September 3, 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.

While it is not possible to provide all the information requested at this time, the Company is attaching the information which has been completed.

Response to D-W-04 Interrogatories dated 08/18/2004
D-W - 064 , 065 , 066 , 067 , 068

Very truly yours,

Anne B. Bartosewicz
Project Director - Transmission Business

ABB/ssn
cc: Service List

Witness: **Anne Bartosewicz**
Request from: **Towns of Durham and Wallingford**

Question:
Reference the portion of Cross Section 2 of the Middletown to Norwalk Project (Oxbow Junction to Beseck Switching Station) within the Town of Durham ("Durham").

At the two locations at the low points of the lowest sag on the S/E and N/W edges of the right-of-way ("Low Points") along Cross Section 2 in Durham, please provide the following:

(a) Field measurements of the electromagnetic field ("EMF").

(b) The Actual Line Load on the relevant transmission line(s) at the time of the measurements described in subsection (a).

(c) The Average Line Load over 8760 hrs/yr ("Annual Average Line Load") for the relevant transmission line(s) for the most recent year for which such data is available.

Response:
On Saturday August 28, 2004, the Companies took measurements along Black Walnut Drive in the Town Of Durham between 10:32AM and 10:33AM. The transmission line in this right-of-way is the 1975 line, a 115-kV line between Haddam substation and East Meriden substation.

(a) The measured magnetic field level at the north edge of the right-of-way was 3.54 mG. The measured magnetic field level at the south edge of the right-of-way was 1.21 mG.

(b) The flow of current on the 1975 line at the time of the measurement was approximately 77.1 amperes per phase.

(c) At the request of the Siting Council, the Companies are calculating field levels assuming conductor loading equal to 50% of the normal rating. The Companies will provide this response to the Siting Council and all parties and intervenors.

Witness: **Anne Bartosewicz**
Request from: **Towns of Durham and Wallingford**

Question:
Reference the portion of Cross Section 2 of the Middletown to Norwalk Project (Oxbow Junction to Beseck Switching Station) within the Town of Wallingford ("Wallingford").

At the two Low Points along Cross Section 2 in Wallingford, please provide the following:

(a) Field measurements of EMF.

(b) The Actual Line Load on the relevant transmission line(s) at the time of the measurements described in subsection (a).

(c) The Annual Average Line Load for the relevant transmission line(s) for the most recent year for which such data is available.

Response:
On Saturday August 28, 2004, the Companies took measurements along Valley View Drive in the Town Of Wallingford between 11:04AM and 11:05AM. The transmission line in the right-of-way is the 1975 line, a 115-kV transmission line between Haddam substation and East Meriden substation.

(a) The measured magnetic field level at the north edge of the right-of-way was 1.94 mG. The measured magnetic field level at the south edge of the right-of-way was 1.51 mG.

(b) The flow of current on the 1975 line at the time of the measurement was approximately 60.3 amperes per phase.

(c) At the request of the Siting Council, the Companies are calculating field levels assuming conductor loading equal to 50% of the normal rating. The Companies will provide this response to the Siting Council and all parties and intervenors.

Witness: **Anne Bartosewicz**
Request from: **Towns of Durham and Wallingford**

Question:
Reference Cross Section 5 of the Middletown to Norwalk Project (Beseck Switching Station to W. Wallingford Junction) in Wallingford.

At the two Low Points in Cross Section 5, please provide the following:

(a) Field measurements of EMF.

(b) The Actual Line Load on the relevant transmission line(s) at the time of the measurements described in subsection (a).

(c) The Annual Average Line Load for the relevant transmission line(s) for the most recent year for which such data is available.

Response:
On Saturday August 28, 2004, the Companies took measurements along Barnes Road (CT Route 68) in the Town Of Wallingford between 11:30AM and 11:31AM. The transmission line in the right-of-way is the 387 line, a 345-kV transmission line between Scovill Rock substation and Halvarsson substation.

(a) The measured magnetic field level at the west edge of the right-of-way was 18.01 mG. The measured magnetic field level at the south edge of the right-of-way was 8.90 mG.

(b) The flow of current on the 387 line at the time of the measurement was approximately 1042.8 amperes per phase.

(c) At the request of the Siting Council, the Companies are calculating field levels assuming conductor loading equal to 50% of the normal rating. The Companies will provide this response to the Siting Council and all parties and intervenors.

Witness: **Anne Bartosewicz**
Request from: **Towns of Durham and Wallingford**

Question:
Reference Cross Section 6 (East) of the Middletown to Norwalk Project (E. Wallingford Junction to North Haven Junction) in Wallingford.

At the Low Points in Cross Section 6, please provide the following:

(a) Field measurements of EMF.

(b) The Actual Line Load on the relevant transmission line(s) at the time of the measurements described in subsection (a).

(c) The Annual Average Line Load for the relevant transmission line(s) for the most recent year for which such data is available.

Response:
On Saturday August 28, 2004, the Companies took measurements along Pond Hill Road in the Town of Wallingford between 12:07PM and 12:08PM. The transmission line in the right-of-way is the 1655 line, a 115-kV transmission line between Branford substation and North Haven substation. Note that the 1655 transmission line at this location is crossed by a 13.8 kV distribution line and the measured magnetic field level readings provided below are affected by the distribution line's magnetic field.

(a) The measured magnetic field level at the north edge of the right-of-way was 6.58 mG. The measured magnetic field level at the south edge of the right-of-way was 4.46 mG.

(b) The flow of current on the 1655 line at the time of the measurement was approximately 214.5 amperes per phase.

(c) At the request of the Siting Council, the Companies are calculating field levels assuming conductor loading equal to 50% of the normal rating. The Companies will provide this response to the Siting Council and all parties and intervenors.

Witness: **Anne Bartosewicz**
Request from: **Towns of Durham and Wallingford**

Question:
Reference Cross Section 7 of the Middletown to Norwalk Project (Wallingford Junction to Cheshire Town Line) in Wallingford.

At the Low Points along Cross Section 7 in Wallingford, please provide the following:

(a) Field measurements of EMF.

(b) The Actual Line Load on the relevant transmission line(s) at the time of the measurements described in subsection (a).

(c) The Annual Average Line Load for the relevant transmission line(s) for the most recent year for which such data is available.

Response:
On Saturday August 28, 2004, the Companies took measurements along Tuttle Avenue in the Town Of Wallingford between 12:32PM and 12:33PM. The transmission lines in the right-of-way are the 1208 line, a 115-kV transmission line between Wallingford substation and Southington substation, and the 1640 line, a 115-kV line between Wallingford substation and Devon Generating Station.

(a) The measured magnetic field level at the north edge of the right-of-way was 5.99 mG. The measured magnetic field level at the south edge of the right-of-way was 1.43 mG.

(b) The flow of current on the 1208 line at the time of the measurement was approximately 214.1 amperes per phase. The flow of current on the 1640 line at the time of the measurement was approximately 37.3 amperes per phase.

(c) At the request of the Siting Council, the Companies are calculating field levels assuming conductor loading equal to 50% of the normal rating. The Companies will provide this response to the Siting Council and all parties and intervenors.