

In The Matter Of:

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

*Hearing Docket No. 461
March 10, 2016*

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1 STATE OF CONNECTICUT
2 CONNECTICUT SITING COUNCIL

3
4 Docket No. 461

5 Application of Eversource Energy for a
6 Certificate of Environmental Compatibility and
7 Public Need for the Construction, Maintenance and
8 Operation of a 115-kilovolt (kV) Bulk Substation
9 Located at 290 Railroad Avenue, Greenwich,
10 Connecticut, and Two 115-kV Underground
11 Transmission Circuits Extending Approximately 2.3
12 Miles Between the Proposed Substation and the
13 Existing Cos Cob Substation, Greenwich,
14 Connecticut, and Related Substation Improvements

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16 Continued Hearing held at the Connecticut
17 Siting Council, 10 Franklin Square, New Britain,
18 Connecticut, Thursday, March 10, 2016, at 1:00
19 p.m.

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22 H e l d B e f o r e :

23 ROBERT STEIN, Chairman
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25

1 A p p e a r a n c e s :

2 Council Members:

3 PHILIP T. ASHTON

4 COMM. MICHAEL A. CARON,

5 PURA Designee

6 DANIEL P. LYNCH, JR.

7

8 Council Staff:

9 MELANIE BACHMAN, ESQ.

10 Executive Director and

11 Staff Attorney

12

13 ROBERT MERCIER

14 Siting Analyst

15

16 For Connecticut Light and Power Company d/b/a

17 Eversource Energy:

18 CARMODY TORRANCE SANDAK HENNESSEY LLP

19 50 Leavenworth Street

20 P.O. Box 1110

21 Waterbury, Connecticut 06721-1110

22 BY: MARIANNE BARBINO DUBUQUE, ESQ.

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24

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1 A p p e a r a n c e s (Cont'd):

2 For the Office of Consumer Counsel:

3 LAUREN HENAULT BIDRA, ESQ.

4 MARGARET BAIN

5

6 For Pet Pantry Super Discount Stores LLC:

7 THE MARCUS LAW FIRM

8 275 Branford Road

9 North Branford, Connecticut 06471

10 BY: MARK L. BERGAMO, ESQ.

11

12 For the Town of Greenwich:

13 COHEN AND WOLF, P.C.

14 P.O. Box 1821

15 Bridgeport, Connecticut 06601

16 BY: DAVID A. BALL, ESQ.

17 JULIE D. KOHLER, ESQ.

18 Intervenors:

19 CHRISTINE EDWARDS

20 111 Bible Street

21 Cos Cob, Connecticut 06807

22

23 CECILIA H. MORGAN

24 3 Kinsman Lane

25 Greenwich, Connecticut 06830

1 THE CHAIRMAN: Good afternoon, ladies
2 and gentlemen. I'd like to call to order this
3 meeting of the Connecticut Siting Council today,
4 Thursday, March 10, 2016, at approximately 1 p.m.
5 My name is Robin Stein. I'm chairman of the
6 Connecticut Siting Council.

7 This hearing is a continuation of the
8 hearings held on September 1, 2015 in Greenwich;
9 and on November 6, 2015; December 1, 2015; January
10 12, 2016; and February 23, 2016, here in New
11 Britain. It is held pursuant to the provisions of
12 Title 16 of the Connecticut General Statutes and
13 of the Uniform Administrative Procedure Act upon
14 an application from Eversource Energy for a
15 certificate of environmental compatibility and
16 public need for the construction, maintenance and
17 operation of a 115-kilovolt bulk substation
18 located at 290 Railroad Avenue in Greenwich,
19 Connecticut, and two 115-kilovolt underground
20 transmission circuits extending approximately 2.3
21 miles between the proposed substation and the
22 existing Cos Cob Substation in Greenwich,
23 Connecticut, and related substation improvements.
24 This application was received by the Council on
25 June 26, 2015.

1 A verbatim transcript will be made of
2 this hearing and deposited with the Town Clerk's
3 Office in the Greenwich Town Hall for the
4 convenience of the public.

5 We will proceed in accordance with the
6 prepared agenda, copies of which are available
7 near the door, I believe.

8 The Council received a motion for
9 administrative notice from Field Point Estate
10 Townhouses, Inc., dated March 1, 2016. On March
11 4, 2016, Eversource filed an objection to Field
12 Point Estate Townhouses' motion for administrative
13 notice and objection to their list of items for
14 administrative notice. On March 8, 2016, Field
15 Point Estate Townhouses, Inc. filed a response to
16 Eversource's objection.

17 The Council also received a motion to
18 reject Eversource's revised Late-Filed Exhibit 20
19 from the Office of Consumer Counsel, dated March
20 9, 2016. On March 9, 2016, Eversource filed a
21 response to Office of Consumer Counsel's motion to
22 reject Eversource's revised Late-Filed exhibit.
23 If you can follow all this, you're doing pretty
24 well.

25 The Council also received a motion for

1 the Council to require additional analysis and to
2 schedule additional hearing dates from the Town of
3 Greenwich, dated March 9, 2016, which I believe
4 was yesterday. On March 9, 2016, Eversource filed
5 a response to the Town of Greenwich's motion for
6 the Council to require additional analysis and to
7 schedule additional hearing dates. This morning
8 OCC also filed a response to the Town of
9 Greenwich's motion for the Council to require
10 additional analysis.

11 In consultation with Attorney Bachman,
12 and as presiding officer in these proceedings, the
13 Chair hereby disposes of the subject motions and
14 objections as follows: Field Point Estate
15 Townhouses, Inc. March 1, 2016 motion for
16 administrative notice is granted.

17 Eversource's March 4, 2016 objection to
18 their list of administrative notice is overruled.

19 And the Office of Consumer Counsel's
20 March 9, 2016 motion to reject Eversource's
21 revised Late-Filed exhibit is denied. All of
22 these items shall be admitted into the record for
23 what they are worth.

24 As for the Town of Greenwich's motion
25 for the Council to require additional analysis and

1 to schedule additional hearing dates, dated March
2 9, 2016, that motion is denied.

3 We will begin with the appearance of
4 the party, Office of Consumer Counsel, to verify
5 their new exhibits marked as Roman Numeral III,
6 Item B.2 on the hearing program.

7 Attorney Bidra, welcome back.

8 MS. BIDRA: Thank you. Good afternoon,
9 Mr. Chairman.

10 THE CHAIRMAN: Please begin by
11 identifying the new exhibit you have filed in this
12 matter and verify the exhibit by the appropriate
13 sworn witness.

14 MS. BIDRA: Would you like me to simply
15 read the title of the exhibit, Mr. Chairman?

16 THE CHAIRMAN: Sure, and go through the
17 verification process.

18 MS. BIDRA: Sure. The title is
19 "Application Table E-5 Customer Load with Office
20 of Consumer Counsel Additions in Red."

21 M A R G A R E T B A I N,

22 having been previously duly sworn, testified
23 further on her oath as follows:

24 MS. BIDRA: Ms. Margaret Bain, did you
25 prepare this exhibit?

1 THE WITNESS (Bain): Yes.

2 MS. BIDRA: Did you use evidence in the
3 record of this proceeding to prepare the exhibit?

4 THE WITNESS (Bain): Yes. And the
5 purpose was to just to verify with the company
6 that this information was correct. So it's not --
7 I'm not stating that this is correct. The purpose
8 is to verify with the company the correct
9 information.

10 MS. BIDRA: Do you have any changes to
11 this table?

12 THE WITNESS (Bain): Yes. The
13 permissible load ratings, the reference on that in
14 the record is the response to OCC-83. And I
15 believe that the number on there under
16 "Permissible Load" for Greenwich Substation should
17 be "144" instead of "134."

18 MS. BIDRA: With that, we submit this
19 for the Council's consideration.

20 THE CHAIRMAN: Do any of the parties or
21 intervenors object to the admission of the Office
22 of Consumer Counsel's new exhibit?

23 Yes, Attorney Dubuque.

24 MS. BARBINO DUBUQUE: Mr. Chairman,
25 good morning. Good morning, everyone. This is

1 Marianne Dubuque. I represent Eversource Energy.

2 And I do object to the exhibit for a
3 number of reasons. And first, I believe Ms. Bain
4 just indicated that this was based on evidence in
5 the record. And it is not, in fact, all evidence
6 in the record. There were two columns that were
7 added by Ms. Bain, and there were also averages
8 that were computed.

9 Now, we were all required to file
10 prefile exhibits by February 16th. That was the
11 final deadline. And when we had the hearing on
12 February 23rd, from the transcript Ms. Bain
13 represented that she just had a little chart based
14 on OCC-22 and Late-File 20 with base load for the
15 27.6 Cos Cob transformer. And on that basis the
16 Council allowed these extra exhibits and extended
17 that courtesy to the OCC, but the document that
18 was distributed on February 23rd is not identical
19 to the document that was ultimately filed. And
20 this particular document does have information
21 that was filed on September 29th, so there's been
22 plenty of time to ask questions during the
23 hearings and also to file interrogatories.

24 So basically the last two columns, the
25 total and the year-to-year change were added by

1 OCC. The averages were added by OCC. And what
2 really concerns me is there's nothing in the
3 record about averaging as an appropriate or valid
4 forecasting methodology for electric utility
5 companies. And the averages that were selected,
6 three, five, ten years, are purely random and are
7 not at all relevant given that there has been no
8 testimony about averaging, and there's been no
9 testimony at all about three, five and ten-year
10 periods.

11 Also, as you may know, Eversource filed
12 a correction to the data and an explanation for
13 its discovery, so I think some of the calculations
14 are actually no longer valid. And I think that
15 this type of approach disrupts the Council's
16 orderly process of submitting exhibits and
17 allowing the parties, and the applicant too, a
18 fair opportunity to respond.

19 THE CHAIRMAN: I understand your
20 objection. I'm going to allow this to go into the
21 record for what it's worth, but you now have the
22 opportunity to cross-examine OCC and to follow up
23 with your concerns.

24 (OCC Exhibit III-B-2: Received in
25 evidence - described in index.)

1 MS. BARBINO DUBUQUE: Mr. Chairman,
2 since there isn't any evidence or any expert
3 testimony that's involved with this exhibit,
4 Eversource has no questions. Thank you.

5 THE CHAIRMAN: Thank you.

6 Mr. Mercier, do you have any questions?

7 MR. MERCIER: I have no questions.

8 THE CHAIRMAN: Mr. Ashton?

9 CROSS-EXAMINATION

10 MR. ASHTON: The whole substance of the
11 case here, to my mind, revolves around a few short
12 strokes of a typewriter in writing a number. And
13 I can't help but admit that the numbers that
14 appeared on the February 4th sheet, which have
15 been admitted for what they're worth, really
16 intrigue me and make me uncertain and ill at ease
17 in committing 140 or \$120 million project to go
18 forward.

19 At the risk of being redundant, I'd
20 like to hear from the company as to how they
21 rationalize a very -- I beg your pardon. I'd like
22 to hear from the OCC as to how they rationalize
23 these numbers and what their case is behind the
24 numbers. And nice and loud because I'm suffering.

25 THE WITNESS (Bain): Now, are you

1 referring to the exhibit that's titled
2 "Application Table E-5 Customer Load"?

3 MR. ASHTON: Yes.

4 THE WITNESS (Bain): Okay. These
5 numbers --

6 MR. ASHTON: Are you challenging these
7 numbers at all?

8 THE WITNESS (Bain): I'm asking for
9 confirmation that these are the right numbers and
10 that, you know, this is the undercapacity. I'm
11 asking for confirmation -- I will be in
12 cross-examination -- on the undercapacity that
13 they're trying to solve. And so far it looks like
14 the undercapacity in 2023 is 9.2, but I'm looking
15 to confirm that, 9.2 MVA. But in 2023 the
16 permissible load rating that they will have looks
17 like with 135 at Cos Cob and Greenwich 144, it
18 would be 279 MVA, which would mean that they have
19 a significant overcapacity.

20 MR. ASHTON: 269 or 279?

21 THE WITNESS (Bain): 279 because the
22 Greenwich Substation, I believe, on OCC-83, that
23 response, it should have been 144, two
24 transformers at 72 each.

25 MR. ASHTON: I've got it.

1 THE WITNESS (Bain): And so I
2 mistakenly put 134.

3 MR. ASHTON: I have it.

4 THE WITNESS (Bain): So that should be,
5 you know, instead of 269, 279.

6 MR. ASHTON: And it's your position
7 that an actual around 215 -- I guess I got that
8 wrong. An actual in 2018 of 137 would be covered
9 by those by the 279 figure?

10 THE WITNESS (Bain): So they'd be
11 significantly overcapacity. If they're trying to
12 solve the capacity issue undercapacity of 9.2,
13 then what they proposed here would seem to be a
14 significant overcapacity. That's what I'm trying
15 to confirm.

16 MR. ASHTON: Is it your position that
17 overcapacity is inherently wrong?

18 THE WITNESS (Bain): You know, myself,
19 I would say that it depends on the level of
20 overcapacity.

21 MR. ASHTON: I see. What would be
22 acceptable overcapacity?

23 THE WITNESS (Bain): Well, that's
24 something that, you know, we have to determine.

25 MR. ASHTON: I'm aware of that, but

1 I've been involved in cases with the Consumer
2 Counsel before where they've taken a position.
3 I'm trying to understand what that position is
4 here and what's behind it.

5 THE WITNESS (Bain): Right. Well, we
6 don't take a position. We write it in our brief.
7 And so at this point we're still gathering
8 information.

9 MR. ASHTON: Okay. Nothing further.
10 Thank you.

11 THE CHAIRMAN: Director Caron?

12 MR. CARON: No. All set, Mr. Chairman.

13 THE CHAIRMAN: Mr. Lynch?

14 MR. LYNCH: No questions, Mr. Chairman.

15 THE CHAIRMAN: Just so I understand
16 this, the numbers that you have come up with have
17 been done by averaging?

18 THE WITNESS (Bain): Table E-5 doesn't
19 have any averaging.

20 THE CHAIRMAN: So you're just using the
21 numbers that have been provided by Eversource?

22 THE WITNESS (Bain): Yes. I'm just
23 confirming that if, you know, put it in the right
24 titles, et cetera, here. So and with that change,
25 due to that we had just mentioned, Mr. Ashton and

1 I talked about where Greenwich Substation, the
2 permissible load rating should be 144, and the
3 total should be 279.

4 THE CHAIRMAN: All right.

5 Eversource, do you have any
6 cross-examination?

7 MS. BARBINO DUBUQUE: No. Thank you,
8 Mr. Chairman.

9 THE CHAIRMAN: I'll go through the list
10 now. Parker Stacy?

11 (No response.)

12 THE CHAIRMAN: Pet Pantry?

13 (No response.)

14 THE CHAIRMAN: Field Point Estate
15 Townhouses?

16 (No response.)

17 THE CHAIRMAN: Christine Edwards?

18 MS. EDWARDS: Is this on this
19 particular piece?

20 THE CHAIRMAN: Yes. This is
21 cross-examination of Office of Consumer Counsel.
22 Yes.

23 MS. EDWARDS: Thank you. I just want
24 to make sure because I'm thinking of another piece
25 I'm speaking on today. Thank you.

1 I just have really one question. Do
2 you feel that right now the usage of the Cos Cob
3 voltage and capacity should be enough to be able
4 to provide for the increase as time goes because
5 what you've come up with is that the load capacity
6 and the pull is becoming not as demonstrated as
7 increasing to such a large degree over the time,
8 that in fact the capacity that's being asked to be
9 drawn on is less than has been put forward with
10 these averages?

11 THE WITNESS (Bain): Well, it does
12 look -- the company has said they will have an
13 undercapacity here, and it looks like it's 9.2,
14 but they're providing for something much larger.
15 So right now I'm just looking to get information
16 from the company as to, you know, is this the
17 case, it looks like this, but is this the case,
18 and if so, why.

19 MS. EDWARDS: And if the generation and
20 the switching possibilities and all the
21 capabilities at the Cos Cob Station were evaluated
22 with a clear eye, that that might be sufficient
23 without this need for extra capacity over the next
24 15 years or so and technology is improving as we
25 go on.

1 THE WITNESS (Bain): All those things
2 are important considerations, yes. And as we've,
3 you know, over the course of the record some of
4 them, I guess, have been considered and some maybe
5 not. So we need to sort out what we need as the
6 OCC supported the town's motion for further
7 analysis.

8 MS. EDWARDS: So it's really coming
9 down to looking for more clear analysis of that?

10 MS. BAIN: (Nodding head in the
11 affirmative.)

12 MS. EDWARDS: Good. Thank you very
13 much.

14 THE CHAIRMAN: Thank you.

15 Richard Granoff?

16 (No response.)

17 THE CHAIRMAN: The grouped intervenors,
18 the Bella Nonna Restaurant, Greenwich
19 Chiropractic, Mr. Berger and Ms. Glass?

20 (No response.)

21 THE CHAIRMAN: Cecilia Morgan?

22 MS. MORGAN: I really have no questions
23 for the OCC.

24 THE CHAIRMAN: No questions?

25 MS. MORGAN: I leave it to them because

1 they're dealing with something technical, and
2 that's not my area of knowledge. My concern here
3 is the preservation.

4 THE CHAIRMAN: Wait a minute, you're
5 just here only to ask questions of the OCC.

6 MS. MORGAN: Then I have no questions
7 for them.

8 THE CHAIRMAN: Thank you.

9 MS. MORGAN: I trust them to know what
10 they're doing.

11 THE CHAIRMAN: Town of Greenwich?

12 MR. BALL: Good afternoon. David Ball
13 on behalf of the Town of Greenwich.

14 I just wanted to ask one question with
15 respect to Table E-5. There's two columns, one
16 that's called "Actuals" and the other called
17 "Company Forecast," Ms. Bain?

18 THE WITNESS (Bain): Yes.

19 MR. BALL: The figures in the column
20 under "Company Forecast," are they the same
21 figures contained in Table E-1 of the application
22 from Eversource?

23 THE WITNESS (Bain): Yes.

24 MR. BALL: So you have accepted in this
25 document the projections provided by Eversource in

1 their application, is that correct, the forecasted
2 numbers?

3 THE WITNESS (Bain): Well, no. This is
4 just confirming that this is what their forecast
5 is using -- I mean we haven't, you know, made a
6 judgment call on what their forecast is based on.

