Connecticut Light & Power
The Northeast Utilities System

NEEWS
Greater Springfield Reliability Project

April 20, 2008

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CONNECTICUT SITING COUNCIL

Mr. S. Derek Phelps
Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain CT 06501

Re: Docket No. 370 – CT Greater Springfield Reliability Project

Dear Mr. Phelps:

This letter provides a Supplemental Response to the information request listed below.

CSC Interrogatory dated 01/28/2009, CSC-01, Q CSC-018

As a supplemental response to the above Interrogatory, CL&P files with this letter:

A. Four copies of a bound volume containing Critical Energy Infrastructure Information, entitled:

Study Reports & Attachments:

1. Preliminary Analysis of the Technical Effectiveness of Proposed Generation Alternatives to GSRP (1/25/2009)
2. Analysis of the Technical Effectiveness of Proposed Generation at Meriden & Oxford, CT in Resolving Springfield and North-Central Connecticut Area Transmission Reliability Problems (4/14/2009)

This document is prominently labeled:

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and is filed pursuant to the Council's CEII Protective Order entered April 7, 2009.

B. Four copies of the same volume, with CEII redacted. These copies do not have a CEII warning and may be viewed by anyone.

Northeast Utilities System
P.O. Box 270
Hartford, CT 06141-0270

C. A CD containing an electronic copy of this letter and of the redacted public version of the volume of Study Reports and Assessments.

Because of their size, CL&P is filing a limited number of copies of this material at this time. If the Council would like additional copies of either the full volume or the redacted public version, please let me know and CL&P will promptly comply with that request. Similarly, if the Council would like an unredacted electronic version of the volume for its own use (rather than for posting on its website), CL&P will provide one on request.

In accordance with the Council's CEII Protective Order, CL&P is serving a redacted copy of the enclosed volume on the entire service list, and is providing a copy of the full volume to those representatives of parties and intervenors on the service list who have subscribed to the Protective Order. Although some of those representatives have elected document service by E-mail, CL&P is providing this material by Federal Express only.

Very truly yours,

Robert E. Carberry
Manager, Siting and Permitting
NEEWS Projects
Northeast Utilities Service Company

Northeast Utilities System
P.O. Box 270
Hartford, CT 06141-0270

CL&P Docket No. 370
Data Request CSC-01
Dated 01/28/2009
Q-CSC-018-SP-01-BULK

Northeast
Utilities System

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ENCLOSED:

STUDY REPORTS & ATTACHMENTS:

1. PRELIMINARY ANALYSIS OF THE TECHNICAL EFFECTIVENESS OF PROPOSED GENERATION ALTERNATIVES TO GSRP (01/25/2009)

   A. *POWER FLOW DISPATCH SUMMARY FOR MERIDEN PLANT*
   B. *POWER FLOW DISPATCH SUMMARY FOR TOWANTIC PLANT*

2. ANALYSIS OF THE TECHNICAL EFFECTIVENESS OF PROPOSED GENERATION AT MERIDEN & OXFORD, CT IN RESOLVING SPRINGFIELD AND NORTH-CENTRAL CONNECTICUT AREA TRANSMISSION RELIABILITY PROBLEMS (04/14/2009)

   A. *ATTACHMENT A.1 - A.4: POWER FLOW RESULTS*
   B. *ATTACHMENT A.5: POWER FLOW DISPATCH SUMMARY DOCUMENT*

PRELIMINARY ANALYSIS OF THE TECHNICAL EFFECTIVENESS OF PROPOSED GENERATION ALTERNATIVES TO GSRP

Northeast Utilities Service Company (NUSCO) transmission planners have performed a limited preliminary analysis of the two generation proposals submitted in response to The Request for Proposals (RFP) of the Connecticut Energy Advisory Board (CEAB) seeking alternatives to the Connecticut Light and Power Company's Proposed Greater Springfield Reliability Project and Manchester to Meekville Project. (For ease of reference in this document, the two proposed CL&P projects will be collectively referred to as "GSRP.") The two generation proposals examined were:

1. A new 530 MW combined cycle plant at Meriden, CT proposed by NRG Energy, Inc. (the Meriden Plant), and
2. A new 520 MW combined cycle power plant in Oxford, CT proposed by Towantic Energy, LLC. (the Towantic Plant)

The need to improve the electric supply system in the Greater Springfield and north central Connecticut areas in order to achieve compliance with mandatory national and regional electric system security standards has been documented in analyses previously provided to LaCapra Associates by NUSCO, and submitted in redacted form with CL&P's application to the Connecticut Siting Council (CSC) concerning GSRP. Each of the two generation proposals was tested individually for its effectiveness in meeting that need.

Although neither of the plants considered in this evaluation were specifically studied in analyses of non transmission alternatives by ICF International and by NUSCO that were previously submitted to LaCapra Associates, those analyses did evaluate scenarios with additional generic generation, and additional load reduction, in Connecticut. Theses analyses demonstrated that the assumed generic generation or load reduction did not resolve the Springfield and North-Central Connecticut area reliability problems. The results of NUSCO's preliminary analysis of the two specific generation proposals were consistent with the previous analyses.

For this analysis, we adapted one ("D2") of the three dispatches (D1, D2, D3) developed for the GSRP "needs" analysis by incorporating each of the new proposed generators in turn and

dispatching it against other Connecticut generating units (Montville #6 & Bridgeport Harbor #2: both among the "Sooty-Six" units)

Of the three dispatches used in the GSRP analysis "D2" assumes the most generation "on" in the Greater Springfield area. Accordingly, the D2 scenario results in the fewest thermal overloads, and is the scenario most likely to show resolution of criteria violations by the addition of generation in Connecticut. Details on the "D2" dispatch scenario are provided in the attached power flow summary sheets.

The key results of the analyses performed for the two proposals (Meriden & Towantic) are summarized below.

1. MERIDEN POWER GENERATION

1.1 CONCLUSIONS

- The proposed Meriden Power plant ***does not*** resolve the greater Springfield area transmission reliability problems.

- The proposed Meriden Power plant ***does not*** resolve the North Central Connecticut area transmission reliability problems.

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- With the modified D-2 dispatch, there are approximately ***50 conditions*** that continue to cause reliability problems after the addition of Meriden plant.

- With the modified D-2 dispatch, there are more than ***10*** transmission facilities within the Springfield and North Central Connecticut areas that remain overloaded after the addition of the Meriden plant.

- It is reasonable to expect that use of the "D1" dispatch scenario, modified to include the Meriden plant, and run with the full N-1 and N-1-1 contingency deck used in the GSRP need studies would show significantly more reliability criteria violations than those produced by the the "D2" dispatch.

1.2 POWER FLOW ANALYSIS RESULTS

Tables **1A** and **1B** below illustrate the Springfield and North Central Connecticut areas' worst transmission facility overloads under **N-1** and **N-1-1** contingency conditions with the addition of Meriden plant. The complete list of Springfield and North Central Connecticut area transmission overloads are provided in attachment **A.1.** The power flow summary for the power flow case used for this analysis is provided in attachment **A.3.**

Table 1A: Worst Transmission Facility overloads in Springfield & North Central Connecticut area with the addition of Meriden plant under N-1 contingency condition.

From Bus	To Bus	Overloaded Line #	Max Post-Loading (MVA)	LTE Rating (MVA)	Max % Over LTE (MVA)	Worst N-1 Contingency	Total N-1 Violations > 100 % of LTE
					173.2		1
					130.6		1
					104.9		2
					100.9		2

Table 1B: Worst Transmission Facility overloads in Springfield & North Central Connecticut area with the addition of Meriden plant under N-1-1 contingency condition.

From Bus	To Bus	Overloaded Line #	Max Post-Loading (MVA)	LTE Rating (MVA)	Max % Over LTE (MVA)	1st Line Out	Worst 2nd Contingency	Total N-1-1 Violations > 100 % of LTE
					238.8			35
					117.3			4
					101.6			4
					129.6			18
					109.8			4
					134.5			7
					134.5			7
					133.3			8
					136.9			8
					124.3			2
					124.3			2
					197.3			12

2. TOWANTIC POWER GENERATION

1.1 CONCLUSIONS

- The Towantic generation ***does not*** resolve the greater Springfield area transmission reliability problems.

- The Towantic generation ***does not*** resolve the North Central Connecticut area transmission reliability problems.

- There are approximately ***50 conditions*** that continue to cause reliability problems after the addition of Towantic plant.

- There are more than **10** transmission facilities within Springfield and North Central Connecticut areas that remain overloaded after the addition of the Towantic plant.

- It is reasonable to expect that use of the "D1" dispatch scenario, modified to include the Towantic plant, and run with the full N-1 and N-1-1 contingency deck used in the GSRP need studies would show significantly more reliability criteria violations than those produced by the the "D2" dispatch.

Tables **2A** and **2B** below illustrate the Springfield and North Central Connecticut areas' worst transmission facility overloads under **N-1** and **N-1-1** contingency conditions with the addition of Towantic plant. The complete list of Springfield and North Central Connecticut area transmission overloads are provided in attachment **A.2**. The power flow summary for the power flow case used for this analysis is provided in attachment **A.4**.

