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Anthony M. Fitzgerald

October 19, 2006

VIA HAND DELIVERY

Ms. Lisa Fontaine
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

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CONNECTICUT
SITING COUNCIL

Re: Docket 317 – The United Illuminating Company Application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a proposed 115-kV / 13.8-kV electric substation and associated facilities at 3-7 Wildflower Lane, Trumbull, Connecticut

Dear Ms. Fontaine:

Enclosed for filing in the above docket are an original and 20 copies of the Testimony of Robert E. Carberry on behalf of The Connecticut Light and Power Company.

Very truly yours,


Anthony M. Fitzgerald

AMF/kas
Enclosure

cc: Service List (w/enclosure)

{N0752556}

LIST OF PARTIES AND INTERVENORS
SERVICE LIST

Status Granted	Status Holder (name, address & phone number)	Representative (name, address & phone number)
Applicant	The United Illuminating Company 157 Church Street P.O. Box 154 New Haven, CT 06506	<p>Richard J. Reed Vice President – Electric System The United Illuminating Company 801 Bridgeport Avenue Shelton, CT 06484 P: 203-926-4500 F: 203-926-4457 Rich.Reed@uinet.com</p> <p>Eugene Kallaur Program Manager Transmission & Substation Projects The United Illuminating Company 801 Bridgeport Avenue Shelton, CT 06484 P: 203-926-4605 F: 203-926-4664 Gene.Kallaur@uinet.com</p> <p>Kathleen Shanley Director of Environmental Safety & Real Estate The United Illuminating Company 801 Bridgeport Avenue Shelton, CT 06484 P: 203-926-4695 F: 203-926-4696 Kathleen.shanley@uinet.com</p> <p>Linda L. Randell Bruce L. McDermott Wiggin and Dana LLP One Century Tower New Haven, CT 06508-1832 P: 203-498-4400 F: 203-782-2889 Lrandell@wiggin.com bmcdermott@wiggin.com</p>
Party (Approved on 8/31/06)	The Wildflower Coalition Petitioners	Julie D. Kohler, Esq. Cohen and Wolf, P.C. 1115 Broad Street Bridgeport, CT 06604 P: 203-368-0211

STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

The United Illuminating Company :
Application for a Certificate of :
Environmental Compatibility and Public Need : Docket No. 317
for the construction, maintenance, and :
operation of a proposed 115-kV/13.8-kV :
electric substation and associated facilities :
at 3-7 Wildflower Lane, Trumbull, Connecticut. : October 19, 2006

TESTIMONY OF ROBERT E. CARBERRY
on behalf of
THE CONNECTICUT LIGHT AND POWER COMPANY

1 **Q. Please identify yourself.**

2 A. I am Robert E. Carberry, Manager of Transmission Siting and Permitting,
3 Northeast Utilities Service Company (“NUSCO”). I am testifying today on behalf of
4 NUSCO’s affiliate, The Connecticut Light and Power Company (“CL&P”), an intervenor
5 in this proceeding.

6 **Q. What is CL&P’s interest in this proceeding?**

7 A. The new Trumbull Substation proposed by the applicant, The United Illuminating
8 Company (“UI”), will be in the immediate vicinity of 115-kV transmission lines that
9 CL&P owns and operates. A modification of these lines will be required to
10 accommodate the proposed construction. In addition, the construction of this substation
11 in its proposed location has been assumed in the planning studies for CL&P’s Bethel to
12 Norwalk project, which just recently entered service (as well as in planning studies for
13 the Glenbrook to Norwalk and Middletown to Norwalk projects.)

1 **Q. Please describe the location of the CL&P 115-kV lines in relation to the**
2 **proposed Trumbull Substation?**

3 A. Exhibit 4.4 of UI's "Trumbull Site Selection Study" (Ex. D to the Application)
4 illustrates this relationship well. A copy of that exhibit is attached to this testimony for
5 convenience of reference. As shown there, the proposed location for the substation (Site
6 1) is at a "T" junction of UI and CL&P 115-kV lines, known as "Trumbull Junction." A
7 one-line diagram of this junction is shown in Figure 6 of the Application, at vol. 1, p. 17.
8 As shown in these figures, UI and CL&P each own segments of the 1710 and 1730
9 circuits. The UI segments extend in a generally south to north direction from UI's
10 Pequonnock Substation in Bridgeport to a Trumbull Junction (forming the stem of the
11 "T"); and the CL&P segments extend east and west from the junction (along the top of
12 the "T.") The CL&P line consists of two 115-kV circuits on common support structures.

