



# STATE OF CONNECTICUT

## CONNECTICUT SITING COUNCIL

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June 12, 2017

Anthony M. Fitzgerald, Esq.  
Carmody Torrance Sandak & Hennessey LLP  
195 Church Street  
New Haven, CT 06509

RE: **DOCKET NO. 461A** - Eversource Energy application 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 transmission circuits extending approximately 2.3 miles between the proposed substation and the existing Cos Cob Substation, Greenwich, Connecticut, and related substation improvements. Reopening of this docket based on changed conditions pursuant to Connecticut General Statutes §4-181a(b).

Dear Attorney Fitzgerald:

The Connecticut Siting Council (Council) requests your responses to the enclosed questions no later than June 30, 2017.

Please forward an original and 15 copies to this office, as well as send a copy via electronic mail. In accordance with the State Solid Waste Management Plan and in accordance with Section 16-50j-12 of the Regulations of Connecticut State Agencies the Council is requesting that all filings be submitted on recyclable paper, primarily regular weight white office paper. Please avoid using heavy stock paper, colored paper, and metal or plastic binders and separators. Fewer copies of bulk material may be provided as appropriate.

Copies of your responses shall be provided to all parties and intervenors listed on the service list, which can be found on the Council's pending proceedings website.

Any request for an extension of time to submit responses to interrogatories shall be submitted to the Council in writing pursuant to §16-50j-22a of the Regulations of Connecticut State Agencies.

Yours very truly,

Melanie Bachman  
Executive Director

MB/RDM

c: Parties and Intervenors



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**Connecticut Siting Council  
Docket No. 461A  
Eversource - GLSP Greenwich  
Pre-hearing Interrogatories – Set 1**

Public Need – System Reliability Questions

1. Reference Reopened Application Vol. 1, Pre-filed Testimony p. 4. Is the 130.5 MVA Cos Cob value now the sole indicator of need for the GLSP? If not, what other studies have been conducted to determine the appropriate solution to this summer peak load value and load growth projections?
2. Is the 2013 peak of 130.5 MVA roughly on the order of a 90/10 extreme weather peak? If yes, if Eversource uses this (non-weather-normalized historical “extreme” peak) as a starting point for a forecast, would it be more appropriate to forecast (into the future) using a 90/10 (or extreme weather) forecast instead of a 50/50 or normal weather forecast?
3. The ISO-NE 2017 Capacity, Energy, Loads and Transmission Forecast (2017 CELT Forecast) shows a compound annual growth rate (CAGR) of about 0.576 percent for Southwest Connecticut for its 90/10 Summer Peak Load Forecast from 2017 to 2026. With the behind the meter solar photovoltaic forecast included, the CAGR decreases to about 0.365 percent. With solar plus passive demand response, the CAGR becomes approximately -0.345 percent. In light of this, what would be an appropriate CAGR to forecast possible load growth (or decline) for the Cos Cob 27.6-kV system from 2017 to 2026?
4. What regional planning criteria apply to the GLSP?
5. Is the GLSP identified in the ISO-New England Regional System Plan? If so, provide the Project ID number.
6. Do the Proposed Modified Project (PMP) and/or the Alternate Modified Project (AMP) have Project Plan Approval (PPA, Section I.3.9 of the ISO-New England Tariff) and Transmission Cost Allocation (TCA) approval from ISO-New England? If so, provide copies of relevant documents.
7. Is it typical for Eversource to design a bulk power substation solely based on a single peak load value recorded in a 12 year period? Provide examples of similar Eversource projects that were designed under similar circumstances.
8. Reference Reopened Application Vol. 1, Pre-filed Testimony p. 15, Line 456. What type of forecasting was used to determine the project would provide “some margin for growth”?
9. Has Eversource revised the Cos Cob 27.6-kV system Peak Demand load forecast (refer to Council Docket 461 Findings of Fact #97, May 12, 2016 [FOF])? If so, please provide.
10. Reference Council FOF #81. Has Eversource revised load growth projections for the Prospect Substation? If so, please provide.
11. Reference Council FOF #83. Revise the table to include the 2016 value.