1.2 POWER FLOW RESULTS

Table 2A: Worst Transmission Facility overloads in Springfield & North Central Connecticut area with the addition of Towantic generation under N-1 contingency condition.

From Bus	To Bus	Overloaded Line #	Max Post-Loading (MVA)	LTE Rating (MVA)	Max % Over LTE (MVA)	Worst N-1 Contingency	Total N-1 Violations > 100 % of LTE
					173.6		2
					105		2
					102.3		2
					131.3		1

Table 2B: Worst Transmission Facility overloads in Springfield & North Central Connecticut area with the addition of Towantic generation under N-1-1 contingency condition.

From Bus	To Bus	Overloaded Line #	Max Post-Loading (MVA)	LTE Rating (MVA)	Max % Over LTE (MVA)	1st Line Out	Worst 2nd Contingency	Total N-1-1 Violations > 100 % of LTE
					240.5			35
					118.1			8
					102.6			4
					130.3			19
					111.2			4
					136.5			7
					136.5			7
					135.7			8
					139.5			8
					125			2
					125			2
					199.1			12

3. ATTACHMENTS

ATTACHMENT A.1

Complete N-1 Contingency Analysis Results for Meriden Plant

N-1 Contingency Results for Meriden Plant Analysis (530 MW); Dispatched against Montville #6 & Bridgeport Harbor #2								
Case Name	Contingency	From Bus / Inter	To Bus / Interface Name	Pre-load	Post-load	Rating	% Over	Ckt ID
2014P_2500_D2_Final_None_N-1_MeridenPower-DA							173.2	1
2014P_2500_D2_Final_None_N-1_MeridenPower-DA							104.9	1
2014P_2500_D2_Final_None_N-1_MeridenPower-DA							100.7	1
2014P_2500_D2_Final_None_N-1_MeridenPower-DA							100.9	1
2014P_2500_D2_Final_None_N-1_MeridenPower-DA							100.7	1
2014P_2500_D2_Final_None_N-1_MeridenPower-DA							130.6	1

Complete N-1-1 Contingency Analysis Results for Meriden Plant

Results of N-1-1 contingency analysis for Meriden Power. Meriden Power net generation = 530 MW;
Meriden power dispatched to Montville #6 (402 MW) & Bridgeport Harbor #2 (170 MW); Case Import set at 1700 MW for N-1-1 cases.

Case Name	Contingency	From Bus / Inter	To Bus / Interface Name	Pre-load	Post-load	Rating	% Over	Ckt ID
							238.8	1
							207.9	1
							182.9	1
							182.9	1
							178.8	1
							178.5	1
							166.6	1
							156.8	1
							147.8	1
							147.8	1
							147.4	1
							147.3	1
							142.1	1
							138.8	1
							138.7	1
							138.3	1

138.1	1
131	1
127.9	1
126.2	1
122.5	1
121.2	1
112.5	1
112.5	1
111.5	1
110.1	1
110.1	1
109.2	1
106.1	1
106.1	1
104.1	1
102.7	1
102.6	1
100.2	1
100.1	1
117.3	1
101.2	1
100.8	1
100.8	1
101.6	1
101.5	1
101.3	1
101.2	1
129.6	1
125.2	1
117.3	1
112.8	1
112.6	1
112.6	1
112.4	1
112.3	1
108.5	1
108.5	1
106.8	1
106.8	1
104.2	1
104.2	1

102.6	1
102.5	1
102.3	1
100.3	1
109.8	1
109.7	1
109.4	1
109.3	1
134.5	1
134.4	1
134	1
133.8	1
110.2	1
109.4	1
106.1	1
134.5	1
134.4	1
134	1
133.8	1
110.2	1
109.4	1
106.1	1
134.5	2
134.4	2
134	2
133.8	2
110.2	2
109.4	2
106.1	2
134.5	2
134.4	2
134	2
133.8	2
110.2	2
109.4	2
106.1	2
133.3	1
133.1	1
132.7	1
132.5	1
130.4	1

111.6	1
107.5	1
106.6	1
136.9	1
136.7	1
136.2	1
136	1
133.6	1
111.2	1
107.1	1
105.9	1
124.3	1
124.3	2
109.2	1
109.2	2
197.3	1
166.3	1
140.8	1
140.8	1
136.7	1
136.4	1
124.2	1
113.9	1
105.2	1
105.1	1
104.4	1
103.7	1

ATTACHMENT A.2

Complete N-1 Contingency Analysis Results for Towantic Plant

N-1 Contingency Results for Towantic Plant Analysis (520 MW); Dispatched against Montville #6 & Bridgeport Harbor #2

Case Name	Contingency	From Bus / Inter	To Bus / Interface Name	Pre-load	Post-load	Rating	% Over	Ckt ID
2014P_2500_D2_Final_None_N-1_Towantic-DA							173.6	1
2014P_2500_D2_Final_None_N-1_Towantic-DA							100.5	1
2014P_2500_D2_Final_None_N-1_Towantic-DA							105	1
2014P_2500_D2_Final_None_N-1_Towantic-DA							100.8	1
2014P_2500_D2_Final_None_N-1_Towantic-DA							102.3	1
2014P_2500_D2_Final_None_N-1_Towantic-DA							102.1	1
2014P_2500_D2_Final_None_N-1_Towantic-DA							131.3	1

Complete N-1-1 Contingency Analysis Results for Towantic Plant

Results of N-1-1 contingency analysis for Towantic generation. Towantic net generation = 520 MW;
Towantic dispatched to Montville #6 (402 MW) & Bridgeport Harbor #2 (170 MW); Case Import set at 1700 MW for N-1-1 cases.

Case Name	Contingency	From Bus / Inter	To Bus / Interface Name	Pre-load	Post-load	Rating	% Over	Ckt ID
							240.5	1
							208.5	1
							182.8	1
							182.8	1
							179.5	1
							179.3	1
							167.2	1
							157	1
							148.7	1
							148	1
							148	1
							147.4	1
							142.4	1
							140.8	1
							140.7	1
							140.3	1
							140.2	1
							132	1
							129.2	1

125.9	1
122.8	1
122.3	1
114.1	1
113.2	1
112.9	1
110.7	1
110.7	1
110	1
106	1
106	1
104.4	1
103.3	1
103.1	1
101.1	1
100.4	1
118.1	1
101.4	1
100.9	1
100.9	1
100.7	1
100.6	1
100.6	1
100.5	1
102.6	1
102.5	1
102.3	1
102.2	1
130.3	1
125.8	1
117.4	1
113.6	1
113.5	1
113.3	1
113.3	1
113	1
108.5	1
108.5	1
107.1	1
107	1
104.2	1

104.2	1
102.8	1
102.8	1
102.5	1
101.1	1
100.7	1
111.2	1
111.1	1
110.8	1
110.7	1
136.5	1
136.3	1
135.9	1
135.8	1
111.8	1
111	1
107.1	1
136.5	1
136.3	1
135.9	1
135.8	1
111.8	1
111	1
107.1	1
136.5	2
136.3	2
135.9	2
135.8	2
111.8	2
111	2
107.1	2
136.5	2
136.3	2
135.9	2
135.8	2
111.8	2
111	2
107.1	2
135.7	1
135.5	1
134.9	1

134.7	1
131.9	1
112.2	1
109.4	1
108.5	1
139.5	1
139.3	1
138.7	1
138.5	1
135.3	1
111.9	1
109.2	1
108.2	1
125	1
125	2
109.3	1
109.3	2
199.1	1
166.9	1
140.8	1
140.8	1
137.5	1
137.2	1
124.8	1
114.2	1
105.4	1
105.4	1
105.1	1
104.5	1

ATTACHMENT A.3

Power Flow Summary for the Meriden Power Analysis provided as PDF attachment "Power Flow Summary-Meriden Plant"

ATTACHMENT A.4

Power Flow Summary for the Towantic Power Analysis provided as PDF attachment "Power Flow Summary-Towantic Plant"

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Power Flow Summary - Meriden Plant

