

**In The Matter Of:**  
*STATE OF CONNECTICUT*  
*CONNECTICUT SITING COUNCIL*

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*Docket No. 474*  
*August 22, 2017*

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## 1 STATE OF CONNECTICUT

## 2 CONNECTICUT SITING COUNCIL

3  
4 Docket No. 4745  
6 The Connecticut Light and Power Company d/b/a  
7 Eversource Energy application for a Certificate of  
8 Environmental Compatibility and Public Need for  
9 the Greater Hartford-Central Connecticut  
10 Reliability Project that traverses the  
11 municipalities of Hartford, West Hartford, and  
12 Newington, which consists of (a) construction,  
13 maintenance and operation of a new 115-kilovolt  
14 (kV) electric transmission line within existing  
15 Eversource, Amtrak and public road rights-of-way  
16 and associated facilities extending overhead  
17 approximately 2.4 miles and underground  
18 approximately 1.3 miles between Eversource's  
19 existing Newington Substation in the Town of  
20 Newington and existing Southwest Hartford  
21 Substation in the City of Hartford; (b)  
22 modifications to a .01 mile section within  
23 existing Eversource right-of-way of the existing  
24 overhead 115-kV electric transmission line  
25 connection to the Newington Substation (Newington  
Tap); and (c) related modifications to Newington  
Substation and Southwest Hartford Substation.17  
18 Public Hearing held at the Newington Town  
19 Hall Auditorium, 131 Cedar Street, Newington,  
20 Connecticut, on Tuesday, August 22, 2017,  
21 beginning at 3:22 p.m.22  
23 H e l d B e f o r e :

24 SENATOR JAMES J. MURPHY, JR., Vice Chairman

25

1    A p p e a r a n c e s :

2

3            Council Members:

4                    ROBERT HANNON

5                    MICHAEL HARDER

6                    DR. MICHAEL W. KLEMENS

7                    LARRY P. LEVESQUE, ESQ.

8                    DANIEL P. LYNCH, JR.

9                    ROBERT SILVESTRI

10

11            Council Staff:

12                    MELANIE BACHMAN, ESQ.

13                    Executive Director and

14                    Staff Attorney

15

16                    MICHAEL PERRONE

17                    Siting Analyst

18

19            For the Connecticut Light and Power Company:

20                    CARMODY TORRANCE SANDAK & HENNESSEY LLP

21                    195 Church Street

22                    P.O. Box 1950

23                    New Haven, Connecticut 06509

24                    BY: ANTHONY M. FITZGERALD, ESQ.

25

1           SENATOR MURPHY: Ladies and gentlemen,  
2 I'd like to call this hearing to order this  
3 Tuesday, August 22, 2017, at approximately 3:24  
4 p.m. My name is James J. Murphy, Jr. I'm vice  
5 chairman of the Connecticut Siting Council.

6           Other members of the Council here today  
7 are Robert Hannon, designee for Commissioner  
8 Robert Klee, Department of Energy and  
9 Environmental Protection; Larry Levesque, designee  
10 for Chairwoman Katie Dykes, Public Utilities  
11 Regulatory Authority; Robert Silvestri; Dr.  
12 Michael W. Klemens; Michael Harder; and Daniel P.  
13 Lynch, Jr. Members of the staff, Executive  
14 Director, Staff Attorney Melanie Bachman; and  
15 Michael Perrone, our siting analyst.

16           This hearing is held pursuant to the  
17 provisions of Title 16 of the Connecticut General  
18 Statutes and of the Uniform Administrative  
19 Procedure Act upon an application from The  
20 Connecticut Light and Power Company, d/b/a  
21 Eversource Energy, for a Certificate of  
22 Environmental Compatibility and Public Need for  
23 the construction, maintenance, and operation of a  
24 transmission line that traverses the  
25 municipalities of Newington, Hartford, and West

1 Hartford. This application was received by the  
2 Council on June 7, 2017.

3 As a reminder to all, off-the-record  
4 communications with members of the Council, or a  
5 member of the Council's staff, upon the merits of  
6 this application is prohibited by the law.

7 The parties and intervenors to the  
8 proceedings are as follows: The applicant is the  
9 Connecticut Light and Power Company, d/b/a  
10 Eversource Energy, its representative Anthony M.  
11 Fitzgerald, Esquire, of Carmody Torrance Sandak &  
12 Hennessey.

13 We will proceed in accordance with the  
14 prepared agenda, copies of which are available  
15 over here to my left. Also available here are  
16 copies of the Council's Citizens Guide to Siting  
17 Council Procedures.

18 At the end of this afternoon's  
19 evidentiary session, we will recess and resume  
20 again at 6:30 for the public comment session. The  
21 6:30 p.m. public comment session will be reserved  
22 for the public to make brief oral statements into  
23 the record. I wish to note that parties and  
24 intervenors, including their representatives and  
25 witnesses, are not allowed to participate in the

1 public comment session.

2 I also wish to note for those who are  
3 here, and for the benefit of your friends and  
4 neighbors who are unable to join us for the public  
5 comment session, that you or they may send written  
6 statements to the Council within 30 days of the  
7 date hereof; and such written statements will be  
8 given the same weight as if spoken at tonight's  
9 hearing.

10 If necessary, party and intervenor  
11 presentations may continue after the public  
12 comment session, if time remains.

13 A verbatim transcript will be made of  
14 this hearing and deposited with the Town Clerk's  
15 Offices in Newington, West Hartford, and the City  
16 Clerk's Office in Hartford for the convenience of  
17 the public.

18 Is there any public official here who  
19 wishes to be heard at this time?

20 (No response.)

21 SENATOR MURPHY: I wish to call to your  
22 attention these items shown on the hearing program  
23 marked as Roman numerals I-D, Items 1 through and  
24 including 69.

25 Does the applicant or any party have an

1 objection to the items that Council has  
2 administratively noticed?

3 (No response.)

4 MR. FITZGERALD: The applicant has no  
5 objection.

6 SENATOR MURPHY: Accordingly, hearing  
7 no objection, the Council will administratively  
8 notice those documents, statements, and comments.

9 Mr. Fitzgerald, I see that you have a  
10 panel assembled. Would you introduce them for the  
11 record?

12 MR. FITZGERALD: Thank you, Senator  
13 Murphy. At the table here to my left is  
14 Christopher Soderman of Eversource. To my right  
15 is our lead witness, Kenneth Bowes. To his right  
16 is our environmental consultant, Louise Mango of  
17 Phenix Environmental. Behind me are the other  
18 principal witnesses, Julia Frayer of London  
19 Economics, and Dr. Gabor Mezei of Exponent. And  
20 in addition to that, we have identified in  
21 Mr. Bowes' testimony certain subject matter  
22 experts who may be called upon to answer specific  
23 questions, and they are Attorney Patrick Holmes of  
24 Burns & McDonnell, who is the project manager of  
25 the project; Robert Russo, manager of transmission

1 and system planning, who is a subject matter  
2 expert on need; and Christopher Newhall, a senior  
3 environmental scientist with Aecom who is a  
4 subject matter expert on environmental effects,  
5 particularly of wetlands.

6 And so, if I might, I would ask that  
7 these witnesses and potential witnesses, all of  
8 whose qualifications have been submitted to the  
9 Council in a separate volume of curriculum vitae  
10 filed in prefile testimony, and I'd ask them to  
11 stand and be sworn.

12 SENATOR MURPHY: Attorney Bachman will  
13 administer the oath to the respective witnesses.

14 K E N N E T H B. B O W E S,

15 J U L I A F R A Y E R,

16 J. P A T R I C K H O L M E S,

17 L O U I S E F. M A N G O,

18 G A B O R M E Z E I,

19 C H R I S T O P H E R P. N E W H A L L,

20 R O B E R T J. R U S S O,

21 C H R I S T O P H E R P A U L S O D E R M A N,

22 called as witnesses, being first duly sworn

23 by Ms. Bachman, were examined and testified

24 on their oaths as follows:

25 MS. BACHMAN: Thank you.



1           MR. FITZGERALD: Senator Murphy, I have  
2 a few updates to the testimony and exhibits that  
3 have been prefiled, which I would like to ask the  
4 witnesses to put on the record before they adopt  
5 the prefile material and are subject to  
6 cross-examination.

7           SENATOR MURPHY: Proceed,  
8 Mr. Fitzgerald.

9           MR. FITZGERALD: Thank you very much.

10          DIRECT EXAMINATION

11          MR. FITZGERALD: Ms. Mango, I'm going  
12 to start with you. Recently the Department of  
13 Energy and Environmental Protection filed a  
14 comment letter with respect to the project, dated  
15 August 18, 2017, which the Council has designated  
16 as Exhibit E-3. I have a few questions concerning  
17 the updates to testimony relating to this  
18 document.

19                   And, in particular, Ms. Mango, do you  
20 have an update to Eversource's response to data  
21 request CSC-001, Question CSC-032, and CSC-033  
22 related to this recent filing?

23           THE WITNESS (Mango): Yes, I do. In  
24 the Eversource data responses we indicated that we  
25 would not provide a copy of Connecticut DEEP's

1 letter identifying two listed species of state  
2 special concern, and that was in order to protect  
3 the locations of those species. We had indicated  
4 that we would seek permission from DEEP, and then  
5 provide that letter to the Council. But the  
6 DEEP's letter of August 18th kindly attached that  
7 August 1st letter regarding the two species of  
8 special concern, so we will not file that  
9 ourselves. That completes our response to those  
10 two questions.

