



**Northeast
Utilities System**

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April 4, 2007

Mr. S. Derek Phelps
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: Docket No. 327 - 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 off of Christian Street, Oxford, Connecticut.

Dear Mr. Phelps:

This letter provides the response to requests for the information listed below.

Response to CSC-01 Interrogatories dated 03/21/2007
CSC-001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011

Very truly yours,

Robert Carberry DEC

Robert Carberry
Manager
Transmission Siting and Permitting
NUSCO
As Agent for CL&P

cc: Service List

Witness: CL&P Panel
Request from: Connecticut Siting Council

Question:

Page 72 of the Application states post-project electric and magnetic field level calculations do not include the proposed feeders crossing the southern property boundary. How would the proposed feeders affect post construction magnetic and electric fields?

Response:

Proposed distribution feeders which will cross or run close to the southerly property boundary with Commerce Park Drive are not included in the calculation. Unbalanced feeder currents due to varying customer loads, switching operations and frequent changes to distribution feeder circuits, and also levels of current in the neutral wires are considerations which make modeling of distribution feeder-caused magnetic fields impractical. Distribution lines near to the southerly property border would affect the magnetic field analysis if they could reasonably be modeled.

The southerly property boundary along Commerce Park Drive is approximately 260 feet in length and encompasses the 110-foot width of transmission right-of-way. CL&P is currently constructing overhead and underground distribution feeder circuit sections adjacent to the newly developed Commerce Park Drive, including within this 260-foot section, and from the end of Commerce Drive easterly over an easement to North Larkey Road. New underground cables for the distribution feeders exiting the substation will cross the southerly property line and will rise up on wood distribution poles to connect with the overhead 13.8-kV line sections alongside Commerce Park Drive, adjacent to the southerly property boundary.

Directly beneath sections of overhead 13.8-kV distribution feeders and directly above sections of underground 13.8-kV distribution feeders or splice vaults, ground-level magnetic field levels are typically found in a range of 1 to 20 mG. Electric fields directly beneath overhead 13.8-kV distribution feeders will typically range up to 30 volts per meter. Electric and magnetic fields within these respective ranges should be expected along the southerly property boundary where such distribution feeders border this boundary. Because of the relatively close wire/cable spacings on such distribution feeders, the electric and magnetic field levels drop-off to much lower levels within a few tens of feet.

Along the southerly property boundary where the 115-kV transmission lines cross, the field contributions of the transmission lines and these distribution feeders would combine in some manner. Per Figures M-5 and M-6 of the Application, the post-project transmission line magnetic field levels at this location range only up to 11 mG. In a hypothetical circumstance at a location along Commerce Park Drive and directly beneath the 115-kV lines where the transmission lines are producing a magnetic field of 11 mG on a peak-load day, with the distribution lines simultaneously producing a magnetic field of 20 mG, their combination could not be more than 31 mG (11 + 20) and would most likely be less.

The Connecticut Light and Power Company
Docket No. 327

Data Request CSC-01
Dated: 03/21/2007
Q-CSC-002
Page 1 of 1

Witness: CL&P Panel
Request from: Connecticut Siting Council

Question:

Would the proposed substation and transmission interconnection increase magnetic fields at any nearby residence? If so, please list the affected property and corresponding pre and post construction magnetic field level.

Response:

No. Figure I-3 in CL&P's Application shows residences within 1/4 mile of the Substation property, and all of these residences are at substantial distances from the substation and transmission interconnection.

The Connecticut Light and Power Company
Docket No. 327

Data Request CSC-01
Dated: 03/21/2007
Q-CSC-003
Page 1 of 2

Witness: CL&P Panel
Request from: Connecticut Siting Council

Question:
Has the US Fish and Wildlife Service responded to your November 27, 2006 inquiry? If so, please provide.

Response:
Yes, CL&P received a favorable response from the U.S. Fish and Wildlife Service for the proposed Oxford Substation dated January 3, 2007. A copy is attached for the Council's records.