1/23/2009

2014 90/10 (N.E. LOAD&LOSS 32775MW) PEAK CASE D2 CT 2500 MW

GENERATION

#		V	MW	MX	#		V	MW	MX	#		V	MW	MX
Vermont and Mass. generation														
70705	VTYAK G	0.982	667	150*	73072	ALT12 PF	1.021	65	12	73073	ALT34 PF	1.020	80	12
72986	BERKPWR	1.044	280	65	73069	MAPR1 PF	1.018	82	24	73070	MAPR2 PF	1.018	82	24
73071	MAPR3 PF	1.013	75	24	73085	MT.TOM	1.002	147	12	72512	BRSWP G1	0.000	0	0
72513	BRSWP G2	0.000	0	0	73083	NRTHFD12	1.019	540	160*	73084	NRTHFD34	1.018	540	160*
72930	STNYBK1A	1.082	65	30*	72931	STNYBK1B	1.082	65	30*	72932	STNYBK1C	1.082	65	30*
72933	STNYBK 1	1.079	87	30*	72934	STNYBK2A	1.082	65	30*	72935	STNYBK2B	1.082	65	30*
73082	SPGFD PF	1.018	6	0	72244	MILLENST	1.006	117	22	72243	MILLENCT	1.007	273	48
73080	WSPFLD 3	0.987	101	-7	73081	W.SPRING	1.018	55	-7	73086	W.SPRCED	0.966	38	-7
73077	ORCHARD	1.013	4	2*	73006	COBLEMTN	1.017	17	4*	73076	PROSPECT	1.044	26	7*
72956	WOODLAND	0.000	0	0	72957	DOREEN	0.000	0	0	72962	AGAWM PF	1.019	2	0*
Connecticut generation														
73562	MILL#2	1.013	940	323	73563	MILL#3	1.005	1276	323	73558	MONTV#5	1.006	81	27*
73559	MONTV#6	0.000	0	0	73555	MIDDTN#2	0.999	117	21	73556	MIDDTN#3	0.981	233	21
73557	MIDDTN#4	1.019	400	200*	73565	LAKERD#1	0.000	0	0	73566	LAKERD#2	0.000	0	0
73567	LAKERD#3	0.000	0	0	73549	SMD1112J	1.040	92	4*	73550	SMD1314J	1.042	46	2*
73594	WALL LV1	0.929	102	-50	73595	WALL LV2	0.000	0	0	73596	WALL LV3	0.000	0	0
73501	KLEENGT1	0.000	0	0	73502	KLEENGT2	0.000	0	0	73503	KLEEN ST	0.000	0	0
73538	AESTH PF	1.020	180	72	73652	BE 11	0.994	170	28	73653	BE 12	0.994	170	28
73654	BE 10 ST	0.993	180	28	73647	BPTHBR#2	0.000	0	0	73648	BPTHBR#3	0.952	375	-42
73570	DEVGAS11	1.026	40	0	73571	DEVGAS12	0.000	0	0	73572	DEVGAS13	0.000	0	0
73573	DEVGAS14	0.000	0	0	73553	DEVON#7	0.957	106	-18	73554	DEVON#8	0.960	106	-18
73574	MILFD#1	1.040	280	42	73575	MILFD#2	1.040	280	42	73651	NH HARBR	0.992	447	175*
73551	NORHAR#1	0.000	0	0	73552	NORHAR#2	0.000	0	0	73168	GLNBROOK	1.035	0	-106
73033	MRDN GT1	1.065	175	58*	73034	MRDN GT2	1.065	175	58*	73035	MRDN ST	1.065	180	59*
Maine and New Hampshire generation														
70060	MIS GT1	1.071	166	96	70061	MIS GT2	1.071	166	96	70062	MIS ST	1.070	191	96
70377	AEC G1	1.113	50	37	70378	AEC G2	1.114	50	37	70379	AEC G3	1.114	50	37
70389	BUCKS G4	0.000	0	0	70426	CHAMP G2	0.971	15	6*	70424	CHAMP G3	1.034	65	32*

70374 MASON G3	1.048	33	3*	70375 MASON G4	1.048	33	3*	70376 MASON G5	1.048	33	3*	
70425 MEADCOGN	1.011	93	46*	70381 RPA CG1	0.000	0	0	70382 RPA SG2	0.000	0	0	
70422 WARRN G1	1.005	50	15*	70423 WARRN G2	1.024	45	11*	70386 WBK G1	1.026	172	54	
70387 WBK G2	1.026	172	54	70388 WBK G3	1.025	187	54	70365 WF WY #1	0.000	0	0	
70366 WF WY #2	1.019	50	14*	70367 WF WY #3	1.023	100	36	70368 WF WY #4	1.030	636	181	
71857 COMRF G1	1.019	40	3	71858 COMRF G2	1.019	40	3	71859 COMRF G3	1.019	40	3	
71860 COMRF G4	1.019	40	3	71861 MOORE G1	1.004	48	-3	71862 MOORE G2	1.004	48	-3	
71863 MOORE G3	0.989	48	-3	71864 MOORE G4	1.001	48	-3	72868 NWNGT G1	1.002	422	85	
70010 NEW_G1	1.021	169	85	70011 NEW_G2	1.021	169	85	70012 NEW_G3	1.017	195	85	
71950 GRANRDG1	1.050	280	49	71951 GRANRDG2	1.038	280	49	72701 AESSTG	1.051	250	44	
72866 MERMK G1	1.052	112	50	72867 MERMK G2	1.052	320	142	72869 SBRK G1	1.010	1298	348	
72870 SCHILLER	0.989	47	-2	72872 SCHILLER	0.989	48	-2	72871 SCHILLER	0.989	50	-2	

NEMA generation

71126 KEND CT	0.000	0	0	71067 MYS8 GTS	1.014	520	13	71068 MYS8 ST	1.016	290	13	
71069 MYS9 GTS	1.046	460	163	71070 MYS9 ST	1.084	290	200*	71060 MYST G4	0.000	0	0	
71061 MYST 5G	0.000	0	0	71062 MYST G6	0.000	0	0	71063 MYST G7	1.011	565	13	
71073 N.BOST 1	0.982	350	-46	71074 N.BOST 2	0.980	380	-50	71946 SALEM G1	1.024	79	11	
71947 SALEM G2	1.024	78	11	71948 SALEM G3	1.020	143	22	71949 SALEM G4	1.021	400	65	
72059 LENERG1	1.048	50	23	72060 LENERG2	1.036	20	10	0	0.000	0	0	

SEMA and Rhode Island generation

71095 ANPBLCK1	1.037	290	30	71096 ANPBLCK2	1.037	290	30	72377 BELL #1	1.054	290	66	
72378 BELL #2	1.054	290	66	72372 BP #1 GN	1.021	238	87*	72375 BP #2 GN	1.021	241	87*	
72370 BP #3 GN	1.023	605	76	72371 BP #4 GN	1.024	421	57	71531 OSP1 PF	1.050	77	38*	
71532 OSP2 PF	1.050	77	38*	71533 OSP3 PF	1.053	107	52*	71534 OSP4 PF	1.050	77	38*	
71535 OSP5 PF	1.050	77	38*	71536 OSP6 PF	1.053	107	52*	71084 NEA GTPF	1.046	85	40*	
71085 NEA GTPF	1.046	85	40*	71086 NEA STPF	1.061	80	55*	72666 FRSQ SC1	0.991	43	-3	
72667 FRSQ SC2	0.991	43	-2	72668 FRSQ SC3	0.991	42	-1	72661 MANCH09A	1.011	119	35*	
72662 MANCH10A	1.011	119	35*	72663 MANCH11A	1.011	119	35*	72671 RISE G1	1.045	176	88*	
72672 RISE G2	0.000	0	0	72673 RISE G3	0.000	0	0	72373 MPLP 1PF	1.040	108	39	
72374 MPLP 2PF	1.031	44	27*	71251 CANAL G1	1.042	566	243	71252 CANAL G2	1.015	577	100*	
71094 PLGRM G1	1.036	670	137	71092 EDG ST	1.036	148	29	71093 EDG GTS	1.026	552	29	
71522 SOM G6	0.000	0	0	72669 TIVER G1	0.997	189	9	72670 TIVER G2	1.000	92	5	
71524 DGHTNPWR	1.033	185	69	0	0.000	0	0	0	0.000	0	0	

	MW	MX		MW	MX		MW	MX

MILLSTONE	2216	646	BRPT-ENERGY	520	85	MIDDLETOWN	750	243
MONTVILLE	81	27	NORWALK	0	0	BPTHBR	375	-42
NHHARBOUR	447	175	DEVON	212	-36	WALLINGFORD	102	-50
BERKSHIRE	280	65	LAKEROAD	0	0	STONYBROOK	412	180
MILLENNIUM	390	69	BRAYTONPT	1505	305	HOPE	176	88
FRSQ	485	99	SOMERSET	0	0	OSP	523	254
NEA	249	135	CANAL	1143	343	PILGRIM	670	137
MASSPWRR	239	71	ANP-BELLINGHAM	580	132	ANP-BLACKSTONE	580	60
EMI-TIVERTON	281	13	EMI-DIGHTON	185	69	SITHE-EDGAR	700	58
MYSTIC	565	13	NEWBOSTON	730	-96	SALEMHBR	700	108
SITHE-MYSTIC	1560	388	SEABROOK	1298	348	NEWINGTON	422	85
ConEd_Newington	533	256	SCHILLER	145	-6	MERRIMACK	432	191
WYMAN	786	231	VTYANKEE	667	150	BEARSWAMP	0	0
NORTHFIELD	1080	320	ALTRESCO	145	23	MIS	523	289
AEC	149	110	RPA	0	0	WESTBROOK	531	163
BUCKSPORT	0	0						