7 MR. BALL: No, I understand that. And
8 I'm not asking your opinion. I'm just asking the
9 data itself is based on Eversource's projected
10 forecasts?

11 THE WITNESS (Bain): Yes. Yes.

12 MR. BALL: Thank you. I have nothing
13 further. Thank you.

14 THE CHAIRMAN: I just want to clarify.
15 Now I'm getting confused here. On that table
16 "Company Forecast" --

17 THE WITNESS (Bain): Yes.

18 THE CHAIRMAN: Just taking on the Cos
19 Cob Substation, the first one, 2016 is 134.5;
20 2017, 135.8; and then 2018, 66.7?

21 THE WITNESS (Bain): Yes. That is when
22 the new substation comes into operation, I guess.

23 THE CHAIRMAN: It would be helpful what
24 the asterisk -- a third asterisk making that
25 clear. Okay.

1 Those are all the cross-examination for
2 OCC. Now it's OCC's opportunity to cross-examine
3 the applicant.

4 MS. BAIN: So beginning with the
5 exhibit --

6 THE CHAIRMAN: Excuse me, I'm told
7 first you need to verify the new exhibit. Sorry.

8 MS. BARBINO DUBUQUE: Yes. Thank you,
9 Mr. Chairman. Eversource Energy requests one new
10 exhibit we'd like admitted into evidence. It is
11 Exhibit 45, Eversource Energy's correction to
12 Late-Filed Exhibit 20. And that appears on the
13 hearing program that would be dated March 7, 2016.

14 K E N N E T H B . B O W E S ,
15 J A C Q U E L I N E A . G A R D E L L ,
16 M I C H A E L L I B E R T I N E ,

17 having been previously duly sworn, testified
18 further on their oaths as follows:

19 MS. BARBINO DUBUQUE: And I'd like to
20 ask Ms. Gardell and Mr. Bowes, if you prepared or
21 were in charge of preparing this particular
22 exhibit?

23 THE WITNESS (Bowes): Yes, I was.

24 THE WITNESS (Gardell): Yes, I was.

25 MS. BARBINO DUBUQUE: And to the best

1 of your knowledge, is the information in this
2 exhibit accurate and true?

3 THE WITNESS (Bowes): Yes, it is.

4 THE WITNESS (Gardell): Yes, it is.

5 MS. BARBINO DUBUQUE: Do you have any
6 further corrections or additions?

7 THE WITNESS (Bowes): I have no other
8 corrections.

9 THE WITNESS (Gardell): No corrections.

10 MS. BARBINO DUBUQUE: Do you adopt
11 Exhibit 45 as a full exhibit?

12 THE WITNESS (Bowes): Yes, I do.

13 THE WITNESS (Gardell): Yes, I do.

14 MS. BARBINO DUBUQUE: Thank you.

15 Mr. Chairman, I respectfully request that the
16 Council admit into evidence Exhibit 45 as a full
17 exhibit.

18 THE CHAIRMAN: Okay. Is there any
19 objection from any of the parties or intervenors?

20 (No response.)

21 THE CHAIRMAN: Hearing and seeing none,
22 the exhibit is --

23 MS. BAIN: We will have questions on
24 it.

25 THE CHAIRMAN: I understand. But the

1 exhibit is admitted.

2 (Applicant Exhibit II-B-45: Received
3 in evidence - described in index.)

4 THE CHAIRMAN: Now you can begin the
5 cross-examination.

6 CROSS-EXAMINATION

7 MS. BAIN: Okay. Now, regarding the
8 revised Late-File 20, is it the case that the
9 company has three transformers in order that two
10 will back up one if one is being repaired, for
11 instance, or maintained?

12 THE WITNESS (Bowes): So there are
13 three transformers at Cos Cob to serve the 27.6-kV
14 load, and they do operate in parallel. So much as
15 the question was posed, they will operate when one
16 or more are out of service.

17 MS. BAIN: So is it possible that the
18 11R-1X was being maintained or taken down and the
19 other transformers were operating, carrying the
20 load during the period that the company says there
21 was no usage on the transformer metered?

22 THE WITNESS (Bowes): There is not.
23 They were all three transformers were in service.

24 MS. BAIN: So there's a certain period
25 of time in which the company says there was no

1 metered use?

2 THE WITNESS (Bowes): Correct, from
3 September 13th through November 1st.

4 MS. BAIN: Now, is it possible that the
5 cause of that was that that transformer, which was
6 the 11R-1X, correct --

7 THE WITNESS (Bowes): Correct.

8 MS. BAIN: -- that that one was being
9 maintained or repaired during that time period and
10 the other transformers were carrying the full
11 load?

12 THE WITNESS (Bowes): No, it is not
13 possible.

14 MS. BAIN: Why is that?

15 THE WITNESS (Bowes): We have
16 indications of what equipment is in service and
17 what equipment is out of service, and in the
18 particular case of the 1X transformer, that was
19 maintained in April of 2015.

20 MS. BAIN: And so what is the cause of
21 the lack of metering on that transformer for that
22 one-and-a-half month approximate period?

23 THE WITNESS (Bowes): The metering did
24 not record or register -- I should back up. The
25 collection system in metering did not register any

1 values for approximately 49 days.

2 MS. BAIN: So is the meter broken or
3 what?

4 THE WITNESS (Bowes): The meter was not
5 working properly; that's correct.

6 MS. BAIN: So did you take it out of
7 service to prepare it? What happened?

8 THE WITNESS (Bowes): Actually it was
9 observed, when we looked at the data for this
10 situation, we identified zeros as the only
11 registration for that period of time. In between
12 times -- hold on just a second. I'll see what the
13 actual cause of the meter error was.

14 (Off the record discussion.)

15 THE WITNESS (Bowes): So there was a
16 failure of the communications and registration on
17 the metering equipment, and it was repaired
18 approximately November 1st.

19 MS. BAIN: And so how did you get it
20 operating again?

21 THE WITNESS (Bowes): It was a service
22 call to the station and the communications
23 equipment was verified and the meter was repaired.

24 MS. BAIN: And what led you to
25 recognize that it wasn't registering?

1 THE WITNESS (Bowes): So apparently the
2 metering department recognized that they were
3 getting no output from that meter and performed a
4 service call. When we filed this data for the end
5 of 2015, we were not aware that there was a 49-day
6 period where the meter was out of service.

7 MS. BAIN: So why did it take them 29
8 days to recognize that?

9 THE WITNESS (Bowes): We don't have any
10 alarming on that system. We read them once a
11 month.

12 MS. BAIN: So again, why did it take 29
13 days?

14 THE WITNESS (Bowes): It was actually
15 49 days.

16 MS. BAIN: Forty-nine days, yes.

17 THE WITNESS (Bowes): So the meters
18 were read, and then on the next cycle it was
19 discovered that there was no registration from
20 that, and a service order was created to
21 investigate the situation and solve it.

22 MS. BAIN: So you read them in like
23 49-day cycles?

24 THE WITNESS (Bowes): No, it's a
25 monthly cycle.

1 MS. BAIN: And in OCC's response to the
2 revision, OCC comments on the estimate. So you
3 have an estimate of over 26 million kWh during
4 that time period, correct?

5 THE WITNESS (Bowes): On page 2 you
6 indicate there's a difference of 26 million.

7 MS. BAIN: So that would be, in other
8 words, the difference between the previous total
9 on Late-File 20, original Late-File 20, and your
10 revised total, correct?

11 THE WITNESS (Bowes): That is correct.

12 MS. BAIN: So that difference would be
13 the 49 days that this meter -- your estimate of
14 the 49 days that this meter wasn't operating; is
15 that correct?

16 THE WITNESS (Bowes): That is correct.

17 MS. BAIN: So going through this, if we
18 take a monthly look at this, we take that number,
19 the 26 million, since this was one-and-a-half
20 months that it wasn't operating, and we get a
21 monthly total. It's approximately 17 and a half
22 million, correct?

23 THE WITNESS (Bowes): So you've taken
24 the 26 million and divided it by 1.5?

25 MS. BAIN: Yes.

1 THE WITNESS (Bowes): It was 49 days,
2 so it's not -- 1.5 would not be exactly accurate.

3 MS. BAIN: Right. Right. So it's
4 approximately 17.5 though, right?

5 THE WITNESS (Bowes): The math you've
6 done is correct. I'll grant you that, yes.

7 MS. BAIN: Let's say it's only 17 when
8 we account for the four days, the difference
9 between 49 days and 45 days, is that what you want
10 for one-and-a-half months?

11 THE WITNESS (Bowes): I don't want
12 anything for one-and-a-half months. It's your
13 question.

14 MS. BAIN: No. Is that what you're
15 saying, it's not exactly --

16 THE WITNESS (Bowes): I'm saying the
17 math you've done is accurate. I'm just saying
18 it's a 49-day period, not one-and-a-half months.

19 MS. BAIN: Right. So we'll take a
20 little bit off the 17.5. And this time period is
21 not a peak period, correct?

22 THE WITNESS (Bowes): That is correct.

23 MS. BAIN: So this usage, if we
24 conservatively said that that was an average
25 monthly usage, we'd end up with something

1 approaching 210 million, if we multiplied that
2 times 12, to get an annual usage, correct?

3 THE WITNESS (Bowes): Again, I will
4 agree that the math you have on the page
5 calculates out to 210 million, yes.

6 MS. BAIN: So how are you possibly
7 thinking that that would be reasonable given the
8 numbers that are the history of this transformer
9 in 2014, 2013, et cetera?

10 THE WITNESS (Bowes): So again, I
11 agreed with your math that you had on the page,
12 but I did not agree with the methodology. We
13 believe that the average monthly usage on that
14 meter is approximately 9.1 million kilowatt hours.
15 So the overall annual usage on that meter would be
16 109 million, approximately 109 million kilowatt
17 hours.

18 MS. BAIN: Go over that again for me?
19 We're trying to get to the difference, right, the
20 26 million kilowatt hour difference, correct?

21 THE WITNESS (Bowes): So again, we
22 believe that the average monthly usage for the 1X
23 transformer is 9.1 million kilowatt hours, and
24 that the annual usage that we've estimated is 109
25 million kilowatt hours, not the 210 that you just

1 had me go through.

2 MS. BAIN: In OCC-22, in that response,
3 our original -- let's take original Late-File 20,
4 okay, you came up with, what, 457 million,
5 correct?

6 THE WITNESS (Bowes): Approximately,
7 yes. Probably closer to 458 million.

8 MS. BAIN: So what's missing between
9 your estimated amount and the total in the
10 original one is 26 million, correct?

11 THE WITNESS (Bowes): Yes. So that
12 means the annual usage for the 2X and the 3X would
13 remain unchanged, and we believe that the annual
14 usage for the 1X would be estimated at 109 million
15 kilowatt hours. We made no adjustments to the
16 metered values for the 2X or 3X.

17 MS. BAIN: Okay. Why don't we do it
18 this way because this isn't computing. Do you
19 want to file a supplement to this that shows what
20 the numbers are that use --

21 THE CHAIRMAN: There will be no
22 supplemental filings at this point. You're going
23 to have to either agree to agree or agree to
24 disagree on this.

25 MS. BAIN: Okay. It's just not

1 computing here. We don't have all the
2 information. We don't have this.

3 THE CHAIRMAN: You've had months and
4 months and months.

5 MS. BAIN: That's okay. I wasn't going
6 to do further questioning on that.

7 THE CHAIRMAN: Thank you.

8 MS. BAIN: Okay. That's just not
9 computing. Okay. I'm sorry.

10 MS. BARBINO DUBUQUE: I think, Mr.
11 Chairman, this is starting to be testimony.
12 Mr. Bowes has given the answer. That's it.

13 THE CHAIRMAN: And I said we're not
14 going to --

15 MS. BAIN: And I'm just giving you the
16 chance to expand on that because we don't have the
17 numbers.

18 THE WITNESS (Bowes): Do you have other
19 questions for me, particular --

20 MS. BAIN: We don't have the numbers
21 that would back it up.

22 THE WITNESS (Bowes): If you have other
23 questions for me, I'd be glad to answer them on
24 each transformer, on each year.

25 MS. BAIN: Okay. Do you know offhand

1 what the numbers are that back up the 457 that was
2 originally used by a transformer? We don't have
3 that.

4 THE WITNESS (Bowes): Yes, I do. For
5 the 1X transformer the measured values were
6 approximately 83 million kilowatt hours. The 2X
7 transformer, approximately 188 million kilowatt
8 hours. And the 3X transformer, 186.6 million
9 kilowatt hours.

10 MS. BAIN: Okay. That's helpful.

11 Now, in Late-File 22 that was
12 concerning distances. Actually what I think I
13 asked to see was the distance from Cos Cob. Do
14 you know if that's somewhere on the record? This
15 has distance from Prospect.

16 THE WITNESS (Bowes): So I think you're
17 asking me what's the distance from Cos Cob to each
18 of these other substations?

19 MS. BAIN: Yes.

20 THE WITNESS (Bowes): I do not know if
21 that's in the record or not. I know we had other
22 distance question, but I'm not sure if that's
23 covered in that question or not.

24 MS. BARBINO DUBUQUE: Mr. Chairman, can
25 we go off the record for one moment?

1 THE CHAIRMAN: Yes.

2 MS. BARBINO DUBUQUE: Thank you.

3 (Off the record discussion.)

4 THE CHAIRMAN: We're back on the
5 record.

6 MS. BARBINO DUBUQUE: Thank you. We'll
7 look for that other response in the meantime. But
8 if we could go on and get back to you on that
9 question?

10 THE CHAIRMAN: As long as it's before
11 nightfall.

12 MS. BARBINO DUBUQUE: Today.

13 MS. BAIN: Now, regarding the ISO CELT
14 report that we went over last time that we
15 discussed, do you know which category ISO uses in
16 its planning? Do they use the 90/10 gross number
17 minus the solar and the passive demand reduction
18 resources or which -- as you know, there are a
19 bunch of categories on that sheet. So do you know
20 which category they use?

21 THE WITNESS (Boves): I believe they
22 used them all but for different purposes. I know
23 that beginning in 2014 they do now include PV
24 solar into their calculations, but I think they
25 use them, as I said, for different purposes like

1 demand response would be used for emergency
2 conditions, for example.

3 MS. BAIN: This would be when they're
4 assessing peak load conditions when they're
5 projecting summer peak load. So do you know if
6 they use the 90/10 gross, minus PVA solar, minus
7 passive data demand resource reduction?

8 THE WITNESS (Bowes): I'm not clear on
9 the question. I think I've answered to the point
10 of I think they do use both the numbers, but they
11 use them for different purposes.

12 MS. BAIN: Right. I know you said for
13 different purposes. I'm trying to clarify that
14 this would be for projecting peak load conditions
15 summer peak load.

16 THE WITNESS (Bowes): I'm not sure I
17 know the answer to that, no.

18 MS. BAIN: Now, I don't believe -- just
19 to clarify, I don't think we have anything
20 significant from the company on Airgas. Can you
21 tell me, Airgas is the neighbor, correct, of the
22 proposed new substation?

23 THE WITNESS (Bowes): I would say, yes,
24 it's the abutting property.

25 MS. BAIN: So do you know what gases

1 are stored there at Airgas?

2 THE WITNESS (Bowes): Specifically, no,
3 I do not.

4 MS. BAIN: Would any of your witnesses
5 know that?

6 THE WITNESS (Bowes): I don't believe
7 so, no.

8 MS. BAIN: So you wouldn't be familiar
9 with any plans regarding a potential, you know, if
10 a substation fire happened and how that would --
11 how you've planned for that with Airgas as the
12 neighbor, you wouldn't have that; is that right?

13 THE WITNESS (Bowes): I think we'd plan
14 for it as any abutting property based upon the
15 design of our substation, the physical separation
16 and distances within the substation to the
17 property line, and the protective systems that we
18 have within the substation.

19 MS. BAIN: Regarding Late-File 21, on
20 page 2 the company has an estimate of \$137 million
21 for the distribution feeders from Cedar Heights to
22 North Greenwich. Now, would this be
23 undergrounded?

24 THE WITNESS (Bowes): So in the first
25 bullet it says, "Install ten miles (the

1 approximate distance between the two substations)
2 of duct bank." "Duct bank" indicates that it's
3 underground construction, yes.

4 MS. BAIN: How did you get the 137
5 million? Did you work it out from a -- work up to
6 it, or did you have a breakdown of that?

7 THE WITNESS (Bowes): It will be
8 separated by the ones that are identified here in
9 the bullets. So yes, the ten miles would be the
10 approximate cost per unit for underground
11 construction based upon our estimating tools and
12 also confirmed with recent construction contracts.

13 The feeder cables would be based upon
14 our existing material costs and including the
15 installation and splicing of those based on both
16 our work order system that we have in place, as
17 well as the latest commodity prices for those
18 cables. And there is some additions in here based
19 upon what we did as a, I would say, a desktop
20 survey of the field conditions, so it's really not
21 a field survey, but it's looking at the
22 configurations of the road and indicating where we
23 would have to have splicing vaults based upon the
24 conductor pull distances and, again, using our
25 latest construction estimating tools, as well as

1 actual field costs.

2 And we did the same for each of the
3 components of this estimate. We did the same
4 process when we did the initial estimates for the
5 proposed project, the alternatives to this
6 project, as well as the various interrogatories
7 we've gotten for -- we had a request, I think,
8 from the OCC to look at feeding from Waterside
9 Substation in Stamford. So we used the same
10 methodology, the same estimating tools and the
11 same process for all of the estimates done for
12 this project at this level of detail.

13 MS. BAIN: Is there some reason why the
14 company didn't provide a breakdown of that large
15 number, 137 million, break it down into -- itemize
16 it?

17 THE WITNESS (Bowes): No, I don't
18 believe there was any particular reason. It was
19 the same we've done for the other kind of
20 conceptual estimates, kind of broke them into
21 substation and line, and also separation between
22 transmission and distribution costs. It's really
23 the same level of detail we've used for the other
24 estimates that you had requested prior to this.

25 MS. BAIN: I think that's all the

1 questions I have. Thank you.

2 THE CHAIRMAN: Thank you.

3 We'll now continue cross-examination of
4 Eversource starting with Parker Stacy?

5 (No response.)

