STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

THE CONNECTICUT LIGHT AND POWER COMPANY AND THE UNITED ILLUMINATING COMPANY APPLICATION TO THE CONNECTICUT SITING COUNCIL FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED FOR THE CONSTRUCTION OF A NEW 345-KV ELECTRIC TRANSMISSION LINE FACILITY AND ASSOCIATED FACILITIES BETWEEN SCOVILL ROCK SWITCHING STATION IN MIDDLETOWN AND NORWALK SUBSTATION IN NORWALK, INCLUDING THE RECONSTRUCTION OF PORTIONS OF EXISTING 115-KV AND 345-KV ELECTRIC TRANSMISSION LINES, THE CONSTRUCTION OF BESECK SWITCHING STATION IN WALLINGFORD, EAST DEVON SUBSTATION IN MILFORD, AND SINGER SUBSTATION IN BRIDGEPORT, MODIFICATIONS AT SCOVILL ROCK SWITCHING STATION AND NORWALK SUBSTATION, AND THE RECONFIGURATION OF CERTAIN INTERCONNECTIONS

DOCKET NO. 272

MARCH 11, 2005

PROPOSED SUPPLEMENTAL FINDINGS OF FACT
OF THE TOWNS OF DURHAM AND WALLINGFORD (THE "TOWNS")

I. The amount of undergrounding in Phase I has limited the undergrounding available in Phase II.

1. On September 9, 2003, the Council approved the Bethel to Norwalk Project ("Phase I"), including approximately 11 linear miles of undergrounding. Docket 217 Revised Opinion dated 9/17/03 at pages 6-7.

2. On October 9, 2003, the Applicants filed their Application for the Middletown to Norwalk Project ("Phase II") in Docket 272. As proposed in the Application, Phase II would include approximately 24 linear miles of undergrounding. Exhibit 1, Volume 1, page ES-2.

3. On June 7, 2004, ISO-NE (the "ISO") filed testimony in Docket 272 ("June ISO Testimony") concluding that Phase II, as proposed in the Application will not operate reliably. June ISO Testimony at page 6.

4. The June ISO Testimony stated that the ISO's prior Regional Transmission Expansion Plans ("RTEPs") included the "full loop"; i.e., Phases I and II, as "an overhead line configuration," and that the prior RTEPs "did not contemplate the substantial amount of underground cable in the full loop that would result from the combination of underground cable required in Docket No. 217 and the amount of underground cable included in [Phase II], as proposed by the Applicants." June ISO Testimony at pages 4-5.

5. The ISO's primary concern was that Phase II "would introduce too much capacitance to a relatively weak system, resulting in low order harmonic resonances. . . [leading to]. . . cascading outages and damage to equipment. . . . The driving factors regarding capacitance are liked to the length and type of cable installed and the strength of the system to which it is connected." June ISO Testimony at page 6.

6. On July 14, 2004, the Council announced that a working group (the "ROC") had been assembled "to develop a revision to the [A]pplication. . . . This working group was composed [sic] subsequent to the [June ISO Testimony]. . . calling into question the amount of underground construction proposed by the applicant's [sic] design." Council Memorandum to Parties and Intervenors dated 7/14/04.

7. On December 20, 2004, the ROC submitted its Final Report to the Council, concluding that the 24 linear miles of underground cable proposed in the Application was the maximum feasible amount. Exhibit 176 - ROC Final Report to the Connecticut Siting Council dated 12/20/04 at pages 2-3.

8. On January 13, 2005, Witness for the Applicants Zaklukiewicz testified that an overhead configuration for Phase I would result in a strengthening of the overall transmission system and a decrease in the amount of total system

capacitance (the issue of concern in the June ISO Testimony). Tr. 01/13/05 at page 132.

II. Phase I will increase EMF in the Towns.

9. In the Application, the Applicants provided EMF measurements at specific locations along the edges of the Phase II right-of-way, including locations in the Towns. For "Cross-Section 2" (including the Town of Durham), those measurements were 3.0 and 4.5 milligauss ('mG"). Exhibit 1, Volume Six, page 26.