INTERFACE FLOWS

NB-NE	1004	-12	ORRING-SOUTH	1196	-7	SUROWIEC-SOUTH	586	-46
MEYANKEE-SOUTH	737	-164	MAINE-NH	1297	-138	NNE-SCOBIE+394	2469	155
SEABROOK-SOUTH	1438	186	NORTH-SOUTH	2464	-145	CMFD/MOORE-SO	266	-47
SNDYPOND-SOUTH	2326	164	CONN-IMPORT	2547	-1	SWCT	2439	168
NE-NRWLK-STFD	1463	91	BOSTON IMPORT	2446	-445	SEMA/RI EXPORT	1955	-302
SEMA EXPORT	638	-569	EAST-WEST	2269	52	NY-NE	11	-161
NW VT	325	-8	PLAT PAR	119	-38	BLISS PAR	136	-43
UPNY-CONED	4762	78	CENTRAL_EAST	1867	-132<5	CROSS-SOUND	-351	-2
CONN-EXPORT	-2531	159	LILCO	1	-52	RI_IMP	-1608	-1
CT_WCT	2872	-117	GRI EXP + LK	1600	230			

HVDC TRANSFERS FROM H-Q

CHAT-1 = 373			HIGHGATE = 200
MADAWASK = 0	PHII-P1 = 1000		PHII-P2 = 1000
EEL = 0			

BUS VOLTAGES

AREA/ZONE TOTALS

REDACTED

FOR PUBLIC DISTRIBUTION

Power Flow Summary - Towantic Plant

1/23/2009

2014 90/10 (N.E. LOAD&LOSS 32775MW) PEAK CASE D2 CT 2500 MW

GENERATION

#		V	MW	MX	#		V	MW	MX	#		V	MW	MX
Vermont and Mass. generation														
70705	VTYAK G	0.982	667	150*	73072	ALT12 PF	1.021	65	12	73073	ALT34 PF	1.020	80	12
72986	BERKPWR	1.046	280	70	73069	MAPR1 PF	1.022	82	27	73070	MAPR2 PF	1.023	82	27
73071	MAPR3 PF	1.016	75	27	73085	MT.TOM	1.003	147	15	72512	BRSWP G1	0.000	0	0
72513	BRSWP G2	0.000	0	0	73083	NRTHFD12	1.019	540	160*	73084	NRTHFD34	1.019	540	160*
72930	STNYBK1A	1.083	65	30*	72931	STNYBK1B	1.083	65	30*	72932	STNYBK1C	1.083	65	30*
72933	STNYBK 1	1.080	87	30*	72934	STNYBK2A	1.083	65	30*	72935	STNYBK2B	1.083	65	30*
73082	SPGFD PF	1.020	6	0	72244	MILLENST	1.007	117	22	72243	MILLENCT	1.008	273	48
73080	WSPFLD 3	0.988	101	-6	73081	W.SPRING	1.020	55	-6	73086	W.SPRCED	0.971	38	-6
73077	ORCHARD	1.004	4	2*	73006	COBLEMTN	1.017	17	4*	73076	PROSPECT	1.043	26	7*
72956	WOODLAND	0.000	0	0	72957	DOREEN	0.000	0	0	72962	AGAWM PF	1.018	2	0*
Connecticut generation														
73562	MILL#2	1.014	940	339	73563	MILL#3	1.006	1276	339	73558	MONTV#5	1.002	81	27*
73559	MONTV#6	0.000	0	0	73555	MIDDTN#2	1.002	117	25	73556	MIDDTN#3	0.982	233	25
73557	MIDDTN#4	1.017	400	200*	73565	LAKERD#1	0.000	0	0	73566	LAKERD#2	0.000	0	0
73567	LAKERD#3	0.000	0	0	73549	SMD1112J	1.037	92	4*	73550	SMD1314J	1.040	46	2*
73594	WALL LV1	0.929	102	-50	73595	WALL LV2	0.000	0	0	73596	WALL LV3	0.000	0	0
73501	KLEENGT1	0.000	0	0	73502	KLEENGT2	0.000	0	0	73503	KLEEN ST	0.000	0	0
73538	AESTH PF	1.020	180	80*	73652	BE 11	0.994	170	28	73653	BE 12	0.994	170	28
73654	BE 10 ST	0.992	180	28	73647	BPTHBR#2	0.000	0	0	73648	BPTHBR#3	0.952	375	-41
73570	DEVGAS11	1.027	40	0	73571	DEVGAS12	0.000	0	0	73572	DEVGAS13	0.000	0	0
73573	DEVGAS14	0.000	0	0	73553	DEVON#7	0.956	106	-19	73554	DEVON#8	0.959	106	-19
73574	MILFD#1	1.039	280	41	73575	MILFD#2	1.039	280	41	73651	NH HARBR	0.992	447	175*
73551	NORHAR#1	0.000	0	0	73552	NORHAR#2	0.000	0	0	73168	GLNBROOK	1.035	0	-108
73051	TWNTICG1	1.080	169	38	73052	TWNTICG2	1.080	169	38	73053	TWNTICST	1.083	182	39
Maine and New Hampshire generation														
70060	MIS GT1	1.071	166	96	70061	MIS GT2	1.071	166	96	70062	MIS ST	1.070	191	96
70377	AEC G1	1.113	50	36	70378	AEC G2	1.114	50	36	70379	AEC G3	1.113	50	36
70389	BUCKS G4	0.000	0	0	70426	CHAMP G2	0.972	15	6*	70424	CHAMP G3	1.034	65	32*

70374 MASON G3	1.048	33	3	70375 MASON G4	1.048	33	3	70376 MASON G5	1.048	33	3
70425 MEADCOGN	1.012	93	46*	70381 RPA CG1	0.000	0	0	70382 RPA SG2	0.000	0	0
70422 WARRN G1	1.008	50	15*	70423 WARRN G2	1.027	45	11*	70386 WBK G1	1.029	172	59
70387 WBK G2	1.029	172	59	70388 WBK G3	1.028	187	59	70365 WF WY #1	0.000	0	0
70366 WF WY #2	1.019	50	14*	70367 WF WY #3	1.023	100	36	70368 WF WY #4	1.028	636	172
71857 COMRF G1	1.019	40	3	71858 COMRF G2	1.019	40	3	71859 COMRF G3	1.019	40	3
71860 COMRF G4	1.019	40	3	71861 MOORE G1	1.004	48	-3	71862 MOORE G2	1.004	48	-3
71863 MOORE G3	0.989	48	-3	71864 MOORE G4	1.001	48	-3	72868 NWNGT G1	1.002	422	85
70010 NEW_G1	1.021	169	85	70011 NEW_G2	1.021	169	85	70012 NEW_G3	1.016	195	85
71950 GRANRDG1	1.050	280	49	71951 GRANRDG2	1.038	280	49	72701 AESSTG	1.051	250	44
72866 MERMK G1	1.052	112	50	72867 MERMK G2	1.052	320	142	72869 SBRK G1	1.011	1320	352
72870 SCHILLER	0.989	47	-2	72872 SCHILLER	0.989	48	-2	72871 SCHILLER	0.989	50	-2
NEMA generation											
71126 KEND CT	0.000	0	0	71067 MYS8 GTS	1.014	520	13	71068 MYS8 ST	1.016	290	13
71069 MYS9 GTS	1.046	460	163	71070 MYS9 ST	1.084	290	200*	71060 MYST G4	0.000	0	0
71061 MYST 5G	0.000	0	0	71062 MYST G6	0.000	0	0	71063 MYST G7	1.011	565	13
71073 N.BOST 1	0.982	350	-46	71074 N.BOST 2	0.980	380	-50	71946 SALEM G1	1.024	79	11
71947 SALEM G2	1.024	78	11	71948 SALEM G3	1.020	143	22	71949 SALEM G4	1.021	400	65
72059 LENERG1	1.048	50	23	72060 LENERG2	1.036	20	10	0	0.000	0	0
SEMA and Rhode Island generation											
71095 ANPBLCK1	1.038	290	33	71096 ANPBLCK2	1.038	290	33	72377 BELL #1	1.054	290	66
72378 BELL #2	1.054	290	66	72372 BP #1 GN	1.021	238	87*	72375 BP #2 GN	1.021	241	87*
72370 BP #3 GN	1.023	605	77	72371 BP #4 GN	1.024	421	58	71531 OSP1 PF	1.050	77	38*
71532 OSP2 PF	1.050	77	38*	71533 OSP3 PF	1.053	107	52*	71534 OSP4 PF	1.050	77	38*
71535 OSP5 PF	1.050	77	38*	71536 OSP6 PF	1.053	107	52*	71084 NEA GTPF	1.046	85	40*
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72667 FRSQ SC2	0.991	43	-2	72668 FRSQ SC3	0.991	42	-1	72661 MANCH09A	1.011	119	35*
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71524 DGHTNPWR	1.033	185	70	0	0.000	0	0	0	0.000	0	0
		MW	MX			MW	MX			MW	MX

MILLSTONE	2216	678	BRPT-ENERGY	520	85	MIDDLETOWN	750	250
MONTVILLE	81	27	NORWALK	0	0	BPTHBR	375	-41
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MYSTIC	565	13	NEWBOSTON	730	-96	SALEMHBR	700	108
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ConEd_Newington	533	256	SCHILLER	145	-6	MERRIMACK	432	191
WYMAN	786	223	VTYANKEE	667	150	BEARSWAMP	0	0
NORTHFIELD	1080	320	ALTRESCO	145	23	MIS	523	288
AEC	149	109	RPA	0	0	WESTBROOK	531	176
BUCKSPORT	0	0						