11 MR. FITZGERALD: And moving on to  
12 Question CSC-034, I'd ask whether Eversource has  
13 received a response from the SHPO. The response  
14 to that question was that Eversource had not yet  
15 received a formal response from the SHPO following  
16 its consultations. And we now have listed in the  
17 program we find under the state agencies' comments  
18 a listing of the SHPO response, which was filed, I  
19 believe, yesterday, or the day before.

20 So would you just like to update your  
21 response to that interrogatory that the SHPO  
22 response has been received and filed with the  
23 Council?

24 THE WITNESS (Mango): Yes. We received  
25 a letter from the State Historic Preservation

1 Office, dated August 17th, and, as Mr. Fitzgerald  
2 indicated, that letter was filed with the Council  
3 yesterday. That letter indicates a finding of no  
4 adverse effect based on the SHPO's review of our  
5 cultural resource studies, all of which are  
6 included in Volume 2 of the Siting Council  
7 application.

8 MR. FITZGERALD: Thank you.

9 Mr. Bowes, the DEEP letter designated  
10 Exhibit E-3 by the Council, on page 2 and 3,  
11 refers to a difference between the location of the  
12 underground line that's proposed across land of  
13 Shepard Steel in Newington, as shown in map sheet  
14 4 of 12 in Volume 3, and the alignment, which Mr.  
15 Riese, who wrote that letter, which he said  
16 appeared to conform to an agreement between  
17 Eversource and Shepard Steel that had been  
18 described to him by a Mr. Fernandez as a  
19 representative of Shepard Steel. Can you comment  
20 on that?

21 THE WITNESS (Bowes): Yes. With  
22 respect to the Shepard Steel property, Mr. Riese  
23 is correct in that the proposed route, as shown on  
24 the application maps, reflects a slightly  
25 different alignment. Since the application was

1 filed, we've continued to work with our outreach  
2 group, and with Shepard Steel specifically, to  
3 find a mutually-agreeable location on this piece  
4 of property.

5 Right now we're thinking it will be  
6 approximately 125 feet to the south with a  
7 transition structure, as you saw today in the  
8 field visit, and the underground duct bank would  
9 then connect over to that new structure location.  
10 This was done in order to move it away from the  
11 Shepard Steel building. And we will update the  
12 final alignment as part of the D&M planning  
13 process.

14 MR. FITZGERALD: Thank you. And my  
15 next set of questions is for you, Mr. Soderman.  
16 On August 18th Eversource filed a response to the  
17 comment letter of the highways division of the  
18 Connecticut Department of Transportation, which  
19 was dated August 14, 2017. And that response has  
20 been designated Eversource Exhibit 8. The state  
21 agency letter is part of that exhibit, and also is  
22 designated by the Council under the state agency  
23 comments as state agency comment E-1, I believe.

24 And pages 2 through 8 of that letter  
25 concern Eversource's proposal for accommodating

1 the potential future construction of a new rail  
2 station at Flatbush Avenue to be called West  
3 Hartford Station. And the letter describes two  
4 alternate strategies for accommodating the future  
5 station, just to set the table for my updated  
6 questions. Could you very briefly summarize what  
7 those two strategies are?

8 THE WITNESS (Soderman): Of course.  
9 The first strategy is to redesign the structures  
10 and the transmission line to have clearance to  
11 allow the bridge to be constructed without future  
12 modification. This would make the structures in  
13 question somewhere in the vicinity of 125 to 130  
14 feet tall, as opposed to the 107-foot tall  
15 structures as is in the application.

16 The second strategy is to design  
17 107-foot structures that would be able to be  
18 extended at a future date when the railway station  
19 would be constructed.

20 MR. FITZGERALD: And the exhibit  
21 describes these two approaches in some detail, but  
22 does not include any cost estimates for them.  
23 Have you been working on that, and do you now have  
24 a cost estimate for the two approaches?

25 THE WITNESS (Soderman): We do. So the

1 first option, which is the taller structures are  
2 going in once, would have an incremental cost of  
3 approximately \$170,000.

4 As for the second option, there would  
5 be two sets of costs: One would be the  
6 incremental cost to trap those structures today;  
7 and the second set of costs would be what it would  
8 take to modify the structures in the future.

9 So the first set of costs for the  
10 second option is \$160,000. And then to go back in  
11 the future to accommodate the rail station, that  
12 additional cost would be \$285,000.

13 MR. FITZGERALD: With those costs in  
14 mind, what preference does Eversource have between  
15 the two strategies?

16 THE WITNESS (Soderman): Based on the  
17 costs that have come fairly close between option  
18 one and option two for the costs today where there  
19 is very minimal cost savings, Eversource would  
20 prefer to go with the first design option, which  
21 would be to construct the taller poles so that we  
22 wouldn't have to come back in the future and raise  
23 the structures to accommodate the rail station.

24 This is done for two main reasons: The  
25 first is a very small incremental savings between

1 options two and one. And the second is that in  
2 conversations that we have had with the  
3 Connecticut Department of Transportation, they  
4 have indicated that this rail station is a high  
5 priority on their list of rail stations to  
6 construct.

7 MR. FITZGERALD: So your opinion is  
8 informed by belief that the railroad station  
9 actually will be built, so that you would not be  
10 building some taller structures in vain?

11 THE WITNESS (Soderman): That is  
12 correct.

13 MR. FITZGERALD: And back to you, Mr.  
14 Bowes, I've got a question about the Amtrak  
15 license. Eversource's prefiled testimony on page  
16 13, and its response to question CSC-007, provide  
17 information on the status of the Amtrak license  
18 agreement for the co-location of the overhead  
19 segment within the Amtrak right-of-way. Do you  
20 have an update on the status of that agreement?

21 THE WITNESS (Bowes): Yes, I do.  
22 Eversource has executed the Amtrak license  
23 agreement, and will be sending it to Amtrak for  
24 execution as soon as all the required documents  
25 are assembled, and the package will be provided to

1 Amtrak.

2 MR. FITZGERALD: And with those  
3 supplements, I'd like to ask first, Mr. Bowes,  
4 Mr. Soderman, and Ms. Mango, is the information  
5 and the opinions expressed in your prefile  
6 testimony and the company exhibits that have been  
7 listed on the hearing program true and correct to  
8 the best of your knowledge and belief, as  
9 supplemented by the answers you've just given  
10 today?

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

12 THE WITNESS (Bowes): Yes, they are.

13 THE WITNESS (Soderman): Yes.

14 MR. FITZGERALD: And Ms. Frayer, I have  
15 a question for you. If you could just approach  
16 the microphone? Are the information and opinions  
17 expressed in the report of London Economics, which  
18 was prepared under your supervision concerning the  
19 nontransmission alternatives, which has been  
20 designated in the hearing program as Exhibit  
21 2.D.1, true and accurate to the best of your  
22 knowledge and belief?

23 THE WITNESS (Frayer): Yes.

24 MR. FITZGERALD: And Dr. Mezei, I have  
25 a question for you. Would you just step up to the



1 microphone? Thank you.

2 Dr. Mezei, are the information and  
3 opinions in the report of Exponent, which was  
4 authored by you, and which has been designated as  
5 Exhibit 2.C.2 in the hearing program, true and  
6 correct to the best of your knowledge and belief?

7 THE WITNESS (Mezei): Yes.

8 MR. FITZGERALD: And if it please the  
9 Chair, I'd offer the prefiled testimony of Mr.  
10 Bowes, Mr. Soderman, and Ms. Mango, and the  
11 exhibits that have been marked for identification  
12 as 1 through 10 as full exhibits.

13 SENATOR MURPHY: Is there any objection  
14 to the admission as full objections?

15 (No response.)

16 SENATOR MURPHY: Hearing none, they are  
17 so admitted as full exhibits.

18 (Applicant's Exhibits II-B-1 through  
19 II-B-10: Received in evidence - described in  
20 index.)

21 MR. FITZGERALD: Thank you, Senator  
22 Murphy. And the panel is now yours for  
23 cross-examination.

24 SENATOR MURPHY: Thank you, Mr.  
25 Fitzgerald.

1           We'll begin our cross-examination with  
2 staff, Mr. Perrone.

3           CROSS-EXAMINATION

4           MR. PERRONE: Thank you.

5           Turning to the response to the Council  
6 Interrogatory Question 1, I understand that notice  
7 was resent to four abutters. When was that notice  
8 resent via first class mail?

9           THE WITNESS (Soderman): Can we get  
10 back to you on a break with that? We can get you  
11 that data.

12          MR. PERRONE: Sure. Turning to Volume  
13 1, page 9-4, Eversource notes that representatives  
14 from Newington and West Hartford indicate support  
15 for the new proposed route and found it  
16 preferable, and Hartford had not provided any  
17 feedback at that time.

18          So as an update, have you heard  
19 anything from Hartford regarding the proposed  
20 project?

21          THE WITNESS (Mango): We had a meeting  
22 scheduled with Hartford last week, and as it  
23 turned out, some of their representatives were on  
24 vacation. So I think some representatives may  
25 come tonight, or maybe actually be here today, but

1 they indicated that they didn't have a lot of --  
2 well, have no issues about the project. So  
3 there's been several attempts to contact Hartford,  
4 but the timing just hasn't worked out.

