

middletown | norwalk

August 18, 2004

Ms. Pamela B. Katz
Chairman
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: Docket No. 272: The Connecticut Light and Power Company and The United Illuminating Company Application for a Certificate of Environmental Compatibility and Public Need for the construction of a new 345-kV electric transmission line and associated facilities between the Scovill Rock Switching Station in Middletown and the Norwalk Substation in Norwalk, including the reconstruction of portions of existing 115-kV and 345-kV electric transmission lines, the construction of Beseck Switching Station in Wallingford, East Devon Substation in Milford, and Singer Substation in Bridgeport, modifications at Scovill Rock Switching Station and Norwalk Substation, and the reconfiguration of certain interconnections

Dear Chairman Katz:

On May 7, 2004, the Connecticut Light and Power Company and The United Illuminating Companies (collectively, "the Companies") filed Exhibit 79, a table that summarizes the number of structures (houses and other buildings) along the proposed overhead right of way ("ROW") that are currently, at least in part, within an area of calculated magnetic fields of (a) between 3 and 6 milligauss ("mG") or (b) 6 mG or more. Exhibit 79 also summarizes the number of structures that would be, at least in part, within such areas following completion of the Project as proposed in the Companies' Application. Thereafter, on May 27, 2004, the Companies filed Exhibit 92, a spreadsheet identifying the location of the structures referenced in Exhibit 79. In the course of preparing Exhibit 92, the Companies revised the number of structures listed slightly, as explained in the cover letter accompanying that exhibit.



**Connecticut
Light & Power**

The Northeast Utilities System



The United Illuminating Company

Since filing Exhibits 79 and 92, the Companies have presented numerous exhibits and extensive testimony with respect to potential low magnetic field line designs that would reduce magnetic fields along the proposed overhead ROW to levels that would be lower than those that would have been associated with the overhead lines as originally proposed, and in many locations, lower than those associated with the existing lines. *See*, in particular:

Ex.	Date	Description
96 (Rev.)	07/07/04	Magnetic Field Reduction Options by Cross Section (For proposed overhead route, shows line design options by ROW cross section, with calculated edge of ROW magnetic fields for existing lines, originally proposed line designs, and low magnetic field designs.)
124	07/19/04	Supplemental Testimony II of Dr. William H. Bailey Concerning Options to Establish "Buffer Zones" by Reducing 60-HZ Magnetic Fields and revised exhibits thereto).
136	07/27/04	Applicants' Presentation Concerning Magnetic Field Reduction Along Proposed Overhead Right of Way

In addition, the Companies expect to submit further information concerning potential low magnetic field line designs in the coming weeks.

The enclosed tables supplement the information previously provided in Exhibits 79 and 92, by showing the number of structures that would be within the 3 mG and 6 mG calculated fields (using the same assumptions as those used in preparing Exhibits 79 and 92) if low magnetic field line designs were used. Like Exhibit 92, the attached tables also provide assessor's map parcel numbers that can be cross-referenced to maps previously filed by the Companies.

The low magnetic field line designs used in preparing the enclosed tables were the "optimized" designs presented in Applicants' Exhibit 136, with the exception of that used for Cross Section 6 East (E. Wallingford Jct. to North Haven Jct.), for which the Companies have developed an additional low magnetic field line design that eliminates fields of 3mG or greater at any structures adjacent to ROW. This design will be described in a forthcoming filing.


Please note that the enclosure also includes a comparison table, which shows total structures exposed to the specified fields for the existing lines, the originally proposed overhead construction, and the low magnetic field line design construction, all assuming the 15 GW New England load case. As this table shows, use of the low magnetic field designs would achieve very substantial magnetic field reductions all along the ROW, as compared to the proposed lines. Moreover, as compared to the existing lines, the aggregate number of structures exposed to fields of three milligauss and above would be substantially reduced, from 105 to 57.

