STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL
136 Main Street, Suite 401
New Britain, Connecticut 06051-4225
Phone: 827-7682

Petition No. 348
The Connecticut Light and Power Company
Cook Hill Junction - Glen Lake Junction Transmission Line
Cheshire and Hamden, Connecticut
March 13, 1996
Staff Report

On February 23, 1996, Gloria D. Pond and Edward S. Wilensky of the Connecticut Siting Council (Council), 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 uprate the existing transmission line segment between Cook Hill Junction in Cheshire and Glen Lake Junction in Hamden for higher temperature operation by converting three existing wood-pole H-frame structures from suspension to strain configuration, replacing three wood-pole H-frame structures, and installing one new wood H-frame structure as follows.

Structure Replacements/New Structure

Existing Structures	Proposed Structures
# 5227 two-pole wood H-Frame height: 56.5 ft. (suspension)	# 5227 4-pole wood H-frame height: 56.5 ft. (strain)
	# 5226 ½ new 3-pole wood H-frame height: 34 ft.
# 5214 two-pole wood H-frame height: 52 ft. (suspension)	# 5214 two-pole wood H-frame height 74.5 ft. (suspension)
# 5195 two-pole wood H-frame height: 56.5 ft. (suspension)	# 5195 two-pole wood H-frame height: 74.5 ft. (suspension)

The replacement of structure no. 5227 and the installation of new structure no. 5226 ½ would lower the conductors on the existing (1610) circuit where this circuit crosses under the 1630 line, thereby increasing the clearance between the two circuits.

Normal existing line ratings would remain the same for summer and winter ratings. Long-term emergency summer ratings would increase from 895 amps to 1145 amps. Winter ratings would increase from 1120 amps to 1320 amps. Short-term emergency summer ratings would increase from 895 amps to 1215 amps and winter short-term emergency ratings from 1120 amps to 1395 amps.

The proposed project would serve to prevent projected overloads under contingency conditions. CL&P anticipates construction would begin in April 1996 with completion of the project by 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 along both the northern and southern edges of the ROW.

Cook Hill Junction - Glen Lake Junction Line

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

Winter Short-Term Emergency (STE)	Winter Long-Term Emergency (LTE)	Winter Normal	Average Currents
10.9	10.9	10.9	1.5

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

Winter STE	Winter LTE	Winter Normal	Average Currents
13.5	12.8	10.9	1.5

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

Winter STE	Winter LTE	Winter Normal	Average Currents
88.7	88.7	88.7	11.9

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

Winter STE	Winter LTE	Winter Normal	Average Currents
110.4	104.5	88.7	11.9