STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

APPLICATION OF THE CONNECTICUT LIGHT AND POWER COMPANY FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED FOR THE CONSTRUCITON OF A 345-kV ELECTRIC TRANSMISSION LINE AND THE RECONSTRUCITON OF AN EXISTING 115-kV ELECTRIC TRANSMISSION LINE BETWEEN ITS PLUMTREE SUBSTATION IN BETHEL THROUGH THE TOWNS OF REDDING, WESTON, AND WILTON, AND TO NORWALK SUBSTATION IN NORWALK, CONNECTICUT	**DOCKET NO. 217**
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 ("CERTIFICATE") 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** **July 23, 2004**

PROCEDURAL MOTION OF THE TOWNS OF DURHAM AND WALLINGFORD

A. INTRODUCTION

The Town of Durham and the Town of Wallingford (collectively, the "Towns") hereby request that the Connecticut Siting Council (the "Council"):

(1) reconsider and reverse its Decisions and Orders, Opinions and Findings of Facts (collectively, the "Decisions") in Docket 217 dated July 14, 2003, and September 9, 2003, by reason of changed conditions, pursuant to Conn. Gen. Stat. § 4-181a(b);

(2) consolidate the proceedings in Docket 217 and Docket 272 for the combined consideration of the facilities separately reviewed and under review in those two Dockets;

(3) update the Council's "Best Management Practices for Electric and Magnetic Fields for Electric Transmission Lines" (the "Best Practices"); and

(4) apply the updated Best Practices to the consolidated proceedings.

B. AUTHORITY FOR THE REQUESTED ACTIONS

Conn. Gen. Stat. § 4-181a(b) provides in pertinent part that "[o]n a showing of changed conditions . . . [an] agency may reverse or modify . . . [a] final decision, at any time, at the request of any person . . . ."

The changed conditions requiring the requested relief are the following: (1) supplemental testimony in Docket 272 (the "ISO Testimony") of the New England

Independent System Operator (the "ISO") concluding that the underground configuration ordered in the Decisions has rendered the facilities approved in Docket 217 and the proposed facilities in Docket 272 unworkable; and (2) the passage of Public Act 04-246 ("P.A. 04-246"), the benefits of which were intended for the Towns and which the Towns will be denied unless the relief requested herein is granted.

C. FACTUAL BACKGROUND

Phase I

On October 15, 2001, Northeast Utilities Service Company (the "Applicant"), on behalf of The Connecticut Light and Power Company ("CL&P"), submitted an application to the Council in Docket 217 for a 345-kV electric transmission line, and the reconstruction of an existing 115-kV electric transmission line between CL&P's Plumtree Substation in Bethel and the Norwalk Substation (the "Bethel to Norwalk Project" or "Phase I"). In the application and in the Applicant's testimony before the Council, the Bethel to Norwalk Project was expressly presented as a segment of a larger facility, namely a 345-kV Loop (the "Loop"), which was already planned by CL&P for Southwest Connecticut.

The configuration of the Bethel to Norwalk Project approved by the Council in the Decisions was a modification of a proposal entitled "Configuration X" by the Applicant. As originally proposed, Configuration X included "11.2 miles of underground 345 kV cable systems in two segments, XLPE in ducts in a new road route for 1.5 miles. . . and

HPFF for 9.7 miles. . . ."[1] As described in the Council's Opinion dated September 9, 2003 in Docket 217, "Configuration X marries both overhead and underground technology in an unorthodox manner."[2] The Opinion also pointed out that Configuration X has the characteristic of "porpoising" and that as such, Configuration X "is not typical for high voltage electric transmission."[3] Also in the Opinion, the Council ordered an additional underground 0.6 mile XLPE segment for Phase I, acknowledging that this modification "adds to the capacitance of operating the line. . . ." The Council concluded, based upon the confidence expressed by the Applicant, that Configuration X "will serve the interests of electric system reliability. . . ."[4]

Phase II

On October 9, 2003, CL&P and The United Illuminating Company (collectively, the "Companies"), submitted an application in Docket 272 for the second half of the Loop (the "Norwalk to Middletown Project" or "Phase II"). Phase II as proposed by the Companies would contain approximately 45 miles of overhead 345 kV transmission lines from Scovill Rock Switching Station in Middletown to the proposed East Devon substation in Milford. From East Devon, Phase II would consist of approximately 24 miles of underground cable to the Norwalk Substation. Phase II Application, Vol. 1,

1/ Joint Submission of the Applicant and the Towns of Bethel, Redding, Weston, and Wilton, Seeking Certification of Specific Proposed Facilities dated March 17, 2003 ("Features of X configuration").
2/ Council Opinion in Docket 217 dated September 9, 2003 at page 5.
3/ Id. at page 6.
4/ Id. at page 7.

page E-1. With respect to the Loop, those 24 miles of undergrounding would be in addition to the undergrounding approved in the Decisions for Phase I.