Finally, the Companies would like to discuss an issue related to the enclosed data at tomorrow's process meeting. At the July 28, 2004 hearing, you asked that the Companies prepare an exhibit plotting the calculated 3 mG and 6 mG field boundaries (assuming low magnetic field line designs and the 15 GW case) on the aerial photo included in the application showing "Segment 15" of the ROW.

The requested exhibit was to serve as a sample, on the basis of which the Council would determine whether to ask for similar (and perhaps additional) information in that format for all of the proposed overhead portions of the line. The Companies have prepared the requested example. They have also prepared an example of the same information in a different visual format, which the Companies would prefer because it is more useful, more accurate, and less labor intensive to prepare than exhibits using the Volume 9 aerials. This preferred format uses as a base the Geographic Information System ("GIS") visual database previously filed with the Council. (This is the same database that the Companies have used in preparing the 3mG - 6 mG tables in Exhibits 79 and 92 and the enclosed tables.) Lines designating the boundaries of the 3mG and 6 mG fields can be plotted by computer in this database, and the Companies can then file both large format "hard copy" print-outs showing the information the Council has requested, and a digital copy of the data, which the Council can add to its copy of the GIS database. This will allow the Council to view the data at various levels of resolution. By contrast, exhibits using the aerial photos in Volume 9 of the application must be prepared by plotting the field boundaries manually. This technique is not as precise as the computer plotting in the GIS database, and is much more labor intensive and time consuming. Accordingly, the time required for production of a full set of such maps would be substantially longer than that for the GIS maps.


Sincerely,


Anne Bartosewicz, Project Director
The Connecticut Light & Power Company


John J. Prete, Project Director
The United Illuminating Company

cc: Service List

Structures Adjacent to Overhead Right of Way : 3mG and 6mG based upon a 15GW case and Low-EMF Mitigation Designs

					Low EMF Design Option			
					East / South		West / North	
Cross Section	400 Scale Segment #	Town	Parcel Number	Street	3 mG	6 mG	3 mG	6 mG
Cross Section 1 - 345kV Delta Configuration								
1	3	Middletown	50 49 1 19	Bartholomew Road			X	
1	3	Middletown	4942116A	East Mount Road			X	
Cross Section 2 - As Proposed (Composite 345kV/115kV)								
2	4	Durham	20 9	Foot Hills Road	X			
2	4	Durham	20 8	Foot Hills Road		X		
2	4	Durham	20 4	Foot Hills Road		X		
2	4	Durham	20 5	Foot Hills Road			X	
2	4	Durham	20 14 9	Foot Hills Road			X	
2	5	Durham	9 12	Arbutus Street		X		
2	5	Durham	10 14 7	Johnson Lane				X
2	5	Durham	9 11	Arbutus Street			X	
2	5	Durham	9 10	Arbutus Street			X	
2	6	Durham	-	Royal Oaks	See Royal Oak By-Pass Table			
2	7	Durham	68	Little Lane		X		
2	7	Durham	5-3	Cherry Hill Road		X		
2	9	Durham	12-4	Skeet Club Road		X		
2	9	Durham	12-1	Skeet Club Road		X		
2	9	Durham	23-21	Skeet Club Road		X		
2	9	Durham	23-19	Skeet Club Road		X		
2	9	Durham	22-3	Powder Hill Road	X			
2	9	Durham	22-4	Powder Hill Road		X		
2	9	Durham	22-1-1	Powder Hill Road		X		
2	9	Durham	12-3	Skeet Club Road				X
2	9	Durham	12-2	Skeet Club Road				X
2	4	Haddam	18-3	Haddam Quarter Road		X		
2	4	Haddam	18 2-2	Haddam Quarter Road	X			
2	4	Haddam	18-2	Haddam Quarter Road	X			
2	4	Haddam	18 2-1	Haddam Quarter Road				X
2	4	Haddam	18 2-1	Haddam Quarter Road		X		
2	7	Middlefield	21-23	Little Lane			X	
2	7	Middlefield	21 24 1	Snell Road			X	
2	7	Middlefield	21 7	Cherry Hill Road			X	
2	7	Middlefield	21 5	Cherry Hill Road			X	
2	6	Middletown	-	Royal Oaks	See Royal Oak By-Pass Table			
2	7	Middletown	21 12	Route 17			X	
2	10	Wallingford	204 85B	Cliffside Drive		X		
2	10	Wallingford	204 87B	Cliffside Drive		X		
2	10	Wallingford	204 93B	Valley View Drive		X		
2	10	Wallingford	209 98B	Valley View Drive	X			
2	10	Wallingford	209 64	High Hill Road		X		
2	10	Wallingford	204 84B	Cliffside Drive				X
2	10	Wallingford	204 88B	Cliffside Drive			X	
2	10	Wallingford	204 92B	Valley View Drive			X	
2	10	Wallingford	209 99B	Valley View Drive			X	
2	10	Wallingford	209 65	High Hill Road			X	
Cross Section 3 - As Proposed with Strain Insulators								
3	11	Meriden	10 18 341 8D	East Main Street				X
3	11	Meriden	10 18 341 8F	Parker Road				X
3	11	Meriden	10 18 338 14	East Main Street				X
3	12	Meriden	10 15 339 108	High Hill Road	X			
3	12	Meriden	10 18 338 12C	Birdsey Avenue				X
3	12	Meriden	10 18 338 11D 1	Birdsey Avenue				X
3	12	Meriden	10 18 338 11B	Birdsey Avenue				X
3	12	Meriden	10 18 338 11 & 1	Birdsey Avenue				X
3	12	Meriden	10 15 339 1E 1B	Thorpe Avenue			X	
Cross Section 4 - As Proposed with Strain Insulators								
4	13	Meriden	10 10 337 2L	Fleming Road	X			
Cross Section 5 - Reconstructed ROW - Vertical Construction								
5	15	Wallingford	208 2 12C	High Hill Road	X			
5	15	Wallingford	208 2 11A	High Hill Road	X			
5	15	Wallingford	208 2 8A	High Hill Road	X			
5	16	Wallingford	212 1 16	Williams Road	X			
5	17	Wallingford	212 1 6	Williams Road		X		
Totals					11	18	16	12