5 MR. PERRONE: Turning to the direct  
6 testimony of Mr. Bowes and Mr. Soderman, page 10,  
7 I understand that the critical load levels are  
8 given. There's a thermal one and a voltage one.  
9 And I was looking at that vis-a-vis the needs  
10 assessment on page 93. So what it looks like --  
11 and I'd like to ask you -- did you basically take  
12 the lowest critical load level in the thermal  
13 violations table, and take the lowest critical  
14 load level in the voltage violations table?

15 MR. FITZGERALD: I'm sorry. Is that  
16 the definition of critical load level, is that the  
17 question?

18 MR. PERRONE: No. I was trying to see  
19 where the thermal and voltage critical load levels  
20 came from. It appears that they came from page 93  
21 and page 94 of the needs assessment?

22 THE WITNESS (Bowes): I'm sorry. Page  
23 93 and 94 of Volume 2, the needs assessment?

24 MR. PERRONE: That is in Volume 2. So  
25 there's a Table 6-2, and then there's a table 6-3.

1 And my question is, were those numbers obtained by  
2 taking the smallest number in Table 6-2 and taking  
3 the smallest number in Table 6-3?

4 THE WITNESS (Bowes): Yes, they were.

5 MR. PERRONE: Okay. And is it fair to  
6 say that the reason for that approach is, by  
7 taking the smallest critical load level, that's a  
8 number that would be reached first, earliest?

9 THE WITNESS (Bowes): Yes.

10 MR. PERRONE: Also on page 93 of that  
11 needs assessment, Table 6-1, which is up top, is  
12 that basically the 2013 CELT, C-E-L-T, forecast  
13 gross minus passive demand response?

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

15 MR. PERRONE: Is it correct to say that  
16 these numbers are between 7,000 and 8,000  
17 megawatts?

18 THE WITNESS (Bowes): Yes.

19 MR. PERRONE: Have you looked at the  
20 more recent 2017 CELT forecast numbers?

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

22 MR. PERRONE: Would it also be correct  
23 to say that if you take the 2017 CELT gross, take  
24 out the passive demand response, you're also going  
25 to be in the 7,000 plus category?

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

2 MR. PERRONE: So with that, is it  
3 correct to say that even with the most up-to-date  
4 forecast, you're still well above your thermal and  
5 voltage critical load levels?

6 THE WITNESS (Bowes): Yes, that is  
7 correct.

8 MR. PERRONE: And I understand in the  
9 application some historical peak loads were given,  
10 I believe 2013 through 2016. Is it correct to say  
11 that the 2017 peak is probably not available yet  
12 because the summer season isn't over yet?

13 THE WITNESS (Bowes): So on page 10 of  
14 my prefile it shows the actual peak loads for 2013  
15 to 2016. The year-to-date peak load is  
16 approximately 6,200 megawatts, and that occurred  
17 on July 20th. But you are correct, as the year is  
18 not over, there's still potential for a new peak  
19 to be reached, and that would ultimately be  
20 recorded post summertime --

21 MR. PERRONE: Sure.

22 THE WITNESS (Bowes): -- for  
23 Connecticut's peak load.

24 MR. PERRONE: And if you have this,  
25 that's fine; if you don't, it's okay. But do you

1 have weather normalized peaks 2013 through 2016?

2 THE WITNESS (Bowes): So the  
3 transmission planning expert, Mr. Russo, believes  
4 that they are weather normalized, but we will  
5 verify that and read it in before the end of the  
6 proceeding.

7 MR. PERRONE: Okay. Moving on to  
8 construction items related to the project. I  
9 understand Volume 1, page ES-10, it mentioned  
10 about 30 to 40 feet of width is needed for  
11 underground transmission construction. Of that 30  
12 to 40 feet of width for underground construction,  
13 about how much is for the trench itself?

14 THE WITNESS (Bowes): So the duct bank  
15 will be, for the excavation itself, will be about  
16 5 feet wide. The actual dimensions for an  
17 alignment with two conduits below and two conduits  
18 above, two over two, it probably should be  
19 slightly less than 5 feet when it's all done. But  
20 the excavation itself will be about 5 feet.

21 MR. PERRONE: So you need a 5-foot  
22 trench for the duct bank. And then when you get  
23 to a splice vault, does it get wider to about  
24 12ish?

25 THE WITNESS (Bowes): That would be

1 approximately correct. There's an 8-foot splicing  
2 vault with about 2 feet on either side. So 12  
3 feet is a reasonable estimate.

4 MR. PERRONE: I understand that it was  
5 mentioned in a few places that the structures  
6 along the Amtrak right-of-way would be galvanized.  
7 Would the two transition structures also be  
8 galvanized?

9 THE WITNESS (Soderman): At this point  
10 that is the intent.

11 MR. PERRONE: Would any proposed  
12 structures require guy wires?

13 THE WITNESS (Soderman): No. These  
14 would all be self-supporting structures.

15 MR. PERRONE: And I know there was some  
16 mention about the relocation of the transition  
17 structure on the Shepard property. With that,  
18 would the structure 12B remain in the same  
19 location?

20 THE WITNESS (Soderman): Yes, it would.

21 MR. PERRONE: And looking at sheet 2 of  
22 4, which is Volume 3, if 12B stays in the same  
23 location, right now in the drawing it looks like a  
24 perpendicular crossing to cross the railroad. So  
25 if you move 11B to the south, you'd be crossing at

1 somewhat of an angle. Is that correct?

2 THE WITNESS (Soderman): That is  
3 correct.

4 MR. PERRONE: And just a general term  
5 that's been mentioned in a few places, the term  
6 "blow-out." Does that basically refer to the sway  
7 of the conductors due to wind?

8 THE WITNESS (Soderman): That is  
9 correct.

10 MR. PERRONE: Turning to CSC No. 9  
11 interrogatory response, Eversource mentions that  
12 the magnetic fields from a delta configuration  
13 would be slightly higher than for a vertical  
14 configuration. Could you explain why?

15 THE WITNESS (Soderman): The basis for  
16 that -- and this was based off of calculations  
17 that were prepared for a delta configuration --  
18 but the underlying cause is that you're actually  
19 bringing all conductors a little bit closer to the  
20 ground. And the right-of-way is very narrow.  
21 That's why the fields are a little bit higher.

22 MR. PERRONE: So is the conductor space  
23 in closer with the delta, but the fact that you're  
24 just coming down lower is what raises it?

25 THE WITNESS (Soderman): That's



1 correct.

2 MR. PERRONE: And also in the direct  
3 testimony of Mr. Bowes and Mr. Soderman, also EMF  
4 related, on page 43 it notes that "We consider the  
5 average annual load case to be the most useful  
6 reference for predicting field levels for any  
7 typical day." Is that because of the different  
8 load levels you're more likely to be closer to the  
9 average than some extreme peak?

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

12 MR. PERRONE: So instead of an overly  
13 conservative scenario, it's more of a very  
14 realistic scenario?

15 THE WITNESS (Soderman): Yes.

16 MR. PERRONE: Since the proposed  
17 transmission line would span the South Branch Park  
18 River Flood Control System, since you're actually  
19 expanding it, would it avoid adverse impacts to  
20 that flood control system?

21 THE WITNESS (Mango): Do you mean Trout  
22 Brook?

23 MR. PERRONE: I'm sorry.

24 THE WITNESS (Mango): We actually don't  
25 touch the South Branch of the Park River on the

1 tributary in the Southwest Hartford system, but we  
2 span Trout Brook on the east side of the Amtrak  
3 right-of-way. So we, as currently planned, we  
4 wouldn't be in the Trout Brook floodplain at all.

5 MR. PERRONE: Okay. And I understand  
6 when excavating for the structures along the  
7 Amtrak right-of-way, there is a possibility of  
8 encountering contaminated soil and/or groundwater.  
9 Is that correct?

10 THE WITNESS (Mango): That is, given  
11 the history of about 100 years of railroad  
12 operation.

13 MR. PERRONE: And to address that,  
14 would Eversource coordinate with DEEP, as  
15 necessary?

16 THE WITNESS (Mango): My understanding  
17 is that Eversource proposes to conduct  
18 geotechnical surveys along the Amtrak  
19 right-of-way, and as part of that conduct surveys  
20 for soil and groundwater, you know, conducting  
21 testing, as will be the case along the underground  
22 sections. And I'm assuming that typically what  
23 does happen is we will coordinate in this case  
24 with Amtrak, ConnDOT and DEEP, as appropriate.

25 MR. PERRONE: Page 4-38 of Volume 1.

1 This is a safety topic. Eversource notes that  
2 "The relay/control enclosures at each substation  
3 are equipped with fire extinguishers." Do you  
4 mean manual fire extinguishers, or an automatic  
5 fire suppression system?

6 THE WITNESS (Bowes): They are manual  
7 fire extinguishers.

8 MR. PERRONE: Back to the DOT comment  
9 topic. I understand option one is increasing the  
10 structure height for additional clearance. Are  
11 these clearances governed by the National  
12 Electrical Safety Code?

13 THE WITNESS (Soderman): That is  
14 correct.

15 MR. PERRONE: And by raising the  
16 structures, would you be able to comply with NESC?

17 THE WITNESS (Soderman): We would be  
18 able to comply with the NESC even if the proposed  
19 rail station weren't constructed.