The Connecticut Light and Power Company
Docket No. 327

Data Request CSC-01
Dated: 03/21/2007
Q-CSC-004
Page 1 of 1

Witness: CL&P Panel
Request from: Connecticut Siting Council

Question:

Provide an estimate of the number of trees with a diameter at breast height of six inches or greater that would be removed to construct the substation, access drive, and new transmission right-of-way?

Response:

CL&P estimates that development of the substation and the associated transmission line interconnections will require the removal of approximately 221 trees with a diameter at breast height of 6 inches or greater. The majority of trees to be removed are associated with the transmission line interconnections. Twenty-four trees will be removed for the substation and access road.

The Connecticut Light and Power Company
Docket No. 327

Data Request CSC-01
Dated: 03/21/2007
Q-CSC-005
Page 1 of 1

Witness: CL&P Panel
Request from: Connecticut Siting Council

Question:
Estimate the amount of cut and fill required for the project.

Response:
The approximate cut and fill required for the project is as follows:

Cut: 1,835 cubic yds
Fill: 15,571 cubic yds

Witness: CL&P Panel
Request from: Connecticut Siting Council

Question:

Page 57 of the Application states plantings would be included to enhance wetland habitat characteristics adjacent to disturbed wetland areas. Where on the Landscape Plan is this proposal shown?

Response:

Wetland plantings are depicted on the *Revised Landscape Plan* in the vicinity of the access road crossings. CL&P proposes to enhance wetland habitat by planting temporarily disturbed wetland areas with native shrubs. CL&P will plant a combination of the following species, dependent upon their availability from the nursery, following construction: arrowwood viburnum (*Viburnum dentatum*), silky dogwood (*Cornus amomum*), black willow (*Salix nigra*), pussy willow (*Salix discolor*), winterberry (*Ilex verticillata*), and spicebush (*Lindera benzoin*). A wetland shrub buffer will be established along the intermittent watercourse on both sides of the access road crossing. Additionally, temporarily disturbed areas within the 100-foot upland review area will be seeded with *New England Conservation/Wildlife Mix* or equal, in combination with the plantings proposed on CL&P's revised landscape plan (see attached).

The Connecticut Light and Power Company
Docket No. 327

Data Request CSC-01
Dated: 03/21/2007
Q-CSC-007
Page 1 of 1

Witness: CL&P Panel
Request from: Connecticut Siting Council

Question:
Three tree species are proposed in the Landscape Plan. What is the typical height of each species at maturity?

Response:
The three species of plants proposed on the Landscape Plan in the Application, include one tree species (red cedar) and two tall shrub species (arrowwood viburnum and gray dogwood). Red cedar (*Juniperus virginia*) can attain a height of up to 35-feet. Arrowwood viburnum (*Viburnum dentatum*) attains a height of 12 feet. Gray dogwood (*Cornus racemosa*) attains a height of 10 feet.