13 **Q. Will the proposed substation at its proposed location interconnect with**
14 **CL&P-owned 115-kV circuits?**

15 A. Yes. UI proposes to break up the existing three-terminal 1730 circuit into three
16 circuits: Trumbull-Pequonnock, Trumbull-Devon and Trumbull-Weston. To do this, a
17 new connection from a CL&P-owned span of the 1730 circuit on the west side of
18 Trumbull Junction must be made to the proposed substation. At this location, the 1730
19 circuit is on the north side of CL&P's towers, and the proposed substation is on the south
20 side.

21 **Q. Does CL&P support the construction of the new Trumbull Substation at this**
22 **location?**

23 A. Yes.

1 **Q. Could the 1730 circuit be broken into three circuits at the proposed substation,**
2 **as proposed, if the substation were located away from Trumbull Junction?**

3 A. No, unless another 115-kV line segment is constructed between the new substation
4 location and Trumbull Junction. Without a new 115-kV line segment between these two
5 points, one of the supply circuits to the new substation would remain a three-terminal
6 line.

7 **Q. Has UI made arrangements with CL&P to design and build a modification of**
8 **CL&P's portion of the 1730 circuit for this substation interconnection?**

9 A. No, not as yet. However, we expect that such an arrangement will be made as
10 soon as the final location of the proposed substation is determined. The photo renderings
11 in Exhibits A and B and Figure 2-2 of Exhibit B of the Application indicate that, if the
12 new substation is constructed at Trumbull Junction as proposed, UI envisions one new
13 monopole structure located within CL&P's right-of-way over UI's property, with a
14 lower-level buckarm. That is an acceptable arrangement, which CL&P would be
15 prepared to implement.

16 **Q. Would CL&P expect to file a petition to the Siting Council with respect such**
17 **a modification of its segment of the 1730 circuit?**

18 A. Yes. If that question remains open after this proceeding, we would expect to file a
19 petition for a declaratory ruling that the modification to CL&P's facilities required for the
20 interconnection will not have a substantial adverse environmental effect. On the other
21 hand, on the basis of the information in the Application, the Council could make such a
22 finding within the context of this proceeding, which would obviate the need for a separate

1 petition. CL&P would then work with UI to include the details of the modification as a
2 component of the Development and Management Plan for the substation.

3 **Q. In section 2.2 of Exhibit D to the Application, UI wrote: “Due to transmission**
4 **line loading restrictions, only the CL&P 1730 line or UI 1730 line may be used as a**
5 **source of supply to the substation.” Do CL&P’s transmission system planners agree**
6 **with this statement?**

7 A. Yes.

8 **Q. Would additional planning studies be required before CL&P could comment**
9 **further on the reliability implications of selecting any of the alternate locations for**
10 **the substation identified in the Application?**

11 A. Yes. Most, and perhaps all, of the alternate sites would require the performance
12 of additional planning studies to determine whether such locations could have a negative
13 impact on the Norwalk-Stamford transfer limit prior to the completion of the
14 Middletown-Norwalk Project, which is now estimated to be in December, 2009.