INTERFACE FLOWS

NB-NE	1004	-12	ORRING-SOUTH	1196	-7	SUROWIEC-SOUTH	585	-48
MEYANKEE-SOUTH	737	-169	MAINE-NH	1297	-135	NNE-SCOBIE+394	2490	157
SEABROOK-SOUTH	1455	187	NORTH-SOUTH	2486	-145	CMFD/MOORE-SO	266	-47
SNDYPOND-SOUTH	2332	164	CONN-IMPORT	2567	4	SWCT	2143	105
NE-NRWLK-STFD	1464	89	BOSTON IMPORT	2446	-444	SEMA/RI EXPORT	1956	-298
SEMA EXPORT	638	-569	EAST-WEST	2290	52	NY-NE	11	-177
NW VT	325	-8	PLAT PAR	119	-38	BLISS PAR	136	-43
UPNY-CONED	4763	80	CENTRAL_EAST	1869	-132<5	CROSS-SOUND	-351	4
CONN-EXPORT	-2551	159	LILCO	1	-52	RI_IMP	-1608	-2
CT_WCT	2892	-91	GRI EXP + LK	1599	234			

HVDC TRANSFERS FROM H-Q

CHAT-1 = 373		HIGHGATE = 200
MADAWASK = 0	PHII-P1 = 1000	PHII-P2 = 1000
EEL = 0		

BUS VOLTAGES

AREA/ZONE TOTALS

ANALYSIS OF THE TECHNICAL EFFECTIVENESS OF PROPOSED GENERATION AT MERIDEN & OXFORD, CT IN RESOLVING SPRINGFIELD AND NORTH-CENTRAL CONNECTICUT AREA TRANSMISSION RELIABILITY PROBLEMS

04/14/2009

1. OVERVIEW

Northeast Utilities Service Company (NUSCO) performed an analysis to evaluate the effect of proposed generating plants at Meriden (NRG Energy) & Oxford (GE Financial), for resolving transmission problems identified by ISO-NE in the Springfield, MA area and the north-central area of Connecticut. The technical analysis performed considered both plants to be fully operational in the study year 2014.

The proposed generating plants were:

1. *A new 530-MW[1] combined-cycle plant at Meriden, CT proposed by NRG Energy, Inc. (the Meriden Plant), and*
2. *A new 520-MW[2] combined- cycle power plant in Oxford, CT proposed by GE Financial, Inc (the Towantic Plant)*

The need to improve the electric supply system in the Greater Springfield and north central Connecticut areas in order to achieve compliance with mandatory national and regional electric system security standards has been documented in previous analyses, as follows:

- In January, 2008, ISO-NE issued a report entitled *Southern New England Transmission Reliability Need Analysis*, which identified the need for all four of the New England East West Solution (NEEWS) projects, including the Greater Springfield Reliability Project (GSRP)
- On October 20, 2008, the Connecticut Light and Power Company (CL&P) filed with the Connecticut Siting Council (Council) an application relating to the GSRP and the Manchester to Meekville Circuit Separation Project (MMP):
    - Section F of Volume 1 of this application included an updated need analysis relating specifically to the GSRP and the MMP, redacted to protect Confidential Energy Infrastructure Information (CEII)
    - The CEII Appendix to that application, which was filed with the Siting Council on October 28, 2008 under seal, pending the resolution of CL&P's Motion for a Protective Order, included an unredacted version of Volume 1, Section F.

In addition, CL&P has submitted to the Siting Council with its application for the GSRP and MMP a report by ICF International, entitled *Assessment of Non-Transmission Alternatives to the NEEWS*

[1] Plant Summer Capacity Rating, as listed in the NRG proposal to the CEAB.
[2] Plant Summer Capacity, as listed in the System Impact Study report performed by Siemens on behalf of ISO-NE in support of the generator's Proposed Plan Application (I.3.9) to the ISO-NE.

Transmission Projects: Greater Springfield Reliability Project (September 2008) (the NTA Report). As stated in the NTA Report, ICF International determined that there are no practical non-transmission alternatives to the GSRP and MMP. The NTA Report was filed both in redacted form and, in the CEII Appendix, in unredacted form. Two weeks prior to filing its application, CL&P provided an unredacted copy of the NTA Report to LaCapra Associates, the consultant to the Connecticut Energy Advisory Board (CEAB).

Thereafter, the CEAB issued a Request for Proposals (RFP) for alternatives to GSRP and MMP. In response, on January 2, 2009, the developers of each of the Meriden and Towantic plants proposed their respective plants as such alternatives. NUSCO performed power-flow studies that established that neither of the proposed plants would resolve the Springfield and north-central Connecticut area transmission reliability problems that the GSRP and MMP are designed to address. CL&P provided these power-flow studies to the CEAB and its consultant, LaCapra Associates, on January 30, 2009.

On or about March 18, 2009, GE wrote to the CSC declining to file a new application for the Towantic plant, and therefore this proposal will not be further considered by the CSC as a potential alternative for GSRP within the context of CL&P's GSRP application.

Even though Towantic has removed itself as a potential alternative, NUSCO has performed additional power-flow studies to test whether both Meriden and Towantic plants together could resolve the transmission reliability problems, which are addressed by the GSRP and MMP.

NUSCO's analyses of the Meriden and Towantic proposals illustrate that **neither proposal by itself nor both proposals together resolve the Springfield and north-central Connecticut area transmission reliability problems that the GSRP is designed to address. Compliance with mandatory reliability criteria is a federal requirement. Every proposed solution for reliability, whether transmission or generation based, is required by law to eliminate all criteria violations and to comply fully with national and regional reliability standards.**

The latest analysis, considering both the Meriden and Towantic plants to be in-service demonstrates that under the current import capabilities for Connecticut (2500 MW & 1700 MW under N-1 and N-1-1 contingency conditions) the operation of these two generating plants, either individually or simultaneously, does little to eliminate the reliability violations in the Springfield and north-central Connecticut areas.

For this analysis, we adapted the same three dispatches (D1, D2, D3) developed for the GSRP "needs" analysis by incorporating both new proposed generators and dispatching them against other

Connecticut generating units. The decision to dispatch these new proposed generators against other existing Connecticut generators is based on the following:

- *In the recent Connecticut DPUC decision pertaining to the 2008 Connecticut Integrated Resource Plan Docket No. 08-07-01 dated February 18th, 2009 the DPUC stated that* ***"The Department (DPUC) believes that a conservative generator retirement projection would include nine units totaling 929 MW during the planning period (2011-2018). After 2011, all units reaching 50 years of operation would retire during their 50th year of operation".*** *For the year 2014, the projected CT generation retirements as illustrated in the DPUC decision amount to 907 MW.*

- *The RFP proposals submitted by NRG Energy & GE Financial to the CEAB state that the new proposed generators in Meriden & Oxford would displace older, dirtier and less-efficient generation.*

The key results of the analysis performed with both proposed generating plants operating simultaneously are summarized below.

1.1 CONCLUSIONS

- The proposed generating plants at Meriden and Oxford ***do not*** resolve the greater Springfield area transmission reliability problems.

- The proposed generating plants at Meriden and Oxford ***do not*** resolve the north-central Connecticut area transmission reliability problems.

- Under each dispatch scenario, approximately the ***same number of conditions (over 1000 conditions for the "D1" dispatch scenario alone)*** as demonstrated in the GSRP "needs" dispatch scenarios continue to cause reliability problems after the addition of both proposed plants.

- Under each dispatch scenario, approximately the ***same number of transmission facilities with similar levels of severity*** as observed in the GSRP "needs" dispatch scenarios remain overloaded after the addition of the two proposed plants.

- With the "D1" dispatch (stress generation dispatch scenario), there are more than ***25 transmission facilities*** within the Springfield and north-central Connecticut areas that remain overloaded after the addition of the two proposed plants.

- With the "D2" dispatch (most optimistic generation dispatch scenario), there are more than ***10 transmission facilities*** within the Springfield and north-central Connecticut areas that remain overloaded after the addition of the two proposed plants.

- With the "D3" dispatch, there are more than ***10 transmission facilities*** within the Springfield system that remain overloaded after the addition of the proposed plants.

In summary, constructing the two new proposed power plants will not resolve the transmission reliability problems in the Springfield and north-central Connecticut areas. The proposed plants will not provide a substitute reliability solution for north-central Connecticut or Springfield area transmission reliability problems. The greater Springfield reliability project (GSRP) would still be required to resolve all the transmission problems in the two areas. These conclusions reaffirm those of a previous analysis conducted by ISO-NE which indicated that generation additions will not resolve the identified transmission problems in the Springfield and north-central Connecticut areas. Furthermore, GE Financial's (Towantic) recent decision to *NOT* file an application with the Connecticut Siting Council to be considered an alternative to the proposed transmission project (GSRP), leaves the Meriden generating plant alone to be considered an alternative to resolve transmission reliability problems of Springfield and north-central Connecticut areas. However, CL & P's prior study of Meriden generating plant as an alternative (study dated 01/25/2009, titled, "Preliminary Analysis Of the Technical Effectiveness Of Proposed Generation Alternatives To GSRP") illustrates that the proposed Meriden generating plant alone will not resolve the transmission reliability problems of Springfield and north-central Connecticut areas either.