6 THE CHAIRMAN: A representative of Pet
7 Pantry?

8 MR. BERGAMO: Good morning, Mr.
9 Chairman, members of the Council, and others.

10 THE CHAIRMAN: Good afternoon by now.

11 MR. BERGAMO: Good afternoon. I'm
12 still on morning mode.

13 Referencing the Town of Greenwich
14 letter to the Siting Council dated May 23, 2015,
15 was there ever a separate response --

16 MS. BARBINO DUBUQUE: Excuse me, did
17 you say May? Are you talking about the November?

18 MR. BERGAMO: November.

19 MS. BARBINO DUBUQUE: I'm sorry. I
20 just want to make sure we're all on the same page.
21 Thank you.

22 MR. BERGAMO: I'm sorry.

23 Was there ever a response from
24 Eversource?

25 THE WITNESS (Boves): I don't believe

1 there was.

2 MR. BERGAMO: Thank you.

3 Now, other than from Eversource, has
4 there been any other independent testimony from
5 any other source that has been submitted that
6 supports the need for this project?

7 MS. BARBINO DUBUQUE: Mr. Chairman, I'm
8 sorry, I don't understand the question. Are you
9 asking what documents are in the docket because I
10 think the docket speaks for itself?

11 MR. BERGAMO: But has there been
12 anybody independent from Eversource?

13 MS. BARBINO DUBUQUE: Well, all of the
14 exhibits are Eversource's exhibits, so I'm just
15 saying that the documents in the docket speak for
16 themselves.

17 MR. BERGAMO: Okay.

18 Now, it appears that the submitted load
19 projections used to support the project appeared
20 to demonstrate that a need is not there, at least
21 to the intervenors' knowledge. Why wouldn't you
22 use the actual numbers for 2015 in your
23 calculations?

24 THE WITNESS (Bowes): The process we
25 use is we look at the largest value in the last

1 five years to base it off of, and that value is
2 still at the 2013 number.

3 MR. BERGAMO: Now, if there's a need
4 demonstrated, the town believed that there were
5 alternatives that had not been adequately explored
6 regarding the installation of new transformers at
7 the present site. Were all those alternates
8 explored?

9 THE WITNESS (Bowes): Are you talking
10 specifically for the Cos Cob Substation?

11 MR. BERGAMO: For the Prospect Station.

12 THE WITNESS (Bowes): We did not look
13 at alternatives for the Prospect Substation as
14 part of this analysis.

15 MR. BERGAMO: Did the town have an
16 opportunity to participate in discussing those
17 alternatives -- any alternatives? Did they raise
18 up any alternatives?

19 THE WITNESS (Bowes): They certainly
20 did in this November 23rd letter to the Siting
21 Council.

22 MR. BERGAMO: Now, did not the town ask
23 Eversource for evidence to support Eversource's
24 claim that alternatives won't work?

25 THE WITNESS (Bowes): So we've had a

1 long history of working with the Town of Greenwich
2 for this project. And we disclosed to them prior
3 to making the public announcement in 2011. We had
4 seven meetings with the town to select a
5 substation site. We went through a municipal
6 consultation process with the town, including two
7 open houses and through multiple agencies within
8 the town, and have continued to meet with the
9 town, even while this docket has been opened, to
10 discuss specifics around the project.

11 MR. BERGAMO: And was there a point in
12 time that you were going to provide to the town
13 some -- a little more information with regards to
14 alternatives? If so, when was that -- was it
15 provided; and if so, when?

16 THE WITNESS (Bowes): I'm not sure what
17 the data request from the town was for that
18 particular item.

19 MR. BERGAMO: Do you know if it was
20 provided?

21 THE WITNESS (Bowes): I believe beyond
22 the application alternatives we have not provided
23 anymore to the town other than, of course, through
24 this docket where many alternatives have been
25 proposed.

1 MR. BERGAMO: Now, does Eversource
2 suggest to the Council that the town is in favor
3 of lines going through Bruce Park?

4 THE WITNESS (Bowes): I think we heard
5 through the municipal consultation process and
6 field visits that there was some level of
7 acceptance of using Bruce Park, but clearly
8 through the Siting Council process we have heard,
9 I think the words they used were "vehemently
10 opposed" to using Bruce Park.

11 MR. LYNCH: Mr. Bowes, could you keep
12 your voice up a little bit?

13 THE WITNESS (Bowes): Certainly.

14 MR. BERGAMO: Now, you've stated on
15 occasions, is it not true, that there are other
16 viable options that don't include the Bruce Park
17 installation line?

18 THE WITNESS (Bowes): There are other
19 transmission route alternatives, yes. Many are
20 proposed within the application. And one route
21 variation has been developed through the Siting
22 Council process.

23 MR. BERGAMO: Now, is Eversource
24 willing to examine or can you make a design that
25 runs the new feeders along the existing

1 Metro-North Railroad tracks?

2 THE WITNESS (Bowes): Yes, that is the
3 solution that is -- I think satisfies many of the
4 stakeholder needs that we've talked about in this
5 process. It addresses some of the cost issues
6 that the Siting Council has raised, as well as the
7 OCC. It's a route that is now supported by the
8 Town of Greenwich. Connecticut Department of
9 Transportation and Metro-North have supported our
10 design as we've presented it to them. So I
11 believe it satisfied many stakeholders in this
12 process.

13 MR. BERGAMO: Now, is it also true that
14 Eversource's current plan includes no improvement
15 in the overhead 13.2 kilovolt distribution system
16 through Greenwich?

17 THE CHAIRMAN: The distribution system
18 is not before this Council.

19 MR. BERGAMO: Okay. Are there any --

20 THE WITNESS (Bowes): I don't mind
21 answering the question if --

22 THE CHAIRMAN: I just want to make sure
23 we don't go off on a tangent, but you can answer.

24 THE WITNESS (Bowes): I believe it was
25 either OCC-56 or 58 which shows a diagram of the

1 13.2-kV system of what it would look like post
2 Greenwich Substation, and it clearly shows the
3 interconnections between North Greenwich
4 Substation, Cos Cob Substation and the new
5 Greenwich Substation. That new 13.2-kV system
6 will provide significant new reliability benefits
7 to the Town of Greenwich.

8 MR. BERGAMO: Now, would a new
9 substation on Railroad Avenue or anywhere, for
10 that matter, improve the restoration of
11 electricity in a storm event or emergency event
12 that might not bring overhead lines, wood poles,
13 if there was a storm event or an emergency event?
14 I mean, what is that new substation specifically
15 designed to do?

16 THE WITNESS (Bowes): So with regards
17 to the specific question of distribution
18 reliability, what the Greenwich Substation will
19 allow us to do is restore approximately 85 percent
20 of the customers now served from Cos Cob
21 automatically and instantaneously. If the new
22 Greenwich Substation were to be lost for any
23 reason, 67 percent of the customers fed from that
24 substation would be restored automatically and
25 instantaneously. Depending upon the time of year,

1 all 100 percent of the customers could be backed
2 up by either the Cos Cob or the Greenwich
3 Substation.

4 MR. BERGAMO: Are you talking about the
5 North Greenwich --

6 THE WITNESS (Bowes): No. I'm talking
7 about the new Greenwich Substation and Cos Cob.
8 So the blue sky reliability, blue sky meaning the
9 day-to-day reliability, a day like today, there
10 will be a dramatic improvement in reliability for
11 the Town of Greenwich. During catastrophic storm
12 events it is frequently when more than one of the
13 sources is interrupted. And we've seen from
14 experience, for example, Super Storm Sandy, that
15 the automation, rather than being 100 percent
16 effective during a storm like that because of the
17 extent of damage, you get about a 20 percent
18 improvement in the number of customers restored
19 automatically. So the performance during a major
20 catastrophic event like Storm Sandy would not be
21 as positive for the Town of Greenwich as the blue
22 sky, but it would still be much more positive than
23 they have today.

24 MR. BERGAMO: Isn't it true that you
25 used the current and actual consumption data for

1 20 -- or actually this question has been changed
2 because of the recent submission, so I'm going to
3 move on.

4 Is it not true that during 2015 it was
5 one of the warmest summers ever recorded?

6 THE WITNESS (Bowes): I believe the
7 year, in general, was one of the warmest. I think
8 we just saw that information. The month of
9 December was the warmest on record, and the month
10 of February was the coldest on record.

11 MR. BERGAMO: Unlike this year.

12 Would you say that the electrical
13 system serving Greenwich still had a reserve
14 capacity of 15 percent?

15 THE WITNESS (Bowes): So the Cos Cob
16 Substation did.

17 MR. BERGAMO: This was during 2015?

18 THE WITNESS (Bowes): Correct. But the
19 distribution feeders did not. On three occasions
20 in July of 2015 we were into the emergency ratings
21 for cables because of cable faults on one of the
22 four circuits that supplies Prospect Substation.
23 So while the capacity situation did not hit a peak
24 in 2015, the distribution feeders were overloaded
25 on three occasions.

1 MR. BERGAMO: So there was a cable
2 failure?

3 THE WITNESS (Bowes): Cable failure
4 requiring the other three remaining cables to go
5 into their emergency ratings. That occurred in
6 July of 2015.

7 MR. BERGAMO: Is it true that in 2013
8 Eversource identified a 6.8 potential overload of
9 capacity in 2024? I think it's on your statements
10 in your calculation.

11 MS. BARBINO DUBUQUE: Mr. Chairman, I
12 don't think we've ever said a overload of
13 capacity.

14 MR. BERGAMO: Potential.

15 MS. BARBINO DUBUQUE: But I think
16 you're mixing terms.

17 THE WITNESS (Bowes): So I think you
18 mean if Cos Cob Substation would be overloaded. I
19 thought the number was different than that. I
20 know it's in the record. And I know we've
21 indicated that Prospect Substation would see an
22 overload in that time frame as well. I think the
23 number may be for Prospect Station that you're
24 referencing.

25 MR. BERGAMO: The 6.8.

1 THE WITNESS (Bowes): I think it may
2 be, subject to check.

3 MR. BERGAMO: So I guess getting down
4 to the basic question, under the existing
5 circumstances, everything pretty much -- if the
6 substation remained as it was, or the substation
7 as it were, you are advocating the position that
8 there's a high likelihood of an overload in the
9 system or the Prospect Substation?

10 THE WITNESS (Bowes): Within the time
11 frame that we forecasted, I believe there's a
12 likelihood that there will be an overload.

13 MR. BERGAMO: And this is based on the
14 years that you've been using to assess your data
15 as far as usage and distributions?

16 THE WITNESS (Bowes): That is correct.
17 It's based upon the methodology we've used.

18 MR. BERGAMO: Now, is it true that the
19 cable technology that Eversource proposes used a
20 petroleum-based fluid to act as the insulation
21 means for the 115-kilovolt cables?

22 THE WITNESS (Bowes): In the original
23 proposal it called for what's called HPFF cables.
24 It uses a fluid that's called polybutene. That is
25 a non-toxic fluid. We took administrative notice

1 of Docket 272. And the Siting Council in that
2 docket heard from an expert that went on to great
3 lengths to explain the characteristics of
4 polybutene. It's used in many cosmetic products,
5 such as lipstick and mascara. It's used in many
6 food products such as chewing gum. And it can be
7 ingested. I would not recommend that, but it has
8 clearly been mischaracterized during this
9 proceeding.

10 MR. BERGAMO: So in other words, it is
11 a petroleum-based fluid?

12 THE WITNESS (Bowes): It's a synthetic
13 fluid, yes.

14 MR. BERGAMO: Now, is it possible the
15 cable systems can leak?

16 THE WITNESS (Bowes): It is possible,
17 yes.

18 MR. BERGAMO: And have there been any
19 events where this has occurred in the past in any
20 of your towns?

21 THE WITNESS (Bowes): There was a
22 dig-in from an environmental contractor working I
23 believe for the State of Connecticut in the early
24 2000s adjacent to our Glenbrook Substation in
25 Stamford where they penetrated one of the cables

1 with an environmental survey. And yes, there was
2 a significant fluid leak at that point.

3 MR. BERGAMO: Now, am I correct in the
4 statement that you've got 2.13 miles of these
5 cables that would contain in excess of about
6 100,000 gallons of this fluid?

7 THE WITNESS (Bowes): That is correct.

8 MR. BERGAMO: Can we agree that in the
9 Eversource application, table E-1, it shows 11
10 years from 2013 to 2023, that in that respect only
11 the values that were used at the time were only
12 for 2013 were the actual?

13 THE WITNESS (Bowes): That was the
14 beginning year for the forecast forward looking,
15 yes.

16 MR. BERGAMO: Isn't that true that the
17 real consumption numbers are really 2014, 2015?

18 THE WITNESS (Bowes): So now you're
19 mixing peak demand, which is in this table with
20 consumption. The consumption numbers for 2014 are
21 in the record. I'm not sure if the consumption
22 numbers for 2015 are. The consumption numbers in
23 2014 were lower than 2013. The consumption
24 numbers in 2015 were higher.

25 MR. BERGAMO: Now, is it true that

1 Greenwich, I mean based on what's been testified
2 and the information that's been given from the
3 town, that it really -- Greenwich has not really
4 grown over the last decade, and that their land
5 use policy and the zoning regulations are really
6 geared toward maintaining their current profile?

7 MS. BARBINO DUBUQUE: Let me just ask a
8 clarifying -- are you talking about population?
9 You said Greenwich hasn't grown --

10 MR. BERGAMO: We'll say --

11 MS. BARBINO DUBUQUE: What are you
12 talking about in terms of --

13 MR. BERGAMO: Population.

14 MS. BARBINO DUBUQUE: Population. I
15 just want to make sure we understand the question.

16 THE WITNESS (Bowes): So I believe we
17 heard from the Town of Greenwich in that regard.
18 I have data for the past 25 years that would
19 indicate a similar trend. In 1990 the population
20 of Greenwich was 58,441, and 20 years later it was
21 61,171. So a very modest increase over that time
22 frame. However, the electrical demand in that
23 same time period went up by 45 percent.

24 MR. BERGAMO: You're saying it went up
25 45 percent over 25 years?

1 THE WITNESS (Bowes): Correct.

2 MR. BERGAMO: And what was the
3 percentage that's been going up the last several
4 years?

5 THE WITNESS (Bowes): It's been very
6 modest, I would say.

7 MR. BERGAMO: In fact, it's sort of
8 stabilized based on your figures, very modest --

9 THE WITNESS (Bowes): I would say it's
10 --

11 MR. BERGAMO: Up and down?

12 THE WITNESS (Bowes): Again, the data
13 has not been weather normalized, so there is
14 variation in it, but it's plus or minus a few
15 percent variation between use.

16 MR. BERGAMO: Is it also not true that
17 the further development in the Town of Greenwich,
18 it really is in regards to the replacement of
19 existing properties, in other words, they're
20 taking down properties and just building on the
21 same sites?

22 THE WITNESS (Bowes): So I would say
23 that I could speak to the new service activity
24 that the company has seen, which is obviously in
25 direct relation to the type of development that's

1 going on. I originally had said in I think the
2 December hearing that we had 92 service upgrade
3 and new service requests active in the Town of
4 Greenwich. It's now up at 115, but that's
5 probably just the time period. So it's
6 approximately the same number, maybe a little
7 more. But in each one of those cases the average
8 service size has more than doubled. So although
9 it may be built on the same property, the service
10 request to Eversource is for service that's twice
11 the size of the existing service.

12 MR. BERGAMO: Isn't that also true
13 because of the new standards in safety and
14 providing service, you know, you're no longer on a
15 60 amp, you're on a 200?

16 THE WITNESS (Bowes): I think in most
17 cases we're not talking about a 60 to a 200-amp
18 service. We're talking about a 200 or 400-amp
19 service to a three-phase 1,200 amp service. So
20 the type of dwellings that are being built have
21 the capability, and we'll see about the usage in
22 future years. But clearly the request from
23 customers in their service upgrades is two times
24 the existing service they have.

25 MR. BERGAMO: My question to you is

1 with regards to that request for usage, is the
2 usage being taken? In other words, is it being
3 used? I know you have said that they are
4 requesting it, but is it being used?

5 THE WITNESS (Bowes): So we will know
6 that in the future.

7 MR. BERGAMO: You don't know that now?

8 THE WITNESS (Bowes): I would say over
9 time that the rate of growth has been modest.

10 MR. BERGAMO: You don't know that now.
11 We'll wait and see.

12 THE WITNESS (Bowes): That's not what I
13 said. I said to date it's been modest. In the
14 future time will tell on that.

15 MR. BERGAMO: Okay.

16 Now, the town's position, you agree,
17 that they believe that there's no growth, that
18 there's no increase, in fact, there's more of a
19 withdrawing of the town as far as between
20 population, business, commercial?

21 THE WITNESS (Bowes): I know I heard
22 the testimony that was indicating some industrial
23 customers were potentially not as active as they
24 had been in the town, but I think all of the
25 metrics around building permits and demolitions

1 were in a positive direction. In fact, some of
2 the construction numbers were the highest in the
3 last -- since the downturn in 2007/2008.

4 MR. BERGAMO: Now, my question is
5 because we've all -- it was more of a question
6 really toward the Town of Greenwich's, what do
7 those building permits really entail?

8 MS. BARBINO DUBUQUE: I would ask that
9 you ask the town that question because I don't
10 think Eversource is qualified to answer the
11 question about the building permits. Mr. Bowes
12 has testified about the service requests.

13 THE CHAIRMAN: Okay.

14 MR. BERGAMO: Yes.

15 You don't know of anything, or
16 Eversource does not know of the extent of what
17 those building permits were for?

18 THE WITNESS (Bowes): So obviously we
19 know the class of customer that is applying for
20 those service upgrades. It's heavily residential,
21 and we do also have account executives that work
22 with the managed accounts, the larger ones, and we
23 don't have a lot of new development going into the
24 Town of Greenwich for industrial customers.

25 MR. BERGAMO: I guess my question to

1 you is you really don't know, or Eversource really
2 doesn't know what extent these building permits,
3 even though they're being applied for, what they
4 are, whether they're modification, extension of a
5 home, the type?

6 THE WITNESS (Bowes): I would say in
7 general we do not. I mean, a new service is
8 clearly a new building. A service upgrade would
9 be upgrading for some reason, but we do not know
10 the reason why.

