

January 6, 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-01 Interrogatories dated 10/24/2003
D-W - 026 , 036 , 054

Very truly yours,

Anne Bartosewicz
Project Director - Transmission Business

ABB/tms
cc: Service List

CL&P/UI
Docket No. 272

Data Request D-W-01
Dated: 10/24/2003
Q- D-W-026
Page 1 of 1

Witness: Peter T. Brandien
Request from: Towns of Durham and Wallingford

Question:

Reference pages H-17 and H-18 and Section H.3.5 of the Application. Provide copies of the Documents for the evaluation of the entire underground cable route alternatives.

Response:

Please refer to Supplemental Filing, dated December 16, 2003, part 3; "Installation of Additional Underground Cables" and the referenced GE study included therein as Attachments B and C.

To the extent this question seeks other "Documents" the Companies object to it for the reasons stated in response to D-W-01, Q-D-W-001.

Witness: Jay Williams; Roger C. Zaklukiewicz
Request from: Towns of Durham and Wallingford

Question:

Reference the PDC Evaluation of Potential 345-kV and 115-kV Cable Systems as part of the Middletown-Norwalk Project included in Volume 6 of the Application.

- a. Provide copies of the other evaluations of 345-kV and/or 115-kV cable systems prepared by or for PDC since January 1, 1999.
- b. Provide copies of the other evaluations of HPPE or XLPE cables prepared by or for PDC since January 1, 1999.
- c. Provide copies of the other evaluations of underground or combined overhead and underground cable systems prepared by or for PDC since January 1, 1999.
- d. (Page 5) Provide copies of the Documents that formed the basis for the determination that only 23.6 miles of the proposed Middletown to Norwalk Project should be underground.
- e. (Page 33) Provide copies of the Documents prepared by or for PDC, CL&P or UI which examined/investigated the size of the transition stations that would be required if any portion(s) of proposed Middletown to Norwalk Project were underground between Beseck and the East Devon substations.
- f. (Page 33) Provide copies of the Documents prepared by or for PDC, CL&P or UI which examined/investigated the operating problems that would be caused if any portion(s) of proposed Middletown to Norwalk Project were underground between Beseck and the East Devon substations.

Response:

- a. Please see the Municipal Consultation Filing, Volume 4, Exhibit 6, Evaluation of Potential 345-kV Cable Systems as Part of the Middletown-Norwalk Project. CL&P included a report of PDC titled "Evaluation of A Potential Underground System" as Appendix 3 to Volume 1 of its application in Connecticut siting Council Docket No. 217, and has been widely distributed. Additional copies will be provided to any party or intervenor on request. The Companies do not have access to reports prepared by PDC for other clients.
- b. See response to part a.
- c. See response to part a.
- d. Please refer to the Supplemental Filing in Docket 272, filed on December 16, 2003, Item No. 3 (page 3), Installation of Additional Underground Cable.
- e. PDC did not examine/investigate the size of transition stations that would be required if a portion of the Project were constructed underground between Beseck and East Devon.

In Alternatives A and B of the Application, the Companies proposed two transition stations without reactive power compensation (shunt reactors). A single-line arrangement for a transition station is included in Volume 7 of the Application, Alternative Transition Station Drawings, Hawthorne and Seaview Transition Stations. Also, please see the response to D-W-01, Q-D-W-016, page 3 of 3.

- f. PDC did not evaluate potential operating problems. PDC provided impedance data for the cable alternatives. As to documents prepared by or for the Companies, please refer to Part 3 of the Companies' Supplemental Filing of December 16, 2003 and Attachments B, C and D of the filing prepared by GE Power Systems Energy Consulting.

To the extent this question seeks other "Documents" the Companies object to it for the reasons stated in response to D-W-01, Q-D-W-001.

CL&P/UI
Docket No. 272

Data Request D-W-01
Dated: 10/24/2003
Q- D-W-054
Page 1 of 1

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

Question:

Please state whether, and if so, to what extent, the undergrounding of facilities approved by the Siting Council in Docket 217 has any effect on the extent to which the Middletown to Norwalk Project may be placed underground, from either an economic or technical perspective, or both.

Response:

All of the analyses of the effects of undergrounding portions of the proposed Middletown to Norwalk transmission line have assumed, as a base case, a transmission system that includes the future Bethel to Norwalk line, in the mixed underground/overhead configuration approved by the Council in Docket 217. This interrogatory appears to ask for a comparison to analyses based on the hypothetical assumption of an all overhead Bethel to Norwalk line. These analyses have not been made. As indicated by the discussion in Part 3 of the Supplemental Filing and the referenced studies by GE, determination of the harmonic and transient voltage effects on the transmission system caused by the addition of underground cables requires an analysis of the complex interaction of many variables, including the specific location of the segments of underground cable within the transmission system in relation to the impedance of the system and other sources of capacitance. Without such studies, which are expensive and time consuming, any comparison would be speculative.