20 MR. PERRONE: And I also understand  
21 that Eversource would maintain the 36 inches from  
22 the top of pavement, or ground, to the top of the  
23 facility when you're installing underground within  
24 the state right-of-way?

25 THE WITNESS (Bowes): That is correct.

1 We would modify our design approach to meet the  
2 Utility Accommodation Manual for Connecticut DOT.

3 MR. PERRONE: So that 36 inches, that's  
4 from grade to basically the top of the duct bank?

5 THE WITNESS (Bowes): Yes.

6 MR. PERRONE: So would you keep the  
7 36-inch minimum in the state right-of-way, and  
8 then perhaps decrease it to 30ish elsewhere, or  
9 would you keep it uniform?

10 THE WITNESS (Bowes): I think we'd  
11 probably go with the existing design, which would  
12 be 30 inches in the right-of-way, and go with 36  
13 inches deep in the state roadways.

14 MR. PERRONE: Would notice or a no  
15 hazard determination letter from FAA be required  
16 for any of the proposed structures? Have you  
17 looked at that?

18 THE WITNESS (Soderman): We have filed  
19 with the FAA's Notice Criteria Tool, and no  
20 structures have been identified as requiring  
21 notification with the Federal Aviation  
22 Administration.

23 MR. PERRONE: And that question was  
24 referring to permanent structures. Do you think  
25 you would need any notice to FAA for temporary

1 structures such as cranes?

2 THE WITNESS (Soderman): Individual  
3 cranes, depending on their pick locations, may  
4 need to submit notification to the FAA, and that  
5 would be the responsibility of the construction  
6 contractor to do so.

7 MR. PERRONE: Lastly, going back to  
8 ES-18 on Volume 1. At the top of that page, the  
9 first paragraph, With respect to the  
10 all-underground route, West Hartford and Newington  
11 officials expressed concerns regarding traffic,  
12 businesses and residents, and excavation of  
13 recently-paved streets. Were there any streets,  
14 in particular, that were recently paved that were  
15 of concern?

16 THE WITNESS (Mango): In particular,  
17 New Britain Avenue, which happens to be State  
18 Route 529, that was recently repaved around 2015.

19 MR. PERRONE: Thank you. That's all I  
20 have.

21 SENATOR MURPHY: Thank you, Mr.  
22 Perrone.

23 We'll start the process of  
24 cross-examination with Mr. Silvestri.

25 MR. FITZGERALD: Senator Murphy, I have

1 a request. If at all possible, we would  
2 appreciate, if there are questions concerning  
3 nontransmission alternatives, if they could be  
4 asked so that Ms. Frayer could return to Boston to  
5 be with her family this evening. She would  
6 greatly appreciate it. But that's just a, you  
7 know, if possible request. Thank you.

8 SENATOR MURPHY: Okay. Questions  
9 relative to --

10 MR. FITZGERALD: Nontransmission  
11 alternatives in the London Economics report.  
12 There may not be any but --

13 SENATOR MURPHY: Okay. What we'll  
14 simply do is go down the line, if anyone has a  
15 question for her.

16 Mr. Silvestri.

17 MR. SILVESTRI: I actually do have one.  
18 If I could reference Volume Number 1. And this is  
19 the background and need section, page 2-15. I  
20 know that there are eight identical Pratt &  
21 Whitney FT4 A9 units at South Meadow. The units  
22 are usually grouped into what I refer to as a  
23 twin-pack, so that both units would operate  
24 basically simultaneously when they had to. When  
25 I'm looking at Table 2-1, there is basically four

1 units that are listed.

2 And my question is, say for South  
3 Meadow Unit 11, is it actually Unit 11A and 11B  
4 that you're looking at and combining the megawatts  
5 for that?

6 THE WITNESS (Bowes): So our  
7 transmission planning expert just models them  
8 together. I'm not sure if they are two separate  
9 units. They're combined for nomenclature purposes  
10 or planning purposes as a single unit. You may be  
11 correct in your --

12 MR. SILVESTRI: My belief, again, that  
13 there are eight, and that it would be 11A and B,  
14 12A and B, 13A and B, and 14A and B combined, and  
15 I think the megawatts would go in the combination  
16 that's there. And I believe also that South  
17 Meadow Units 5 and 6 are just --

18 THE WITNESS (Bowes): Okay. Yes.

19 MR. SILVESTRI: That's all I have right  
20 now on that topic.

21 SENATOR MURPHY: Any other members of  
22 the Council have questions about that item?

23 (No response.)

24 SENATOR MURPHY: If not, apparently no  
25 one else has any other question for her, so

1 continue on.

2 MR. SILVESTRI: Okay. Thank you.  
3 Regarding the proposed underground route from the  
4 Newington substation that's going down the  
5 existing distribution right-of-way, is any  
6 maintenance, periodic maintenance, performed by  
7 Eversource on that distribution line?

8 THE WITNESS (Bowes): So the answer is  
9 yes. There would be annual foot patrols  
10 performed, there will be vegetative clearing done  
11 on a four or five-year cycle, and there will be  
12 pole inspections done on a 15-year cycle.

13 MR. SILVESTRI: And with the pole  
14 inspections they'll be looking at the subsurface  
15 as well to make sure those are decent?

16 THE WITNESS (Bowes): Yes. If the wood  
17 pole appears defective, they will dig as well  
18 below the ground.

19 MR. SILVESTRI: Ballpark, when was the  
20 last time that you might have had an inspection  
21 along that right-of-way?

22 THE WITNESS (Bowes): For the ground  
23 line and the pole inspection?

24 MR. SILVESTRI: For the poles.

25 THE WITNESS (Bowes): I do not know.



1           MR. SILVESTRI: Let me ask the question  
2 in a different way. If the project is approved,  
3 would there have to be any type of work done on  
4 the existing distribution poles as you put the  
5 underground transmission line in?

6           THE WITNESS (Bowes): Yes. There's a  
7 couple of things to be done. There would be  
8 vegetative clearing done in the right-of-way  
9 around the poles. I think approximately ten of  
10 the poles have to be temporarily relocated. And  
11 so ultimately there would be ten new poles out  
12 there in the final configuration.

13          MR. SILVESTRI: Okay. Thank you.

14                 In response to the Siting Council's  
15 Interrogatory Number 21, it was noted that a shed  
16 is encroaching on Eversource property LL 6018.  
17 And the response also comments that a swing set at  
18 property LL 6009 may also need to be temporarily  
19 moved for construction, although the response  
20 doesn't comment on encroachment for that swing  
21 set. But from a safety and security standpoint,  
22 what measures are in place, or will be instituted  
23 by Eversource, to advise and warn the residents  
24 along the underground corridor, if it's approved,  
25 to not dig, set pipes, foundations, or otherwise

1 encroach upon the corridor?

2 THE WITNESS (Bowes): Certainly on a  
3 public way we typically don't mark underground  
4 transmission facilities. In this case we probably  
5 will think about markers along the distribution  
6 right-of-way. There's also an existing  
7 distribution underground circuit on that  
8 right-of-way that we would also mark with stakes  
9 or markers.

10 MR. SILVESTRI: Judging from what I saw  
11 with a lot of vegetation there right now, that  
12 might not be an issue, but if there's clearing,  
13 that's where my concern --

14 THE WITNESS (Bowes): And also just  
15 during construction it would be prudent for us to  
16 mark the facilities so our construction  
17 contractors are aware of it as well.

18 MR. SILVESTRI: Moving on and staying  
19 with the underground portion now coming out of the  
20 distribution right-of-way and going across Willard  
21 Avenue, how would you handle road closures in that  
22 case? It seems they're going to come out of the  
23 distribution right-of-way and go to the east side  
24 of the avenue. The way I looked at the map,  
25 you're cutting right across Willard. What would

1 happen with road closures? How long would they be  
2 closed? How would you manage traffic in that  
3 area?

4 THE WITNESS (Bowes): So this is an  
5 area, again, on a state highway we would  
6 coordinate with the DOT. It would probably entail  
7 a nighttime construction activity, and we would  
8 cut one half of the road at a time, and for  
9 temporary or emergency needs we would have plates  
10 available. It would probably be an evolution that  
11 would take one or two evenings to complete, fairly  
12 short in duration, but we would only do half of  
13 the road at a time.

14 MR. SILVESTRI: How would you then  
15 apply that principle to Avery Road, West Hartford  
16 Road, other areas that are up there?

17 THE WITNESS (Bowes): So these are the  
18 other crossroads along the underground road, so  
19 the same type of procedure would be followed.  
20 We'd go halfway into the intersection and complete  
21 that work, and then do the second half.

22 MR. SILVESTRI: So residents would  
23 still be able to get in and out, it might be just  
24 a little bit slower, but they'd be able to get in  
25 and out?

1           THE WITNESS (Bowes): So in every case  
2 and every driveway that we pass as well, that same  
3 process would be followed. So a person would  
4 always have access to their driveway, although it  
5 might mean we would have to install a temporary  
6 plate as we pass through. So there might be  
7 operations where there would be a five to  
8 ten-minute delay while we put a plate over their  
9 driveway entrance.

10           MR. SILVESTRI: Thank you.

11           At some point in the future should,  
12 again, the project be approved, and should  
13 Eversource determine that it needs to upgrade the  
14 overhead portion from 1272 kcmil to say 1590, as  
15 an example, would the existing structures and  
16 foundations be able to accommodate the larger  
17 conductor?

