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April 22, 2008

Hand-Delivered and Electronic Mail

Daniel F. Caruso, Chairman
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

RE: **DOCKET NO. 352** The Connecticut Light and Power Company application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a proposed substation located at 264 Rood Avenue and 25 Shelley Avenue, Windsor, Connecticut

Dear Chairman Caruso:

In connection with Docket No. 352, enclosed please find the original and twenty (20) copies of Comments on CSC's Draft Findings of Fact.

Very truly yours,

Marianne Barbino Dubuque

MBD/mkw
Enclosures
cc: Service List

DOCKET NO. 352 - The Connecticut Light and Power Company application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a proposed substation located at 264 Rood Avenue and 25 Shelley Avenue, Windsor, Connecticut.	}	Connecticut
	}	Siting
	}	Council
	}	April 22, 2008

Comments on CSC's DRAFT Findings of Fact

1. The Connecticut Light and Power Company (CL&P), in accordance with provisions of Connecticut General Statutes Sections 16-50g et seq., and Section 16-50j-1 et seq. of the Regulations of Connecticut State Agencies (RCSA), applied to the Connecticut Siting Council (Council) on November 7, 2007 for the construction, operation, and maintenance of a ~~60 MVA~~ bulk power substation at 264 Rood Avenue and 25 Shelley Avenue, Windsor, Connecticut. (CL&P 1, Vol. I, ~~p~~pp. A-1, O-1, Q-1)

Note: The revisions more accurately reflect the type of substation to be constructed and provide more accurate citations.

8. Pursuant to CGS § 16-50*l* (b), notice of the application was provided to all abutting property owners by certified mail. (CL&P 1, Vol. II, Tab 10; CL&P 2)

Note: The additional citation includes the outcome of the second mailing.

17. CL&P conducted public outreach efforts by mailing informational packages to area residents in May 2007 and by conducting a door-to-door outreach to project abutters and four homes located across the street on Rood and Matianuck Avenues on June 1, 2007. Eleven of the 28 abutters were home during the door-to-door outreach. For the abutters who were not home, CL&P representatives left an informational package that described the project and notified residents of ~~an~~ upcoming ~~P&Z meeting~~municipal meetings concerning the project. (CL&P 1, Vol. I, p. R-1; Tr. 1, pp. 58-63)

Note: The revisions more accurately reflect where the door-to-door outreach was conducted.

30. Replacement of the three existing transformers at the Bloomfield Substation as a solution was rejected ~~due to the low~~since the change out would be labor intensive and the net capacity increase is less than that associated with the project. A single transformer at the proposed substation would provide more net capacity than the three new transformers. (CL&P 1, Vol. I, p. G-7)

Note: The revisions more accurately reflect CL&P's reasoning for rejecting this alternative to the proposed substation.

37. CL&P investigated eight potential locations along the existing transmission line right-of-way in southern Windsor and selected the proposed site as most preferable. The seven rejected locations and the reasons for their rejection are as follows:

a. Park Avenue – site would require longer distribution feeders, additional right-of-way purchases, and significant land clearing. Additionally, interconnecting line access is blocked by residences.
b. Washington Road – no suitable land ~~identified~~ available. Residential area with insufficient buffer. Wetland constraints.
c. Matianuck Avenue – no suitable land ~~identified~~ available. Residential area in which residences occupy all potential site areas.
d. South of Rood Avenue – wetland constraints and insufficient buffer to residential area.
e. Windsor Avenue – insufficient buffer to residential area. Development would require acquisition of church parking lot.
f. Deerfield Road – no vacant land available. Area surrounded by residences and wetlands.
g. Midian Avenue – potential site constrained by active railroad and wetlands/floodplain. Long distribution feeders and expansion of the right-of-way would be required. Minimal buffer to residential area to north.

(CL&P 1, Vol. I, pp. I-2 – I-5)

Note: The revisions more accurately reflect CL&P's reasoning for rejecting these potential site locations.