1.2 POWER-FLOW ANALYSIS RESULTS

In all three dispatches (D1, D,2 ,D3) tested in this analysis, the new proposed generators were dispatched against other Connecticut generators namely, Montville #6, Bridgeport Harbor #2, Middletown #2 & Middletown #4. Further, this analysis retired Devon units #7 & #8 (106 MW each), and turned "ON" Norwalk Harbor #2 (168 MW) and Devon Gas unit #12 (40 MW).

Of the three dispatches, "D2" assumes the most generation "ON" in the Greater Springfield area. Accordingly, the D2 scenario results in the fewest thermal overloads, and is the scenario most likely to show resolution of criteria violations by the addition of generation in Connecticut. On the other hand,

the "D1" dispatch scenario is a stress generation scenario for the greater Springfield system and is likely to show many more overload problems in Springfield and north central Connecticut regions. Details on each of the three dispatch scenarios (D1, D2, D3) modified with the proposed generators are provided in the attached power flow summary sheets.

Tables **1A** through **1D** below illustrate the Springfield and North-Central Connecticut areas' worst transmission facility overloads for the three dispatches under **N-1** and **N-1-1** contingency conditions with the addition of both proposed plants. The complete list of Springfield and North-Central Connecticut area transmission overloads are provided in attachments **A.1** through **A.3**. The power-flow summary for the power flow case used for this analysis is provided in attachment **A.5**.

Table 1A: Worst transmission facility overloads in Springfield & North-Central Connecticut area with the addition of proposed plants at Meriden & Oxford, CT under N-1 contingency condition for dispatches D1, D2 & D3 combined.

From Bus	To Bus	Overloaded Line #	Max Post-Loading (MVA)	LTE Rating (MVA)	Max % Over LTE (MVA)	Worst N-1 Contingency	Total N-1 Violations > 100 % of LTE
					103.6		1
					180.9		2
					371.1		57
					104		1
					123.7		1
					136.7		8
					101.8		1
					113.5		3
					131		5
					175		56
					115.2		1
					108.8		4
					108.4		2
					132.7		4
					114.8		2
					113.5		2
					306.8		10

Table 1B: Dispatch "D1" - Worst transmission facility overloads in Springfield & North-Central Connecticut area with the addition of proposed plants at Meriden & Oxford, CT under N-1-1 contingency condition.

From Bus	To Bus	Overloaded Line #	Max Post-Loading (MVA)	LTE Rating (MVA)	Max % Over LTE (MVA)	1st Line Out	Worst 2nd Contingency	Total N-1-1 Violations > 100 % of LTE
					132.1			20
					128.6			19
					186.5			12
					104.6			2
					100.8			1
					434.4			618
					166.5			30
					160.5			101
					122.2			11
					138.3			64
					147.8			67
					204.4			724
					132.4			15
					109.7			8
					101.6			4
					138.7			80
					167.6			35
					115.1			8
					135.6			33
					119			6
					155.9			122
					114.9			4
					114.9			4
					131.3			4
					136.2			4
					130.5			1
					130.5			1
					371.4			128

Table 1C: Dispatch "D2" - Worst transmission facility overloads in Springfield & North-Central Connecticut area with the addition of proposed plants at Meriden & Oxford, CT under N-1-1 contingency condition.

From Bus	To Bus	Overloaded Line #	Max Post-Loading (MVA)	LTE Rating (MVA)	Max % Over LTE (MVA)	1st Line Out	Worst 2nd Contingency	Total N-1-1 Violations > 100 % of LTE
					241.8			34
					118.4			7
					102.9			4
					130.8			17
					111.7			5
					137.3			7
					137.3			7
					136.8			8
					140.8			8
					125.6			2
					125.6			2
					200.4			12

Table 1D: Dispatch "D3" - Worst transmission facility overloads in Springfield & North-Central Connecticut area with the addition of proposed plants at Meriden & Oxford, CT under N-1-1 contingency condition.

From Bus	To Bus	Overloaded Line #	Max Post-Loading (MVA)	LTE Rating (MVA)	Max % Over LTE (MVA)	1st Line Out	Worst 2nd Contingency	Total N-1-1 Violations > 100 % of LTE
					114.9			2
					134			15
					233.6			32
					111.4			15
					104.2			1
					117.1			6
					112			7
					143.8			31
					100.1			1
					116.8			2
					116.8			2
					190.4			12

1.3 SENSITIVITY ANALYSIS: CROSS SOUND CABLE TIE TO LONG ISLAND, NY

An additional sensitivity analysis was performed as part of this technical analysis of the two generator proposals. The sensitivity analysis evaluates the technical effectiveness of the proposed generators at Meriden and Oxford, CT in resolving transmission problems in the Springfield and the north-central Connecticut areas when power exports on the Cross Sound Cable (CSC) to Long Island are limited to 100 MW - the current firm contract level, under N-1-1 contingency conditions. The reduced level of power exported on the CSC from the typical level of about 330-350 MW to the lower level of 100 MW results in reduced Connecticut import levels. Reduced Connecticut power imports help in alleviating some of the transmission facility overloads in the two problem areas under certain operating conditions.

This sensitivity analysis was performed on the "D2" dispatch scenario described earlier in the report. Of the three dispatches used in the earlier analysis of this study, "D2" assumes the most generation "ON" in the Greater Springfield area resulting in the fewest thermal overloads (refer to **Table 1C** above), ***and hence is the scenario most likely to show resolution of the remaining criteria violations*** under reduced power-export levels on the Cross Sound Cable. Key results of this sensitivity analysis are provided below; full power flow results and summaries are provided in the Appendices **A.4 & A.5** respectively.

- The proposed generating plants at Meriden and Oxford ***do not*** resolve the north-central Connecticut area transmission reliability problems **even under the reduced power-export scenario on the Cross Sound Cable (CSC) to Long Island, NY.** The two 115-kV lines from the Springfield area to North Bloomfield substation in CT continue to be overloaded under various contingency conditions. Further, almost the same number of conditions as in the earlier analysis of this study causes these north-central Connecticut area transmission lines to be overloaded.

- The proposed generating plants at Meriden and Oxford ***do not*** resolve the greater Springfield area transmission reliability problems **even under the reduced power-export scenario on the Cross Sound Cable (CSC) to Long Island, NY.** All but one of the transmission facilities that were previously overloaded under various contingency and normal conditions in the greater Springfield area continue to be overloaded with reduced power exports on the CSC to Long Island.

In summary, construction of the two new proposed power plants will not resolve the transmission reliability problems in the Springfield or north-central Connecticut areas even under reduced power-export levels on the Cross Sound Cable to Long Island, NY. The proposed generating plants will not provide a substitute solution for north-central Connecticut or Springfield area transmission reliability problems. The greater Springfield reliability project (GSRP) would still be required to resolve all the transmission problems in the two areas.

ATTACHMENT A.1

- *Complete N-1 Contingency Analysis Results for "D1"dispatch - Both Generating Plants Operational Simultaneously*
- *Complete N-1-1 Contingency Analysis Results for "D1"dispatch - Both Generating Plants Operational Simultaneously*

ATTACHMENT A.2

- *Complete N-1 Contingency Analysis Results for "D2"dispatch - Both Generating Plants Operational Simultaneously*
- *Complete N-1-1 Contingency Analysis Results for "D2"dispatch - Both Generating Plants Operational Simultaneously*

ATTACHMENT A.3

- *Complete N-1 Contingency Analysis Results for "D3"dispatch - Both Generating Plants Operational Simultaneously*
- *Complete N-1-1 Contingency Analysis Results for "D3"dispatch - Both Generating Plants Operational Simultaneously*

ATTACHMENT A.4

- *Complete N-1-1 Contingency Analysis Results for "D2"dispatch - Both Generating Plants Operational Simultaneously; Export on Cross Sound Cable (CSC) to Long Island, NY set to 100 MW.*

ATTACHMENT A.5

- *Power Flow Summary for dispatches "D1", "D2" & "D3" are provided in PDF attachment* "Power Flow Summary"

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ANALYSIS OF THE TECHNICAL EFFECTIVENESS OF PROPOSED GENERATION AT MERIDEN & OXFORD, CT IN RESOLVING SPRINGFIELD AND NORTH-CENTRAL CONNECTICUT AREA TRANSMISSION RELIABILITY PROBLEMS

ATTACHMENT A.1-A.4: POWERFLOW RESULTS

2. ATTACHMENTS

ATTACHMENT A.1

Complete N-1 Contingency Analysis Results for "D1"dispatch - Both Generating Plants Operational Simultaneously