18           THE WITNESS (Soderman): They can be  
19 designed to do that with minimal impact.

20           MR. SILVESTRI: By "minimal impact,"  
21 could you clarify that?

22           THE WITNESS (Soderman): Essentially it  
23 would just mean a slight -- you know, we would  
24 design the loads when we specify these structures  
25 and just evaluate them on that basis. So we can

1 evaluate the structures to see if they can  
2 accommodate the 1590, and beef ones up, as needed,  
3 to accommodate that. So we can predesign it for  
4 1590.

5 MR. SILVESTRI: Again, same with the  
6 overhead portion. And I'm looking north of Trout  
7 Brook at this time and the area of the proposed  
8 structures 32 to 37. There are railroad sidings  
9 and spurs that are in the area, and I believe, at  
10 least according to the Connecticut DEEP's letter,  
11 that those spurs and sidings are not used at that  
12 point. Is that correct?

13 THE WITNESS (Soderman): It appears  
14 that is the case, yes.

15 MR. SILVESTRI: Okay. Let's assume  
16 that they are used. Would your proposed  
17 structures 34, 35 and 36, which are located  
18 between the main portion of the tracks and the  
19 siding, would they still clear those sidings?

20 THE WITNESS (Soderman): Yes.

21 MR. SILVESTRI: I mentioned on the bus  
22 about Oakwood Avenue being in that grade crossing,  
23 and we saw that when we were there. Connecticut  
24 DOT expressed concerns with proposed structure  
25 number 40. Are those concerns focused on

1 clearances of the crossing gates that are there,  
2 signals, electrical issues, or could you shed some  
3 light on what they're concerned about?

4 THE WITNESS (Soderman): That is  
5 correct.

6 MR. SILVESTRI: All of the above?

7 THE WITNESS (Soderman): That we would  
8 maintain clearance, and that none of our  
9 operations would affect any of the operations of  
10 their traffic control systems.

11 MR. SILVESTRI: If I could turn your  
12 attention to sheet 9 of 12 of the proposed route  
13 in Volume 3. I'm a stickler for going on and  
14 looking at aerial maps and trying to figure out  
15 what roads are there. So I'll preface my question  
16 that way. But I believe Andover Drive is actually  
17 Oakwood Place, and that the actual Andover Drive  
18 is about 500 feet to the east. Do you know if I'm  
19 correct on what I saw on aerials?

20 THE WITNESS (Bowes): So I have yet to  
21 find the map.

22 MR. SILVESTRI: The reason I bring that  
23 up, Knights of Columbus --

24 THE WITNESS (Bowes): Yeah, Andover  
25 Drive. I have it now.

1           MR. SILVESTRI: Knights of Columbus has  
2 a building that's on Andover, but it's not at the  
3 railroad tracks. It's east of that. So I think  
4 that might be mislabeled and it's really Oakwood  
5 but --

6           THE WITNESS (Bowes): I think you are  
7 correct. It looks like this map or this sheet is  
8 labeled --

9           MR. SILVESTRI: It's just sometimes  
10 when you look at things on the internet, they  
11 might not be true.

12           Going back to Volume 1, the project  
13 specification section on page 3-8, there is  
14 discussion on proposed structure number 46. And  
15 if I understood the discussion correctly, it  
16 appeared that the right-of-way is narrow in the  
17 area. My question would be, would that structure  
18 number 46 be placed in an easement other than the  
19 Amtrak right-of-way?

20           THE WITNESS (Soderman): That is a  
21 possibility.

22           MR. SILVESTRI: Okay. Going back to  
23 structures 47 and 48, I have a couple of follow-up  
24 questions. First of all, it was mentioned earlier  
25 that no guy wires would be needed for the

1 structures, yet if the alternative comes in that  
2 structures 46 and 49 would be built as deadend  
3 structures, would they require guys?

4 THE WITNESS (Soderman): No, those  
5 would be designed as self-supporting structures on  
6 drilled shaft concrete foundations.

7 MR. SILVESTRI: Keeping with that  
8 scenario where you have the deadend structures, as  
9 well as the flange joints for 47 and 48, you gave  
10 the prices that were there, the 160,000 and  
11 285,000 for future work. Does that include  
12 deadending structures 46 and 49?

13 THE WITNESS (Soderman): That does  
14 include setting up those deadends, and then the  
15 future cost is to restring those three spans.

16 MR. SILVESTRI: Again, staying with  
17 those two structures 47 and 48, it was mentioned  
18 before that no notifications would be needed to  
19 FAA for the proposed structures. Would that also  
20 be true in raising structures 47 and 48 to about  
21 140 feet?

22 THE WITNESS (Soderman): Based off the  
23 filing with the Notice Criterion Tool on the FAA  
24 web site, no notification to the FAA would be  
25 required, even for the taller structure heights.



1           MR. SILVESTRI: No problems with flight  
2 paths at Brainard Airport?

3           THE WITNESS (Soderman): That's  
4 correct.

5           MR. SILVESTRI: Thank you.

6           Last one, also a follow-up. From  
7 earlier conversations, I believe I heard that no  
8 sampling and testing has been performed to date  
9 along the Amtrak corridor for potential  
10 pollutants. Is that correct?

11          THE WITNESS (Mango): That is correct,  
12 because they're negotiating right of entry.

13          MR. SILVESTRI: Got you.

14          That's all I have. Thank you.

15          SENATOR MURPHY: Thank you, Mr.  
16 Silvestri.

17          Mr. Harder.

18          MR. HARDER: Thank you, Mr. Chairman.

19          Several questions. Have you received  
20 any comments from any of the residential abutters;  
21 and if you have, could you briefly summarize them?

22          THE WITNESS (Bowes): So we have no  
23 written comments from remaining residents. We  
24 have had conversations, in particular, with a  
25 resident that lives behind the new substation.

1 They are concerned about the new structure at that  
2 location and its height. And we've had ongoing  
3 discussions with them about visual screening in  
4 their backyard. And at this point we don't have  
5 any further actions to follow up with that  
6 resident.

7 THE WITNESS (Soderman): We have also  
8 had meetings with both neighbors on Willard Ave.  
9 on either side of the distribution riser and  
10 switching stations, and no further actions are at  
11 this time.

12 MR. HARDER: So the people you've been  
13 speaking with are basically satisfied with what  
14 you're doing and how you're addressing the  
15 concerns they have?

16 THE WITNESS (Soderman): I'm sorry, I  
17 couldn't hear.

18 MR. HARDER: The people you've been  
19 speaking with in those locations are basically  
20 satisfied with how you're dealing with their  
21 concerns?

22 THE WITNESS (Bowes): I would say in  
23 general, yes. They didn't proceed with written  
24 comments. They may have other concerns as the  
25 project unfolds, but at this point I believe they

1 satisfied their questions about the project  
2 development.

3 MR. HARDER: Thank you.

4 SENATOR MURPHY: Thank you.

5 Dr. Klemens.

6 DR. KLEMENS: Thank you, Mr. Chairman.

7 When we were on the bus, I asked  
8 whether or not the base maps were being used that  
9 were in Volume 3. Now, as I'm sitting here  
10 preparing questions about that, I realized that  
11 some of the things are different.

12 So I imagine, for the record, this  
13 is -- I don't know which one we're supposed to  
14 use. It says Volume 3. One of the things I've  
15 noticed on page 1 of 4 is the different treatment  
16 of that wetland to the southwest of the project  
17 area. What is indicated -- I understand in the  
18 original the NDDDB blob is indicated by an outline  
19 and a single line. What are these extra lines  
20 that are in this map that was distributed on the  
21 bus today?

22 THE WITNESS (Mango): I really just  
23 think that that was maybe a different shading.  
24 You're speaking about the blue line and blob  
25 around the unnamed tributaries to Bass Brook.

1 Correct?

2 DR. KLEMENS: No. What I'm speaking  
3 about is the crosshatching. One, you've got these  
4 large blue crosshatches that are about maybe half  
5 an inch apart. And the one you have in there has  
6 got those, plus it has additional lines. Is it  
7 just a different way of representing it, or is  
8 something different being indicated?

9 THE WITNESS (Mango): No, nothing  
10 different is being indicated. The map that was  
11 provided to everyone on the bus tour this  
12 afternoon is just a 1 inch equals 400 foot scale  
13 map that was taken from the application, and, in  
14 addition, we added on the underground route  
15 because we were led to believe that the Council  
16 members also wanted to drive that.

17 So we took the 1 inch equals 400 foot  
18 map from the MCF, which we had published in  
19 December of 2015, and combined them so that both  
20 routes could be shown. And in doing that, it just  
21 seems to me that maybe a little bit extra, bigger,  
22 was added to some of the crosshatching, but none  
23 of the environmental features shown on your tour  
24 route map are different technically from that  
25 shown in Volume 3.

1 DR. KLEMENS: I'm going to use what you  
2 have in the binder in Volume 3 and ask some  
3 questions. I would assume that this NDDDB blob  
4 that we're seeing in the southwest corner is the  
5 genesis of the box turtle and the spotted turtle  
6 records of special concerned species?

7 THE WITNESS (Mango): We believe that  
8 to be the case, although there were no such blobs  
9 at all in the vicinity that encompass any part of  
10 this project.