12. Reference Council FOF #83 and #84. Was weather the primary cause of the 128.2 MVA value recorded in Year 2012?
13. Reference Response to Office of Consumer Counsel Interrogatory #065, January 5, 2016 (OCC-065). Revise the table to account for Year 2016.
14. Reference Reopened Application Vol. 1, Pre-filed Testimony p. 7, Line 190. What was the cause of the multiple faults/overloads recorded in July 2016?
15. Reference Council FOF #66e. Provide more information as to the extent of the feeder replacements.
16. Reference Reopened Application Vol. 1, Pre-filed Testimony p. 5, Line 153. Describe any measures performed to alleviate feeder overloads occurring at 82 MVA under contingent conditions given that the lowest peak load recorded from 2004 to 2015 was 96.8 MVA.
17. Reference Council FOF #74. Provide customer outage information related to the pole-mounted transformer fire.
18. Reference Council FOF #91. What is the lead time on a 27.6-kV transformer replacement at Cos Cob?
19. Reference Council FOF Attachment 1. Revise table to account for project changes.
20. Reference Reopened Application Vol. 1, Pre-filed Testimony p. 9, Line 274. For the remaining 27.6-kV feeders serving “certain large customers and the 27.6-kV network”, what would be the percentage of each feeder’s normal ratings under peak 2013 load conditions?
21. Reference Reopened Application Vol. 1, Pre-filed Testimony p. 7, Line 220 and FOF #88. Clarify the load transfer ability from Cos Cob Substation to the 13.2-kV network (6 MVA and 11 MVA values are given).
22. Reference Reopened Application Vol. 1, Pre-filed Testimony p. 8, Line 241. Does the PMP and/or AMP address the reliability issue of two transformers served by a single circuit breaker?
23. Reference Reopened Application Vol. 1, Pre-filed Testimony p. 9, Line 257. Explain how the PMP and/or AMP can supply peak load up to 190 MVA when the new substation would have two 60-MVA transformers. How would load transfers allow Eversource to handle peak loads up to 190 MVA?
24. Reference Eversource Response to OCC – 058, 11/30/15. Revise the information in the response based on the new Greenwich Substation configuration.
25. Reference Reopened Application Vol. 1, Pre-filed Testimony p. 11, Line 343. At what point would modifications at Byram Substation be necessary? Would future modifications comport with Eversource’s goal of phasing out the 27.6-kV system?

#### Project Alternatives Questions

26. Reference Reopened Application Vol. 1, Pre-filed Testimony p. 17, Line 526. Provide design and associated costs for each of the eight distribution alternatives that were examined and ultimately rejected.

27. Reference OCC Post-Hearing Brief, 04/11/16.
  - a. Section II – Address in detail the issue of transformer sizing and available space for such a retrofit at Cos Cob substation.
  - b. Section III – Address the retrofit of the Prospect Substation in conjunction with switching some load to other substations.
28. Reference Reopened Application Vol. 1, Pre-filed Testimony p. 7, Line 211. Provide detailed information regarding the lack of space for additional 27.6-kV feeders at the Prospect Substation.

#### General Project Questions

29. Reference Reopened Application Vol. 1, p. F-15 and Vol. 2, App. 6, sheet XSECT 4. Structure 14004 is listed as both 130 and 135 feet tall. Please clarify.
30. Reference Reopened Application Vol. 1, p. A-7. Provide additional information as to the location and area (sq. ft.) the Cos Cob substation was expanded beyond the original proposal.
31. Provide information as to the number of overhead and underground transmission line crossings of limited access highways within Eversource's Connecticut territory.

#### Force Main Questions

32. Reference Reopened Application Vol. 1, Pre-filed Testimony p. 23, Line 746. Explain how the initial proposal did not conflict with the existing Force Main. Did Eversource intend to install the transmission structures after the new force main was in place, assuming the existing Force Main was to be abandoned?
33. Reference Reopened Application Vol. 1, Pre-filed Testimony p. 12, Line 361. This sentence describes a Force Main variation north of the MNRR; however Section F.4 presents a variation on the south side of the MNRR. Please clarify. Was a Force Main variation examined that used the north side of the MNRR. If so, why was it rejected?
34. Reference Reopened Application Vol. 2, App. 6, sheets XSECT 5 & 6. What is the width on the south side of the MNRR right-of-way between the 7-foot catenary clearance zone and the Interstate 95 right-of-way boundary, at structure locations 14009, 14008, 14007, 14006?
35. Have field surveys pertaining to the location of the existing Force Main and any other subsurface utilities been performed in the MNRR corridor? If so, has this data been incorporated onto the cross-sections sheets in Appendix 6? If not, how accurate are the cross-section sheets?
36. Provide a cross section sheet from Force Main Variation structure 14006 shown on Reopened Application Vol. 1 Figure F-3. What type of foundation would be required for this structure? Provide preliminary details as to the size and depth of this foundation.
37. Reference Reopened Application Vol. 2, App. 6. The cross section sheets depict the new Force Main in the CTDOT Highway ROW. How was the location of the Force Main determined? Has CTDOT agreed to the new Force Main location?
38. Reference Reopened Application Vol. 1, p. A-22. How much space would be required between each type of foundation to avoid potential disturbance or damage to the Force Main during foundation installation?

