

Northeast Utilities P.O. Box 270 Hartford, CT 06141-0270 (860) 665-5000 www.nu.com

March 13, 2013

Mr. Robert Stein Connecticut Siting Council 10 Franklin Square New Britain, CT 06051

Re: Docket No. CSC 435 - Stamford Reliability Cable Project

Dear Mr. Stein:

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

Response to CSC-01 Interrogatories dated 02/25/2013 CSC-001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011

Very truly yours,

John Morissette

Manager

Siting and Permitting, Transmission

oh Morissette / +r

NUSCO

As Agent for CL&P

cc: Service List

Data Request CSC-01 Dated: 02/25/2013 Q-CSC-001 Page 1 of 1

Witness:

**CL&P Panel** 

Request from:

**Connecticut Siting Council** 

#### Question:

What were the results of CL&P's notice to the property owners abutting the two substations? How many return receipts received? If receipts were not returned, did CL&P make any additional attempts to contact these property owners?

# Response:

CL&P has not received any correspondence from the substation abutters. CL&P sent notices to 23 abutters by certified mail. CL&P received 16 proof of delivery receipts and did not receive return receipts from seven abutters. CL&P sent an additional notice via first class mail to the remaining seven abutters from whom CL&P did not receive return receipts.

Data Request CSC-01 Dated: 02/25/2013 Q-CSC-002 Page 1 of 3

Witness:

CL&P Panel

Request from:

Connecticut Siting Council

Question:

Did the Connecticut Energy Advisory Board vote to issue a Request for Proposals for alternate solutions to the Stamford Reliability Cable Project?

Response:

At the Connecticut Energy Advisory Board (CEAB) meeting on February 1, 2013, the CEAB voted in favor of CL&P's request for exemption from a reactive Request For Proposal. The CEAB determined that a Request for Proposal is "unnecessary for the Project." See attached March 1, 2013 Letter from Elin Swanson Katz, Consumer Counsel and Chair of CEAB, to Christopher R. Bernard, Manager, Regulatory Affairs, Northeast Utilities Service Company.



March 1, 2013

Christopher R. Bernard Manager, Regulatory Affairs Northeast Utilities Service Company 107 Selden Street Berlin, CT 06037

RE: Connecticut Energy Advisory Board Vote on CL&P Stamford Reliability Cable Project

Dear Mr. Bernard,

As Chair of the Connecticut Energy Advisory Board (CEAB), I am writing to advise you on the Board's vote concerning the Connecticut Light & Power Company (CL&P) Application to the Connecticut Siting Council (Council) for a Certificate of Environmental Compatibility and Public Need for the Stamford Reliability Cable Project (Project), filed with the Council on January 18, 2013. Pursuant to Connecticut General Statutes section 16a-7c, not later than fifteen days after the filing of an application for a Certificate of Environmental Compatibility and Public Need to the Council, the CEAB "shall issue a request for proposal [RFP] to seek alternative solutions to the need that will be addressed by the proposed facility in such application." The statute further provides that "[n]otwithstanding the provisions of this subsection, the [CEAB], by a vote of two-thirds of the members present and voting, may determine that [an RFP] is unnecessary for a specific application because the process is not likely to result in a reasonable alternative to the proposed facility."

At a CEAB meeting on February 1, 2013, by a vote of two-thirds of the members present and voting, the CEAB determined that an RFP is unnecessary for the Project. The CEAB found that the information CL&P provided regarding why the Project falls within the CEAB RFP exemption criteria to be satisfactory. The information that CL&P provided included the following: the Project is small, only 1.5 miles; the Project has a short lead time; the Project is urgently needed; and the Project is energy efficient and environmentally benign.

Christopher R. Bernard Northeast Utilities Service Company Page 2

Please let me know if you have any questions or concerns.

Regards,

Elin Swanson Katz

Cc: Robert Stein, Chairman, Connecticut Siting Council

**CEAB** members

Data Request CSC-01 Dated: 02/25/2013 Q-CSC-003 Page 1 of 1

Witness:

Raymond L. Gagnon, Allen W. Scarfone

Request from:

**Connecticut Siting Council** 

Question:

Describe the nature of the reliability criteria violations referred on page ES-1 of the application's Executive Summary.

# Response:

The nature of the reliability criteria violations--as described on page ES-1 of the Executive Summary in the Application--are both thermal overloads on transmission lines that exceed emergency ratings and system voltages at substations that fall below acceptable limits. As indicated in Section B.1.2 Project Need, there is also the potential for voltage collapse in the Stamford-Greenwich Sub-area.

Data Request CSC-01 Dated: 02/25/2013 Q-CSC-004 Page 1 of 1

Witness:

**CL&P Panel** 

Request from:

Connecticut Siting Council

#### Question:

Describe the long-range plan for improving the electric transmission system in the Stamford- Greenwich Sub-area of which this project would be an important part.

### Response:

CL&P's long-range plan to improve the reliability of the transmission system in the Stamford-Greenwich Sub-area begins with the Stamford Reliability Cable Project. The recently completed 115-kV Glenbrook Cables Project provides the needed foundation for reinforcement of the transmission system and improved system reliability of electric service in Stamford. With the Glenbrook Cables in place, completion of the Stamford Reliability Cable Project would begin to expand the transmission infrastructure and extend the reliability improvements west from Stamford toward Greenwich. Currently, CL&P is evaluating the development of a new substation in Greenwich to increase the reliability of the distribution network in Greenwich. If a new substation in Greenwich is constructed, new transmission facilities would be needed to supply this substation for it to be placed in service. CL&P has not finalized the design or determined the originating substation for these proposed transmission reinforcements.

Data Request CSC-01 Dated: 02/25/2013 Q-CSC-005 Page 1 of 1

Witness:

CL&P Panel

Request from:

**Connecticut Siting Council** 

Question:

How would the costs of this project be amortized?