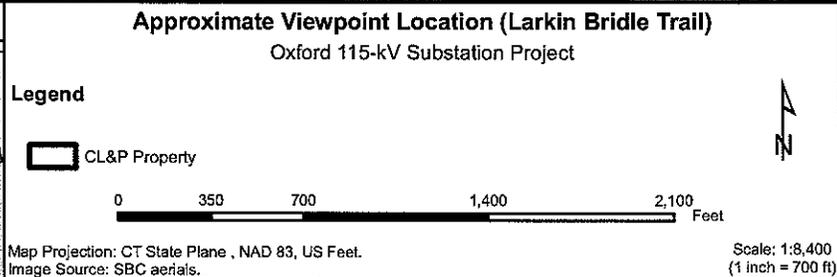
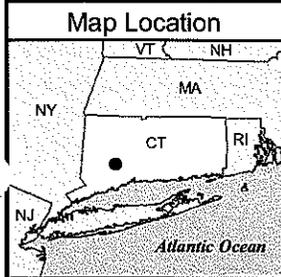
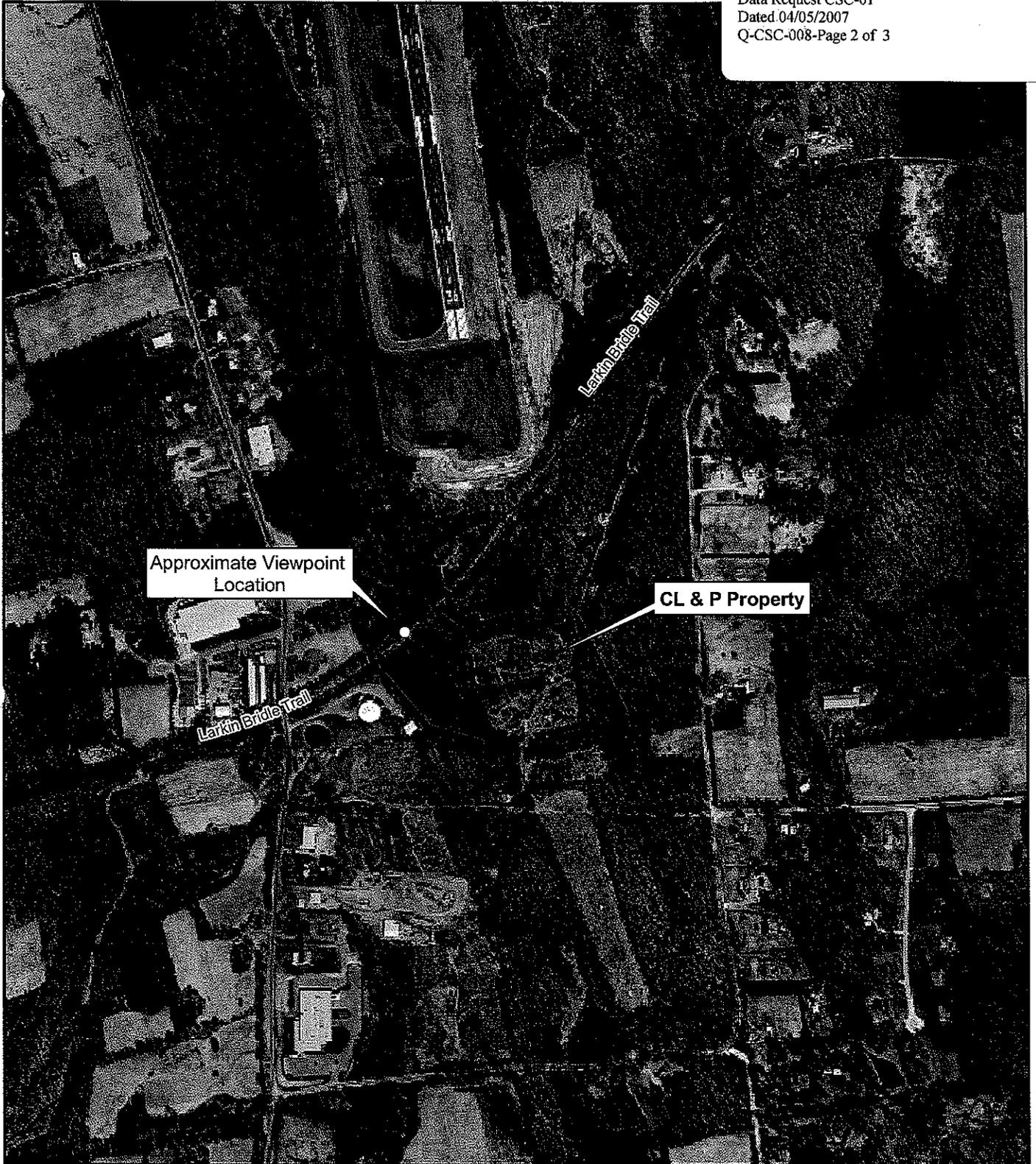
The Connecticut Light and Power Company
Docket No. 327

Data Request CSC-01
Dated: 03/21/2007
Q-CSC-008
Page 1 of 3

Witness: CL&P Panel
Request from: Connecticut Siting Council

Question:
Provide a photograph from the Larkin Bridle Trail depicting seasonal views of the existing lattice structures in the area of the proposed substation.