41. The nearest residence is ~~250~~365 feet north of the proposed substation, located at 190 Sunnyfield Drive. (CL&P 1, Vol. I, ~~p~~pp. H-3, H-4)

Note: This revision corrects the distance of the nearest home to the proposed substation and provides a more accurate citation.

68. Wetland 4 is ~~a wooded wetland located southeast of the proposed substation.~~located east of the existing switching station's access drive and north of Wetland 5. CL&P intends to clear ~~approximately 1,000 square feet of woodland from the wetland~~a portion of the upland review area adjacent to Wetland 4 in order to provide clearance for construction activities. ~~Temporary impacts such as construction vehicles entering the area would be avoided to the greatest extent possible.~~ (Protective measures will be in place so that the activities will not physically impact the wetland. (CL&P1, Vol. 1, p. H-8; Tr. 1, pp. 23, 58)

Note: The revisions more accurately describe the location of and the potential impacts on Wetland 4.

69. CL&P identified a population of pink lady's slipper *(Cypripedium acaule)* adjacent to Wetland 4 and within the construction footprint. At the town's request, CL&P would attempt to relocate the population to a suitable area east of the substation and along the edge of Wetland 4. The pink lady slipper is not a state threatened, endangered, or special concern species. (CL&P 1, Vol. II, Tab 1; CL&P 3, Q. 6; Tr. 1, p. 25)

Note: Given that the pink lady's slipper is difficult to relocate, CL&P agreed to try to relocate as many as possible.

71. CL&P plans to ~~restore a~~enhance and reestablish native vegetation in an area that was previously a disturbed wetland adjacent to the existing switchyard that once connected Wetland 1 and 2. (CL&P 1, Vol. II, Tab 1; Tr. 1, p. 18)

Note: The revision more accurately reflects the extent of CL&P's proposed efforts.

72. CL&P would implement an invasive species control program for areas within the substation disturbed by construction and for wildlife/wetland enhancement areas in the surrounding buffer area. (Tr. 1, pp. 41-43).

Note: The revision provides a more accurate description of CL&P's position on an invasive species control program.

81. The project has been designed to minimize magnetic fields near statutory facilities, ~~per~~consistent with the Council's Electric and Magnetic Fields Best Management Practices For the Construction of Electric Transmission Lines in Connecticut guidlines. (Council ~~Adminstrative~~Administrative Notice Item No. 3; CL&P 1 Vol. 1, p. M-13)

Note: Since the Council's EMF BMPs apply to new transmission lines and not to modifications to existing transmission lines within the context of substation projects, this finding would be more accurate if the term "per" was replaced with "consistent with".

85. ~~The projected magnetic fields where~~Based on projected peak line currents in 2014, the highest level of magnetic field at ground level along a cross section beneath the transmission lines ~~crosses~~where they cross Rood Avenue would increase from 57.7 mG to 65 mG. (CL&P 1, Vol. I, p. M-8)

86. ~~The projected magnetic fields where~~Based on projected peak line currents in 2014, the highest level of magnetic field at ground level along a cross section beneath the transmission lines where they cross Mantianuck Avenue would decrease from 53.2 mG to 41.7 mG. (CL&P 1, Vol. I, pp. M-8~~, M-9~~, M-10)

87. Magnetic fields from the distribution lines would also be affected by substation operations. ~~Magnetic fields~~Due to associated changes in peak currents on both the transmission lines and distribution lines, magnetic fields at ground level where the distribution lines cross Matianuck Avenue would decrease directly beneath the distribution lines from 40 mG to less than 10 mG, ~~due to decreased load. Magnetic~~and magnetic fields at ground level where the distribution lines cross Rood Avenue would increase directly beneath the distribution lines from 26 mG to 41 mG~~, due to increased load~~. (CL&P 1, Vol. I, p. M-10)

88. ~~Magnetic fields~~Based on projected peak line currents in 2014, magnetic fields over a 275-foot distance along a neighbor's fence at the west property line would ~~decrease~~range from 17 mG to 8 mG due to the reconfigured #1751 transmission line. (CL&P 1, Vol. I, pp. M-9 through M-10)

89. ~~Magnetic fields~~Based on projected peak line currents in 2014, the highest level of magnetic field along the north property ~~lines~~line would decrease from 18 mG to 15 mG due to the reduced current on the distribution line ~~in this area~~which crosses the north property line. (CL&P 1, Vol. I, pp. M-10, M-12)

Note: These revisions more accurately present the levels depicted in the graphs included in Section M.1 and reflect that the magnetic fields beneath the distribution lines where they cross Rood and Matianuck Avenues are due to currents in both the distribution lines and transmission lines.

