



**Northeast
Utilities**

107 Selden Street, Berlin, CT 06037

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

May 20, 2013

Ms. Melanie Bachman
Acting Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

ORIGINAL

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

RECEIVED
MAY 21 2013

Dear Ms. Bachman:

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

**CONNECTICUT
SITING COUNCIL**

Response to CSC-03 Interrogatories dated 04/24/2013
CSC-004, 005

Very truly yours,

John Morissette /s/

John Morissette
Manager
Siting, Transmission
NUSCO
As Agent for CL&P

cc: Service List

Due on: 05/17/2013 - Past Due
 The Connecticut Light and Power Company
 Docket No. CSC 435

Data Request CSC-03
 Dated: 04/24/2013
 Q-CSC-004
 Page 1 of 2

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

Question:
 Provide a detailed cost breakdown of the proposed underground transmission cable (Preferred Route with Canal Street option) and of any overhead solution examined by CL&P.

Response:
 Provided below are detailed cost breakdowns for the underground and overhead solutions. Substation upgrades have been excluded from both estimates to reflect line costs only. CL&P is developing an estimate of the cost of reconstructing the 1977 line as a double-circuit structure line and upgrading other lines as needed to comply with applicable reliability criteria. CL&P will file a supplement to this response when it is completed.

Breakdown of the Conceptual Grade Cost Estimate of the Proposed Underground Transmission Cable (Preferred Route With Canal Street Option)

Proposed Underground Transmission Line (Preferred Route With Canal Street Option) Estimate Detail			
Item Description	Total		
Material	\$ 4,510,200	see detail below	
Labor	\$ 14,663,408	see detail below	
Engineering/Permitting/CM/PM (incl Co OH)	\$ 10,120,332		
Escalation	\$ 2,835,775		
AFUDC	\$ 3,382,591		
Contingency	\$ 8,363,640		
Total Cost	\$ 43,875,947	Note: Does not include substation upgrades	
Material and Labor Cost Breakdown			
Item	Material	Labor	Subtotal
Civil / Site Work, Ductbank	\$ 936,793	\$ 12,590,190	\$ 13,526,983
Civil / Site Work, Splice Vaults	\$ 188,500	\$ 549,673	\$ 738,173
Cable (procure and install)	\$ 3,384,907	\$ 1,523,545	\$ 4,908,452
Subtotal	\$ 4,510,200	\$ 14,663,408	\$ 19,173,608
Taxes			
Subtotal Construction Material and Labor	\$ 4,510,200	\$ 14,663,408	\$ 19,173,608
General Assumptions:			
115-kV single circuit			
3500 kcmil Copper XLPE Cable			
Typical trench size 5'W x 9'H			
Assumed 20% rock excavation			
One (1) jack and bore install			
Conceptual Grade estimate (-25% to +50% accuracy)			

2) Breakdown of the Order of Magnitude Estimate of New Overhead 115-kV 1440/1450 Lines

New 115-kV 1440/1450 Lines Estimate Details			
Item Description	Total		
Material	\$ 4,381,863		see detail below
Labor	\$ 9,753,179		see detail below
Right of Way	\$ 62,000,000		
Engineering/Permitting/CM/PM (incl Co OH)	\$ 8,000,967		
Escalation	\$ 11,330,109		
AFUDC	\$ 1,066,796		
Contingency	\$ 3,467,086		
Total Cost	\$ 100,000,000	Note: Does not include substation upgrades	
Material and Labor Cost Breakdown			
Item	Material	Labor	Subtotal
Civil / Site Work	\$ 1,533,652	\$ 3,413,613	\$ 4,947,265
Poles & Foundations	\$ 1,884,201	\$ 4,193,867	\$ 6,078,068
Cable and Hardware	\$ 964,010	\$ 2,145,699	\$ 3,109,709
Subtotal	\$ 4,381,863	\$ 9,753,179	\$ 14,135,042
Subtotal Construction Material and Labor	\$ 4,381,863	\$ 9,753,179	\$ 14,135,042
General Assumptions:			
Build new 1440/1450 circuits and remove existing line.			
Two 115-kV single circuit steel monopole construction			
Approximate length of each circuit is 1.4 miles			
Average span is approximately 400 feet - 14 structures per mile			
Land based on 2011 assessed value			
Order of Magnitude Grade estimate (-50% to +200% accuracy)			
Average escalation is 4% per year			

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

Question:

Provide a cost comparison, on a per mile basis, for the proposed Stamford Reliability Cable Project and other underground 115 kV lines recently installed by CL&P.

Response:

The Stamford Reliability Cable Project estimated cost per mile is \$29.3 M. The following is a cost per mile comparison for other underground 115-kV lines recently installed by CL&P:

Glenbrook Cables	\$30.3 M
M-N Cheshire Bypass	\$10.1 M
Norwalk Junction to Norwalk	\$11.5 M

All projects used 3500 kcmil XLPE cable, except for Norwalk Junction to Norwalk which used 3000 kcmil XLPE cable. To fairly compare costs, adjustments were made to exclude substation terminal costs and escalate costs to 2014 dollars using a 4% annual rate. No cost adjustments were made to reflect the urban and suburban construction settings. The M-N Cheshire Bypass and Norwalk Junction to Norwalk projects were less costly in part because they were constructed in suburban areas. The Glenbrook Cables project required more costly construction in an urban area and the Stamford Reliability Cable Project would also require more costly urban construction.