11 DR. KLEMENS: I understand that. And  
12 I'm a little bit confused. Who is Chris Fritz and  
13 Burns & McDonnell? Why did they make the inquiry,  
14 and you're here? Do they work for you?

15 THE WITNESS (Mango): That would make  
16 me really important. No, Chris Fritz is a Burns &  
17 McDonnell employee who is assisting Eversource  
18 regulatory affairs, that group of Eversource. And  
19 in moving forward to plan for other permits for  
20 this project, he was doing due diligence as part  
21 of the stormwater pollution control permit  
22 requirements. So in order to get a general permit  
23 from DEEP to obtain a general stormwater permit,  
24 if your project, or any part of it, is within a  
25 quarter mile of an NDDDB blob, then one has to

1 recontact DEEP and seek further advice. If you  
2 have just a project, and no part of your project  
3 area encompasses an NDDB blob, and you don't need  
4 a stormwater permit, then your time with DEEP and  
5 NDDB is done.

6           So in the course of just submitting a  
7 generic request to NDDB, which Mr. Fritz did as  
8 part of his initial preparation for the stormwater  
9 pollution control permit, and NDDB came back and  
10 they said Mr. Fritz submitted that because the  
11 blob around Bass Brook to the west of our project  
12 area is in fact I think it's right about half or a  
13 quarter mile away.

14           So we were surprised to hear about the  
15 turtles when that NDDB letter came back, and I  
16 think it was August 1st. So we do not know what  
17 the NDDB was thinking, but it appears that they  
18 perhaps feel the turtles would migrate along the  
19 right-of-way and end up in our project area.

20           DR. KLEMENS: Let's talk about that,  
21 because I'm all for giving full employment to  
22 herpetologists and environmental consultants, but  
23 I'm also not interested in seeing public money  
24 being spent for things on a public -- Eversource's  
25 money, which then ultimately becomes the

1 ratepayers, on things that don't make sense.

2 Let's take a look at this wetland.

3 There's a little piece that extends onto the  
4 right-of-way to the east of Kimberly Road. What  
5 is the nature of the rest of that right-of-way  
6 between that and the wetland N-1A?

7 THE WITNESS (Mango): We did not do  
8 surveys of that portion of the right-of-way. That  
9 is the 1783, 1785 line right-of-way, and I think  
10 there's also a distribution pole.

11 DR. KLEMENS: Is it a wetland?

12 THE WITNESS (Mango): I actually don't  
13 know. It's not mapped here as wetland soil. So  
14 that would have been the case just by doing  
15 baseline research. So based on our baseline  
16 research, without doing on-the-ground field  
17 surveys, because, once again, it's outside of our  
18 project area, this does not appear to be a wetland  
19 area.

20 DR. KLEMENS: Do you see those little  
21 lines that look like roads there, trails on there?

22 THE WITNESS (Mango): That's probably  
23 an Eversource access road or a third-party trail,  
24 ATV.

25 DR. KLEMENS: Because what I'm troubled

1 about is, you have been requested to have a very  
2 elaborate turtle protection program, and I'm all  
3 in favor of those. And you've been asked to hire  
4 a qualified herpetologist. I don't know what that  
5 means, how you determine a qualified  
6 herpetologist. But I looked at the areas today,  
7 and I cannot in my professional -- and I'm not  
8 allowed to testify. I'm going to ask you, based  
9 on your professional opinion, do you really think  
10 that there's spotted turtles or box turtles in  
11 this area?

12 THE WITNESS (Mango): Well, I am not a  
13 herpetologist, and I would love you to offer an  
14 opinion that you think that these turtles are not  
15 there. I will reiterate that we were surprised to  
16 get the letter. And there are a number of  
17 protection measures that are now in the record as  
18 measures that DEEP is asking Eversource to  
19 implement. Our opinion at this point is that  
20 during the course of our further permitting  
21 discussions with DEEP, our intent is to revisit  
22 the question of the turtles and try to get further  
23 information from DEEP as to why they believe the  
24 turtles actually may inhabit our right-of-way; and  
25 if so, devise some sort of protection strategies



1 that would be appropriate to the work that we're  
2 doing for this project.

3           So at this time I think that we have it  
4 on the record a letter that says, in DEEP's  
5 opinion, the turtle is present -- turtles, and  
6 therefore we need to enter into further  
7 discussions with DEEP as we move into like, for  
8 example, getting other permits from them,  
9 including a stormwater permit and a 401 Water  
10 Quality Certification.

11           DR. KLEMENS: It may be helpful to ask  
12 for a consultation with a wildlife biologist on  
13 this, a wildlife biologist, as opposed to the  
14 people that generate this -- spit out this  
15 database.

16           Would you characterize the -- how would  
17 you characterize the overall habitat matrix, is it  
18 a rural area, suburban, is it fragmented, how  
19 would you characterize that?

20           THE WITNESS (Mango): Overall the  
21 right-of-way, the 0.8 mile right-of-way from the  
22 Newington Substation to Willard Avenue, is really  
23 the only type of shrub-scrub, even forested  
24 pockets of vegetation that we have along this  
25 entire project. The project area itself is highly

1 urbanized. On either side of the Eversource  
2 right-of-way there is what I would characterize as  
3 dense single-family residential development that's  
4 been in existence for 50-plus years.

5 DR. KLEMENS: What is your  
6 understanding of the existence of box turtles and  
7 spotted turtles in that kind of urban landscape  
8 matrix that has been in existence for more than  
9 half a century?

10 THE WITNESS (Mango): Well, I would say  
11 it's not desirable habitat. But, to be fair,  
12 turtles do walk and, you know, one doesn't know  
13 where they might go. I had a dog that loved  
14 turtles, and he would pick them up and take them  
15 far from where he found them. So I have no idea  
16 where they might be found.

17 DR. KLEMENS: You can probably gather  
18 I'm quite skeptical of whether or not this is  
19 proper turtle habitat.

20 THE WITNESS (Mango): Dr. Klemens, let  
21 me just say it's my understanding that this has  
22 happened to Eversource on other projects where we  
23 proceeded through a petition before the Council  
24 and other regulatory submissions finding no  
25 endangered species, and then turtle sightings

1 popped up at the last minute just like this. So  
2 this is probably something that Eversource  
3 environmental affairs should pursue globally.

4 DR. KLEMENS: I know that Eversource is  
5 quite turtle -- they do tend to crop up in  
6 opportune places.

7 Let's talk about the wetlands. I  
8 looked at wetlands N-1A and tried to look at the  
9 one behind the substation, N-2, and I asked you on  
10 the bus as to the nature of the quality of the  
11 vegetation. From my looking at it, I saw a lot of  
12 Phragmites, invasive species. Can you comment on  
13 that?

14 THE WITNESS (Mango): Your observations  
15 are correct. Wetlands N-1 and N-1A have been  
16 disturbed over time first as a result of  
17 agricultural development, you know, many years  
18 ago, and now they are maintained as part of the  
19 Eversource right-of-way. In this suburban type of  
20 environment they are characterized by Phragmites  
21 and other invasive species. So in the big scheme  
22 of things, while they do provide wetland habitat,  
23 it is not high quality wetland habitat.

24 DR. KLEMENS: How about wetland N-3,  
25 which I really couldn't see very clearly?

1           THE WITNESS (Mango): Wetland N-3 is a  
2 more, I would say, of the four wetlands along this  
3 segment of the project, wetland N-3 is maybe a  
4 medium quality wetland. It too has a lot of  
5 Phragmites. It has Reed Canary Grass. It also is  
6 a wetter wetland. So, for example, in June when  
7 AECOM did their field survey, there was still  
8 standing water, whereas that was not the case in  
9 some of the other wetlands. So I would say that  
10 this is probably a medium quality wetland, but  
11 still nonetheless affected by the surrounding  
12 development.

13           DR. KLEMENS: So can you comment --  
14 let's talk about wetland 1A and wetlands N-1 and  
15 N-2. You have proposed, or Eversource is  
16 proposing to do an invasive species control  
17 restoration plan. You're going to have a linear  
18 impact within basically a wetland that's choked  
19 with Phragmites and other invasives. How  
20 efficacious is this going to be? You take up the  
21 timber mats. Is it really going to make a  
22 difference? Again, I'm asking again from, I'm all  
23 for wetland restoration and that, but if it's not  
24 going to work, why do it?

25           THE WITNESS (Mango): First, let me

1 just say I agree with you. These are wetlands  
2 that have been highly disturbed. We will be  
3 clearing some additional forested wetland  
4 vegetation in some places that are not currently  
5 characterized by Phragmites, Reed Canary Grasses,  
6 other invasives. But in terms of invasive species  
7 control, we propose to use invasive species  
8 control best management practices only during  
9 construction. The Army Corps of Engineers'  
10 general permit, which we would qualify for, in  
11 fact, requires that you comply with these measures  
12 on a blanket basis, and so therefore we don't have  
13 any choice. So as a result, we will make sure  
14 that the mats are clean before they're put down,  
15 and then when they're removed we'll have the  
16 contractor clean them again so they don't transmit  
17 this vegetation elsewhere.

