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January 8, 2015

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

Re: Docket No. CSC 192B - CPV Towantic, LLC Motion to Reopen and Modify the June 23, 1999 Certificate of Environmental Compatibility and Public Need based on changed conditions pursuant to Connecticut General Statutes 4-181a(b) for the construction, maintenance and operation of a 785 MW dual-fuel combined cycle electric generating facility located north of the Prokop Road and Towantic Hill Road intersection in the Town of Oxford, Connecticut

Dear Mr. Stein:

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

Response to RP-01 Interrogatories dated 12/23/2014
RP-001, 002, 003

Very truly yours,

John Morissette
Project Manager
Transmission Siting and Permitting
NUSCO
As Agent for CL&P

cc: Service List

The Connecticut Light and Power Company
Docket No. CSC 192B

Data Request RP-01
Dated: 12/23/2014
Q-RP-001
Page 1 of 1

Witness: William O'Hara
Request from: Raymond Pietrorazio - Intervenor

Question:

Can the present newly updated power lines accept 785 MW from the plant continuously without detriment to the lines and appurtenances?

Response:

The CPV Towantic facility would connect to three (3) existing 115-kV transmission lines - the 1990, 1575 and 1585 lines. As part of the interconnection process, ISO-NE completed technical studies; these studies determined that no upgrades would be required for the 1990 Line or for the 1575 Line and their appurtenances. These studies found that the 1585 line from the CPV Towantic facility going north to Bunker Hill Substation would need to be re-conducted to handle 281 MVA. CL&P will start the design and engineering for this shortly and would submit any necessary requests for rulings to the Council once the design and engineering have been completed.

The Connecticut Light and Power Company
Docket No. CSC 192B

Data Request RP-01
Dated: 12/23/2014
Q-RP-002
Page 1 of 2

Witness: William O'Hara
Request from: Raymond Pietrorazio - Intervenor

Question:

Please provide the size, ratings and metallic alloy composition of the three circuits that would serve the plant, with the various temperature ratings of the lines.

Response:

The technical data for the three circuits, 1575 Line, 1585 Line and the 1990 Line, are summarized in the table below. Both the 1575 Line and the 1990 Line are three-terminal lines (sections) with independent ratings. These individual legs are identified with a dash number and the end points for each leg are called out. The 1585 Line has a number of sections with different conductors. The limiting conductor is identified with italics in Table Q-RP-002.

Table Q-RP-002

Circuit #	Endpoints		Cable Type†	Size	Al/Cu Strands	Steel Strands	Diameter	Max Oper. Temp.	Summer Ratings		Winter Ratings		Summer Ratings		Winter Ratings	
									Normal	LTE	Normal	LTE	Normal	LTE	Normal	LTE
--	--	--	--	kcmil	--	--	inches	°C	Amps	Amps	Amps	Amps	MVA	MVA	MVA	MVA
1575-1	Oxford	Baldwin Jct	ACSR	556	26	7	0.927	132	871	1073	1065	1222	173	214	212	243
			ACSS	795	26	7	1.108	100	1106	1106	1355	1355	220	220	270	270
1575-2	Baldwin	Baldwin Jct	ACSS	1590	54	19	1.545	180	2014	2400*	2342	2858	401	478*	466	569
1575-3	Bunker Hill	Baldwin Jct	ACSR	556	26	7	0.927	132	871	1073	1065	1222	173	214	212	243
1585	South Naugatuck	Bunker Hill	ACSR	556	26	7	0.927	93	840	840	1080	1080	178	228	217	257
			ACSR	795	45	7	1.063	140	1088	1398	1332	1575	217	278	265	314
			HD Copper	4/0	7	0	0.522	130	556	685	691	783	113	136	138	156
1990-1	Frost Bridge	Baldwin Jct	ACSS	1590	54	19	1.545	180	2014	2638	2342	2858	401	525	466	569
1990-2	Baldwin	Baldwin Jct	ACSS	1590	54	19	1.545	180	2014	2349*	2299*	2349*	401	468*	458*	468*
1990-3	Stevenson	Baldwin Jct	ACSS	1590	54	19	1.545	180	1947*	2034*	2246*	2318*	388*	405*	447*	462*

† ACSR refers to Aluminum conductor, Steel Reinforced, HD Copper refers to Hard Drawn Copper Stranded Cable, and ACSS refers to Aluminum Conductor Steel Supported.

* This circuit has other limiting factors at one or more terminals and is not limited by the overhead conductor.

Witness: William O'Hara
Request from: Raymond Pietrorazio - Intervenor

Question:

Please indicate at what current carrying capacity the maximum allowable "sag" or "droop" would occur at the different temperatures above.

Response:

For the 1575 Line, 1585 Line and the 1990 Line, the maximum allowable sag is governed by the maximum operating temperature as listed in the table below. While the maximum sag will vary depending on span length, the table below summarizes the typical maximums sags for a 600-foot span.

Circuit	Wire Size	Max Temp	Design Tension*	Max Sag
--	--	°C	lbs.	feet
1575-1	556 ACSR	132	6000	20.75
	795-ACSS	100	6000	21.90
1575-2	1590 ACSS	180	11400	21.56
1575-3	556 ACSR	132	6000	20.75
1585	556 ACSR	93	6000	19.17
	795 ACSR	140	7000	22.61
	4/0 Cu	130	4500	21.74
1990-1	1590 ACSS	180	11400	21.56
1990-2	1590 ACSS	180	11400	21.56
1990-3	1590 ACSS	180	11400	21.56

* Design Tension in this case refers to the tension of the conductor under the weather loading as specified in Rule 250B of the National Electrical Safety Code in its final condition.