11 MR. BERGAMO: If you look at Section 8
12 on the top of page 5 of their report or their
13 letter? That's the 23rd of November.

14 THE WITNESS (Bowes): This is page 8?

15 MR. BERGAMO: No, Section B on the top
16 of page 5.

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

18 MR. BERGAMO: I'm just going to go
19 slowly so you can move with me.

20 The town submitted that a transformer
21 that has a higher load than its FA rating is not a
22 risk for fire, that the only penalty for overuse,
23 in essence, is that the life expectancy goes down
24 from 30 years to 25 years. Is that true?

25 THE WITNESS (Bowes): So the standard

1 that's quoted here is actually the design
2 standard, not the operating standard. I think we
3 established that at the last hearing. So there is
4 an operating standard that is applicable here.
5 And in general as you go above the nameplate
6 rating, life is taken away from the transformer.
7 And at certain points typically -- and we set our
8 emergency ratings based upon that -- we're willing
9 to accept a 1 percent loss of life based on the
10 ratings that we use, for example, at the Cos Cob
11 Substation for each occurrence.

12 MR. BERGAMO: Looking at Section 2 on
13 page 5, it refers to the testing provided in E-1,
14 which questions whether or not a test on a 24-hour
15 basis after June 1st all the way through September
16 21st, whether it was done, and points out that
17 this issue was raised by Mr. Ashton at the October
18 hearing on page 25 of that hearing transcript.
19 Has that issue or information come to a definite
20 resolution? I mean, have we come --

21 THE WITNESS (Bowes): So by definition
22 it's definitely a one-hour rating. In the case of
23 2013, the peak was for approximately two hours in
24 duration. So I think that was in the record as
25 well.

1 MR. BERGAMO: The town, in doing their
2 study or report, on page 5 state that they didn't
3 find any major difference in the temperature
4 between 2013 and 2014. Is there anything wrong
5 with their numbers? Are they correct? And if so,
6 how does that affect the numbers that you used in
7 your application?

8 And I'll repeat the question just so
9 that if you know the answer. Do you want me to
10 repeat it?

11 THE WITNESS (Bowes): Yes, please.

12 MR. BERGAMO: It's sort of a three-part
13 question within a question. Now, the town in
14 their study, they didn't find any major difference
15 in the temperatures between 2013 and 2014.

16 Is there anything wrong with their
17 numbers? Are they correct? Let's take that --

18 THE WITNESS (Bowes): So subject to
19 check, I agree that the average temperatures are
20 probably accurate in this.

21 MR. BERGAMO: If they are correct, how
22 do those numbers affect your application?

23 THE WITNESS (Bowes): So if you want to
24 flip over to page 7 of 26 in the same document,
25 they list the number of days between 90 and 95.

1 In July of 2013 there were 10 of those days. And
2 that's really the time period where we set the
3 peak is where there was very hot humid weather for
4 an extended period of time in the summer of '13.

5 MR. BERGAMO: Now, going to page 9 of
6 the report, I believe it's number 6. E-1 had
7 shown the routing of the eight feeders, but the
8 capacity of the individual circuits and loads they
9 individually carried in the past was not made
10 available. Was that information made available,
11 or would you just point where it's referenced?

12 THE WITNESS (Bowes): I'm still trying
13 to find your reference. Do you know what
14 paragraph that is?

15 MR. BERGAMO: It's page 9, number 6.

16 THE WITNESS (Bowes): Number 6, yes.

17 MR. BERGAMO: They point out, okay, I'm
18 asking -- or you can point out that you once
19 showed the routing of eight feeders, but the
20 capacity of the individual circuits and loads that
21 they individually carried in the past was not made
22 available.

23 Was that information made available
24 during the hearings? I didn't know where it was.
25 If you could just point it out?

1 THE WITNESS (Bowes): So there's
2 general information in the application in Section
3 E-4.1.2 and E-4.1.3, and then more specific
4 information was in the Field Point 03010 on
5 November 30th, which is basically Interrogatory
6 Number 10 from Field Point, which went into the
7 feeder capacities and feeder data. OCC-04, 50,
8 filed November 30th, has information on the
9 feeders and feeder capacities. And in Field Point
10 Set III, 013, filed November 30th, goes into
11 additional detail on the 27.6 transformers and the
12 feeders at 27 kV. There have also been multiple
13 transcript areas as well, if you'd like those.

14 MR. BERGAMO: The town, on page 10 of
15 the report, they bring up the same issues of the
16 Consumer Counsel, namely, can you size up the
17 three transformer units or add a fourth? Is that
18 a viable option which would take care of the needs
19 that are really being debated here?

20 THE WITNESS (Bowes): So we've looked
21 and relooked at the distribution solutions within
22 Cos Cob Substation. And while there are
23 potentials to expand the substation, if that were
24 possible geographically -- I'll come back to that
25 as well -- by adding, say, a fourth transformer

1 there, it wouldn't solve the 27-kV distribution
2 circuit issues that we have coming out of there.
3 So we'd also require upgrades to those facilities
4 as well.

5 One of the distribution alternatives
6 that we proposed actually as part of the project
7 was to build a substation adjacent to Cos Cob.
8 Some of the challenges, of course, you have to
9 keep the existing service going while you're
10 installing the new equipment. So there is some
11 redundancy in that construction process that would
12 have to be done.

13 We've spoken to both the town and the
14 State of Connecticut about the use of additional
15 property at the Cos Cob site, and those are not
16 viable options, we've been told. So we were
17 looking to acquire an additional piece of property
18 adjacent to the substation. That solution was
19 detailed in the application, and it was a more
20 costly alternative.

21 MR. BERGAMO: How about is it viable to
22 add another unit at the North Greenwich Station?

23 THE WITNESS (Bowes): So that's
24 actually the alternative that we were just talking
25 about with the OCC in their interrogatory. And,

1 again, it came out to be theoretically or
2 technically feasible, yes. It would provide a 50
3 MVA solution. It would cost more than the
4 proposed solution that the company has put
5 forward.

6 MR. BERGAMO: Now is that because you
7 have to run an underground route?

8 THE WITNESS (Bowes): We assumed an
9 underground route in the case of Cedar Heights to
10 North Greenwich Substation. We also assumed that
11 there would be some property acquisition around
12 North Greenwich. If you recall the previous
13 discussions we had, there's significant wetlands
14 and flood zones around the existing North
15 Greenwich Substation. So there would be some
16 property acquisition that would have to take
17 place.

18 MR. BERGAMO: Is it cheaper -- is it
19 more inexpensive to do overhead routes than it is
20 underground routes?

21 THE WITNESS (Bowes): I would say in
22 almost -- and in the generic sense, it's almost
23 always less expensive to go overhead than it is
24 underground.

25 MR. BERGAMO: And was an overhead route

1 for North Greenwich?

2 THE WITNESS (Bowes): So the issue gets
3 into the number of circuits that would be
4 required. So we would be running new pole lines
5 on both sides of the street. That typically is
6 not an acceptable solution in most towns where
7 we'd be taking and adding potentially three
8 circuits or three pole lines along the same public
9 right-of-way. Very difficult to do. So we did
10 select an underground alternative for that.

11 MR. BERGAMO: Has Eversource been
12 replacing poles throughout the state?

13 THE WITNESS (Bowes): It's not a pole
14 issue. It's a pole line issue.

15 MR. BERGAMO: A pole line issue.

16 THE WITNESS (Bowes): We'd be having
17 three sets of poles on the same street.

18 MR. BERGAMO: Now, the town on page 11
19 of the report asked when documentation would be
20 provided supporting the details submitted in E-5.
21 Was that ever done, or was that done through
22 this -- I mean, it seems --

23 THE WITNESS (Bowes): There's six
24 paragraphs on this page. Is there anymore
25 specific or -- I can hunt for it.

1 MR. BERGAMO: I'll move on to the next
2 question.

3 On page 8 -- number 8, question number
4 8 --

5 THE WITNESS (Bowes): Okay. I have
6 number 8, yes.

7 MR. BERGAMO: -- of the report
8 pertaining to the analysis of potential
9 undercapacity problems, the town then requested a
10 listing of the capacity of all the feeders. That
11 was done; am I correct?

12 THE WITNESS (Bowes): Yes, OCC fourth
13 set of questions, Number 57, filed November 30th;
14 and 59, filed November 30th, detailed that.

15 MR. BERGAMO: And the solution on the
16 last paragraph on page 11 of the report talks
17 about adding additional capacity -- well, we went
18 through that.

19 On page 12 of the report the town makes
20 it very clear that they have disagreed that
21 there's any need and that the loading increase is
22 going to be by percentage each year 1 percent.

23 The town talks about their own efforts in
24 reducing -- conservation efforts, and they go into
25 a long explanation that they don't envision any

1 new residential commercial --

2 MS. BARBINO DUBUQUE: Mr. Chairman, I'm
3 going to object. Is there a question that's being
4 asked --

5 MR. BERGAMO: Yes.

6 MS. BARBINO DUBUQUE: -- or are you
7 just reading from the town's report? Because
8 that's already in evidence. And it's already as
9 an exhibit, for what it's worth.

10 MR. BERGAMO: I understand that, but to
11 make it easier for the witness to know exactly
12 what I'm talking about, I just wanted to clarify.
13 Now I have my question. I'm not going to -- just
14 move on.

15 Is it true that the consumer-generated
16 conservation efforts have begun to take effect,
17 actually begun to take effect in the Town of
18 Greenwich?

19 THE WITNESS (Bowes): I would say yes.
20 I mean, I think we've responded to the last set of
21 OCC interrogatories where we indicated the
22 participation rates from any towns of larger
23 energy users in the state, and Greenwich had lots
24 of opportunity to grow in that area.

25 MR. BERGAMO: Is it also not true that

1 greater efficient electrical devices and further
2 conservation efforts will further reduce any
3 potential increases?

4 THE WITNESS (Bowes): Yes, I believe
5 that the energy efficiency programs that we
6 promote do have a positive benefit for customers
7 and lower the overall usage and in some cases the
8 demand as well.

9 MR. BERGAMO: On page 12 of the report
10 the town points out that the town has installed a
11 solar system at the Greenwich High School. Is
12 that true, do you know?

13 MS. BARBINO DUBUQUE: Mr. Chairman, I
14 think the town already testified at the last
15 hearing as to all of the measures they undertook.
16 I don't think Eversource should be telling the
17 Council what measures the town undertook when it's
18 already in the record.

19 MR. BERGAMO: I'll rephrase the
20 question. Is Eversource aware of the continuing
21 efforts by the Town of Greenwich to improve their
22 own route system?

23 THE WITNESS (Bowes): Yes.

24 MR. BERGAMO: And you're aware -- is
25 everything that has been testified by the town is

1 Eversource aware of, other than these hearings?

2 THE WITNESS (Bowes): I'm going to have
3 to ask you to be a little more specific on that.
4 I'm not going to accept everything that they've
5 testified to.

6 MR. BERGAMO: So Eversource doesn't
7 have full knowledge of what the town is doing?

8 THE WITNESS (Bowes): For what?

9 MR. BERGAMO: To reduce their efforts
10 to reduce the energy consumption.

11 THE WITNESS (Bowes): So we clearly
12 know the programs that we sponsor and their
13 activity in that, whether they're the PV programs
14 for distributed generation, or whether they're the
15 energy efficiency programs. I do not know if
16 that's the totality of what they're doing.

17 MR. BERGAMO: That's all I need.

18 Now, when Eversource goes in to
19 actually make an application such as this, what
20 type of investigation does Eversource do to make a
21 determination from the various towns what their
22 own efforts have been as far as reducing energy,
23 getting off the grid, alternates, I mean, does
24 Eversource make an investigation in those
25 particular towns?

1 THE WITNESS (Bowes): Yes, we do. And
2 there's a lot of detail in the application about
3 the distributed generation within the town, the
4 energy efficiency, the ISO New England demand
5 response programs. So it's pretty detailed of
6 what the Town of Greenwich has done to minimize
7 their growth of electricity.

8 MR. BERGAMO: But you just testified --
9 let me move on.

10 THE WITNESS (Bowes): Again, those are
11 the programs that we sponsor and we --

12 MR. BERGAMO: But those aren't only the
13 programs that you sponsor, otherwise Eversource
14 does not go into a town, ask the town planner what
15 are you doing as far as your conservation efforts
16 are concerned, do you have any alternate energy
17 programs?

18 THE WITNESS (Bowes): Well, I would say
19 yes we do in that regard, and we try to make sure
20 if there's a program that matches what they're
21 doing, that they get the proper incentives for
22 that. So I would say there is interaction around
23 the electrical conservation programs that the town
24 has, but they may be doing other things beyond
25 electricity. For example, it could be water, it

1 could be other types of resources that they may be
2 working on.

3 MR. BERGAMO: Thank you. Now, in the
4 report it objects to the granting of an approval
5 by the Siting Council. Is there anything in there
6 that you contend that in their letters is not true
7 that you want to state?

8 THE WITNESS (Bowes): Yes, I think we
9 heard from the Town of Greenwich that this was not
10 a statement of expertise or a fact, but it was a
11 series of questions they were posing to
12 Eversource.

13 MR. BERGAMO: Now, moving on. On page
14 14 of that report, and this is -- actually we had
15 discussed this already.

16 Is it true that the population in
17 Greenwich is half that of Stamford?

18 THE CHAIRMAN: What's the question?

19 MR. BERGAMO: Is it not true that the
20 population of Greenwich, to your knowledge, is
21 about half that of Stamford?

22 THE WITNESS (Bowes): I certainly know
23 the electrical customers are approximately 50
24 percent of Stamford. So if that were to be
25 extrapolated, subject to check, I would agree it's

1 probably around 50 percent.

2 MR. BERGAMO: So Stamford's electrical
3 consumption is three times that of Greenwich; is
4 that true?

5 THE WITNESS (Bowes): I know we filed
6 that in this docket. I'm not sure that that was
7 accurate.

8 MR. BERGAMO: Is that --

9 THE WITNESS (Bowes): Hold on just a
10 second. I think we can find that.

11 MR. BERGAMO: I'm just suggesting. Is
12 that in E-4?

13 THE WITNESS (Bowes): I'm sorry?

14 MR. BERGAMO: Was it in E-4?

15 THE WITNESS (Bowes): It was a response
16 to one of the OCC questions.

17 MR. BERGAMO: Okay.

18 THE WITNESS (Bowes): Subject to check,
19 I believe it's about 60 percent higher. It's not
20 three times higher.

21 MR. BERGAMO: So you've used Stamford
22 as an argument for a new substation. Is that a
23 bad idea by using that as a comparison?

24 MS. BARBINO DUBUQUE: Can you repeat
25 the question?

1 MR. BERGAMO: You stated that the
2 population of Greenwich is about half that of
3 Stamford. Stamford's electrical consumption is
4 about three times that of Greenwich.

5 MS. BARBINO DUBUQUE: No, he just said
6 it was not three times.

7 MR. BERGAMO: Okay. Then I'm
8 corrected.

9 Now, on the bottom page 14 doesn't the
10 report make clear that the town has no plans to
11 upgrade or enlarge infrastructure to support any
12 major growth? This is the 11/23.

13 THE CHAIRMAN: I'm sorry, is that
14 testimony from the town or from Eversource?

15 MR. BERGAMO: This was in the report.

16 THE CHAIRMAN: Report of who?

17 MR. BERGAMO: Of the town.

18 THE CHAIRMAN: So why are you asking
19 Eversource?

20 MR. BERGAMO: I believe if they're
21 knowledgeable about that the town has no plans to
22 improve.

23 THE CHAIRMAN: Assuming the report is

24 --

25 MR. BERGAMO: Assuming the report is

1 true and accurate.

2 THE CHAIRMAN: I think we all agree
3 that the representatives of the Town of Greenwich
4 did an excellent job of presenting their case.

5 MR. BERGAMO: Now, the town in their
6 report -- and this is on the top of page 16 -- the
7 town made reference that the residential customers
8 would receive no benefit for a new bulk
9 substation. However, in your application E-3 it
10 says that it would greatly improve the reliability
11 of the entire electrical distribution in
12 Greenwich. Are you saying that it would actually
13 benefit the residential consumers in the town?

14 THE WITNESS (Bowes): Yes, it would.
15 I've detailed some of those benefits for both the
16 blue sky and catastrophic storm events.

17 MR. BERGAMO: Now, also on that same
18 page you point out in the application that -- or
19 they point out in the application should the need
20 arise that all of Greenwich allegedly be fed from
21 either the 135 MVA Cos Cob Substation or the new
22 134 MVA station, that by Eversource's prediction
23 in 2017 that Greenwich's power consumption would
24 exceed 135 MVA. If that's the case, then if the
25 total load were to exceed that amount, would

1 either Cos Cob or the new substation on its own
2 keep Greenwich energized?

3 THE WITNESS (Bowes): Could you go
4 through that again?

5 MR. BERGAMO: Okay. Should the need
6 arise that all of Greenwich can allegedly be fed
7 from either the 135 MVA Cos Cob Substation or the
8 new 134 MVA station, by your own prediction in
9 2017, Greenwich's power consumption is projected
10 to exceed the 130 MVA. If the total load were to
11 exceed that amount, would either Cos Cob or a new
12 substation just on its own keep Greenwich
13 energized?

14 THE WITNESS (Bowes): So I think the
15 question is is would either one of the
16 substations --

17 MR. BERGAMO: On their own.

18 THE WITNESS (Bowes): -- supply the
19 entire Greenwich town.

20 MR. BERGAMO: Right.

21 THE WITNESS (Bowes): It would not --
22 if it went above that, they would not be able to
23 do that by themselves. There are other ties --
24 you know, we talked about Tomac that does feed a
25 portion of Greenwich as well, and there's some

1 ties, a few customers that are fed from Stamford
2 into Greenwich, but in general I would agree that
3 I think the basis for your question is is that
4 either one of those two substations could not
5 serve 100 percent of the customers at the peak
6 load.