Response:
See page 3 for a photograph taken from a viewpoint on the Larkin Bridle Trail that is marked on an aerial photograph on page 2.



Northeast Utilities System

ENSR | AECOM

Date: March 2007

Project #: 05022-012



View from Larkin Bridle Trail looking east toward the
Substation Site (Photo taken 11/9/06)



View from Larkin Bridle Trail looking east toward the
Substation Site with Tower Locations Identified
(Photo taken 11/9/06)

The Connecticut Light and Power Company
Docket No. 327

Data Request CSC-01
Dated: 03/21/2007
Q-CSC-009
Page 1 of 1

Witness: CL&P Panel
Request from: Connecticut Siting Council

Question:

Page 32 of the Application states the existing forested uplands and wetlands provide visual screening of the site. From what direction do these features provide screening? What visual receptors are in these areas?

Response:

Forested uplands and wetlands provide visual screening for resources located west of the proposed Substation Site including portions of the Larkin Bridle Trail and commercial land uses located off of Christian Street. Forested uplands provide visual screening north and east of the Substation Site. Visual receptors in these areas include the Larkin Bridle Trail located west of the site, and Jacks Hill Cemetery located to the east of the site.

The Connecticut Light and Power Company
Docket No. 327

Data Request CSC-01
Dated: 03/21/2007
Q-CSC-010
Page 1 of 1

Witness: CL&P Panel
Request from: Connecticut Siting Council

Question:

Would the proposed substation and transmission interconnection require any system changes at any neighboring substation? If so, briefly describe and indicate whether these changes are part of this application.

Response:

CL&P is currently evaluating the need to replace transmission line relays, or to make changes to existing relay settings, at the Beacon Falls, Bunker Hill and Baldwin substations. Such changes will be confined entirely within existing control house enclosures, and will not require any physical expansion to the referenced substation facilities. These kinds of changes at a substation facility are not "modifications", as this word is defined in C.G.S. Section 16-50i(d), and so they do not require action by the Siting Council. No other transmission system changes are required as a result of the interconnection of the Oxford substation.

However, as noted in CL&P's March 1, 2007 filing with the Council of its "2007 Forecast of Loads and Resources for the Period 2007-2016", other nearby 115-kV transmission system changes are being considered by transmission system planners. In 2007, CL&P expects to seek the Council's approval for a reconductoring upgrade of two 115-kV circuit sections from Christian Lane Junction (in Oxford) to Beacon Falls Substation, and other changes to the 115-kV lines between Frost Bridge and Devon may be proposed in the future. If the proposed Towantic Energy power station in Oxford, certified by the Council in Docket 192, were constructed, that also could lead to proposals to upgrade or modify the 115-kV lines along this corridor.

The Connecticut Light and Power Company
Docket No. 327

Data Request CSC-01
Dated: 03/21/2007
Q-CSC-011
Page 1 of 1

Witness: CL&P Panel
Request from: Connecticut Siting Council

Question:

During the hearing for the Docket 304 proceeding, CL&P witness Michael Green stated the substation access drive could be located to avoid wetland impacts. What was the basis of this statement given that the access road, as proposed, will cross two wetland areas?

Response:

Michael Green's statement on April 28, 2005 in the Docket 304 proceeding was based on plans prepared by Spath-Bjorklund Associates, Inc. (Consulting Engineers and Surveyors) for the landowner, David B. Sippin. The plans provided to Mr. Green were entitled "Oxford Commerce Park" Layout Plan L-1 dated 6/14/04, Wetlands Plan dated 9/9/04 & 10/25/04, and Resubdivision Map of Parcel 'B' dated 1/4/05. These plans showed that there would be room to build a substation access road from the developer's new road without crossing wetlands. In 2006, CL&P had the wetlands flagged by Soil Science and Environmental Services. Based on their delineation, access to the Substation would require crossing an inland wetland and intermittent watercourse.