Structures Adjacent to Overhead Right of Way : 3mG and 6mG based upon a 15GW case and Low-EMF Mitigation Designs

Properties that would be avoided by Royal Oak By-Pass (Middletown & Durham)								
Cross Section	400 Scale Segment #	Town	Parcel Number	Street	3 mG	6 mG	3 mG	6 mG
2	6	Durham	78	Black Walnut Drive		X		
2	6	Durham	77	Black Walnut Drive		X		
2	6	Durham	6 29	Evergreen Terrace		X		
2	6	Durham	6 28	Evergreen Terrace	X			
2	6	Durham	6 23	Evergreen Terrace		X		
2	7	Durham	6-22	Ironwood Lane		X		
2	7	Durham	6-12	Packing House Road	X			
2	7	Durham	6-13	Packing House Road		X		
2	7	Durham	6-15	Packing House Road		X		
2	7	Durham	6-10	Packing House Road				X
2	6	Middletown	32 47 2 125	Holly Lane			X	
2	6	Middletown	32 47 2 124	Holly Lane			X	
2	6	Middletown	32 47 2 123	Holly Lane				X
2	6	Middletown	32 47 2 117	Ash Court			X	
2	6	Middletown	32 47 2 116	Ash Court			X	
2	6	Middletown	32 47 2 111	Ironwood Lane				X
2	6	Middletown	32 47 2 122	Black Walnut Drive				X
2	7	Middletown	32 47 2 104	Ironwood Lane				X
Totals					2	7	4	5

Comparison of the number of structures that are at EMF levels equal to or greater than	East / South		West / North		Totals
	3mG	6 mG	3 mG	6 mG	
Existing Overhead ROW	65	4	27	9	105
Proposed Overhead ROW	114	56	116	65	351
Low-Emf Design Overhead ROW (Does not include Properties that would be avoided by Royal Oaks By-PasS)	11	18	16	12	57