Response:

The costs of this project would be depreciated over the life of the specific transmission assets put into service. The amounts charged to depreciation would reflect depreciable lives of approximately 39 - 46 years.

Data Request CSC-01 Dated: 02/25/2013 Q-CSC-006 Page 1 of 1

Witness:

CL&P Panel

Request from:

Connecticut Siting Council

#### Question

How would this project connect with the new transmission lines installed in Southwest Connecticut since 2006?

### Response:

The Stamford Reliability Cable Project would connect (at the Glenbrook Substation) to the new transmission lines that have been constructed in southwest Connecticut since 2006. In Section B.1.1 of the need section of the Application, CL&P describes its long range plan to improve the reliability of the transmission system in southwest Connecticut. CL&P envisioned a 345-kV loop to reliably serve the peak load demands and in the 1970s initiated the first leg of the plan by constructing the Long Mountain to Plumtree 345-kV line. Eventually, the 345-kV southwest Connecticut loop was completed by the construction of the Bethel - Norwalk 345-kV line and the Middletown-Norwalk 345-kV lines. To extend the benefits of these 345-kV projects that created the 345-kV southwest Connecticut loop and the new strong hub at Norwalk Substation, CL&P planned the 115-kV Glenbrook Cables Project. Overall these upgrades reinforced the regional transmission system in New England and in particular southwest Connecticut. The new 115-kV underground cable from the Glenbrook Substation to the South End Substation in Stamford would extend west toward Greenwich the benefits of the system reinforcements provided by the Glenbrook Cables at Glenbrook Substation.

Data Request CSC-01 Dated: 02/25/2013 Q-CSC-007 Page 1 of 1

Witness:

CL&P Panel

Request from:

**Connecticut Siting Council** 

## Question:

Provide 10-year load forecasts for the Southwest Connecticut area and the Stamford-Greenwich Sub-area. Show these forecasts on a per-capita basis for the two areas. Provide 10-year peak load forecasts for the two areas.

#### Response:

2020

2021

2022

The tables below contain a 10-year 90/10 summer peak load forecast by ISO-NE and a per capita load forecast for the southwest Connecticut area and the Stamford-Greenwich Sub-area for the years from 2013 to 2022. The per capita load forecast is developed using the State of Connecticut Department of Public Health's ("DPH") estimated population as of July 2011. The DPH's forecast annual change in population from 2010 to 2011 was universally applied through the ten year forecast period. The per capita forecast was developed by dividing the forecasted peak load (per kW) by the sum of the population in each town within the southwest Connecticut area and the Stamford-Greenwich Sub-area.

2.35

2.37 2.38

Year	Southwest Connecticut Peak - MW	Stamford-Greenwich Sub-area Peak - MW
2013	4006	450
2014	4067	456
2015	4129	463
2016	4195	470
2017	4268	478
2018	4313	483
2019	4345	486
2020	4377	490
2021	4410	493
2022	4445	496
Year	Southwest Connecticut	Stamford-Greenwich Sub-area
	kW/capita	kW/capita
2013	2.19	2.17
2014	2.22	2.20
2015	2.25	2.23
2016	2.28	2.27
2017	2.32	2.30
2018	2.35	2.32
2019	2.36	2.34

2.38

2.39

2.41

Data Request CSC-01 Dated: 02/25/2013 Q-CSC-008 Page 1 of 1

Witness:

CL&P Panel

Request from:

**Connecticut Siting Council** 

#### Question:

What peak load levels might be expected to cause reliability or other problems at the substations listed in Table B-1?

# Response:

A load level in the Stamford-Greenwich Sub-area of approximately 360 MW would cause a reliability criteria violation if certain contingency events occurred. The 360 MW load level translates into peak load levels that have already occurred. In 2015, the Stamford-Greenwich Sub-area load is forecast to be approximately 128% greater than that necessary to result in transmission planning analyses violations.

Data Request CSC-01 Dated: 02/25/2013 Q-CSC-009 Page 1 of 1

Witness:

Raymond L. Gagnon, Allen W. Scarfone

Request from:

**Connecticut Siting Council** 

Question:

What would be considered to constitute a "contingency event?"

### Response:

According to the North American Electric Reliability Corporation (NERC) a contingency event is the sudden loss of a transmission element such as a transmission line, circuit breaker, transformer, or substation equipment.

Data Request CSC-01 Dated: 02/25/2013 Q-CSC-010 Page 1 of 1

Witness:

CL&P Panel

Request from:

Connecticut Siting Council

Question:

What is the expected service life of the cables that would be installed in this project?

Response:

The expected service life of cross-linked polyethylene (XLPE) transmission cable is approximately 40 years.

Data Request CSC-01 Dated: 02/25/2013 Q-CSC-011 Page 1 of 1

Witness:

CL&P Panel

Request from:

Connecticut Siting Council

#### Question:

Describe the methodology CL&P uses to predict increase in load demand that might be expected as a result of the Stamford economic development projects enumerated in the application.

### Response:

Predictions of load demand increases associated with Stamford Economic Development projects are based on both new construction activity and revisions to existing loads due to customer upgrades/additions. Planned new construction activity is communicated to CL&P from the City of Stamford Planning and Zoning Department. These planned projects are segregated into residential and commercial components. A separate algorithm is used to anticipate each of the new loads and distribution design then proceeds accordingly.

Load demand resulting from historical load growth is developed from the monitoring of existing load growth patterns. As above, these loads are programmed into the substation loads. Finally, customer upgrades/additions are communicated to CL&P by architect engineers as buildings are modified. An algorithm is again utilized to add these loads to the corporate model.

The summation of the loads above becomes the final projected substation load.