EMF Issue in Phase II and P.A. 04-246

On May 28, 2004, the Companies filed (as "Exhibit 96") updated estimates of electromagnetic fields ("EMF") along the right-of-way ("ROW") of the Phase II route. Along "Cross Section 2" of the route (which includes Durham) EMF at one edge of the ROW for the proposed lines is estimated at 30.4 milligauss ("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. *Id.* at page 5.

On June 17, 2004, the Council's EMF expert Gary Ginsberg, Ph.D., filed supplemental testimony (as "Exhibit 6") in Docket 272. In that testimony, Dr. Ginsberg cited a UK study concluding that there is scientific uncertainly as to whether exposure to EMF levels above 4 mG is associated with childhood leukemia. Exhibit 6 at page 1. However, based upon "suggestive positive findings for exposures above 3 or 4 mG" in other studies, Dr. Ginsberg stated that his agency The Connecticut Department of Public Health "finds that prudent avoidance is warranted in this uncertain zone above 3 mG." Exhibit 6 at page 2.

On June 3, 2004, during the pendency of Docket 272, the Connecticut General Assembly passed P.A. 04-246 ('An Act Concerning Electric Transmission Line Siting Criteria"; "P.A. 04-246"). P.A. 04-246 consists of twelve sections, each "applicable to applications for a certificate of environmental compatibility and public need ["Certificate"]

that was originally filed on or after October 1, 2003, for which the Connecticut Siting Council has not rendered a decision upon the record prior to the effective date of this section." Therefore, the Phase II application is subject to P.A. 04-246.

Section 3 of P.A. 04-246 provides that the Council may not grant a Certificate for an electric transmission line facility unless it finds and determines, *inter alia*, "the nature of the probable environmental impact of the facility. . .including a specification of every significant adverse effect, including. . .[EMF]. . .[and] why the adverse effects. . .are not sufficient reason to deny the application. . . ." That section also requires the Council to find and determine, as a condition for a Certificate, that any overhead portions of an electric transmission line facility are consistent with, *inter alia*, the Council's Best Practices.

Section 7 of P.A. 04-246 imposes a presumption that a proposal to place overhead transmission lines at 345 kV adjacent to particular sensitive areas, including residential areas, and private or public schools, is inconsistent with the purposes of the Council's enabling legislation.

Section 8 of P.A. 04-246 requires the Council to "administratively notice completed and ongoing scientific and medical research on electromagnetic fields" for an application for an electric transmission line facility. Section 10 of P.A. 04-246 additionally orders the Council to "adopt, and revise as the [C]ouncil deems necessary, standards for best management practices for electric and magnetic fields for electric transmission lines. Such standards shall be based on the latest completed and ongoing

scientific and medical research on electromagnetic fields. . .Such standards shall not be regulations for purposes of chapter 54."

The Council has listed "Docket 272 EMF Material" on its web site; there is a link from that page to the Council's Best Practices. The Best Practices are dated February 11, 1993. The Council's web site also lists reports administratively noticed by the Council in Docket 272; those reports include documents dated up to and including 2004.

ISO Testimony

The ISO Testimony was filed in Docket 272 on June 5, 2004. It concluded that Phase II, "as proposed and presently designed, will not operate reliably." ISO Testimony at page 6. The ISO Testimony explains that in the ISO's prior Regional Transmission Expansion Plans ("RTEPS") in which the ISO considered the Loop, "the full [L]oop configuration included as part of RTEP's assessment of system needs was an overhead line configuration. The RTEPS did not contemplate the substantial amount of underground cable in the full [L]oop that would result from the combination of underground cable required in Docket No. 217 and the amount of underground cable included in the [Norwalk to Middletown] Project. . . ." ISO Testimony at pages 4-5. The ISO Testimony opines that the combination of the undergrounding approved in Docket 217, together with the undergrounding proposed in Docket 272, introduces too much capacitance on the system. ISO Testimony at pages 6-7. The ISO Testimony also ultimately concludes that based on available information "and taking into consideration the full 345 kV [L]oop, including both Phase I, as approved in Docket 217, and Phase II,

as proposed in [Docket 272], ISO has not seen a plan which results in an acceptable level of capacitance in the system. Because the proposed [Norwalk to Middletown] Project, in conjunction with Phase I, would introduce too much capacitance into the system. . .we would not find it acceptable. . .I am not comfortable that the Norwalk to Middletown Project, as proposed. . .offers the needed degree of reliability for the transmission system in Southwestern Connecticut. . . ." ISO Testimony at pages 11-12.

D. THE CHANGED CONDITIONS REQUIRING THE REVERSAL OF THE DECISIONS AND THE CONSOLIDATION OF DOCKETS 217 AND 272

I. The ISO Testimony Establishes That the Underground Configuration Approved in Phase I has Rendered the Proposed Norwalk to Middletown Project Unworkable.

The conclusion reached in the ISO Testimony; i.e., that the underground configurations in Phase I and Phase II will render the entire Loop unreliable, requires the Council to reverse its approvals of Phase I and consider Phase I and Phase II in a consolidated proceeding. The ISO Testimony establishes that the "unorthodox marriage" of overhead and underground technology approved in Phase I, together with the undergrounding proposed in Phase II, will not work. Therefore, the only rational course for the Council is to reverse the Decisions and review the Loop in a consolidated proceeding.

