June 14, 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 CSC-03 Interrogatories dated 06/07/2004
CSC - 058 , 059 , 060 , 061 , 063 , 066 , 067

Very truly yours,

Anne B. Bartosewicz
Project Director - Transmission Business

ABB/tms
cc: Service List

Witness: **Roger C. Zaklukiewicz**
Request from: **Connecticut Siting Council**

Question:
Please provide the latest geographical transmission system maps of the Connecticut Light and Power Company and the United Illuminating Company.

Response:
An updated map of the Main Electric Systems of Connecticut as of 1-1-2004 is being provided to the Council as a confidential document. Public disclosure of this map could adversely impact the security of the electric system.

Witness: **Roger C. Zaklukiewicz**
Request from: **Connecticut Siting Council**

Question:
Please provide the latest one-line diagrams showing the existing transmission system of the Connecticut Light and Power Company and the United Illuminating Company.

Response:
A one-line diagram entitled CL&P Transmission System as of January 1, 2004 is being provided to the Council as a confidential document. Public disclosure of this diagram could adversely impact the security of the electric system.

Witness: **Roger C. Zaklukiewicz**
Request from: **Connecticut Siting Council**

Question:
Please provide the latest one-line diagrams of the Connecticut Light and Power Company and the United Illuminating Company, showing the existing transmission system, the 345 kV project from Plumtree to Norwalk known as Phase I, as approved, and the 345 kV project from Middletown to Norwalk - Phase II, as proposed.

Response:
A diagram entitled Southwestern Connecticut Electric Reliability Project, May 2004 is being provided to the Council as a confidential document. Public disclosure of this diagram could adversely impact the security of the electric system.

Witness: **Roger C. Zaklukiewicz**
Request from: **Connecticut Siting Council**

Question:
Please provide the NERC Reliability Readiness Audit Report for the Applicant's control area, if completed.

Response:
The NERC conducted a Control Area Readiness Audit of the New England Control Area on May 4, 5, and 6, 2004. ISO-NE is the Reliability Coordinator for New England and the Maritimes Areas and the Control Area Operator for New England. The audit included a review of the ISO-NE procedures, controls, and communications used to carry out the Control Area Operator functions, along with the four New England Satellites, to ensure reliable operation of the bulk power system. CONVEX is one of the four New England Satellites.

At the conclusion of the audit, ISO-NE verbally received a favorable report. While the audit team identified areas that could be strengthened, no major procedural or operating deficiencies were identified. The NERC Control Area Readiness Audit Team did not visit the CONVEX facility.

The NERC Control Area Readiness Audit Team is expected to issue its final report in the next four to six weeks. The final report will be available on the NERC website at URL http://www.nerc.com/~rap/audits.html.

Witness: **Allen W. Scarfone**
Request from: **Connecticut Siting Council**

Question:
If Applicant did not study an Alternative that models the Phase II project as an underground cable over the whole length from Middletown to Norwalk please provide the Applicant's conceptual design of that alternative. Please apply all commercially available technology to eliminate the capacitive charging and to maintain the voltages within required limits.

Response:
The Companies did consider an all underground option between Beseck and East Devon. Alternatives which were considered included Gas Insulated Lines (GIL) and the use of three XLPE cables. These options were not considered to be a long term reliable solution to the problems in SWCT. This leg of the Middletown - Norwalk project is a vital link to the bulk transmission system in New England. The studies performed by General Electric in addition to the Companies' evaluation of system reliability led the Companies to conclude that the increased use of underground cable would result in unacceptable system operability and reliability. Therefore, a conceptual design of an underground configuration between Beseck and East Devon is not a reliable solution.

Witness: **Allen W. Scarfone**
Request from: **Connecticut Siting Council**

Question:
Please provide the raw data of the EMTP models, in electronic format, that General Electric used to construct their EMTP simulation cases used for the following studies, submitted in the Applicant's Supplemental Filing:

a. Connecticut Cable Transient and Harmonic Study for Middletown to Norwalk Project East Devon-Beseck 40-mile Cable Option (M/N-P1) November 2003;
b. Connecticut Cable Transient and Harmonic Study for Middletown to Norwalk Project East Devon-Beseck 20-mile Cable Option (M/N-P2) December 2003.

Please provide the models: i) with the Phase I and without the Phase II, and ii) with the Phase I and Phase II projects modeled. Please provide the files modeling the Phase II as proposed in the Application, and as studied in the GE studies referenced under a. and b. The models should include data for transmission lines, transformers, sources, loads, shunt capacitors, shunt reactors, and existing and proposed filters that are modeled to eliminate the harmonics.

Please provide the related network diagram. Please provide the contact name and phone number of the engineer who will be providing the above requested files, for eventual questions that KEMA may have regarding the above requested files.

Response:
As stated in the response to data request TOWNS-01, Q-TOWNS-001, the ATP/EMTP model that was used in this analysis is proprietary material owned by General Electric ("GE"). Adjustments to the model to reflect specific cases are also proprietary and have not been provided to the Companies. (Correspondence from GE is attached to data request TOWNS-01, Q-TOWNS-001).

The above reports each contain a diagram showing the transmission system modifications. Diagrams for the Project are found in the Connecticut Cable Transient and Harmonic Study for Phase 2 - November 2003 which was submitted in TOWNS-01, Q-TOWNS-025.

Witness: **Allen W. Scarfone**
Request from: **Connecticut Siting Council**

Question:
Please provide simulated case files of all simulated ATP EMTP cases listed in the General Electric reports:

a. Connecticut Cable Transient and Harmonic Study for Middletown to Norwalk Project East Devon-Beseck 40-mile Cable Option (M/N-P1) November 2003;
b. Connecticut Cable Transient and Harmonic Study for Middletown to Norwalk Project East Devon-Beseck 20-mile Cable Option (M/N-P2) December 2003.

The case files must be able to run in the ATP EMTP program directly without any change.

Please provide the contact name and phone number of the engineer who will be providing the above requested files, for eventual questions that KEMA may have regarding the above requested files.

Response:
See response to data request CSC-03, Q-CSC-066.