7 MR. BERGAMO: You'd have to tie into
8 another substation or another feeder.

9 THE WITNESS (Bowes): Or we'd have to
10 just take some other emergency measures to deal
11 with that situation.

12 MR. BERGAMO: Okay.

13 THE WITNESS (Bowes): So there's not
14 100 percent redundancy of peak.

15 MR. BERGAMO: Right. And we've talked
16 about lightning strikes on prior occasions and
17 that nobody can predict them. But can we agree
18 that a new substation is not going to protect any
19 feeders whatsoever if there's a lightning strike,
20 it's something that this would not take care of?

21 THE WITNESS (Bowes): I'm hesitating
22 because the protective features inside the
23 substation do also protect the distribution
24 feeders, but if you're saying a lightning strike
25 on an overhead circuit a few miles from the

1 substation, a new substation is going to have
2 little impact on the system performance for that.
3 But a close in strike, in this case the close in
4 feeders will come out underground, so there's
5 significant lightning protection for those feeders
6 in the first few hundred feet from the substation,
7 and it will also benefit from the protection
8 systems inside the substation for a short distance
9 outside of the substation.

10 MR. BERGAMO: Now, the customers that
11 are fed from the North Greenwich Substation, would
12 the proposed new \$140 million substation do
13 anything for the people in that area? I mean, how
14 is this new substation going to affect the people
15 in the North Greenwich area?

16 THE WITNESS (Bowes): So there will be
17 automatic ties between the new Greenwich
18 Substation and the North Greenwich Substation. So
19 most of the feeders from North Greenwich will be
20 backed up by the new Greenwich Substation.

21 MR. BERGAMO: So it's going to act as
22 an additional backup to --

23 THE WITNESS: To North Greenwich, yes.

24 MR. BERGAMO: As well as Cos Cob?

25 THE WITNESS (Bowes): As well as Cos

1 Cob, yes.

2 MR. BERGAMO: Now, the town had pointed
3 out on the top of page 18 of that report that
4 they're constantly plagued by storm-related power
5 interruptions. But you testified that the
6 substation is not going to improve any reliability
7 except if the power station itself got struck. Is
8 that correct?

9 THE WITNESS (Boves): No, that's not
10 what I said. I said it enables the distribution
11 system to back itself up between, as we just
12 discussed, both North Greenwich and Cos Cob. It
13 allows us to resupply those customers from the new
14 Greenwich Substation. And as part of this project
15 we are putting in I think in the last part of the
16 sentence additional reclosers, more effective
17 sectionalization. And although there's not a lot
18 of undergrounding as part of this project, other
19 than the distribution feeders that exit the
20 substation, it's probably the only area where
21 there are additional opportunities that wouldn't
22 benefit directly from this project.

23 MR. BERGAMO: That was my next question
24 too. So you're saying is that there's a portion
25 of this 140 million that's being spent is going

1 into additional reclosers, more effective circuit
2 sectionalizing and undergrounding of existing
3 overhead?

4 THE WITNESS (Bowes): The first two,
5 not the third. There's no additional
6 undergrounding of existing overhead.

7 MR. BERGAMO: Is there any storm
8 hardening that's part of that cost?

9 THE WITNESS (Bowes): So the same type
10 of investments around reclosers and sectionalizing
11 is part of our storm hardening program. It's
12 being funded as part of this substation upgrade to
13 interconnect the substation. So the same
14 techniques and equipment are used, but it's not
15 technically storm hardening. The same
16 methodology, same practices and same benefits will
17 result.

18 MR. BERGAMO: Now, on the bottom of
19 page 20 of the report the town thought it was an
20 exaggeration to state that without a new
21 substation, reliable, consistent electrical
22 service would severely jeopardize them in the
23 immediate future?

24 THE WITNESS (Bowes): So my page 20 is
25 about horizontal direction --

1 MR. BERGAMO: It's toward the bottom of
2 page 20.

3 THE WITNESS (Bowes): I've got it.
4 Here it is. Well, I think that's a question for
5 us, right?

6 MR. BERGAMO: The question is, I mean,
7 a new substation is not -- is a new substation
8 vitally important to this project, or is it just
9 moreover a backup for overall reliability?

10 THE WITNESS (Bowes): No, I would say
11 it's vitally important.

12 MR. BERGAMO: How would you
13 characterize "vitally important"?

14 THE WITNESS (Bowes): Greenwich is the
15 only town we serve in the last five years where
16 we've had to shed customer load during peak
17 conditions. So of the 149 towns we serve for over
18 five years, it's the only place we've had to do
19 this because the capacity was not available and
20 the cascading distribution failures on the
21 underground we could not control otherwise.

22 MR. BERGAMO: Is this related to
23 distribution or the amount of power coming in?

24 THE WITNESS (Bowes): It's related to
25 the distribution system at that time.

1 MR. BERGAMO: So there are other
2 distribution methods that you discussed throughout
3 this application as well. This is just the --

4 THE WITNESS (Bowes): But they are not
5 viable without the new Greenwich Substation. They
6 cannot be implemented without a second source in
7 Greenwich.

8 MR. BERGAMO: I thought -- so that's
9 Eversource's stance, you cannot have an upgrade
10 without the substation?

11 THE WITNESS (Bowes): We can't achieve
12 the benefits that I described before backing up
13 customers from North Greenwich or from Cos Cob in
14 the method that we proposed, that is correct, we
15 cannot do that through another means.

16 MR. BERGAMO: But there could be other
17 means; am I correct?

18 THE WITNESS (Bowes): We listed a host
19 of them in the alternative section of this
20 application. None of those alternatives have come
21 forward.

22 MR. BERGAMO: On page 22 of the report
23 the town also pointed out the application was
24 silent on detection and responses to a breach in
25 either piping -- dealing with either piping

1 housing the cables or fluid return. Did you
2 discuss that or mention that in any of your
3 submitted exhibits?

4 THE WITNESS (Bowes): So yes, in our
5 second -- I believe it was the second supplemental
6 prefile testimony or testimony in the case, pages
7 13 and 14, we discussed that.

8 MR. BERGAMO: Okay. That's pretty much
9 all of the questions I have.

10 THE CHAIRMAN: Okay.

11 MR. BERGAMO: I just have a question of
12 the Council. There were two letters that were
13 submitted by, number one, the state -- or actually
14 federal, Senator Richard Blumenthal, and the
15 Attorney General. Are those exhibits? Are
16 they part of the record?

17 THE CHAIRMAN: They're part of the
18 record.

19 MR. BERGAMO: Thank you.

20 THE CHAIRMAN: We have a stack of
21 letters this high, if you'd like us to put those
22 on the top --

23 MR. BERGAMO: Thank you very much.

24 MS. BARBINO DUBUQUE: Excuse me, Mr.
25 Chairman. We do have the information on the

1 distances from Cos Cob Substation. Mr. Libertine
2 is prepared to give you those, if you would like
3 to hear them?

4 THE CHAIRMAN: Yes, please.

5 THE WITNESS (Libertine): These are as
6 the crow flies and approximately in miles. So
7 from Cos Cob beginning to Byram Substation in
8 Greenwich, that's approximately three miles. From
9 Cos Cob to Prospect is 1.9. Cos Cob to Mianus
10 Substation, 1.1 miles. Cos Cob to Tomac
11 Substation, approximately 1.8 miles. And Cos Cob
12 to the North Greenwich Substation, about 5.3
13 miles. There are also four substations listed on
14 that list in Stamford. I can provide those
15 distances to complete the record.

16 From Cos Cob to the Southend Substation
17 in Stamford is approximately 3.4 miles. Cos Cob
18 to Glenbrook Substation, 4.6. Cos Cob to Cedar
19 Heights, 5.8 miles. And Cos Cob to Waterside,
20 approximately 2.3 miles.

21 THE CHAIRMAN: Thank you.

22 THE WITNESS (Libertine): You're
23 welcome.

24 THE CHAIRMAN: We're going to take a
25 break now. We'll resume at 3 o'clock.

1 (Whereupon, a recess was taken from
2 2:46 p.m. until 3:01 p.m.)

3 THE CHAIRMAN: I'd like to call the
4 meeting back to order of the Siting Council on
5 Docket 461. The next party for cross-examination
6 is Field Point Estate Townhouses.

7 (No response.)

8 THE CHAIRMAN: Christine Edwards?

9 MS. EDWARDS: Yes. Where do you want
10 me to sit?

11 THE CHAIRMAN: You have a big choice.

12 MS. EDWARDS: Thank you very much. I'm
13 Christine Edwards. And one of the questions that
14 I have, which really gets to me to the heart of
15 the matter, because we're looking at usage. And
16 with regard to the usage we're told we need to
17 have this extra capacity for the distribution.
18 However, it has been brought up in many of the
19 different dockets --

20 THE CHAIRMAN: I would, as I've done in
21 the past, ask you not to make statements, but to
22 ask questions.

23 MS. EDWARDS: Oh, I'm sorry. I always
24 want to prepare it.

25 THE CHAIRMAN: I know what you want to

1 do.

2 MS. EDWARDS: Thank you.

3 With your Cos Cob Station you made an
4 accommodation to Metro-North so that they could be
5 using the electricity from there. That had come
6 up in some discussions. How much of a percentage
7 of the usage of the Cos Cob Station is enjoyed by
8 Metro-North?

9 THE WITNESS (Bowes): So just to be
10 clear, you're asking the property allocation?

11 MS. EDWARDS: No, because they're using
12 it for their electrical usage.

13 THE WITNESS (Bowes): So you're asking
14 how much electricity?

15 MS. EDWARDS: How much of a percentage
16 of the use of that particular facility is used by
17 Metro-North?

18 THE WITNESS (Bowes): So they take
19 transmission level service at 115 kV, but it's
20 approximately 10 percent.

21 MS. EDWARDS: Only 10 percent. Could
22 that be shifted over to a Stamford station so that
23 we could open up more capacity for the kV usage?

24 THE WITNESS (Bowes): I don't believe
25 the technology of it -- the technical feasibility

1 of that is possible for --

2 MS. EDWARDS: But it could be something
3 that you could look into because 10 percent would
4 give us many years before we have to -- at a
5 growth rate of, you know, almost static right now
6 and increasing the efficiencies.

7 THE WITNESS (Bowes): So again, the
8 sovereign would have to agree to vacate the
9 property.

10 MS. EDWARDS: I'm not talking about
11 vacating. I'm talking about usage. It's a
12 question of where you put the switch. So instead
13 of having the switch in the usage and power
14 distribution for Cos Cob, that could be shifted
15 onto Stamford and therefore give us much greater
16 use and capacity for the distribution from Cos Cob
17 and alleviate any problem that we would have to
18 even build the Prospect.

19 MS. BARBINO DUBUQUE: Mr. Chairman, I
20 think the witness already answered that it could
21 not be shifted to Stamford.

22 MS. EDWARDS: I don't think it was an
23 answer. It was more of a maybe.

24 THE CHAIRMAN: Would you then reiterate
25 your answer?

1 THE WITNESS (Bowes): So again, I don't
2 believe it's technically possible for the load for
3 Metro-North to be shifted to a Stamford
4 Substation, Stamford Metro-North location.

5 MS. EDWARDS: So what I understand with
6 your answer is it's a possibility because it's not
7 a definite no, it's just an open-ended comment --

8 THE CHAIRMAN: I'm sorry --

9 MS. EDWARDS: But that is an open-ended
10 comment.

11 THE CHAIRMAN: -- it's his answer. You
12 can, if you decide to write a brief, you can say
13 anything you want, but right now the answer has
14 been given, and if you have more questions, please
15 ask more questions.

16 MS. EDWARDS: Just as a comment from
17 your question, so I could still write a brief that
18 would be acceptable for the --

19 THE CHAIRMAN: Everybody can write a
20 brief.

21 MS. EDWARDS: And it would be able to
22 be put into looking here?

23 THE CHAIRMAN: If and when before the
24 hour of midnight I get a chance to close the
25 hearing, and I'm not sure what day, month or year

1 that will be, I think if you can wait until then,
2 you will get an answer to that question.

3 MS. EDWARDS: Thank you very much. I
4 really appreciate that.

5 THE CHAIRMAN: Let them answer the
6 question. If you don't like the answer, that's
7 too bad. That's their answer. You will have a
8 chance to brief. My only comment was on that
9 question, and it's really not a question, but I
10 just can't resist, is there any way that
11 Metro-North could maybe terminate, stopping in
12 Greenwich, and just go straight through and maybe
13 then -- but nobody has to answer that question. I
14 can't resist. That's not a question for you.
15 That's the Chair's prerogative. So at this point
16 if you have anymore questions, please ask them as
17 questions. Thank you.

18 MS. EDWARDS: Thank you very much.

19 The other question I had regarding the
20 usage of Cos Cob because this is really -- as I
21 understand it, and I'm asking you this question,
22 you feel that there's not enough space there to
23 expand, or there really isn't any space, is there
24 the possibility of using more of the space in the
25 Cos Cob location to be able to expand in such a

1 way that we don't need to build another station?

2 THE WITNESS (Bowes): Again, the state
3 has not allowed us to expand into their area. The
4 town has indicated their answer was no to expand
5 onto the town park area. So we looked at an
6 alternative that was to purchase an additional
7 piece of property adjacent to Cos Cob Substation,
8 and that is the distribution alternative in the
9 application.

10 So yes, there is a viable alternative
11 to do something at the Cos Cob location. It would
12 require new land acquisition, and it is more
13 costly than the existing project with not quite
14 the same level of benefit.

15 MS. EDWARDS: But it could be done?

16 THE WITNESS (Bowes): Yes, it could.

17 MS. EDWARDS: And therefore you could
18 keep that particular space available for
19 expansion. Thank you very much.

20 THE WITNESS (Bowes): I'm not sure -- I
21 think the answer to the last -- well, it wasn't a
22 question -- was that we would build a new
23 substation adjacent to the existing Cos Cob
24 Substation. That's the alternative that's in the
25 application. That's what I testified to.

1 MS. EDWARDS: I'm sorry, I guess I'm
2 seeing that as expansion rather than because it's
3 just taking what is there now and expanding it.
4 Is that correct?

5 THE WITNESS (Bowes): No, it's a new
6 substation in a property adjacent to Cos Cob.
7 That's the viable alternative.

8 MS. EDWARDS: Okay. Thank you.

9 THE CHAIRMAN: Okay. Richard Granoff?
10 (No response.)

11 THE CHAIRMAN: The grouped intervenors,
12 again, Bella Nonna Restaurant, Greenwich
13 Chiropractic, Mr. Berger and Ms. Glass?

14 (No response.)

15 THE CHAIRMAN: Cecilia Morgan?

16 MS. MORGAN: Thank you for this
17 opportunity. I wanted to ask Eversource if you
18 are aware and have you read at any point during
19 your research on this the deed from Sarah Bruce
20 devised under the last will and testament of
21 Robert M. Bruce to the Town of Greenwich, dated
22 October 19, 1909, and recorded October 30, 1909,
23 in Volume 123 at page 165 of the Greenwich land
24 records?

25 MS. BARBINO DUBUQUE: Mr. Chairman, I

1 don't believe that document is in the record.

2 MS. MORGAN: I know, that's why I was
3 wondering if that had been --

4 THE CHAIRMAN: It has not been put into
5 the record.

6 MS. MORGAN: Okay. I don't know
7 whether the town has put that into the records or
8 not.

9 Anyway, part of it states that --

10 THE CHAIRMAN: We can't really, if it's
11 not in the record --

12 MS. MORGAN: I'm surprised that the --

13 THE CHAIRMAN: Well, you can be
14 surprised. This is the sixth hearing. So you've
15 had --

16 MS. MORGAN: Well, no, I didn't know if
17 anyone had researched Bruce Park to know what the
18 history of it was, in which case this would be --

19 THE CHAIRMAN: We had a whole
20 discussion about Bruce Park, and there's now an
21 alternative on the table, so you really --

22 MS. MORGAN: Well, we're still talking
23 about Bruce Park because I live on Kinsman Lane,
24 and they're still talking about Kinsman Lane as a
25 possible area for this.

1 THE CHAIRMAN: But if you have a
2 specific question but --

3 MS. MORGAN: My question was were they
4 aware of this deed and what it states about Bruce
5 Park.

6 THE CHAIRMAN: Why don't you just
7 answer it.

8 MS. BARBINO DUBUQUE: Well, the
9 document isn't in the record, so Mr. Bowes can
10 answer the question.

11 THE WITNESS (Bowes): I do not have any
12 knowledge of the document you're talking about.

13 MS. MORGAN: Well, the document says it
14 said park premises should be kept in a good state
15 of preservation for the use of the public and
16 shall keep all other buildings on said premises --

17 MS. BARBINO DUBUQUE: Mr. Chairman,
18 that's testimony, the requirements --

19 MS. MORGAN: It's just reading from a
20 document. Okay. That's all I have to say. I
21 just wondered if you were aware of the document
22 regarding Bruce Park, and you're saying that in
23 fact no you are not. That is correct, yes?

24 THE WITNESS (Bowes): Yes, that's what
25 I said.

1 MS. MORGAN: That was my question, are
2 you aware of it.

3 MS. BARBINO DUBUQUE: I think Mr. Bowes
4 indicated he was not aware of it.

5 MS. MORGAN: That's fine. That's all I
6 needed to know.

7 Also, is the Siting Council in receipt
8 of the letter from Senator Scott Frantz yesterday?
9 It has been sent to you. So I just found it.
10 Okay. Thank you.

11 THE CHAIRMAN: We're trying to keep up,
12 but people seem to have a --

13 MS. MORGAN: I know it's hard.

14 THE CHAIRMAN: -- habit of waiting
15 until the last minute to submit objections and
16 submit letters. And they've had ample time.

17 Town of Greenwich, your opportunity.

18 MS. KOHLER: Good afternoon, Julie
19 Kohler from Cohen and Wolf representing the Town
20 of Greenwich. Also with me is David Ball.

21 Just for the Council's clarification,
22 the deed that she referred to actually is in the
23 record. It's attached to the November 23rd filing
24 of the Town of Greenwich.

25 MR. BALL: David Ball. Good afternoon.

1 Town of Greenwich.

2 THE CHAIRMAN: Good afternoon.

3 MR. BALL: I would like to ask a couple
4 of questions about some of the tables in the
5 application and OCC's Table E-5. And if I may, if
6 I could just direct your attention to Table E-1 in
7 your application.

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

9 MR. BALL: Thank you. So obviously
10 among the grounds that you cite for the need for a
11 new transmission line for this project are the
12 projections as to the overloading of transformers
13 at Cos Cob. And that's depicted in Table E-1. Is
14 that accurate?