18 DR. KLEMENS: That's important. I  
19 agree with you on that. But as far as actually --

20 THE WITNESS (Mango): In terms of  
21 long-term monitoring of a wetland like this, in  
22 the past we've had to do five years of monitoring  
23 and document how the invasive species came back  
24 and maybe try to control them. On a linear  
25 right-of-way, it's virtually impossible to control

1 invasive species, especially in an urban area like  
2 this where you have third parties encroach -- not  
3 encroaching, but you have a third-party walking  
4 along the right-of-way. It makes it difficult.

5 DR. KLEMENS: But you're representing  
6 that actually you have to do this as a condition  
7 of your Army Corps permit, even though it makes no  
8 sense?

9 THE WITNESS (Mango): It's a standard  
10 condition of the new Connecticut general permits  
11 from the Army from 2016.

12 DR. KLEMENS: My condolences.

13 THE WITNESS (Mango): Thank you.

14 DR. KLEMENS: In your prefile  
15 testimony -- this is just a small point -- you are  
16 testifying on environmental features, impacts, and  
17 mitigation measures. And I'm kind of puzzled to  
18 see on pages starting on 25 and 26 this  
19 information about traffic. Do you have an  
20 expertise in traffic? Are you a traffic engineer?

21 THE WITNESS (Mango): I am not a  
22 traffic engineer, but over the years I have been  
23 exposed as an environmental inspector, including  
24 as an inspector for the Council on a number of  
25 cables projects and others, to underground

1 construction in roads and the effects of traffic.  
2 So Eversource now looks at traffic as a compliance  
3 issue, traffic maintenance, working with ConnDOT.  
4 So therefore in the environmental testimony I  
5 include a section on traffic control because it is  
6 important to the public.

7 DR. KLEMENS: It's important. It's  
8 just I'm used to seeing it addressed by traffic  
9 engineers, or other people, not an environmental  
10 specialist, but you've explained that.

11 When you spoke -- and this is a general  
12 question maybe for Mr. Bowes or Mr. Soderman --  
13 did any of the towns express a -- I know you had  
14 West Hartford and Newington, Hartford you have  
15 not -- did they express a preference for the route  
16 with the traffic through the wetlands versus the  
17 total underground route? Was there a preference?

18 THE WITNESS (Bowes): I would say yes  
19 there was. The preference is for the proposed  
20 route using the Amtrak right-of-way. And that was  
21 mainly due to disruption in city streets, and in  
22 some cases residential areas, for the underground  
23 construction. The Town of Newington also had a  
24 preference for locating the exit in West Hartford  
25 rather than through a portion of Newington along

1 Willard Avenue.

2 THE COURT REPORTER: I'm having a hard  
3 time hearing you.

4 DR. KLEMENS: And one very final -- and  
5 Vice Chairman, it will be my final question. What  
6 are the cost differences between -- maybe some  
7 were in here -- what are the differences in the  
8 cost between the two proposals?

9 THE WITNESS (Boves): So I also had to  
10 do a calculation to get to the correct number.  
11 It's just under \$39 million in cost savings by  
12 going with the hybrid routing along the Amtrak  
13 versus the alternate.

14 DR. KLEMENS: Thank you. I have no  
15 more questions, Mr. Chairman.

16 SENATOR MURPHY: Thank you, Doctor.  
17 Mr. Hannon.

18 MR. HANNON: Thank you, Mr. Chairman.  
19 I do have a few. A couple of them were answered  
20 on the bus.

21 On sheet 1 of 4, and this is Volume 3,  
22 a question was raised about where the first splice  
23 vault was being situated. And based on the  
24 mapping, I just wanted to make sure that it is not  
25 the intent to put that in the wetlands but --



1           THE WITNESS (Bowes): So we're  
2 proposing at this point the first splice vault  
3 would be located within the right-of-way, and it's  
4 just to the west of West Hartford Road. I'm  
5 sorry, that would be the second vault.

6           MR. HANNON: This is right by West  
7 Hartford Road. My understanding is that it's not  
8 going in the wetlands. I just want it on the  
9 record.

10          THE WITNESS (Mango): It's not going in  
11 the wetlands, no. There's only three vaults, and  
12 none of them will be in the wetland.

13          THE WITNESS (Bowes): And I also  
14 misspoke. It's to the east of West Hartford Road.

15          MR. HANNON: And then on sheet 2 of 2,  
16 the third splice vault. In looking at how the  
17 underground route has been prepared, it looks as  
18 though you're doing as much as you possibly can to  
19 avoid (inaudible). So I'm curious as to why the  
20 third splice vault is located on -- is that  
21 something that can be moved more towards the  
22 intersection so that you have maybe a 45-degree  
23 angle going in, and you can still have a straight  
24 shot to do the work inside the vault?

25          THE WITNESS (Soderman): Well, when you

1 have a splice vault, you have to be going straight  
2 through it because that's how you keep the stress  
3 off of the actual splice. So we need to get it  
4 off of the corner of Willard and Shepard just a  
5 little bit to accommodate the sweep as you're  
6 coming around the corner.

7 MR. HANNON: Thank you.

8 THE WITNESS (Bowes): And also to avoid  
9 being in the state roadway as well for a splice  
10 vault.

11 MR. HANNON: This question is for Mr.  
12 Soderman. I believe you testified earlier that  
13 structures 47 and 48 would be about 125 to 135  
14 feet, but yet in your testimony response, page 4  
15 of 8, I thought there was language in there they'd  
16 be approximately 140 feet. So will this be 140  
17 feet or 125 to 135?

18 THE WITNESS (Soderman): It's in that  
19 range. A lot of it is going to be subject to when  
20 we get the 30 percent design for the railway  
21 station from ConnDOT. They're still in  
22 preparation of that.

23 MR. HANNON: So it could go to 140?

24 THE WITNESS (Soderman): It could go up  
25 as high as 140, yes.

1           MR. HANNON: I didn't know whether it  
2 was 125 to 135 so --

3           THE WITNESS (Soderman): Yes, sir.

4           MR. HANNON: On the responses to Siting  
5 Council questions, this is Question 22, it talks  
6 about the proposed construction hours for Monday  
7 through Saturday and it's possible some Sunday  
8 hours or evening hours may be necessary. But then  
9 moving forward in time to the DOT letter where  
10 they talk about construction may be limited from  
11 midnight until 5:30 a.m., do you need to change  
12 your response on what was in the original answer  
13 to the Siting Council?

14           THE WITNESS (Bowes): So I would say  
15 yes. We received the DOT letter after this  
16 response had been done, and I believe in May of  
17 2018 they expect to increase significantly the  
18 amount of trains along this railway, and that will  
19 prompt or require us to change to probably evening  
20 construction, as you mentioned, from midnight to 5  
21 in the morning.

22           So I would say for the overhead portion  
23 of this line I would be in agreement with your  
24 statement saying that this should be modified to  
25 say -- or I guess I'm doing it right now -- modify

1 it to say evening construction will be preferred,  
2 or will be preferred by the Connecticut DOT to  
3 avoid congestion given the number of trains along  
4 this railway.

5 MR. HANNON: I have no other questions.

6 Thank you.

7 SENATOR MURPHY: Thank you.

8 Mr. Levesque.

9 MR. LEVESQUE: Mr. Bowes, you had said  
10 that there was a \$39 million saving from your  
11 preliminary estimates using the hybrid?

12 THE WITNESS (Bowes): That is correct.

13 MR. LEVESQUE: Can you clarify for us?

14 The cost of your preferred underground route to  
15 get to the train track easement area, as opposed  
16 to the overhead route, it seemed like it was a  
17 rare instance where the underground was less  
18 expensive than the overground. Is that correct?

19 THE WITNESS (Bowes): That is correct  
20 along this portion of the right-of-way. Because  
21 of the distribution system relocations that we'll  
22 be requiring, the underground construction is  
23 actually a little bit less costly than the  
24 overhead construction. There's another constraint  
25 for the transmission overhead line that would have

1 to exit the substation and basically circle  
2 entirely around it because of crossings with the  
3 other lines that are existing today. So those  
4 angled structures, there will actually be three of  
5 them, to go around the substation would be fairly  
6 expensive as well.

7 So those are the two things that drive  
8 the cost of the overhead slightly above the cost  
9 of the underground. Highly unusual, I realize,  
10 but in this case it's because of the specific  
11 things along that right-of-way and the  
12 distribution assets that are presently --

13 MR. LEVESQUE: It's probably sometimes  
14 more (inaudible).

15 THE COURT REPORTER: Attorney Levesque,  
16 I can't hear you at all.

17 MR. LEVESQUE: There's some advantages,  
18 unlike some undergrounds where you -- up and down  
19 as far as construction costs?

20 THE WITNESS (Bowes): Yes, I think this  
21 construction of the underground, along the  
22 right-of-way, would actually be simpler  
23 construction than the overhead and all of the  
24 relocations and customer exposure from the  
25 reworking of the distribution system in this area.

1 So I think this is a preferred solution and also  
2 the least-cost solution.

3 MR. LEVESQUE: Thank you.

4 SENATOR MURPHY: Mr. Lynch.

5 MR. LYNCH: Just one question, one  
6 simple question. Can you explain to me where you  
7 put both overhead and undergrounding, how you  
8 coordinate with the other utilities, the MDC, or  
9 electric -- you're electric -- as far as doing  
10 your planning, do you bring them into your  
11 planning before you get started for overhead and  
12 underground?