Recommended Additional Findings of Fact Consistent With the Reocrd

1. To be inserted into the Environmental Considerations section:

"The site would not affect any state or federal endangered, threatened, or special concern species. (CL&P 1, Vol. 1, p. K-7; CL&P 1, Vol. 2, Tab. 4)"

"Based on current CTDEP NDDB review criteria, the substation does not present a potential conflict with a listed species or significant natural community. (CL&P 1, Vol. 1, p. K-7")

"The closest water supply wells are part of the Windsor Locks Wellfield (a State-designated Preliminary Aquifer Protection Area), located approximately 4.5 miles north of the substation. Based on substation design considerations and the physical distance of the water supply wells to the substation, there would be no adverse environmental effect on the aquifer. (CL&P 1, Vol. 1, p. K-8)"

Note: These findings reflect important components of the Council's evaluation.

2. To be inserted into the Safety and Reliability Section:

"Detection of fire/smoke would automatically activate an alarm at Connecticut Valley Electric Exchange and the system operators would then take the appropriate action. The control enclosure would be equipped with fire extinguishers. (CL&P 1, Vol. 1, p. J-2)"

Note: This finding should be added to thoroughly explain the safety features of the substation.

Recommended Corrections to Text and Citations

2. The purpose of the proposed facility is to increase the capacity and reliability of the electric power distribution system in Windsor while alleviating load on surrounding substations. (CL&P 1, Vol. I, p. ~~A~~G-1)

3. Pursuant to General Statutes § 16-50m, the Council, after giving due notice thereof, held a public hearing on February 21, 2008, beginning at 3:00 p.m. and continuing at 7:00 p.m. at the Windsor Town Hall, 275 Broad Street, Windsor, Connecticut. (Council's Hearing Notice dated January 22, 2008; Transcript 1 – February 21, 2008 at 3:00 p.m. [Tr. 1], p. ~~3~~2; Transcript 2 – February 21, 2008 at 7:00 p.m. [Tr. 2], p. 2)

10. Pursuant to CGS § 16-50*l* (a) (2), the project is exempt from the Connecticut Energy Advisory Board (CEAB) request for proposal process. As a courtesy, CL&P notified the CEAB of the project on September 5, 2007. (CL&P 1, Vol. 1, p. R-~~8~~2)

22. Demand in Windsor has increased approximately 53% from 1981 to 2005. A significant potential for large scale industrial/commercial development exists in the Day Hill Road and Pigeon Hill Road area of Windsor that would further increase demand. In addition, demands on the substations currently serving Windsor are increasing as a result of localized load growth. (CL&P 1, Vol. ~~I, p. G-4; Tr.~~ 1, pp. G-~~9~~,4, G-10; CL&P 5, p. 9; Tr. 1, pp. 6-9)

24. The Bloomfield Substation nearly reached its permissible load rating of 120 MVA in 2006 and was expected to exceed this rating in 2007. To meet the expected need, CL&P instituted a Forced Load Transfer (FLT) scheme where 14 MVA of load was transferred from the substation to the neighboring North Bloomfield and Northwest Hartford Substations, thus increasing available load by 14 MVA. (CL&P 1 Vol. I, ~~ppp~~. G-5, G-6)

26. The two FLT schemes would allow enough capacity to complete construction of the Rood Avenue Substation. Once the substation is complete, peak loads at the Bloomfield Substation would be reduced by 30.8 MVA and would add approximately 56 MVA of new capacity to the distribution system. Further transmission design changes would be implemented to meet future load growth at the North Bloomfield Substation, creating a more reliable, localized distribution system. (CL&P. 1, Vol. I, pp. G-5, G-6; CL&P ~~4~~,5, p. 10)