10. On March 15, 2004, the Applicants submitted an updated EMF filing containing new estimates of "existing" right-of-way EMF levels. For Cross-Section 2, those levels increased to 9.2 and 13.9 mG at a 15 gW system load. The Applicants explained in that filing that the prior EMF analysis in the Application was prepared before Phase I was approved by the Council, and that "the modeling has been updated to reflect the incorporation of [Phase I] approved in Docket 217." Exhibit 35, March 15th filing at page 1.

11. On May 28, 2004, the Companies filed Exhibit 96, containing further estimates of EMF from the proposed lines along the Phase II right-of-way. Along Cross Section 2, EMF at one edge of the ROW for the proposed lines was estimated at 30.4 mG at a 15 gW system load. Exhibit 96 at page 2. Along Cross Section 5 of the route (in Wallingford), EMF at one edge of the ROW is estimated at 27.8 mG at a 15 gW system load. Exhibit 96 at page 5.

III. The Applicants have not complied with the Council's Electric and Magnetic Best Management Practices ("BMP") in effect at the time the Application was filed.

12. The Council's BMP dated February 11, 1993, in effect at the time the Application was filed (the "Vintage BMP") required "baseline, preconstruction measurements of EMF during siting of new facilities" and the "adoption and use of a uniform measurement protocol" for the making of those measurements. Vintage BMP dated February 11, 1993, Nos. 6. and 8.

13. The Application also addresses the manner by which the Applicants must minimize any public health concerns raised by the proposed facilities. Exhibit 1, Volume 6, pages 1-24.

14. The "uniform measurement protocol" referenced in the Vintage BMP is the Institute of Electrical and Electronics Engineers, Inc.'s Standard 644-1994 ("IEEE Std. 644"). Exhibit 1, Volume 6, page 8.

15. IEEE Std. 644 requires that "[b]ackground information, such as environmental conditions (e.g., temperature, humidity, ground cover), transmission line parameters (e.g., line voltages and currents, conductor geometry, measurement locations), and instrumentation used should be recorded. . . " at the time EMF measurements are made. Exhibit 28, IEEE Std. 644, Section 8 ("Reporting field measurements").

16. The Applicants did not include in the Application the information required by the Vintage BMP, except for the "spot" measurements of EMF. Exhibit I, Volume 6, pages 7-23, Tr. 02/01/05 at pages 66-67.

17. The Applicants have not supplemented the Application by providing "transmission line parameters" – the "line voltages and currents" – required by IEEE Std. 644 for each of the EMF measurements submitted in the Application. Tr. 02/01/05 at page 69.

IV. The Council's Adoption of New Best Management Practices dated December 21, 2004 did not Comply with Conn. Gen. Stat. § 4-181.

18. In a Procedural Motion dated July 23, 2004, the Towns asserted that the Council is required by P.A. 04-246 to update the Vintage BMP and to approve its updated BMP in this proceeding. Procedural Motion of the Towns of Durham and Wallingford dated July 23, 2004, at page 11. The Council has not ruled on this legal claim of the Towns.

19. On December 21, 2004, the Council adopted a new BMP (the "New BMP"). Council Web Site, "Publications."

20. The Council expressly adopted its New BMP in response to the requirements of P.A. 04-246, which was enacted June 3, 2004.

21. P.A. 04-246 is expressly applicable to Docket 272. P.A. 04-246.

22. The Connecticut Uniform Administrative Procedure Act provides that no "hearing officer or member of an agency who, in a contested case, is to render a final decision. . . shall communicate, directly or indirectly, in connection with any issue of fact, with any person or party, or in connection with any issue of law, with any party or the party's representative, without notice and opportunity for all parties to participate." Conn. Gen. Stat. § 4-181(a).

23. How the Applicants must minimize any EMF related public health concerns raised by the proposed facilities is an issue of both fact and law in Docket 272. P.A. 04-246.

24. The Council verbally communicated with unidentified energy industry interests regarding the provisions to be included in the New BMP without

affording the parties and intervenors in Docket 272 notice and an opportunity to participate in those communications. Letter from S. Derek Phelps to the Energy and Technology Committee dated January 10, 2005, at page 1.

25. The verbally communicated positions of the unidentified energy industry interests regarding the provisions to be included in the Council's New BMP are reflected in the New BMP. Id.

26. The verbal communications between the Council and the unidentified energy industry interests regarding the provisions to be included in the New BMP took place during the pendency of Docket 272, between June 3, 2004 (the effective date of P.A. 04-246) and December 21, 2004 (the date of adoption of the New BMP).