39. Has Eversource installed such foundations adjacent to critical sewer infrastructure elsewhere in its service territory? If so, list the project and related distance between the foundations and the sewer infrastructure.
40. Reference Reopened Application Vol. 2, App. 7. Structures 14004, 14005, 14007, 14008 are listed as having a direct embed or drilled shaft foundation. What conditions would require a drilled shaft foundation?
41. Reference Reopened Application Vol. 1, p. F-15. Perform a preliminary Federal Aviation Administration analysis to determine if the 195-foot tall structures for the Force Main variation would constitute an aviation hazard that would require marking and/or lighting.

#### Alternate Modified Project

42. What was the Town's rationale in requesting that the 115-kV transmission line be attached to the Indian Field Road Bridge over Interstate 95? If the bridge was to be replaced or rehabilitated, how/where would Eversource relocate the transmission line?
43. Provide information as to the number of transmission line crossings over/under divided highways that are attached to roadway bridges within Eversource's service territory.
44. Reference Reopened Application Vol. 2, App. 9. Describe the composition and flammability of the exterior façade for the 281 Railroad Avenue Substation. How would the façade be supported?
45. Reference Reopened Application Vol. 1, p. F-1, Section F.1.1. The differences in design between the 281 and 290 Railroad Avenue Substations are listed. Using the bulleted items, describe the essential function of each item and whether the design change would compromise the operation of the substation.
46. What would be the cost of a 15-foot tall brick wall to enclose the 281 Railroad Avenue Substation?
47. What length of duct bank and underground cable could be installed within the roadways per workday?
48. What would be the expected life-span of the town-requested pedestrian bridge over Indian Harbor?
49. In lieu of the pedestrian bridge proposed for the AMP;
  - a. Where would the cofferdam crossing occur?
  - b. What is the expected trench depth within the harbor and on the land side of the cofferdam?
  - c. What soils and substrates are expected in the trench location both within the harbor and on adjacent land?
  - d. Is it possible to cross the harbor to the south of the Davis Avenue bridge?

#### Environmental Questions

50. Reference Reopened Application Vol. 1, p. C-7 and p. C-14. Describe the visibility of the PMP from the Indian Harbor Area in Bruce Park. What structures are likely to be visible year-round above the tree canopy along the south side of Interstate 95? Approximately how much of each of these structures would be visible above the tree canopy?

51. Reference Reopened Application Vol. 2, App. 5.
  - a. For Photo 3 - Is a transmission pole within the field of view. If so, what is the pole number and height of the proposed structure?
  - b. For Photos 4 - 10 - What is the pole number and height used in the photo-simulations?
  - c. Provide photo-simulations of the 195-foot transmission structures required for the Force Main Alternative.
52. Reference Reopened Application Vol. 1, p. C-14, para. 3. Identify the roadway described as “west of Bruce Park”.
53. Reference Reopened Application Vol. 1, p. F-2, Table F-1. How many residences about the 281 Railroad Avenues site?
54. Reference Reopened Application Vol. 1, p. F-2, Table F-1. Describe potential noise mitigation measures that may be required at the 281 Railroad Avenues site.
55. Reference Council FOF #239. Provide a similar aerial photograph/substation schematic for both the 281 and 290 Railroad Avenue Substations.
56. Reference Council FOF #74. Provide more information regarding the pole-mounted transformer fire at the Cos Cob Substation in June 2015. Where was the pole-mounted transformer located? What exactly burned and what equipment was destroyed.

#### Costs

57. Provide a chart listing the costs of each component of both the PMP and AMP, including route variations.
58. Define regionalized and localized costs.
59. How does Eversource propose to recover the cost of the PMP? Include the costs and cost recovery mechanisms for both regionalized and localized components and why the components are regionalized or localized.
60. How does Eversource propose to recover the cost of the proposed AMP? Include the costs and cost recovery mechanisms for both regionalized and localized components and why the components are regionalized or localized.
61. Reference Reopened Application Vol. 1, Pre-filed Testimony pp. 19-20. What are the costs to comply with the Town requested conditions?