29. CL&P examined alternatives to constructing a new substation at the proposed site to meet growing demand, but determined these alternatives would not produce a reliable or flexible long-term solution to meet demand needs. (CL&P 1, Vol. I, pp. G-~~7~~6 - G-9, I-6)

35. CL&P contacted several customers in the Windsor area to encourage their participation in the Connecticut Department of Public Utility Control's (DPUC) grant program to install on-site generation. Two distributed generation projects in the Windsor area, representing 3.9 MW, were recently approved by the DPUC. CL&P believes these projects represent the best opportunities for distributed generation in the Windsor area. No additional projects of significance are expected. (CL&P 1, Vol. I, p. I-7; CL&P ~~4~~,5, p. 16)

36. Energy efficiency programs offered to residential and commercial customers in this area by CL&P through the Connecticut Energy ~~Effieciney~~Efficiency Fund have not been sufficient to offset the projected load increase. CL&P estimates customers in the

Bloomfield, Hartford, Windsor, and Windsor Locks area have achieved peak-demand savings of approximately 16 MW since 2005. (CL&P 5, pp. 13-15)

38. The proposed substation would be located on two contiguous properties owned by CL&P: 264 Rood Avenue and 25 Shelley Avenue. The properties are 11.09 and 8.97 acres in size, respectively, and total 21.03 acres (refer to Figure H-1). The properties are zoned for agriculture (CL&P 1, Vol. I, p. H-1)

52. The #1751 transmission line would loop through the proposed substation where a 115-kV circuit breaker would be installed to separate the circuit into two circuits. (CL&P 1, Vol. I, p. F-31)

54. The reconfigured #1751 circuit would pass under the existing #395 and #1779 circuits to the line terminal structures located within the substation. The terminal structures would be approximately 55 feet in height. (CL&P 1, Vol. I, ppp. F-1, F-3; Tr. 1, p. 20)

57. The nominal service life of the substation equipment is 40 years. (CL&P 1, Vol. I, p. NF-15)

59. The proposed project would have no effect on archaeological resources. (CL&P 1, Vol. II, Tab 76)

63. Six wetlands were indentified on-site, three of which would be impacted by construction activities. The impacted wetlands are identified as Wetland 1, Wetland 3 and Wetland 4 (refer to Figure K-2). (CL&P 1, Vol. I, p. K-4; Tr. 1, p. 23)

66. Wetland 3 occurs in the central portion of the property, extending from an area east of the existing access drive towards Shelley Drive. The wooded wetland is 0.8-acres in size and was historically filled and farmed. The early successional forest within the wetland is dominated by red maple, red oak, apple, arrow wood, and silky dogwood. (CL&P 1, Vol. I, p. H-7; CL&P 1, Vol. 2, Tab 1)

79. Approximately three abutting residences to the north would have seasonal views of the substation. CL&P proposes to plant vegetative screening in the area of the existing switchyard and in the lightly wooded area north of the substation. (CL&P1, Vol. 2, Tab 1; Tr. 1, pp. 18-19, 21-23, 28)

80. Abutting residences to the west would have views of the substation due to the lack of mature trees in this area. Vegetation in the right-of-way is maintained in a shrub-like state to provide clearance to the existing transmission lines that traverse the property. CL&P may be able to plant vegetative screening along the right-of-way where the #1751 line is interrupted and looped through the substation. (CL&P 1, Vol. I, p. K-2; Tr. 1, pp. 27-28)

83. The interconnection of the substation would primarily affect current flows on the #1751 transmission line. Using the 2014 peak-hour line currents, magnetic fields at the nearest abutting residence to the line, 288 Rood Avenue, are projected to increase from 17.3 mG to 19.6 mG as a result of current changes associated with the operation of the substation. The residence is approximately 75 feet from the line. (~~CL&P 1, Vol. I, p. 71;~~ CL&P 3, Q. 11)

All citations that cite to the Application as either "Vol. I" or "Vol. II" should be revised to "Vol. 1" or "Vol. 2" in order to be consistent with the Application.