15 THE WITNESS (Bowes): No. The question
16 you asked was around the need for the transmission
17 lines, and that is not accurate.

18 MR. BALL: Okay. So the need for this
19 project is in part, is it not, based on your
20 projections that are depicted in Table E-1?

21 THE WITNESS (Bowes): Yes, it is.

22 MR. BALL: Thank you. And just so
23 we're clear, 2013 shows the actual MVA peak load
24 of 130.5, that's on the Cos Cob transformers,
25 right?

1 THE WITNESS (Bowes): Yes.

2 MR. BALL: That's actual data?

3 THE WITNESS (Bowes): Yes.

4 MR. BALL: And 2014 and 2015, I think
5 has been stated before, those are projected
6 figures, right?

7 THE WITNESS (Bowes): Correct.

8 MR. BALL: You didn't look at actual
9 peak load in 2014 or 2015 in this table?

10 THE WITNESS (Bowes): That is correct,
11 in this table.

12 MR. BALL: Now, if we look at the table
13 you project for 2014, a peak load level of 131.8
14 MVA for the Cos Cob transformers, right?

15 THE WITNESS (Bowes): Yes.

16 MR. BALL: And we know from your
17 response to OCC-22 that the actual peak load level
18 in 2014 was 107.7 MVA, right?

19 THE WITNESS (Bowes): Subject to check,
20 yes.

21 MR. BALL: So it's fair to say that
22 what you depicted in Table E-1 overprojected the
23 peak load on the Cos Cob transformers for 2014 by
24 24.1 MVA. Correct?

25 THE WITNESS (Bowes): Subject to math

1 check, yes.

2 MR. BALL: And in 2015, Table E-1 shows
3 a projection of 133.1 MVA for the Cos Cob
4 transformers, that's a projection, right?

5 THE WITNESS (Bowes): Yes.

6 MR. BALL: And we know from your
7 response to OCC-22 that the actual peak load for
8 the transformers at Cos Cob in 2015 was 114.8 MVA,
9 correct?

10 THE WITNESS (Bowes): Yes.

11 MR. BALL: So for 2015 you've
12 overprojected by 18.3 MVA; is that right?

13 THE WITNESS (Bowes): Yes. And I have
14 verified OCC-22. Those numbers are accurate.

15 MR. BALL: Thank you. My math is
16 correct, right?

17 THE WITNESS (Bowes): Yes, it is.

18 MR. BALL: Let's take a quick look, if
19 we could, at Table E-2.

20 Let me take a step back. One of the
21 issues that you raised with upgrading the
22 transformers at Cos Cob is that it would not
23 address the potential for overloads on the
24 Prospect Substation transformers. Isn't that one
25 of the points you made?

1 THE WITNESS (Bowes): Yes.

2 MR. BALL: So let's take a look at
3 Table E-2, which shows your projections for
4 Prospect Substation. Let me know when you're
5 ready.

6 THE WITNESS (Bowes): I'm ready.

7 MR. BALL: Okay. So for 2013 we see
8 actual peak load of 51.2 MVA. I got that right?

9 THE WITNESS (Bowes): Correct.

10 MR. BALL: And that's actual data?

11 THE WITNESS (Bowes): Yes.

12 MR. BALL: And then 2014 you've
13 projected 51.7 MVA for the Prospect transformers,
14 right?

15 THE WITNESS (Bowes): Yes.

16 MR. BALL: But that's not actual,
17 that's a projection?

18 THE WITNESS (Bowes): That is correct.

19 MR. BALL: And you projected for 2015
20 52.2 MVA, right?

21 THE WITNESS (Bowes): That is correct.

22 MR. BALL: So now if we take a look at
23 the actual peak load levels for the Prospect
24 transformers. And I'll refer you to OCC-49.

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

1 MR. BALL: So the actual peak load
2 level for the Prospect transformers in 2014 is 44
3 MVA. Do I have that right?

4 THE WITNESS (Bowes): That is correct.

5 MR. BALL: And then it's fair to say
6 that you have overprojected in Table E-2 for 2014
7 by 7.7 MVA for the Prospect transformers, right?

8 THE WITNESS (Bowes): Yes.

9 THE CHAIRMAN: I have a follow-up
10 question. Peak load, are they due to
11 weather-related, or are they just totally random
12 and --

13 THE WITNESS (Bowes): So it mirrors
14 both the ISO New England load and Connecticut load
15 and the Southwest Connecticut load pocket. So all
16 those loads were down approximately the same
17 percentage in 2014 and 2015. So clearly it was
18 not just the economic issue, it was related to
19 weather.

20 THE CHAIRMAN: Thank you.

21 MR. BALL: And just sticking with 2015,
22 Mr. Bowes, if I may, the actual peak load level
23 for the Prospect transformers was 47 MVA, correct?

24 THE WITNESS (Bowes): That is correct.

25 MR. BALL: So in Table E-2 where you

1 projected 52.2, you overprojected for 2015 by 5.2
2 MVA for the Prospect transformers, right?

3 THE WITNESS (Bowes): That is correct.

4 MR. BALL: I assume you used the same
5 projection methodology in Table E-1 as Table E-2?

6 THE WITNESS (Bowes): Yes, we did.

7 MR. BALL: In both instances you took
8 the 2013 peak load data and projected forward from
9 that. Is that right?

10 THE WITNESS (Bowes): That is correct.

11 MR. BALL: And in both instances you
12 did not include actual load data from 2014 or 2015
13 in those tables, right?

14 THE WITNESS (Bowes): And the reason
15 being they weren't available at that time.

16 MR. BALL: Understood. They're
17 available now though, right?

18 THE WITNESS (Bowes): They are.

19 MR. BALL: You haven't updated or
20 revised these projections, have you?

21 THE WITNESS (Bowes): We have not.

22 MR. BALL: Let's take a look at, if I
23 could real quick, what we looked at at the
24 beginning of this hearing today which is OCC's
25 Table E-5.

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

2 MR. BALL: Now, I think it's -- you
3 would agree that what OCC is depicting here is
4 that once the new Greenwich Substation is
5 constructed, that even accepting your projections,
6 there would be overcapacity in 2018; you would
7 agree with the chart, right?

8 THE WITNESS (Bowes): So overcapacity,
9 yes. I do not agree with the chart.

10 MR. BALL: But you agree at least that
11 that in 2018 if the new Greenwich Substation is
12 constructed, there would be overcapacity, correct?

13 THE WITNESS (Bowes): Which would
14 allow us -- yes, which would allow us to serve the
15 load --

16 MR. BALL: I'm sure you have an
17 explanation. I'm just asking real simple yes/no
18 questions.

19 And you would agree that based on your
20 projections in 2018, the overcapacity would be
21 131.8 MVA, right?

22 THE WITNESS (Bowes): I do not.

23 MR. BALL: All right. Well, isn't it
24 fair to say that if in fact you have
25 overprojected, that the overcapacity will be even

1 greater in 2018; isn't that accurate?

2 THE WITNESS (Bowes): It is not.

3 MR. BALL: Your projections for 2014
4 peak load data were overprojected compared to what
5 the actual data showed for Cos Cob and Prospect.
6 Right?

7 THE WITNESS (Bowes): Yes.

8 MR. BALL: And similarly for 2015 you
9 overprojected?

10 THE WITNESS (Bowes): Yes.

11 MR. BALL: So to the extent that you
12 are now constructing a new substation with
13 additional capacity, you've already said there
14 will be overcapacity, if you overproject the
15 capacity, the overcapacity is even greater. Isn't
16 that right?

17 THE WITNESS (Bowes): So I'll refer you
18 to OCC-81. I'll wait for you to get that. So
19 OCC-81 indicates that 80 MVA of transformation
20 will be retired as part of this project.

21 MR. BALL: So you don't accept
22 necessarily the figures that OCC has summarized in
23 this table, I understand that, right?

24 THE WITNESS (Bowes): Well, they're
25 incorrect by 80 MVA.

1 MR. BALL: I understand. But the
2 overcapacity is still there, correct? Even with
3 the retirement of 80 MVA, there is still an
4 overcapacity after you construct the Greenwich
5 Substation, right?

6 THE WITNESS (Bowes): But will be used
7 upon contingency. So overcapacity under normal
8 conditions, yes, but not on contingency.

9 MR. BALL: Okay. Again, not a trick
10 question. I understand that you're retiring 80
11 MVA, that that extent of capacity will be retired.
12 But nevertheless, even with that, once you
13 construct the Greenwich Substation let's say in
14 2018, there is going to be overcapacity on the
15 transformers?

16 THE WITNESS (Bowes): With all lines in
17 service and all transformers in service, yes.

18 MR. BALL: And if you have
19 overprojected for 2018, that overcapacity is even
20 greater, right?

21 THE WITNESS (Bowes): Less the 80 MVA.

22 MR. BALL: That's what I'm asking.

23 THE WITNESS (Bowes): That is correct.
24 Or it could be much less if a contingency were to
25 occur or a very hot summer were to occur.

1 MR. BALL: Okay. Let me shift topics.
2 There was just now some questioning about the room
3 at Cos Cob for it sounded like for a new
4 substation. Is that what you were referring to
5 when you said you would need more land on Cos Cob
6 Park?

7 THE WITNESS (Bowes): Correct.

8 MR. BALL: So put aside the potential
9 for a new substation. To upgrade the transformers
10 at Cos Cob, let's just assume we're talking about
11 that, you wouldn't need that much room, you
12 wouldn't need a new substation. Right?

13 THE WITNESS (Bowes): We would need
14 additional space at Cos Cob.

15 MR. BALL: Okay. But that's different
16 than a new substation just for the record?

17 THE WITNESS (Bowes): I was trying to
18 equate what's in the application as the
19 distribution alternative which satisfies all the
20 needs that we proposed in the application. So if
21 you're asking for a partial benefit or a partial
22 solution to the problem, Cos Cob expansion could
23 solve a portion of that.

24 MR. BALL: I was just focused on the
25 Cos Cob, the existing substation, and the

1 potential for upgrading the current transformers
2 there without the need for construction of a new
3 substation. That was my question. You would not
4 need as much land in Cos Cob Park, for instance?

5 THE WITNESS (Bowes): That is correct.

6 MR. BALL: Thank you.

7 I'm going to shift gears to the, if I
8 can, LFE-3, which was your submission as to the
9 Metro-North Railroad option.

10 THE WITNESS (Bowes): That was
11 Late-File 003?

12 MR. BALL: Yes.

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

14 MR. BALL: Earlier there was some
15 questioning about the town's position. You said
16 the town supports the Metro-North Railroad
17 corridor option. Just for the record, you
18 understand the town has questioned the need for
19 the project, right?

20 THE WITNESS (Bowes): Yes, I understand
21 that.

22 MR. BALL: So the town's support for
23 this option is premised on your ability to have
24 met your burden of establishing need. You
25 understand that's the town's position, right?

1 THE WITNESS (Bowes): I think I do now,
2 yes.

3 MR. BALL: That's what the town has
4 stated, in fact, in its interrogatories responses
5 that if the need has been demonstrated, then the
6 town would support the Metro-North Railroad
7 option, right?

8 THE WITNESS (Bowes): I believe that's
9 what they've said recently, yes.

10 MR. BALL: So let's take a look at
11 LFE-3, which is that route, the Metro-North
12 Railroad route, and I want to just focus for a
13 minute -- I'm actually looking at this color-coded
14 chart that you prepared, which shows the four
15 segments, part of LF-3. Do you see that?

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

18 MR. BALL: So I just wanted to ask you
19 a couple of questions about Segment 2 because it
20 looked like you had three variations there. So
21 the green line is a route that would go north of
22 the railroad track but overhead. Am I right?
23 That's 2A.

24 THE WITNESS (Bowes): Yes.

25 MR. BALL: And the blue line would be

1 the route south of the railroad tracks, also
2 overhead?

3 THE WITNESS (Bowes): Yes.

4 MR. BALL: And that's 2B, right?

5 THE WITNESS (Bowes): Yes.

6 MR. BALL: And 2C, which is the pink
7 line, is the underground route that would go
8 beneath Circle Drive?

9 THE WITNESS (Bowes): That is correct.

10 MR. BALL: I got it right. Okay.

11 Now, if the Siting Council approves
12 your project and orders the construction of the
13 transmission line along the Metro-North Railroad
14 corridor, it's fair to say you would be able to
15 construct the line along any of these three routes
16 depicted. Is that right?

17 THE WITNESS (Bowes): Yes, it is.

18 MR. BALL: And regardless of which of
19 those three options in Segment 2 was approved, in
20 each case the line would be reliable. Is that
21 accurate?

22 THE WITNESS (Bowes): That is correct.

23 MR. BALL: And regardless of which of
24 those three 2A, 2B, 2C, which of those options
25 might be chosen, in each instance there would be a

1 cost savings compared to the preferred route in
2 your application. Right?

3 THE WITNESS (Bowes): That is correct.

4 MR. BALL: And forgive me if you have
5 already testified to this, but regardless of which
6 of those three variations might be approved, in
7 each case you would be able to meet the same
8 deadline for construction as you would if it had
9 been the preferred route in your application?

10 THE WITNESS (Bowes): Yes, I believe we
11 can.

12 MR. BALL: Just focusing on Segment 2
13 and option or variation 2B, which is south of the
14 railroad tracks, right, and overhead?

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

16 MR. BALL: Now you're aware that the
17 town has an existing sewer main that's right
18 there, you heard the testimony at the last
19 hearing?

20 THE WITNESS (Bowes): Yes, I did.

21 MR. BALL: Okay. And can you describe
22 what understanding you have as to that sewer main,
23 how would you describe it?

24 THE WITNESS (Bowes): It's a
25 longitudinal underground sewer main that runs

1 along the Metro-North Railroad tracks.

2 MR. BALL: And tell me if you're aware
3 that this particular main conveys flow from Old
4 Greenwich and Riverside and Cos Cob and the North
5 Mianus areas. Are you aware of that?

6 THE WITNESS (Bowes): Generally, yes.

7 MR. BALL: And you're aware that the
8 town is currently under a federal consent decree
9 to replace and upgrade that force main, right?

10 THE WITNESS (Bowes): Yes, I am.

11 MR. BALL: So if the Council approves
12 your transmission line choosing variation 2B and
13 requires overhead poles to the south of the
14 railroad track, would you be able to construct the
15 poles and construct the line in a way that would
16 allow the town to replace and upgrade its force
17 mains in accordance with the Federal Consent
18 Decree?

19 THE WITNESS (Bowes): Yes, we could.

20 MR. BALL: Can you describe?

21 THE WITNESS (Bowes): We would
22 coordinate our construction schedules with the
23 Town of Greenwich and Metro-North to make sure any
24 upgrades for any of the three entities could
25 proceed and in a coordinated fashion so that a

1 safe and reliable sewer system, rail system and
2 electric system were built.

3 MR. BALL: And would you also be able
4 to construct the line to ensure that in the
5 future, to the extent the town needs access to the
6 force mains and needs to perform work on the
7 mains, that it will be able to do so even with the
8 construction of the transmission line?

9 THE WITNESS (Bowes): Yes, we could.

10 MR. BALL: I assume this is not the
11 first project that you've had where you've had to
12 deal with sewer mains or water mains?

13 THE WITNESS (Bowes): That is correct.
14 It's a fairly routine activity across the
15 Eversource companies.

16 MR. BALL: And, in general, can you
17 testify how you would operate in conjunction with
18 the town going forward? Assuming the line is
19 approved overhead along variation 2B, how would
20 you work in the future after approval from the
21 Siting Council to make sure that the town's needs
22 with respect to its force main are met?

23 THE WITNESS (Bowes): So obviously we
24 would coordinate construction activities in major
25 projects between the two entities. We do that

1 today. We have a long history of working with the
2 municipalities in the State of Connecticut on
3 project coordination. And it involves both notice
4 to each other. It involves joint construction
5 meetings. It involves joint engineering approval.
6 So many facets of it which we routinely do,
7 whether it's a gas company, whether it's a water
8 company, whether it's a sewer entity or a rail
9 system. So it's part of our routine business.
10 And we work with multiple utilities every day in
11 this type of endeavor.

12 MR. BALL: And you would do that with
13 Greenwich in this case as well if ordered to
14 construct the line along variation 2B?

15 THE WITNESS (Bowes): Yes, we would.

16 MR. BALL: Have you ever had a
17 situation where the Siting Council ordered the
18 siting of a line that coincided with a sewer line
19 or a water line and you came back and you said,
20 sorry, we can't construct the line?

21 THE WITNESS (Bowes): So I would say we
22 probably had through the D&M plan process, as
23 engineering has advanced, we've had issues where
24 we could not construct the line exactly as
25 described in the application.

1 MR. BALL: All right.

2 THE WITNESS (Bowes): There is a
3 process that we can go through to work with both
4 entities, the Siting Council and the town, to
5 mitigate any impacts that we discover during the
6 future engineering or even during construction.

7 MR. BALL: In this instance I assume in
8 preparing LFE-3, which included variation 2B along
9 the south of the railroad track, I assume you had
10 had some review of the existing force mains with
11 the Town of Greenwich?

12 THE WITNESS (Gardell): I had a short
13 conversation with Rich Feminella, and I was told
14 that the new force main was going to be installed
15 south of the old force main, and there was a good
16 chance that the old force main was going to be
17 removed.

18 MR. BALL: Well, again, my question is
19 perhaps a more general one which is, before you
20 submitted LFE-3 as a proposal to the Siting
21 Council, were you comfortable that you would be
22 able to construct a transmission line along
23 variation 2B, taking into account the needed work
24 on the force main?

25 THE WITNESS (Bowes): That is accurate,

1 yes.

2 MR. BALL: So if the Siting Council
3 approves the transmission line along the
4 Metro-North Railroad corridor and variation 2B to
5 the south of the railroad tracks, is it fair to
6 say that you're not going to be coming back to the
7 Siting Council after the D&M phase to say, sorry,
8 we can't build this line, we need to go back
9 through Bruce Park? You would not be doing that?

10 THE WITNESS (Bowes): We would not. We
11 would accommodate the field conditions that were
12 found in some other manner, but we would not be
13 changing the entire project to go through Bruce
14 Park.