27. The Council did not afford the parties and intervenors in Docket 272 notice and an opportunity to participate in the adoption by the Council of the Council's Wholly New BMP, and instead adopted its Wholly New BMP at its scheduled meeting on December 21, 2004. Letter from S. Derek Phelps to Legislators dated January 10, 2005, at page 1.

V. The Applicants have not complied with the Council's New BMP.

28. The New BMP address of the manner by which the Applicants must minimize any EMF related public health concerns raised by the proposed facilities. New BMP at page 1.

29. The New BMP provides that "[p]reconstruction MF measurements can be obtained using mathematical modeling under a variety of current flows under normal loading, defined as 70 percent of the peak load, and peak loading conditions during winter and summer weather conditions"). New BMP, Section II ("Pre and Post Construction MF Measurements").

30. At the February 1, 2005 hearing, Witness for the Applicants Prete testified that he understood the "mathematical modeling" of "Preconstruction MF measurements" to mean EMF calculations. Tr. 02/01/05 at page 235.

31. At the February 1, 2005 hearing, Witness Prete further testified that for the 27.7 GW case, which has been identified as system-wide peak load within the next five years, 70% of peak load would require calculations assuming 19.39GW. Id.

32. At the February 1, 2005 hearing, Witness Prete conceded that the Applicants have not done any 70% peak load EMF calculations. Tr. 02/01/05 at page 236.

VI. The Applicants concede that there are protected "Statutory Facilities" within the Towns.

33. The Applicants have identified protected "Statutory Facilities," including one "Residential Area," in the Town of Durham – the Royal Oak Neighborhood – described by the Applicants as being 0 feet from the transmission right-of-way ("ROW").[1] Exhibit 142, Applicants Response to Data Request AG-016, Attachment 1 at page 1.

34. The Applicants have identified eight Residential Areas in the Town of Wallingford described by the Applicants as being 60 feet or less from the ROW – the Valley View Drive Neighborhood, the High Hill Road/Whiskey Wind Road Neighborhood, the Mulligan Drive Neighborhood, the North Williams Road Neighborhood, the South High Hill Road Neighborhood, the South Williams Road Neighborhood, the Marriot Circle Neighborhood and the Mansion Road Neighborhood. Id. at Attachment 1, pages 1 to 3.

VII. The Towns have identified additional Statutory Facilities within their borders.

35. The Town of Durham has identified two additional Residential Areas within that Town: (1) Foot Hills Road/Arbutus Street; and (2) Powder Hill Road/Skeet Club Road/Elihu Drive. Letter from Durham Counsel dated July 19, 2004, to the Council, at page 4.

36. Additionally, the Town of Durham owns property purchased in 1968 known as the Dunn Hill Road Property. Letter from Durham First Selectwoman Maryann Boord to Council Chairman Katz dated January 13, 2004, at page 1.

37. The Dunn Hill Road Property consists of 140 acres and is used for passive recreational activities. Id.

38. The existing 115 kV transmission lines are located in a "Utility ROW" and run parallel to the northern boundary of the Dunn Hill Road Property. The existing 115 kV lines are on towers less than 60 feet tall, approximately 10 feet shorter than the surrounding tree canopy. Id.

39. The proposed overhead 345 kV lines would also be located in the Utility ROW, and potentially could be 135 feet tall or even taller. Id.

1/ "Residential Areas" are one category of "Statutory Facilities" listed in P.A. 04-246, requiring protection from EMF from overhead transmission lines. The Applicants defined "Residential Area" (for purposes of their response to AG-16) as "a group of closely spaced houses within 300 feet of the [ROW] and within a length of approximately 2,000 feet along the [ROW]." The Towns dispute the appropriateness of that definition and do not concede any arguments re: its validity on account of its use herein.

40. The 345 kV towers will have an enormous adverse impact on viewsheds within the Dunn Hill Road Property, and will likely decrease public use of the Dunn Hill Road Property. Id. at page 2.

41. The Town of Wallingford has identified additional Statutory Facilities within that Town, including the following Residential Areas: Cliffside Drive; Marie Lane; Williams Road; Pagano Road; Stonybrook Road; Aimie Lane; Shweky Court; Prizzi Road; Pogmore Drive; Park Lane; Docker Drive; Ashford Court; Nod Brook Road; Woods Edge Circle; and Ashley Lane. Presentation of Mayor William W. Dickinson, Jr. to the Council dated January 19, 2005, at pages 3 – 4.