15 **Q. Please explain why that is the case.**

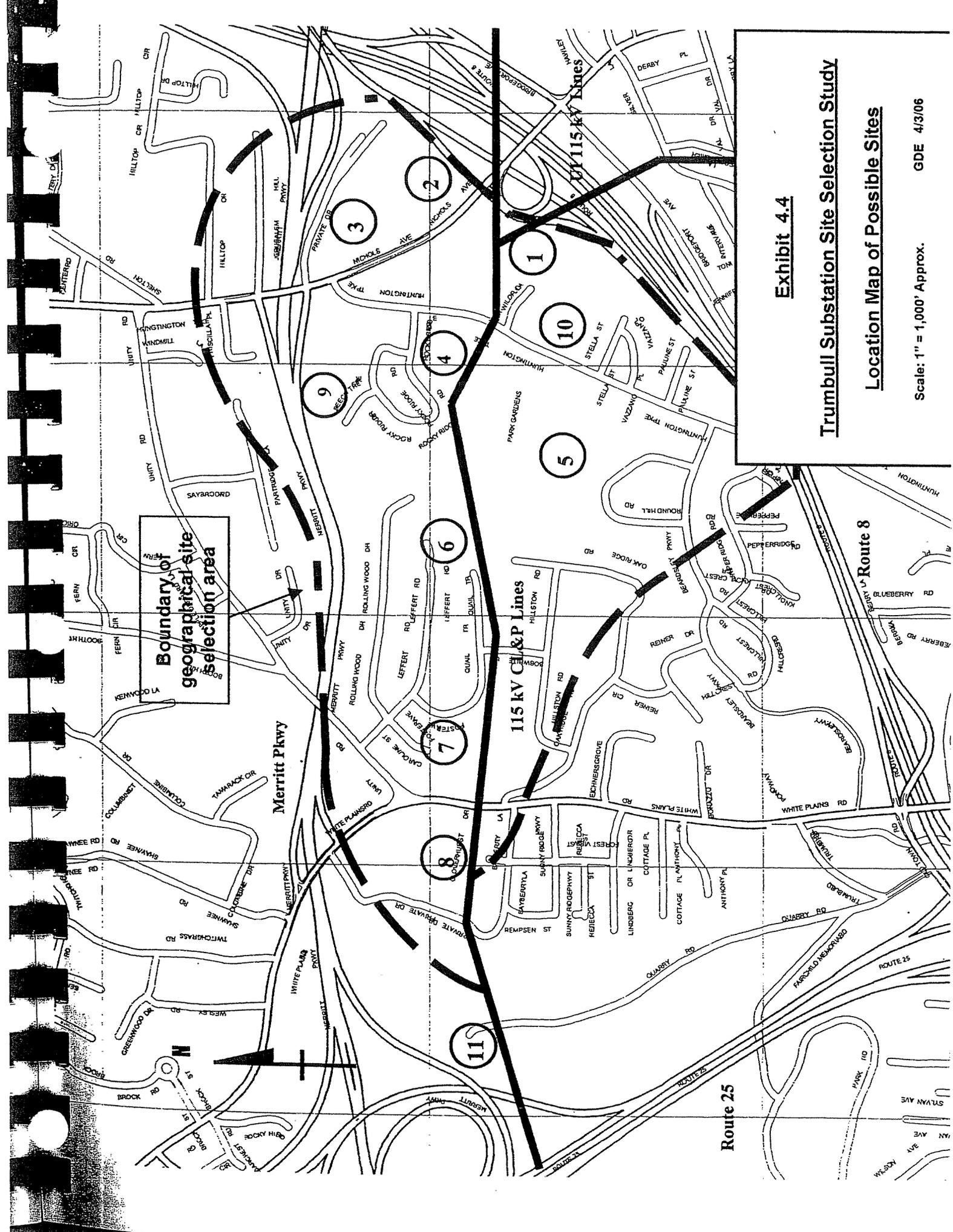
16 A. The 1710 and 1730 circuits form part of the “Norwalk – Stamford interface,”
17 where congestion exists because transfer capacity is limited. The load on these circuits
18 will increase with the completion of the Trumbull Substation because some of the load
19 that will be switched over to Trumbull Substation (that now served from UI’s Trap Falls
20 Substation) is currently not served by these circuits. In addition, load transfers to
21 Trumbull Substation from UI’s Old Town Substation will move load from the 1710
22 circuit path to Norwalk onto the 1730 circuit path. These increases in the pre-
23 contingency loading of the circuit segments west of Trumbull Junction will lower the

1 transfer capacity across the interface. The planning studies for the Bethel-Norwalk
2 project assumed that the proposed substation will be constructed at Trumbull Junction
3 and interconnected as UI has proposed, so that no segment of existing 115-kV line
4 conductor west of Trumbull Junction would be subjected to the new load. Accordingly,
5 the impact of the anticipated additional load at Trumbull Junction on the Norwalk –
6 Stamford transfer limit has been thoroughly characterized. Although the Application
7 does not indicate how the interconnection from any of the alternate sites would be made,
8 it seems apparent that, except possibly for sites 2 and 3, all¹ of the alternate sites would
9 connect with the CL&P segment of the 1730 line that extends west from the “T.”
10 Connecting a substation into the transmission system at this location could reduce the
11 Norwalk – Stamford transfer capacity. Any such reduction would be of concern. While
12 the completion of the Middletown to Norwalk project will eliminate the Norwalk –
13 Stamford interface, that is not expected to occur until December, 2009 - two years after
14 the new substation is expected to be in service. If the Council were to order that the
15 substation be constructed at one of these alternate locations, it is probable that new
16 studies would have to be done to determine if that modification would decrease the
17 transfer limit over the interface to an unacceptable degree.

18 **Q. Does this complete your testimony?**

19 A. Yes.

¹ Although the Site Selection Study Map shows 11 sites, only sites 1-9 are discussed in the application, apparently because sites 10 and 11 were found not to merit further study.



Boundary of geographical site selection area

Exhibit 4.4

Trumbull Substation Site Selection Study

Location Map of Possible Sites

Scale: 1" = 1,000' Approx.

GDE 4/3/06