February 3, 2005

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.

With this filing, the Company has completed responding to all of the interrogatories requested during this proceeding.

Response to CSC-05 Interrogatories dated 10/22/2004
CSC - 094 RV-01

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:
Describe the extent of clearing in a right-of-way when tower height is 130 feet or greater. Could the right-of-way become less in width if conductors are equal to tree height or higher (assume 75 feet for tree height). Explain. This revision modifies the response to Area B clearing for 115-kv lines.

Response:
The extent of clearing when the tower height is 130 feet or greater will depend more on the structure configuration than on structure height. Unless the conductors in each span, and therefore the supporting structures, are purposely increased in height above ground by an increment equal to the mature height of the trees (upwards of 100 feet), such tree species cannot be allowed to remain. (Note: Seventy-five feet for maximum tree heights in southern Connecticut is not the maximum as there are several species that can grow to heights between seventy-five and one hundred feet.)

There are three area-specific types of clearing required for transmission lines. The areas are:
Area A). The area under and immediately adjacent to the conductors.
Area B). The zones to either side of Area A toward each edge of right-of-way.
Area C). Area outside of Area B, which may extend beyond the right-of-way boundaries.

Clearing needs in each area are as follows:
Area A) At a minimum, the right-of-way must be cleared of all tall- and short-maturing tree species within an area directly under the conductors and to a distance of fifteen feet beyond the two outermost conductors of a transmission line. If construction is of single-circuit vertical configuration, the right-of-way area to be cleared of trees will be fifteen feet from the conductors in both directions. If conductors are configured horizontally, Area A grows to also include the zone between the outermost conductors. This area is referred to as the “primary clearing area” in NU's construction specifications, and the “wire zone” in NU's vegetation maintenance specifications. Shrub species will generally remain in this area, except within access roads and areas needed for structure construction and maintenance.

Area B) Along both sides of this area, clearing of tall-maturing tree species is required for an additional 5 feet (115-kV lines) or 15 feet (345-kV lines) for spans up to 700 feet to comply with ISO-NE Operating Procedures. For spans over 700 feet, the clearing distance of tall-maturing tree species for both 115-kV and 345-kV lines is increased by 3 feet for each 100 foot incremental increase of span length. Low-maturing tree species such as Dogwoods can remain in these zones. See Figure VR-1 attached to the response to data request CSC-05, Q-CSC-095.

Area C) Clearing and/or trimming is required for tall "danger trees" in this area which have the potential to fall and contact the conductors.

The right-of-way width cannot be reduced, even if the width of clearing is reduced. Legal rights would be necessary within the width defined by A-C above to remove any tree that was found to exceed the "design tree height". The number of trees outside of the legal right-of-way requiring trimming or removal would increase, and monitoring tree growth under such conditions would be extremely difficult. Also, legal rights are necessary in any event to prevent the construction of a tall building or other object that would be closer to line conductors, when blown by strong winds, than is permitted under the National Electrical Safety Code.