Case Name	Contingency	From Bus / Inter	To Bus / Interface Name	Pre-load	Post-load	Rating	% Over	Ckt ID
2014P_2500_D1_New_None_N-1_BothM+T							103.6	1
2014P_2500_D1_New_None_N-1_BothM+T							100.6	1
2014P_2500_D1_New_None_N-1_BothM+T							180.9	1
2014P_2500_D1_New_None_N-1_BothM+T							371.1	1
2014P_2500_D1_New_None_N-1_BothM+T							206	1
2014P_2500_D1_New_None_N-1_BothM+T							180.8	1
2014P_2500_D1_New_None_N-1_BothM+T							180.8	1
2014P_2500_D1_New_None_N-1_BothM+T							172.3	1
2014P_2500_D1_New_None_N-1_BothM+T							167.4	1
2014P_2500_D1_New_None_N-1_BothM+T							152.8	1
2014P_2500_D1_New_None_N-1_BothM+T							149.1	1
2014P_2500_D1_New_None_N-1_BothM+T							146.3	1
2014P_2500_D1_New_None_N-1_BothM+T							144	1
2014P_2500_D1_New_None_N-1_BothM+T							143.6	1
2014P_2500_D1_New_None_N-1_BothM+T							143.5	1
2014P_2500_D1_New_None_N-1_BothM+T							139.6	1
2014P_2500_D1_New_None_N-1_BothM+T							137.7	1
2014P_2500_D1_New_None_N-1_BothM+T							133.5	1
2014P_2500_D1_New_None_N-1_BothM+T							132.7	1
2014P_2500_D1_New_None_N-1_BothM+T							132.2	1
2014P_2500_D1_New_None_N-1_BothM+T							129.3	1
2014P_2500_D1_New_None_N-1_BothM+T							128.8	1
2014P_2500_D1_New_None_N-1_BothM+T							127	1
2014P_2500_D1_New_None_N-1_BothM+T							126.4	1
2014P_2500_D1_New_None_N-1_BothM+T							126.1	1

2014P_2500_D1_New_None_N-1_BothM+T							125.2	1
2014P_2500_D1_New_None_N-1_BothM+T							124.7	1
2014P_2500_D1_New_None_N-1_BothM+T							123.2	1
2014P_2500_D1_New_None_N-1_BothM+T							123	1
2014P_2500_D1_New_None_N-1_BothM+T							122.9	1
2014P_2500_D1_New_None_N-1_BothM+T							122.8	1
2014P_2500_D1_New_None_N-1_BothM+T							122.6	1
2014P_2500_D1_New_None_N-1_BothM+T							122.3	1
2014P_2500_D1_New_None_N-1_BothM+T							122	1
2014P_2500_D1_New_None_N-1_BothM+T							121.1	1
2014P_2500_D1_New_None_N-1_BothM+T							121	1
2014P_2500_D1_New_None_N-1_BothM+T							120.8	1
2014P_2500_D1_New_None_N-1_BothM+T							119.5	1
2014P_2500_D1_New_None_N-1_BothM+T							119.5	1
2014P_2500_D1_New_None_N-1_BothM+T							119.4	1
2014P_2500_D1_New_None_N-1_BothM+T							117.9	1
2014P_2500_D1_New_None_N-1_BothM+T							117.8	1
2014P_2500_D1_New_None_N-1_BothM+T							117.8	1
2014P_2500_D1_New_None_N-1_BothM+T							117.1	1
2014P_2500_D1_New_None_N-1_BothM+T							117	1
2014P_2500_D1_New_None_N-1_BothM+T							117	1
2014P_2500_D1_New_None_N-1_BothM+T							115.6	1
2014P_2500_D1_New_None_N-1_BothM+T							114.6	1
2014P_2500_D1_New_None_N-1_BothM+T							114.6	1
2014P_2500_D1_New_None_N-1_BothM+T							113	1
2014P_2500_D1_New_None_N-1_BothM+T							110.9	1
2014P_2500_D1_New_None_N-1_BothM+T							108	1
2014P_2500_D1_New_None_N-1_BothM+T							107.8	1
2014P_2500_D1_New_None_N-1_BothM+T							105.6	1
2014P_2500_D1_New_None_N-1_BothM+T							103.4	1
2014P_2500_D1_New_None_N-1_BothM+T							150.1	1
2014P_2500_D1_New_None_N-1_BothM+T							145.2	1
2014P_2500_D1_New_None_N-1_BothM+T							123.7	1
2014P_2500_D1_New_None_N-1_BothM+T							136.7	1
2014P_2500_D1_New_None_N-1_BothM+T							128.6	1

2014P_2500_D1_New_None_N-1_BothM+T							121.9	1
2014P_2500_D1_New_None_N-1_BothM+T							115.6	1
2014P_2500_D1_New_None_N-1_BothM+T							109.8	1
2014P_2500_D1_New_None_N-1_BothM+T							104.3	1
2014P_2500_D1_New_None_N-1_BothM+T							102.7	1
2014P_2500_D1_New_None_N-1_BothM+T							100.5	1
2014P_2500_D1_New_None_N-1_BothM+T							101.8	1
2014P_2500_D1_New_None_N-1_BothM+T							113.5	1
2014P_2500_D1_New_None_N-1_BothM+T							110.8	1
2014P_2500_D1_New_None_N-1_BothM+T							103.2	1
2014P_2500_D1_New_None_N-1_BothM+T							131	1
2014P_2500_D1_New_None_N-1_BothM+T							126.8	1
2014P_2500_D1_New_None_N-1_BothM+T							120.5	1
2014P_2500_D1_New_None_N-1_BothM+T							102.8	1
2014P_2500_D1_New_None_N-1_BothM+T							101.7	1
2014P_2500_D1_New_None_N-1_BothM+T							175	1
2014P_2500_D1_New_None_N-1_BothM+T							170	1
2014P_2500_D1_New_None_N-1_BothM+T							133.5	1
2014P_2500_D1_New_None_N-1_BothM+T							128.1	1
2014P_2500_D1_New_None_N-1_BothM+T							126.6	1
2014P_2500_D1_New_None_N-1_BothM+T							125.8	1
2014P_2500_D1_New_None_N-1_BothM+T							124.5	1
2014P_2500_D1_New_None_N-1_BothM+T							123.9	1
2014P_2500_D1_New_None_N-1_BothM+T							123.8	1
2014P_2500_D1_New_None_N-1_BothM+T							123.7	1
2014P_2500_D1_New_None_N-1_BothM+T							121.5	1
2014P_2500_D1_New_None_N-1_BothM+T							119.8	1
2014P_2500_D1_New_None_N-1_BothM+T							118.5	1
2014P_2500_D1_New_None_N-1_BothM+T							117	1
2014P_2500_D1_New_None_N-1_BothM+T							116.9	1
2014P_2500_D1_New_None_N-1_BothM+T							116.3	1
2014P_2500_D1_New_None_N-1_BothM+T							114.9	1
2014P_2500_D1_New_None_N-1_BothM+T							114.8	1
2014P_2500_D1_New_None_N-1_BothM+T							114.1	1
2014P_2500_D1_New_None_N-1_BothM+T							113.2	1

2014P_2500_D1_New_None_N-1_BothM+T							112.6	1
2014P_2500_D1_New_None_N-1_BothM+T							111.8	1
2014P_2500_D1_New_None_N-1_BothM+T							111.6	1
2014P_2500_D1_New_None_N-1_BothM+T							111.4	1
2014P_2500_D1_New_None_N-1_BothM+T							111	1
2014P_2500_D1_New_None_N-1_BothM+T							110.3	1
2014P_2500_D1_New_None_N-1_BothM+T							109.9	1
2014P_2500_D1_New_None_N-1_BothM+T							109.9	1
2014P_2500_D1_New_None_N-1_BothM+T							109.8	1
2014P_2500_D1_New_None_N-1_BothM+T							109.7	1
2014P_2500_D1_New_None_N-1_BothM+T							109.3	1
2014P_2500_D1_New_None_N-1_BothM+T							109.3	1
2014P_2500_D1_New_None_N-1_BothM+T							109.3	1
2014P_2500_D1_New_None_N-1_BothM+T							109.1	1
2014P_2500_D1_New_None_N-1_BothM+T							108.9	1
2014P_2500_D1_New_None_N-1_BothM+T							108.6	1
2014P_2500_D1_New_None_N-1_BothM+T							108.6	1
2014P_2500_D1_New_None_N-1_BothM+T							108.6	1
2014P_2500_D1_New_None_N-1_BothM+T							108.3	1
2014P_2500_D1_New_None_N-1_BothM+T							107.1	1
2014P_2500_D1_New_None_N-1_BothM+T							107.1	1
2014P_2500_D1_New_None_N-1_BothM+T							106.9	1
2014P_2500_D1_New_None_N-1_BothM+T							106.8	1
2014P_2500_D1_New_None_N-1_BothM+T							106	1
2014P_2500_D1_New_None_N-1_BothM+T							105.8	1
2014P_2500_D1_New_None_N-1_BothM+T							105.7	1
2014P_2500_D1_New_None_N-1_BothM+T							105.6	1
2014P_2500_D1_New_None_N-1_BothM+T							105.5	1
2014P_2500_D1_New_None_N-1_BothM+T							104.6	1
2014P_2500_D1_New_None_N-1_BothM+T							104.5	1
2014P_2500_D1_New_None_N-1_BothM+T							104.2	1
2014P_2500_D1_New_None_N-1_BothM+T							103.7	1
2014P_2500_D1_New_None_N-1_BothM+T							102.7	1
2014P_2500_D1_New_None_N-1_BothM+T							102.3	1
2014P_2500_D1_New_None_N-1_BothM+T							115.2	1