15 MR. BALL: Thank you.

16 I want to -- one small additional
17 point, if I could, related to LFE-3. And
18 actually it might -- and it relates to Segment 4.
19 So Segment 4 is where at the very end of the line
20 you would propose to bury the line, the
21 transmission line, into the new substation. Is
22 that right?

23 THE WITNESS (Bowes): That is correct.

24 MR. BALL: Now, the conversion from the
25 point where the line is overhead to underground, I

1 assume there's -- well, let me ask you. Have you
2 depicted the poles that would be in place at that
3 point where it goes from overhead to underground?
4 And I can refer you to LF-25, if that helps.

5 THE WITNESS (Bowes): Yes, we have.

6 MR. BALL: If you would, with LF-25, I
7 just wanted to ask you a question.

8 THE WITNESS (Bowes): It's actually on
9 page 3 of 17.

10 MR. BALL: You're one step ahead of me.
11 All right. So LF-25, page 3, there was some
12 testimony, and you saw me ask my client at the
13 last hearing about that, do you recall, about this
14 particular photo?

15 THE WITNESS (Bowes): Yes.

16 MR. BALL: So this depicts the
17 intersection of Greenwich and Railroad Avenues,
18 right?

19 THE WITNESS (Bowes): Yes.

20 MR. BALL: And the pole here, is it
21 called a riser pole, is that the terminology?

22 THE WITNESS (Bowes): That's probably
23 applicable in this case. It's a transition
24 structure. Riser pole usually is more of a
25 distribution term, but I understand what you're

1 talking about.

2 MR. BALL: Well, I'm looking at the big
3 one, the 119-foot 8-inch pole. That's the point
4 in this picture where the line goes from overhead
5 to underground, right?

6 THE WITNESS (Bowes): Yes.

7 MR. BALL: And you're aware that this
8 is one of the busiest, most heavily-traveled
9 intersections in Greenwich, right?

10 THE WITNESS (Bowes): Again, I would
11 accept your characterization, yes.

12 MR. BALL: There was some discussion
13 about whether that pole could be moved -- and
14 again, I'm talking about the 119-foot 8-inch
15 pole -- could be moved so it's not quite right at
16 the intersection but moved a bit closer to
17 structure two. And my question is, first of all,
18 could you shift it eastward toward structure two,
19 50 feet, 100 feet; is that technically feasible?

20 THE WITNESS (Bowes): So as part of the
21 detailed engineering, we're going to have to
22 investigate that. The issue becomes around the
23 length of the cable pole and the pulling tensions
24 on that cable. So we're trying to come up with
25 ways that we could minimize the number of bends in

1 that cable to accommodate the request that was
2 made to move that at least 100 feet in this case
3 to the left.

4 MR. BALL: Fair enough. Let's assume
5 it's 100 feet for discussion sake. You would not
6 need to construct a new splice vault if you were
7 to move the pole 100 feet, right?

8 THE WITNESS (Bowes): That's exactly
9 what we're trying to do is design it so there are
10 no splice vaults from this transition structure to
11 the substation. So again, we haven't finished the
12 detailed design and understand all the
13 implications of this change, but we are hopeful --
14 I'll leave that word -- that we can accommodate
15 this request.

16 MR. BALL: Okay. And the details of
17 the town's request and hopefully your
18 accommodation on this, if this were to be
19 approved, is that something you would expect to
20 play out during the D&M phase?

21 THE WITNESS (Bowes): Yes, it is.

22 MR. BALL: Again, assuming you don't
23 have to construct a splice vault, if you were to
24 extend the undergrounding by 100 feet there, I'm
25 assuming you believe that could be done without

1 impacting reliability?

2 THE WITNESS (Bowes): That is true,
3 yes.

4 MR. BALL: Do you have any idea what an
5 extra 100 feet of undergrounding would cost, as
6 you sit here?

7 THE WITNESS (Bowes): Rule of thumb
8 with two circuits it's probably around \$5,000 per
9 foot.

10 MR. BALL: So let's assume you were
11 able to move it 100 feet. No question that would
12 reduce the visibility of the structure at this
13 particular intersection, right?

14 THE WITNESS (Bowes): Yes, it would.

15 MR. BALL: Just a couple questions
16 about the D&M phase. Then I'll let Ms. Kohler ask
17 a few questions.

18 Maybe it's a truism, but I'd like to
19 ask you, assuming that the Council does approve
20 the transmission line along the Metro-North
21 Railroad corridor, I assume Eversource will be
22 willing to work with the town on specific issues
23 during the D&M phase?

24 THE WITNESS (Bowes): Yes, we will.

25 MR. BALL: Including pole locations?

1 THE WITNESS (Bowes): Yes, within
2 obviously the technical constraints.

3 MR. BALL: Understood. Pole heights
4 you would also try to work with the town?

5 THE WITNESS (Bowes): We'll try to
6 work, but again, it's going to be limited by what
7 we can do technically.

8 MR. BALL: How about pole design, would
9 you also take into account the town's concerns?

10 THE WITNESS (Bowes): I think if it's
11 the visual features of it, yes. I think we can
12 probably accommodate that. These are going to be
13 a special application pole because of the high
14 tensions and because of the direct embedment,
15 which is all part of the cost savings as well. So
16 there is going to be probably more limitations on
17 this than normal. But if it's a color issue or if
18 it's some cosmetic-type things, minor variations
19 in pole location, those can easily be
20 accommodated.

21 MR. BALL: Fair to say during the D&M
22 phase you will take the town's concerns into
23 account and try to work cooperatively with the
24 town?

25 THE WITNESS (Bowes): Yes, we will.

1 MR. BALL: If I may, Mr. Chairman, I'd
2 like to turn it over to Attorney Kohler?

3 THE CHAIRMAN: I assume that's why
4 she's sitting there.

5 MS. KOHLER: Thank you.

6 If we could stick with Late-File 3.
7 I'd like to ask -- I suppose these probably would
8 be best addressed to Mr. Libertine, but maybe
9 anybody on the panel could answer.

10 Does the Metro-North Railroad route
11 generally avoid the transmission installation
12 previously planned in Bruce Park?

13 THE WITNESS (Libertine): That
14 alignment would eliminate the need to go through
15 Bruce Park, yes.

16 MS. KOHLER: And are you aware that
17 Bruce Park has historic qualities?

18 THE WITNESS (Libertine): Yes.

19 MS. KOHLER: And would you agree that
20 any potential impact to the historic qualities of
21 Bruce Park would be avoided by setting the
22 potential -- the proposed transmission line along
23 the Metro-North Railroad route?

24 THE WITNESS (Libertine): My opinion is
25 that if we're talking about long-term aesthetic

1 impacts to the park, then avoiding an overhead
2 route through the park certainly would accomplish
3 that.

4 MS. KOHLER: Are you aware that the
5 town identified certain species of special
6 concern, specifically the river herring, in Bruce
7 Park?

8 THE WITNESS (Libertine): I did.

9 MS. KOHLER: And do you agree that any
10 potential impact to the habitat of the species of
11 special concern would also be avoided by siting
12 the proposed transmission line along the
13 Metro-North railroad route?

14 THE WITNESS (Libertine): I would make
15 a qualified answer that I think that certainly
16 avoiding disruption to the park in any way would
17 help mitigate those potential concerns.

18 I'd also add that, although the town
19 has raised this, Eversource has reached out to
20 both DEP and the U.S. Fish and Wildlife Service
21 who reviewed this project in its entirety,
22 including the alternatives through Bruce Park, and
23 did not raise these issues. So I just wanted to
24 clear that from the record. But yes, certainly if
25 we can avoid Bruce Park, then any potential

1 impacts to species and/or the landscape would be
2 mitigated.

3 MS. KOHLER: The town identified
4 various tidal ponds in Bruce Park and estuaries.
5 Can you confirm that the proposed project through
6 Bruce Park would affect the tidal ponds, basins
7 and their associated fish and wildlife habits in
8 Bruce Park?

9 THE WITNESS (Libertine): One of the
10 options through Bruce Park for the underground
11 route would have been done with a direct drilling
12 operation which would have avoided any direct or
13 indirect impacts to any of those resources. If
14 we're talking about the trenching, primarily that
15 was to stay in the road. There was a short
16 crossing of the water body because of the bridge
17 on the western end could not support
18 infrastructure. But with careful engineered
19 planning and construction techniques, it's my
20 opinion that would not have been a major impact to
21 those tidal ponds.

22 MS. KOHLER: Isn't it true that it
23 would have taken one full growing season for the
24 tidal wetlands in surrounding areas to resume
25 habitat function post construction?

1 THE WITNESS (Libertine): Again, if
2 we're limiting the discussion to the use of or the
3 installation of the trench, I would say that there
4 would be some areas that would have been adjacent
5 to either side of the pond that would have had to
6 have restoration. And it's likely that you'd be
7 talking about at least the growing season or a
8 full growing season for that to be restored to its
9 proper or its prior condition.

10 MS. KOHLER: And would that potential
11 impact to the tidal ponds and associated fish and
12 wildlife could be avoided by siting the proposed
13 transmission line along the Metro-North Railroad
14 route?

15 THE WITNESS (Bowes): I would agree
16 with that statement.

17 MS. KOHLER: And if the 115-kV
18 transmission line is sited along the Metro-North
19 Railroad corridor, you agree this would mitigate
20 in eliminating any potential environmental impact
21 at Bruce Park as a whole, including the park's
22 historic and recreational features and impact to
23 the shorebirds, neotropical songbirds in the
24 important wintering areas?

25 THE WITNESS (Libertine): There's kind

1 of a -- maybe a few questions in there just
2 because we're talking about a couple of different
3 resources. Again, if we're talking about either
4 an overhead route through there or the underground
5 trenching, then I think there would probably be a
6 greater likelihood to using the corridor, the
7 railroad corridor would have a greater likelihood
8 to reduce potential impacts to any of those
9 resources. If we're talking about the direct
10 drilling operation, I don't believe that
11 necessarily has the same, from my position, does
12 not have the same overall concerns. But
13 generally, yes, I'd agree with that.

14 MS. KOHLER: Generally you agree that
15 the environmental impacts identified in the
16 original application are avoided by using the
17 Metro-North Railroad route?

18 THE WITNESS (Libertine): Yes.

19 MS. KOHLER: If we can go to the same
20 LFE-3, page 2 of 14, and talk about Cos Cob Park.
21 Can someone describe how the proposed transmission
22 line would exit the substation?

23 THE WITNESS (Gardell): We have two
24 choices to exit the substation. One is referred
25 to -- 1A and 1B.

1 MS. KOHLER: And would either of those
2 routes traverse a common drive shared with Cos Cob
3 Park?

4 THE WITNESS (Gardell): Only 1A would
5 do that.

6 MS. KOHLER: Does Eversource have a
7 right-of-way there?

8 THE WITNESS (Gardell): For the Cos Cob
9 Park driveway?

10 MS. KOHLER: Yes.

11 THE WITNESS (Gardell): Today we have
12 easements for distribution facilities.

13 MS. KOHLER: So would you need an
14 easement in place, would you need an easement to
15 acquire a location for the exit from that
16 location?

17 MS. BARBINO DUBUQUE: Mr. Chairman, can
18 we go off the record for one moment?

19 THE CHAIRMAN: Yes.

20 (Off the record discussion.)

21 MS. BARBINO DUBUQUE: Mr. Chairman, may
22 we go back on the record?

23 THE CHAIRMAN: Yes, we're back on the
24 record. Thank you.

25 MS. BARBINO DUBUQUE: Thank you very

1 much.

2 THE WITNESS (Gardell): Thank you.
3 Eversource's legal is investigating those, and at
4 this point we don't have the answer to that
5 question.

6 MS. KOHLER: Thank you.

7 Are you aware that Cos Cob Park is a
8 brownfield remediation site?

9 THE WITNESS (Gardell): Yes, I am.

10 MS. KOHLER: And how would you address
11 this issue given the fact that you would be
12 disturbing the access road?

13 THE WITNESS (Gardell): To the best of
14 my ability, I do not believe the access road has
15 the cap on it. I believe the cap is over to the
16 right-hand side.

17 MS. KOHLER: Assuming that the cap is
18 on the road, which is our understanding, have you
19 successfully addressed these sort of situations in
20 the past?

21 THE WITNESS (Gardell): We will handle
22 that in the D&M process.

23 THE WITNESS (Bowes): Yes, we've dealt
24 with contaminated soils and contaminated sites in
25 the past.

1 THE WITNESS (Libertine): And I would
2 just add that there is provisions in the
3 remediation standards of Connecticut to lift that
4 type of an environmental land use restriction to
5 be able to develop and then place it back in. So
6 there are those provisions. So it can be done.

7 MS. KOHLER: Can you confirm that none
8 of the recreational areas of the Cos Cob Park will
9 be impacted?

10 THE WITNESS (Gardell): That is
11 correct.

12 MS. KOHLER: Thank you.

13 If I could draw your attention to
14 LFE-17.

15 THE WITNESS (Boves): Yes, I have it.

16 MS. KOHLER: Can you identify the
17 source of these energy efficiency participation
18 rates?

19 THE WITNESS (Boves): They're from our
20 energy efficiency personnel inside Eversource.

21 MS. KOHLER: So this data only reflects
22 residents that engaged Eversource in their energy
23 efficiency efforts?

24 THE WITNESS (Boves): Through the
25 state-sponsored programs. We administer those for

1 Greenwich. So, yes.

2 MS. KOHLER: So would it include those
3 homeowners who engaged private energy efficiency
4 experts?

5 THE WITNESS (Bowes): That are outside
6 of our programs, it would not.

7 MS. KOHLER: And it would not include
8 business owners that engaged private energy
9 efficiency experts either, would it?

10 THE WITNESS (Bowes): Again, if they
11 were outside of our programs, it would not include
12 them.

13 MS. KOHLER: So if those energy
14 efficiency experts of those Greenwich residents
15 and business owners were reported, would you
16 expect the percentages in these columns to
17 increase?

18 THE WITNESS (Bowes): Yes, but I would
19 also be surprised that they wouldn't take
20 advantage of the programs that we have in place.

21 MS. KOHLER: But you would expect the
22 numbers to increase if they were --

23 THE WITNESS (Bowes): Hypothetically,
24 if there were more people that had participated
25 outside the programs and they were added to this,

1 yes, the numbers would go up.

2 MS. KOHLER: Okay. Thank you.

3 Are you aware that the town has
4 concerns about the aesthetic design of the
5 proposed new substation?

6 THE WITNESS (Bowes): Yes, I am.

7 MS. KOHLER: Do you remember previously
8 testifying at the October 6th hearing that "the
9 additions that we've been asked from the Council
10 and from the town have provided a positive
11 aesthetic benefit and the costs have been
12 relatively nominal at this point, so I don't think
13 it's been overly burdensome at this point to
14 change the design or outlook of the facade of the
15 facility"?

16 THE WITNESS (Bowes): It sounds like
17 it's a direct quote. Yes.

18 MS. KOHLER: Yes.

19 And do you also remember representing
20 at the December 1st hearing that you'd be willing
21 to consider design alternatives in the D&M process
22 that "we're certainly open to a more pleasing
23 appearance at the facility"?

24 THE WITNESS (Bowes): Yes. And we
25 still are committed to that.

1 MS. KOHLER: And then in this docket,
2 Exhibit Roman numeral VIII-B-1, a proposed design
3 was submitted by Richard Granoff. Are you aware
4 that the town supports this design?

5 THE WITNESS (Bowes): Yes, I am.

6 MS. KOHLER: And is it technically
7 feasible to design the substation in accordance
8 with the design proffered by Richard Granoff?

9 THE WITNESS (Bowes): I think something
10 very similar. I think some of the roof lines and
11 dimensions might be modified slightly, but in
12 general I think we can get something that looks
13 close to that.

14 MS. KOHLER: Have you studied the cost?

15 THE WITNESS (Bowes): I don't believe
16 we have.

17 MS. KOHLER: Have you come up with a
18 design, a mock-up of the design?

19 THE WITNESS (Bowes): We have not at
20 this point. We're waiting for the process to
21 proceed to that standpoint, and if there was any
22 other input that was to be provided, we wanted to
23 consider that as well.

24 MS. KOHLER: Is it technically feasible
25 to include fencing in this design similar to that

1 on the adjacent property, 330 Railroad Avenue?

2 THE WITNESS (Bowes): So there's a new
3 design spec that's been provided to us from the
4 town, and we do believe that that will meet all of
5 the safety, security and construction requirements
6 that we have. So I think the simple answer is
7 yes.

8 MS. KOHLER: Is it technically feasible
9 to face the walls of the transformers with
10 materials that match the building?

11 THE WITNESS (Bowes): Yes, it is.

12 MS. KOHLER: And is that cost minimal
13 in the overall scheme of the project?

14 THE WITNESS (Bowes): I think we can
15 come up with a design that has minimal cost, yes.

16 MS. KOHLER: Thank you.

17 And is it technically feasible to plant
18 vegetative screening and planters around the
19 outside of the substation to provide visual
20 mitigation?

21 THE WITNESS (Bowes): Yes, it is.

22 MS. KOHLER: And is Eversource willing
23 to cooperate and work with the town during the
24 development and management stage to adopt these
25 improvements?

1 THE WITNESS (Bowes): Yes, we are.

2 MS. KOHLER: That's all the
3 cross-examination I have. The town is complete.

4 THE CHAIRMAN: Thank you.

5 All right. Now some questions from the
6 staff and Council.

7 Mr. Mercier.

8 MR. MERCIER: Thank you. Just a
9 follow-up on a couple of comments made earlier.
10 Regarding the Cos Cob Substation, there was
11 discussion regarding the acquisition of property
12 in order to expand -- actually to construct a new
13 station adjacent to the Cos Cob Substation that
14 was investigated in your application as an
15 alternative and rejected, was the land that was
16 examined for acquisition, was that to the west of
17 the Cos Cob Substation? I think it's 8 Sound
18 Shore Drive?

19 THE WITNESS (Gardell): Yes, that's the
20 property.

21 MR. MERCIER: And that has an office
22 building on it?

23 THE WITNESS (Bowes): Yes, it does.

24 MR. MERCIER: Okay. Thank you.

25 Mr. Bowes, I believe earlier we were

1 talking about Late-File 21. This had to do with
2 overhead distribution circuits.

