May 28, 2004

Ms. Pamela B. Katz
Chairman
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: Docket No. 272 - Middletown-Norwalk 345kV Transmission Line

Dear Ms. Katz:

This letter provides the response to requests for the information listed below.

Response to D-W-01 Interrogatories dated 10/24/2003
D-W - 016 SP-01*

Response to TOWNS-06 Interrogatories dated 04/02/2004
TOWNS - 066 RV-01

Very truly yours,

Anne B. Bartosewicz
Project Director - Transmission Business

ABB/tms
cc: Service List

* Due to the bulk nature of this material the Companies are requesting bulk filing status.

Witness: **Roger C. Zaklukiewicz**
Request from: **Towns of Durham and Wallingford**

Question:
Reference page G-18 and Section 4.3.3 of the Application.

Provide copies of the Documents which form the basis for the statement that "in order to meet national and regional reliability standards, a second
345-kV line would have to be built on separate structures on the Beseck to East Shore ROW."

Response:
Attached* please find a study entitled "Southwest Connecticut Transmission Expansion, East Shore to Norwalk with a Second 345-kV line to East Shore: Transmission Loading and Voltage Analysis @ 27.7 GW load, 387 Line Existing, Second Line to East Shore, NE-NY Plus or Minus 700 MW and 0 MW".

* Due to the bulk nature of this material the Companies are requesting bulk filing status.

Witness: **Roger C. Zaklukiewicz; James M. Hogan**
Request from: **TOWNS**

Question:
Reference Addendum #2 to the Supplemental Filing, at pages 2 and 3.

Please provide the analyses, reports, workpapers and source documents for the investigation of whether the 387 line transmission structures could
support conductors with a capacity larger than 2-954 ACSR and if so, how that would affect the thermal load flow results.

Response:
Attached please find a revised page 1 to the "Feasibility Study of Reconductoring the Middletown to East Shore 387 Line and the Southington to Frost Bridge 329 Line as a Potential Alternative to the Middletown Norwalk 345-kV Project".

Final Report Lines 387 & 329 Page 1 (reviised).pdf

INTRODUCTION

INTRODUCTION TO THE PROJECT

The Connecticut Light and Power Company (CL&P) and United Illuminating (UI) are proposing an upgrade of the electric transmission system in Southwest Connecticut. A 345-kV line is currently before the Connecticut Siting Council from Scovill Rock Switching Station in Middletown to Norwalk Substation in Norwalk. This new line will improve system reliability by enhancing interconnections between Southwest Connecticut and the remainder of New England, eliminating generation restrictions, short circuit problems at substations, and transmission line restrictions (to prevent thermal overload under system contingency conditions).

A municipal official suggested a possible alternative to the proposed Middletown–Norwalk 345-kV transmission line would be to reconductor the existing 345-kV line (387 Line) between CL&P's Scovill Rock Switchyard and UI's East Shore Substation near New Haven Harbor. This report assesses the feasibility of this alternative. System analysis of this alternative determined that reconductoring the 387 Line would impact the existing 345-kV line (329 Line; **12.7 miles**) between Southington and Frost Bridge Substations, so similar reconductoring would be necessary on the 329 Line. In addition, there are further transmission lines which experience overloads that would need to be addressed. This study does not look at each of these lines, but they are identified in addendum 3 of the supplemental filing. These lines are listed below:

- 318/362 Line between Southington S/S and Meriden S/S (345-kV; 3.9 miles)
- 1342 Line between Bokum S/S and Green Hill S/S (115-kV; 11.3 miles)
- 1610 Line between Glen Lake Junction and Southington S/S (115-kV; 18.3 miles)
- 1610 Line between Mix Avenue S/S and Glen Lake Junction (115-kV; 2.9 miles)

Both the 387 and the 329 lines consist of ACSR (Aluminum Conductor, Steel-Reinforced) conductors supported along several sections of right-of-way by a variety of wood H-frame, steel pole and steel lattice structures that were constructed in the 1960's and 1970's. A table summarizing the physical characteristics of these structures is provided in Appendix A.