



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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Petition No. 347

The Connecticut Light and Power Company
Cook Hill Junction-Wallingford Junction Transmission Line
Cheshire and Wallingford, Connecticut

March 13, 1996

Staff Report

On February 23, 1996, Gloria D. Pond and Edward S. Wilensky of the Connecticut Siting Council (Council), Executive Director Joel M. Rinebold and Robert K. Erling of the Council staff met Michael Carlson of the Connecticut Light and Power Company (CL&P) for a field review of this proposed project.

CL&P is petitioning the Council for a determination that the proposed modifications to this existing 115-kV transmission line would not require a Certificate of Environmental Compatibility and Public Need pursuant to General Statutes § 16-50g et seq.

CL&P proposes to replace existing 556 kcmil ACSR conductors on the north side of an existing 115-kV line to the Towns of Cheshire and Wallingford. The existing conductors would be replaced with larger 1272 kcmil conductors, which would require some structure modifications. Eighteen existing steel lattice towers would be strengthened through the addition of x-braces in the lower portions of the towers. Insulator strings on the north side of six towers which are presently in suspension configuration would be converted to strain or horizontal configurations since the larger conductors would have greater sags. Strain configuration would allow minimum ground clearances to be maintained through the addition of strain or attachment plates on the north side of seven towers. The foundation of one tower might require additional strengthening through the application of concrete, pending the results of a test pit dug to reconcile a discrepancy in tower foundation depth.

The project is required to increase emergency ratings to prevent future projected overloads under contingency conditions. Normal existing summer line ratings would increase from 895 amps to 1490 amps and winter ratings from 1120 amps to 1870 amps. Summer long-term emergency ratings would increase from 1145 amps to 1920 amps, and winter long-term emergency ratings from 1310 amps to 2200 amps. Short-term emergency summer ratings would increase from 1215 amps to 2180 amps, while winter short-term emergency ratings would increase from 1395 amps to 2515 amps.

CL&P estimates construction would start in April 1996, with completion expected the end of May 1, 1996.

Magnetic Fields

As a result of this project, magnetic fields along the northern and southern edges of the right-of-way (ROW) are expected to increase for winter short-term emergency (15 minutes), winter long-term emergency (one peak load cycle) and normal conditions. Magnetic fields under average currents are expected to remain the same.

Existing Magnetic Fields at Northern Edge of ROW
 (in Milligauss)

Winter Short-Term Emergency (STE)	Winter Long-Term Emergency (LTE)	Winter Normal	Average Currents
87.9	82.5	70.6	15.8

Proposed Magnetic Fields at Northern Edge of ROW
 (in Milligauss)

Winter STE	Winter LTE	Winter Normal	Average Currents
131.9	117.5	100.0	15.8

Existing Magnetic Fields at Southern Edge of ROW
 (in Milligauss)

Winter STE	Winter LTE	Winter Normal	Average Currents
14.2	13.3	11.4	2.0

Proposed Magnetic Fields at Southern Edge of ROW
 (in Milligauss)

Winter STE	Winter LTE	Winter Normal	Average Currents
19.2	17.3	14.8	2.0