42. The Town of Wallingford has identified additional Statutory Facilities (other than Residential Areas), including a school and a day care center. Presentation of Mayor William W. Dickinson, Jr. to the Council dated January 19, 2005, at page 3.

43. Additionally, the proposed overhead 345 kV lines would traverse the Williams Farm in Wallingford, a 94-acre parcel purchased by Wallingford with assistance from the State of Connecticut's Protected Open Space and Watershed Land Acquisition Grant Program. Presentation of Mayor William W. Dickinson, Jr. to the Council dated January 19, 2005, at page 1.

44. The Williams Farm property is owned by Wallingford subject to a Conservation and Public Recreation Easement and Agreement with the State of Connecticut. That easement ("State Easement") requires the land to held in perpetuity in its natural and scenic state for the protection of natural resources. Id.

45. The installation of an additional 345 kV line across the Williams Farm is incompatible with the State Easement. Id.

VIII. The Application does not comply with P.A. 04-246.

46. There is scientific uncertainly as to whether exposure to EMF levels above 4 mG is associated with childhood leukemia. However, based upon suggestive positive findings for exposures above 3 or 4 mG, The Connecticut Department of Public Health found that prudent avoidance is warranted in the "uncertain zone above 3 mG." Exhibit 6, Testimony of Dr. Gary Ginsberg dated June 17, 2004 at pages 1-2.[2]

---

[2]/ At the public hearing held on October 14, 2004, Dr. Ginsberg revised his earlier recommendations slightly upward, stating that "[a]bove 6 [mG] is more of our target." Tr. 10-14-04 at page 139. However, Dr. Ginsberg also reiterated at that time that "prudent avoidance should begin at levels above 3 [mG].

47. The Applicants have conceded that Statutory Areas in the Towns adjacent to the proposed overhead ROW will be exposed to higher levels of EMF than the levels recommended for "prudent avoidance" by the Connecticut Department of Public Health. Structures which the Applicants "[believe] to be residences" will be in "magnetic fields 6mG or greater at average (15 gW) system loading" after construction of the proposed overhead lines. The Applicants estimate that there will be 22 such structures in Durham and 5 such structures in Wallingford. Exhibit 92, page 1.

48. The Applicants have conceded that homes in Durham and Wallingford which appear to encroach extend into the existing ROW. Applicants' response dated 01/26/05 to Q–D–W-062, Tr. 02/01/05 at 71-72, Applicants' response dated 01/26/05 to Question Q–D–W–063.

49. New overhead transmission lines cannot be sited in locations where Statutory Facilities extend into the ROW, because to do so would violate the minimum buffer zone requirements of P.A. 04-246. P.A. 04-246, Section 3.

IX. The Royal Oak Bypass is supported by the Applicants.

50. The Applicants support the Royal Oak Bypass. Tr., 01/19/05 at page 74.

51. The existing 115kV lines in the Royal Oak Neighborhood could "certainly" be moved into the Royal Oak Bypass. Tr., 1/2/05 at p. 153.

52. As a practical matter the construction of the 345 kV line would be easier to accomplish on raw land as opposed to the existing Royal Oak Neighborhood. Tr. 2/1/05 at p. 155.

53. If the existing 115 KV lines were moved into the Royal Oak Bypass, both the 115 kV lines and the 345 kV lines could be placed on the same poles. Tr. 2/1/05 at p. 156.

54. If the existing 115 KV lines were moved into the Royal Oak Bypass, and placed on the same poles as the 345 kV lines, the poles would be 105 feet tall instead of 150 feet tall.

Respectfully submitted,

THE TOWNS OF DURHAM AND WALLINGFORD

BY _____

Peter G. Boucher
Alan P. Curto
Halloran & Sage LLP
225 Asylum Street
Hartford, CT 06103
Tel: (860) 522-6103
Fax: (860) 548-0006
Their Attorneys

CERTIFICATION

This is to certify that on this 11th day of March, 2005, a copy of the foregoing was either mailed, postage prepaid, or hand-delivered to each admitted party or intervenor on the service list as of the date hereof.

_____

Peter G. Boucher

660121.3