The conclusion in the ISO Testimony; i.e., that Phase I has made it impossible for Phase II to work, is also supported by a document prepared by the Reliability and Operability Committee (the "Committee") created to work with ISO towards a solution to

the capacitance problem cited in the ISO Testimony. The Middletown – Norwalk Project Study Cases dated July 2, 2004 ("Case Studies"), consisting of (12) cases identified as possible methods to reduce capacitance in the Loop to acceptable levels, contains several cases proposing, *inter alia*, the removal of one of the two underground HPFF cables approved for Phase I. Thus, the Case Studies tacitly acknowledge that the underground configuration approved in Phase I has precluded Phase II as proposed from achieving an acceptable level of reliability, thereby providing additional support for the reversal of the Council's Phase I Decisions and the consolidation of Phase I and Phase II in a single proceeding.

Furthermore, in the First Biweekly Report of the Reliability and Operability Committee dated July 16, 2004 (the "Report"), the Committee states that Case 5, the first of the Case Studies reviewed by the Committee, "is not acceptable because the system operates below the third harmonic with all capacitor banks in service." Report at page 2. During a conference call on July 20, 2004 concerning Case 6 (the next Case Study reviewed by the Committee after the failure of Case 5), it was revealed that Case 6 also is unacceptable due to excessive capacitance. These events are additional evidence that the Council must reverse its approvals in the Decisions of the unworkable Phase I and start over by reviewing the Loop as a single facility.

II. P.A. 04-246 was Enacted to Protect the Towns from the Damaging Effects of EMF. The Towns are at Risk of Being Denied That Protection.

P.A. 04-246 creates a presumption that placing overhead transmission lines adjacent to specific sensitive areas is inconsistent with the purposes of the Siting Council statutes. P.A. 04-246 was made specifically applicable to Docket 272. Therefore, the drafters of P.A. 04-246 intended that the benefits of the law (including the undergrounding of transmission lines in sensitive areas unless technically infeasible) would flow to the municipalities impacted by Phase II, including the Towns.

However, as discussed *supra*, the underground configuration approved by the Council in Phase I has made Phase II unworkable with only the undergrounding originally proposed by the Companies; i.e., the original 24 miles. Therefore, it is extremely unlikely that the Council, in Docket 272, will be able to order undergrounding in the Towns in order to fulfill the requirements of P.A. 04-246. Such undergrounding is clearly needed, based upon the Companies' estimates of EMF levels in the Towns if the Docket 272 facilities are constructed overhead as proposed, which are far in excess of the EMF level at which Dr. Ginsberg recommends "prudent avoidance."

Thus, the underground configuration approved in Phase I has resulted in the frustration of the intended benefits of P. A. 04-246 to the Towns. This obligates the Council to reverse the Decisions and consider the entire Loop in a consolidated proceeding so that undergrounding as a preferred EMF mitigation measure can be equitably distributed consistent with P.A. 04-246, to the intended beneficiaries of the law.

III. The Council's Best Practices must be updated.

The Council's Best Practices must be updated to comply with P. A. 04-246 before using the Best Practices as a basis to make the findings required by the law, in the consolidated proceeding requested herein.

Section 3 of P.A. 04-246, as discussed *supra*, requires the Council to find that any approved overhead transmission lines are consistent with its Best Practices. Sections 8 and 10 of P.A. 04-246 require the Council to administratively notice completed and ongoing scientific and medical research on EMF, and to revise its Best Practices based upon "the latest" completed and ongoing scientific and medical research on EMF. Thus, the intent of P.A. 04-246 is that the Council's Best practices be as current as possible, before the Council utilizes the Best Practices to make the finding required by P.A. 04-246. As shown by the materials administratively noticed in Docket 272, the Best Practices (as posted on the Council's web site) do not meet that standard.

The Best Practices also do not, in their current form, incorporate other parts of P. A. 04-246. For example and as discussed *supra*, Section 7 of P.A. 04-246 creates a presumption that overhead 345 kV transmission lines are inconsistent with the Siting Council's enabling legislation. Therefore, the Best Practices must explicitly require undergrounding as a "low-EMF design" in any transmission-line application. The Best Practices currently do not do so. P.A. O4-246 also requires (in Section 3) the placement of overhead transmission lines in "a buffer zone that protects the public health and safety, as determined by the [C]ouncil." Therefore, the Best Practices must

also explicitly require consideration of buffer zones as a "low-EMF design," which the Best Practices currently do not.

F. CONCLUSION

For all the foregoing reasons, the Council should: (1) reopen and reverse its Decisions in Docket No. 217; (2) institute a consolidated proceeding to review the facilities reviewed in Docket 217 and in Docket 272; (3) revise its EMF Practices as required by P.A. 04-246; and (4) apply those revised EMF Practices in that consolidated proceeding.

Respectfully Submitted

THE TOWN OF DURHAM and
THE TOWN OF WALLINGFORD

By _____

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cc: Docket 217 Service List
Docket 272 Service List

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