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

4 MR. MERCIER: Thank you. You basically
5 stated that there would be difficulties in
6 constructing overhead circuits instead of
7 underground for that investigated alternative. I
8 just want to know what types of difficulties would
9 you encounter?

10 THE WITNESS (Bowes): So we'd be adding
11 a second circuit along the roadway with three new
12 distribution feeders. So we would have
13 construction on both sides of the roadway, and
14 five or six circuits along the same public way.
15 It's not something we typically do other than for
16 a junction point or exit from a substation. So
17 for several miles we would have circuits that
18 were -- might not be considered aesthetically
19 pleasing.

20 MR. MERCIER: Did you state earlier
21 that you might need three sets of different poles
22 to support these circuits?

23 THE WITNESS (Bowes): If we couldn't
24 accommodate all three circuits on the same pole
25 line, then we would extend to have a third pole

1 line. That's correct.

2 MR. MERCIER: Did you just say it could
3 go down either side or both sides of the road?

4 THE WITNESS (Bowes): It would clearly
5 be on both sides of the street, and on one side
6 there could be two pole lines. It's not a
7 preferred option that we run three distribution
8 circuits on the same set of structures for
9 reliability.

10 MR. MERCIER: Thank you. Would that
11 type of design be susceptible to frequent storm
12 damage in your belief?

13 THE WITNESS (Bowes): We would do our
14 best to minimize that through probably use of
15 aerial cables, but clearly pole accidents would be
16 probably a more frequent occurrence, and large
17 trees obviously would also take down the pole
18 line. So probably less susceptible to tree
19 branches, but very susceptible to tall trees.

20 MR. MERCIER: Thank you.

21 One thing that has not been discussed
22 yet was that the town at the previous meeting
23 offered two manufacturers, Toshiba and WEG to
24 provide 80 megavolt transformers that could fit
25 into the Cos Cob -- existing Cos Cob Substation

1 transformer footprints. Did you examine the
2 feasibility of these two transformer designs?

3 THE WITNESS (Bowes): We did. We had
4 posed some questions around the Toshiba
5 capabilities of that transformer, and it turned
6 out there was not an equivalent transformer. It
7 did not have a load tap changer required for
8 voltage control. But the WEG design is similar in
9 size to what manufacturer we use, ABB. And
10 actually our ABB design for an 80 MVA transformer,
11 which has been subject to a petition here at the
12 Siting Council previously, is actually a little
13 smaller than the WEG design.

14 So we actually looked at it trying to
15 fit the ABB design within Cos Cob Substation and
16 were unable to do that from the standpoint of they
17 would physically overlap each other so they
18 would -- it was just impossible to actually put
19 them in. Plus, we could not maintain electrical
20 clearances to put the 80 MVA transformers into
21 that substation.

22 So yes, in an indirect way we did look
23 at it. We looked at the two designs, the
24 footprints. We tried to apply them to the Cos Cob
25 Substation using our approved transformer

1 provider, and we were unable to do that.

2 MR. MERCIER: You just mentioned also a
3 tap changer for the Toshiba model. Can you just
4 expand on what the space requirements are required
5 for that?

6 THE WITNESS (Bowes): So it's going to
7 be another physical box on the side of the
8 transformer that increases the overall dimensions
9 both for the physical footprint of it but also for
10 service and maintenance of it. You have to be
11 able to access that part of the equipment to
12 service it. So taking that into consideration,
13 without the tap changer we kind of dismissed that
14 design. Although it was a smaller footprint, it
15 didn't meet the technical requirements of being
16 able to support the voltage changes we need to
17 maintain the voltage for the system.

18 MR. MERCIER: Thank you. I have no
19 questions at this time.

20 THE CHAIRMAN: Thank you.

21 Mr. Ashton?

22 MR. ASHTON: A couple of questions. It
23 seems to me as though the real nub in this case is
24 the question of the reliability of the load
25 estimate. Do you believe it's still worthwhile

1 betting 140 million or 120 million on a load
2 estimate that is by my examination a little bit
3 iffy and question whether it's going to carry
4 forward in the future?

5 THE WITNESS (Bowes): So it's
6 interesting, we announced this substation with the
7 Town of Greenwich two years before that peak load
8 number was realized in 2013. The basis of that,
9 we were coming off a very difficult week for the
10 company where we had shed load for the first time
11 in many years to that extent over that number of
12 days. So the decision was made prior to us
13 hitting a number in some year. It was really
14 around our ability to operate the system reliably.

15 And I look at reliability in three
16 parts: One is assuring the adequate supply. And
17 I've said the statement before, you have the
18 coldest winter night, the hottest summer day.
19 That's core to our business of being able to
20 assure an adequate supply to our customers. The
21 second is is the frequency of interruptions they
22 see. And we also saw in that event in 2011 a
23 frequency of interruptions and a cascading of
24 outages that we did not think was acceptable. And
25 the third item that we look at for reliability is

1 is the duration of events. We were unable to
2 recover in a timely manner, and that led to some
3 of the cascading of the interruptions in
4 Greenwich.

5 So this project solves all three of
6 those needs. It's not based on a number in one
7 year. It's based on the company's obligation to
8 serve and our failure to do that in 2011. So
9 those three factors are what drove the idea of
10 finally putting the Greenwich Substation in place,
11 something we had planned for decades before.

12 But we made a series of incremental
13 improvements, added a temporary substation at
14 Tomac. It's still there today. Adding \$36
15 million of improvements in the distribution system
16 since the time in 2011. But we still don't have a
17 system that is the same as the rest of
18 Connecticut. We want a system that is robust
19 enough that we can operate it on any day, we can
20 have reliable service to our customers, and we can
21 minimize the impacts of storms. The proposal in
22 front of you does all three of those things.

23 MR. ASHTON: And that proposal is
24 consistent with what has been done by Eversource
25 in other locales?

1 THE WITNESS (Bowes): Yes, it is. It's
2 entirely consistent.

3 MR. ASHTON: You perhaps recall at I
4 think it was the last meeting we had a discussion
5 as to load relief, I'll call it, where Eversource
6 or others could install devices that cut down on
7 the electrical load. In the Late-Filed Exhibit
8 HD, hairy dog, 03, there's a table that shows the
9 Town of Greenwich and then residential program
10 participation, residential rebate participation,
11 business and municipal program participation. As
12 I look at that, it would be my conclusion that
13 Greenwich is not one of the best performers as far
14 as load management type of thing. Is that a fair
15 statement?

16 THE WITNESS (Bowes): I think there's
17 more opportunity for the residents of Greenwich to
18 take advantage of our programs.

19 MR. ASHTON: More opportunity means
20 they are a little bit on the lagger side?

21 THE WITNESS (Bowes): Statistics are
22 just that. I mean, obviously they're lower than
23 some of other towns, so I think there are
24 opportunities.

25 MR. ASHTON: Do you think that an

1 aggressive, aggressive program of load management,
2 including solar, electric and thermal and other
3 types of treatments would have a material effect
4 on the load in Greenwich?

5 THE WITNESS (Bowes): So I do not
6 believe it would, and it's based on some history.
7 We have attempted this at other locations across
8 our company and where targeted programs were used
9 for all of those type of tools that are available
10 to us to either reduce or maintain control loads.
11 And it really is a customer choice and a customer
12 behavior issue when all is said and done.

13 MR. ASHTON: I can see that, but I also
14 would state and believe that the customers can be
15 persuaded to do certain things. That's the whole
16 aim of advertising and marketing and whatnot.
17 It's not just the blank wall.

18 Anyway, to come to my conclusion -- I'm
19 running out of gas obviously, no pun intended -- I
20 looked at that table, I looked at the load
21 projections, and I wonder if taken together and
22 perhaps with other steps there isn't a way of
23 postponing the day where the ratepayer has to
24 cough up the carrying charges for 120 million,
25 which I find pretty steep for just Greenwich, and

1 whether that in aggregate will provide a measure
2 of load relief.

3 THE WITNESS (Bowes): So I would say
4 that we have, just by the nature of the process,
5 in 2011 we said this was a long-term solution for
6 Greenwich, probably five years away. It will
7 ultimately be seven years away before we put this
8 into service. So just by the nature of our
9 process, we have gone longer than the initial
10 five-year plan. I'm more concerned that we have
11 situations in the summer of 2016 and 2017 that we
12 can't control and further delay, I think, what's a
13 much higher risk. I think we have been fortunate
14 for five years that we haven't had similar
15 situations. The equipment is for the most part
16 now five years older. It has been stressed a
17 couple of times. So I'm hopeful that we can have
18 a safe and reliable system until the Greenwich
19 Substation is finally installed.

20 MR. ASHTON: Thank you.

21 Thank you, Mr. Chairman.

22 THE CHAIRMAN: Thank you.

23 Commissioner Caron?

24 MR. CARON: No questions, Mr. Chairman.

25 THE CHAIRMAN: Mr. Lynch?

1 MR. LYNCH: Mr. Bowes, I think this is
2 more of a comment rather than a question. A
3 little while ago Mr. Ball was back here asking you
4 a number of questions -- I thought very good
5 questions, as a matter of fact -- on your
6 cooperating with the town as far as the railroad
7 three alternatives were concerned. And what I'd
8 like to know, life is a two-way street. Now, in
9 the construction phase or in the future
10 construction phase would you expect the same
11 consideration or respect from the town that you
12 gave them during this period? It's a comment more
13 than a question but --

14 THE WITNESS (Bowes): Yes. And I see
15 no reason why we can't have that cooperation.

16 MR. LYNCH: Thank you.

17 No more questions, Mr. Chairman.

18 THE CHAIRMAN: I guess I have one.
19 It's a follow-up.

20 MR. MERCIER: I'm sorry, Chairman. You
21 go first. I have one at the end.

22 THE CHAIRMAN: A follow-up question to
23 Mr. Ashton. You used the term "aggressive"
24 program load management conservation. And we both
25 read and heard from the Town of Greenwich the

1 various state programs that are or have taken
2 advantage of. But I was just wondering -- and you
3 may know the answer. If you don't -- but one
4 piece of legislation that's been enacted -- I know
5 your predecessor wasn't too happy with it, but it
6 was enacted anyway -- and that's the creation of
7 energy districts. Do you know has Greenwich taken
8 advantage of that opportunity?

9 THE WITNESS (Bowes): They have not.
10 And I don't believe we have any cities or towns in
11 Connecticut that have officially. There's an
12 inactive one in the City of Stamford.

13 THE CHAIRMAN: Since I can't testify, I
14 will refrain from correcting you on that one, but
15 anyway -- but do you know of the establishment or
16 have they talked about in Greenwich establishing a
17 robust microgrid system with their own generation?

18 THE WITNESS (Bowes): So I did hear in
19 the last hearing the Town of Greenwich indicate
20 that they were exploring microgrids for some of
21 the town buildings, specifically in the civil
22 preparedness or emergency management areas. And
23 we would be more than willing to facilitate that
24 with them. We've done that for many towns. In
25 fact, we're in a study now with several of the

1 smaller towns sponsored through the University of
2 Connecticut where we're helping them come up with
3 plans that ultimately could be submitted to the
4 DEEP for their consideration.

5 THE CHAIRMAN: This is certainly a
6 state priority. I guess I'm still impressed with
7 the document that was submitted by OCC, which at
8 first I couldn't understand why they submitted it,
9 and now I really hope that they follow up because
10 since they submitted it, I assume they could
11 have statewide, but and that's this program in New
12 York State, the Brooklyn Queens Demand Management
13 Program. So it just seems to me -- and maybe this
14 is just a hope for the future -- that in a much
15 more aggressive way -- and I don't want to put the
16 onus entirely on Eversource because I don't think
17 that's -- that's not what this is, but that towns
18 municipalities that have these issues could
19 aggressively, you know, approach both the utility
20 and the state to develop programs that go much
21 beyond what we've heard before so --

22 THE WITNESS (Bowes): So we are active
23 right now with DEEP on some grid-side enhancements
24 that would facilitate and enable distributed
25 energy resources, and ultimately they will

1 investigate some of our proposals, as well as
2 United Illuminating, and those will come before
3 PURA for approval. So we are also hopeful that in
4 the next year or two we have some more offerings
5 to facilitate alternatives to the traditional
6 electric utility system.

7 THE CHAIRMAN: But again that requires
8 I think a partnership but --

9 THE WITNESS (Bowes): Obviously it
10 would with either the developer or a town or both.

11 THE CHAIRMAN: And just quickly just so
12 I'm clear on the peak load and the projections, it
13 seems to me -- and I'm sure I'm oversimplifying
14 it, but there are two issues. One is, which is
15 what we've heard from just about everybody who's
16 testified and talked about 2014 and 2015 and
17 pretty much -- and not 2013, and that sort of
18 looking at some form of trends, and ISO has it,
19 and the percentage. I must admit that I am
20 sympathetic to Greenwich's position that 1 percent
21 growth per year is probably not going to have to
22 happen in this century, but anyway. So there's
23 that, but then how do you --

24 THE WITNESS (Bowes): I will say that
25 the growth between 2014 and 2015, kilowatt hours,

1 was 1.5 percent for Greenwich.

2 THE CHAIRMAN: So I stand, at least,
3 corrected at this point.

4 THE WITNESS (Bowes): Again, to be very
5 clear, based on the customer-metered data, not of
6 our issues with substation metering, but based on
7 the actual customer usage, 2015 was up one and a
8 half percent versus 2014.

9 THE CHAIRMAN: But the second part of
10 it, at least, again in my simplified analysis is
11 these peak loads happen for a number factors, but
12 from my understanding if we had the heat that we
13 had in December, and now in March, if it happened
14 in August or July, we would have had another heat
15 wave load on your -- so how do you project for
16 these contingent weather-related impacts which,
17 you know, may not happen every year but
18 scientists, most scientists suggest that they're
19 going to happen more frequently?

20 THE WITNESS (Bowes): So I'd say at
21 this point we're struggling to deal with two
22 divergent impacts. One is how to plan for
23 distributed energy resources in a forward-looking
24 manner. What should we assume is going to be
25 available, especially at the peak load times. And

1 the other is is how do we plan for extreme events,
2 you know, low probability high-impact events. And
3 it could be a weather-related issue, or it could
4 be a man-caused issue. And I think we're
5 struggling with what level of preparation, what
6 level of resiliency we build into our systems to
7 deal with those two issues. One is very known and
8 controllable, I would say, the DER, but how fast
9 and how far is that going to go. And the other is
10 much less predictable. And I don't have an answer
11 for you today, but I know it's a concern that we
12 have of how to plan for those two different
13 scenarios.

14 THE CHAIRMAN: Thank you.

15 At this point, Mr. Mercier.

16 MR. MERCIER: I've just got one
17 question regarding actually the overhead hybrid
18 solution that goes along the railroad. Does
19 anybody have any information regarding potential
20 magnetic fields from that installation at the
21 edges of the right-of-way? I guess really my
22 question would be with the fields --

23 THE WITNESS (Bowes): Yes, we have done
24 the analysis, and Mr. Soderman will address your
25 question. I'm sorry, he's not sworn. Can we go

1 off the record for just a sec?

2 THE CHAIRMAN: Yes.

3 (Off the record discussion.)

4 MS. BARBINO DUBUQUE: Mr. Chairman, may
5 we go back on the record?

6 THE CHAIRMAN: Yes.

7 MS. BARBINO DUBUQUE: Thank you.

8 THE WITNESS (Bowes): So I have
9 information for the three components of the
10 project. We'll start with the substation. At the
11 fence line the magnetic fields would be less than
12 one milligauss, so basically at that background or
13 below from the substation. Ten feet from the
14 center of the underground line it will be one
15 milligauss or less. For the overhead portions of
16 the line the maximum milligauss will be 6.5
17 milligauss at the closest residence. I'm sorry,
18 that is underneath the line, 6.5 milligauss. Hold
19 on just a second for the edge of right-of-way.
20 Towards the customers it would be less than 1
21 milligauss at the edge of the right-of-way.

22 MR. MERCIER: At the edge of the
23 right-of-way along the railroad?

24 THE WITNESS (Bowes): Correct.

25 MR. MERCIER: And this is under full

1 capacity, full operation, these numbers?

2 THE WITNESS (Bowes): Under average
3 annual load.

4 MR. MERCIER: Thank you.

5 THE CHAIRMAN: Okay. Before closing
6 this hearing, the Connecticut Siting Council
7 announces that briefs and proposed findings of
8 fact may be filed with the Council by any party or
9 intervenor no later than April 11, 2016. The
10 submission of briefs or proposed findings of fact
11 are not required by this Council, rather we leave
12 it to the choice of parties and intervenors.

13 Anyone who has not become a party or
14 intervenor, but who desires to make his or her
15 views known to the Council, may file written
16 statements with the Council within 30 days of the
17 date hereof.

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

25 Copies of the transcript of this

1 hearing, as well as all the other ones, will be
2 filed at the Town Clerk's Office in Greenwich.
3 And I hereby declare this hearing adjourned.
4 Thank you all for your participation. Drive
5 safely. And I'll close the hearing. If you have
6 any process questions, you can ask Attorney
7 Bachman, but the hearing is closed.

8 (Whereupon, the witnesses were excused
9 and the above proceedings were adjourned at 4:21
10 p.m.)

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CERTIFICATE

I hereby certify that the foregoing 145 pages are a complete and accurate computer-aided transcription of my original stenotype notes taken of the Council Meeting in Re: DOCKET NO. 461, APPLICATION OF EVERSOURCE ENERGY FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED FOR THE CONSTRUCTION, MAINTENANCE AND OPERATION OF A 115-KILOVOLT (kV) BULK SUBSTATION LOCATED At 290 RAILROAD AVENUE, GREENWICH, CONNECTICUT, AND TWO 115-kV UNDERGROUND TRANSMISSION CIRCUITS EXTENDING APPROXIMATELY 2.3 MILES BETWEEN THE PROPOSED SUBSTATION AND THE EXISTING COS COB SUBSTATION, GREENWICH, CONNECTICUT, AND RELATED SUBSTATION IMPROVEMENTS, which was held before ROBERT STEIN, Chairman, at the Connecticut Siting Council, 10 Franklin Square, New Britain, Connecticut, on March 10, 2016.



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

Court Reporter

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