13 THE WITNESS (Bowes): So I'll start  
14 with a response, and Mr. Soderman may have more  
15 details to add on the overhead. But for the  
16 underground, we would start with a survey of the  
17 utilities that are out there, probably also some  
18 tests borings and test pittings as well, some  
19 excavation to see what is actually under the  
20 roadway, or in this case the right-of-way. We  
21 want to make sure that we understand the location  
22 of all of those facilities. There will obviously  
23 be mark-outs. But prior to construction, we would  
24 engage each one of the utilities that are out  
25 there, including CL&P distribution. There's some

1 gas in this neighborhood as well, at least in the  
2 West Hartford portion of it. So there's a local  
3 gas company that we coordinated with. As you  
4 mentioned, there's water, there's sewer, town  
5 facilities, and there's at least interaction with  
6 MDC in one location along the route where we will  
7 have a crossing with their facilities. So we will  
8 coordinate with all of those entities to identify  
9 during the survey and through the mapping process.

10 MR. LYNCH: That was my concern,  
11 Mr. Bowes. Knowing nothing about construction, I  
12 wonder how you're integrating with gas, MDC, and  
13 --

14 THE WITNESS (Bowes): Yes. So we will  
15 start an outreach program with all of the  
16 utilities once they're identified, and probably  
17 preconstruction meetings and meetings with our  
18 contractors to make sure if they have areas of  
19 concern, or if potentially if we're opening a  
20 road, they may have construction repairs they  
21 would like to coordinate with us. It's a  
22 possibility. We would certainly entertain to try  
23 to minimize the impact on the streets being a  
24 single evolution, not multiple.

25 MR. LYNCH: When you are opening a road

1 or digging a trench, do you have to also notify  
2 the law enforcement in the area?

3 THE WITNESS (Bowes): So we would  
4 definitely have traffic control there. And as we  
5 work with each of the towns, we typically use  
6 local law enforcement if they do support the  
7 project. Otherwise, we'll use certified flaggers.  
8 In most cases local law enforcement, especially  
9 for the nighttime construction, will be used, and  
10 preferred.

11 MR. LYNCH: Mr. Soderman.

12 THE WITNESS (Soderman): For the  
13 overhead portion of the construction, you would  
14 review similar survey utility mapping for making  
15 sure your foundations don't conflict with any  
16 underground facilities. And to address overhead  
17 facilities, such as phone, cable television, and  
18 other fiber optic, that is based off of our LIDAR  
19 that was done in the area. The LIDAR is basically  
20 a laser-based survey that picks up wires and all  
21 sorts of overhead obstacles.

22 MR. LYNCH: Thank you very much. Thank  
23 you, Mr. Chairman.

24 SENATOR MURPHY: Thank you, Mr. Lynch.

25 Mr. Harder, do you have any follow-up?



1           MR. HARDER: Yes. I wanted to actually  
2 get on the record a question we had on the bus  
3 tour just so it's on the record. We talked about  
4 the route the line takes from the northeast corner  
5 of the Newington substation, and it runs in a  
6 diagonal direction southeast about 300 to 400 feet  
7 directly east. My question was, in the process of  
8 doing that, or in order to do that, you have to  
9 remove some trees, about a 25-foot wide section of  
10 trees. My question was, could you avoid the tree  
11 route by going immediately along the east side of  
12 the substation and then going directly east?

13           And I think, Ms. Mango, you had pointed  
14 out that there are some pole structures in that  
15 area. I guess my specific question is, do you  
16 have to move or relocate any of those poles in  
17 order to do that, or are there other reasons why  
18 that's a preferred route?

19           THE WITNESS (Mango): I think, first  
20 off, when you look at, for example, sheet 1 of 12,  
21 and you see the yellow line that indicates the  
22 proposed underground TPV line, I don't think  
23 what's accurately shown on here is where  
24 necessarily the underground circuit is, which is I  
25 believe it's to the north of the black box that

1 indicate that overhead 23 kV double circuits.

2           So we need to maintain some separation  
3 with the 115 kV line from that direct underground  
4 23 kV. And if the 115 kV line, we tried to route  
5 it farther to the south, hugging the eastern fence  
6 line, then we'd have to cross under the  
7 underground circuit and those other aboveground  
8 lines, which would make for more problematic  
9 construction. And then we'd still have to get  
10 back over to the north side of the right-of-way.  
11 So you'd be crossing existing distribution lines  
12 twice.

13           THE WITNESS (Bowes): I agree with what  
14 she said. We can certainly look at and locate  
15 where that underground distribution circuit is,  
16 and we may be able to bring in a few feet to the  
17 south for the transmission line. That's something  
18 we could certainly look at during the D&M process.

19           MR. HARDER: All right. Thank you.

20           Thank you, Mr. Chairman.

21           SENATOR MURPHY: Mr. Perrone, do you  
22 have further follow-up?

23           MR. PERRONE: No, I don't. I'm all  
24 set.

25           SENATOR MURPHY: Does any member of the

1 Council have any questions? (No response.)

2 If not, we'll stand in recess until --

3 MR. FITZGERALD: We have some answers  
4 to questions that were deferred.

5 SENATOR MURPHY: Fine. Proceed.

6 THE WITNESS (Bowes): So there was a  
7 question about CSC-001, and the four residents  
8 that had not responded to certified mail. We  
9 resent first class mail to them on July 28th.

10 And then you had a question,  
11 Mr. Perrone, around historical load data. It's  
12 actually on my prefile testimony at page 10. So  
13 the period from 2013 for each year to 2016 was not  
14 weather normalized data. It was data directly  
15 from the ISO web site. So it's accurate data, but  
16 it is not weather normalized.

17 MR. PERRONE: So it's actual historical  
18 peak?

19 THE WITNESS (Bowes): That is correct.

20 MR. PERRONE: Thank you.

21 SENATOR MURPHY: We'll stand in recess  
22 until 6:30 and have public comment. Thank you.

23 (Whereupon the witnesses were excused,  
24 and the above proceedings adjourned at 4:51 p.m.)

25

## 1 CERTIFICATE

2 I hereby certify that the foregoing 66 pages  
3 are a complete and accurate computer-aided  
4 transcription of my original stenotype notes taken  
5 of the Council Meeting in Re: DOCKET NO. 474,  
6 The Connecticut Light and Power Company d/b/a  
7 Eversource Energy application for a Certificate of  
8 Environmental Compatibility and Public Need for  
9 the Greater Hartford-Central Connecticut  
10 Reliability Project that traverses the  
11 municipalities of Hartford, West Hartford, and  
12 Newington, which consists of (a) construction,  
13 maintenance and operation of a new 115-kilovolt  
14 (kV) electric transmission line within existing  
15 Eversource, Amtrak and public road rights-of-way  
16 and associated facilities extending overhead  
17 approximately 2.4 miles and underground  
18 approximately 1.3 miles between Eversource's  
19 existing Newington Substation in the Town of  
20 Newington and existing Southwest Hartford  
21 Substation in the City of Hartford; (b)  
22 modifications to a .01 mile section within  
23 existing Eversource right-of-way of the existing  
24 overhead 115-kV electric transmission line  
25 connection to the Newington Substation (Newington  
Tap); and (c) related modifications to Newington  
Substation and Southwest Hartford Substation,

18 which was held before SENATOR JAMES J. MURPHY,  
19 JR., Vice Chairman, at the Newington Town Hall  
20 Auditorium, 131 Cedar Street, Newington,  
21 Connecticut, on August 22, 2017

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

25 Court Reporter

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I N D E X

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JULIA FRAYER

J. PATRICK HOLMES

LOUISE F. MANGO

GABOR MEZEI

CHRISTOPHER P. NEWHALL

ROBERT J. RUSSO

CHRISTOPHER PAUL SODERMAN

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Mr. Hannon 55

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## 1 I n d e x (Cont'd):

2

## 3 APPLICANT'S EXHIBITS

4 (Received in evidence)

5 EXHIBIT DESCRIPTION PAGE

6 II-B-1 Application filed by CL&amp;P, 16

7 Volumes 1-3, received June 7, 2017,  
8 and attachments and bulk file exhibits  
9 (regional, municipal and  
10 consultation documents)

11 II-B-2 Eversource Energy letter 16

12 regarding posted signs with  
13 attachments, dated 8/11/17

14 II-B-3 Eversource Energy correction sheet 16

15 regarding revisions to Volume 1 of  
16 the application, dated 8/14/17

17 II-B-4 Eversource Energy direct 16

18 testimony of Kenneth Bowes and  
19 Christopher Soderman, dated 8/15/17

20 II-B-5 Eversource Energy Direct 16

21 testimony of Louise F. Mango, dated  
22 8/15/17

23

24

25

## 1 I n d e x (Cont'd):

2

3 EXHIBIT DESCRIPTION PAGE

4 II-B-6 Eversource Energy resumes of 16

5 witnesses: Bowes, Frayer, Holmes,

6 Mango, Mezei, Newhall, Russo and

7 Soderman, 8/15/17

8 II-B-7 Eversource Energy's responses 16

9 to Council's interrogatories, dated

10 8/15/17

11 II-B-8 Eversource Energy's responses 16

12 to the CT DOT's comments, dated

13 8/18/17

14 II-B-9 Route map to be used in the 16

15 introductory presentation by Kenneth

16 Bowes at public comment session, dated

17 8/18/17

18 II-B-10 Field Review handout and maps, 16

19 dated 8/22/17

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21

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25