2014P_2500_D1_New_None_N-1_BothM+T							104	1
2014P_2500_D1_New_None_N-1_BothM+T							108.8	1
2014P_2500_D1_New_None_N-1_BothM+T							108.6	1
2014P_2500_D1_New_None_N-1_BothM+T							108.4	2
2014P_2500_D1_New_None_N-1_BothM+T							108.1	1
2014P_2500_D1_New_None_N-1_BothM+T							132.7	1
2014P_2500_D1_New_None_N-1_BothM+T							127	1
2014P_2500_D1_New_None_N-1_BothM+T							100.4	1
2014P_2500_D1_New_None_N-1_BothM+T							114.8	1
2014P_2500_D1_New_None_N-1_BothM+T							112.7	1
2014P_2500_D1_New_None_N-1_BothM+T							102.4	1
2014P_2500_D1_New_None_N-1_BothM+T							113.5	1
2014P_2500_D1_New_None_N-1_BothM+T							110.3	1
2014P_2500_D1_New_None_N-1_BothM+T							306.8	1
2014P_2500_D1_New_None_N-1_BothM+T							161.3	1
2014P_2500_D1_New_None_N-1_BothM+T							135.7	1
2014P_2500_D1_New_None_N-1_BothM+T							132.7	1
2014P_2500_D1_New_None_N-1_BothM+T							128.4	1
2014P_2500_D1_New_None_N-1_BothM+T							121.1	1
2014P_2500_D1_New_None_N-1_BothM+T							104.9	1
2014P_2500_D1_New_None_N-1_BothM+T							101.7	1

Complete N-1-1 Contingency Analysis Results for "D1"dispatch - Both Generating Plants Operational Simultaneously

Case Name	Contingency	From Bus / Inter	To Bus / Interface Name	Pre-load	Post-load	Rating	% Over	Ckt ID
							132.1	1
							128.7	1
							128.7	1
							128.7	1
							128.6	1
							128.4	1

							122	1
							118.5	1
							110.6	1
							110.5	1
							108.3	1
							107.4	1
							107.2	1
							106.4	1
							106	1
							105.3	1
							104.2	1
							101.3	1
							101.2	1
							100.6	1
							128.6	1
							127.2	1
							127.1	1
							127.1	1
							126.8	1
							120.2	1
							119.2	1
							113.3	1
							111	1
							109.6	1
							107.4	1
							106.1	1
							105.8	1
							105.2	1
							104.5	1
							103.5	1
							102.1	1
							101.9	1
							101.7	1
							101.7	1

							186.5	1
							185.4	1
							185.3	1
							185.3	1
							185.2	1
							184.3	1
							184.3	1
							184.2	1
							182.3	1
							181.2	1
							179.7	1
							179.4	1
							102.7	1
							102.6	1
							102.6	1
							102.4	1
							102.6	1
							102.6	1
							102.5	1
							102.3	1
							104.6	1
							103	1
							101	1
							100.8	1
							434.4	1
							381.9	1
							381.5	1
							379.2	1
							368.1	1
							356.5	1
							353	1
							345.7	1
							345.7	1
							338.6	1

							331.9	1
							326.4	1
							259.1	1
							238.1	1
							229.8	1
							229.7	1
							229.6	1
							229.2	1
							224.1	1
							222.3	1
							222.3	1
							219.2	1
							219	1
							215	1
							208.1	1
							207.1	1
							206.9	1
							201.6	1
							195.9	1
							192.2	1
							191.9	1
							191.7	1
							191.1	1
							191	1
							191	1
							190.3	1
							188.4	1
							187.9	1
							187.4	1
							187.4	1
							184.6	1
							184.4	1
							181.6	1
							181.6	1

							181.3	1
							181.1	1
							180.7	1
							179.4	1
							179.3	1
							178.4	1
							176.1	1
							176.1	1
							175.3	1
							174.5	1
							173.9	1
							173.9	1
							173.5	1
							173.4	1
							173.4	1
							173.2	1
							172.7	1
							172.1	1
							169.8	1
							169.1	1
							168.5	1
							167	1
							166.4	1
							166.1	1
							166.1	1
							165.1	1
							165.1	1
							162.7	1
							162.7	1
							161.3	1
							160.8	1
							160.6	1
							160.2	1
							160	1

							159.4	1
							159.4	1
							159.3	1
							159.2	1
							159	1
							158.9	1
							158.6	1
							158.4	1
							158	1
							157.5	1
							156.5	1
							156.5	1
							156.4	1
							156.4	1
							156.3	1
							155.8	1
							155.6	1
							155.5	1
							154.4	1
							154.4	1
							154.3	1
							153.9	1
							153.5	1
							153.4	1
							153.3	1
							152.8	1
							152.7	1
							152.5	1
							152.1	1
							151.9	1
							151.6	1
							151.1	1
							151	1
							150.9	1

							150.7	1
							150.7	1
							149.9	1
							148.5	1
							148.3	1
							148.2	1
							147.9	1
							147.8	1
							147.6	1
							147.4	1
							147.3	1
							147.1	1
							146.9	1
							146.8	1
							145.8	1
							145.7	1
							145.7	1
							145.7	1
							145.6	1
							145.4	1
							145.3	1
							145.3	1
							145.3	1
							145.2	1
							145	1
							144.9	1
							144.7	1
							144.7	1
							144.4	1
							143.8	1
							143.6	1
							143.2	1
							142.4	1
							142.2	1

							142.2	1
							142	1
							142	1
							141.7	1
							141.7	1
							141.7	1
							141.4	1
							141.1	1
							140.7	1
							140.6	1
							140.3	1
							140.2	1
							139.9	1
							139.9	1
							139.7	1
							139.7	1
							139.6	1
							139.3	1
							139.3	1
							139.2	1
							139.2	1
							139	1
							139	1
							138.3	1
							138.1	1
							137.9	1
							137.7	1
							137.6	1
							137.5	1
							137.4	1
							137.2	1
							137.2	1
							137	1
							136.9	1

							136.7	1
							136.5	1
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							156.8	1
							151.2	1
							147.6	1
							146.6	1

							146.4	1
							143.5	1
							143.3	1
							142.9	1
							142.8	1
							142.8	1
							142.5	1
							142.5	1
							140.7	1
							140.4	1
							139.9	1
							137.3	1
							137.1	1
							136.4	1
							135.8	1
							133.2	1
							132.8	1
							131.9	1
							131.3	1
							130.9	1
							129.3	1
							128.8	1
							128.4	1
							127.1	1
							125.5	1
							125.5	1
							124.6	1
							124.5	1
							124.4	1
							124.1	1
							124	1
							123.9	1
							121.6	1
							121.5	1

							121.1	1
							119.9	1
							119.9	1
							118.9	1
							117.8	1
							117.8	1
							117.8	1
							115.5	1
							114.9	1
							114.5	1
							114.2	1
							114	1
							113.9	1
							113.7	1
							113.3	1
							113	1
							113	1
							112.1	1
							112	1
							111.8	1
							111.5	1
							110.9	1
							110.5	1
							110.5	1
							110.1	1
							109.5	1
							109.4	1
							109.2	1
							109.1	1
							108.9	1
							108.6	1
							108.5	1
							108.2	1
							107.9	1

							107.9	1
							107.6	1
							107.4	1
							107.4	1
							107.3	1
							107.2	1
							107.1	1
							106.5	1
							106.1	1
							106	1
							105.7	1
							105	1
							104.9	1
							104	1
							104	1
							103.2	1
							103	1
							102.8	1
							102.7	1
							102.7	1
							102.2	1
							102	1
							101.7	1
							101.6	1
							100.8	1
							100.5	1
							100.3	1
							100.2	1
							100.1	1

ATTACHMENT A.2

Complete N-1 Contingency Analysis Results for "D2"dispatch - Both Generating Plants Operational Simultaneously

Case Name	Contingency	From Bus / Inter	To Bus / Interface Name	Pre-load	Post-load	Rating	% Over	Ckt ID
2014P_2500_D2_New_None_N-1_BothM+T							173.8	1
2014P_2500_D2_New_None_N-1_BothM+T							101	1
2014P_2500_D2_New_None_N-1_BothM+T							105.1	1
2014P_2500_D2_New_None_N-1_BothM+T							100.9	1
2014P_2500_D2_New_None_N-1_BothM+T							102.8	1
2014P_2500_D2_New_None_N-1_BothM+T							102.6	1
2014P_2500_D2_New_None_N-1_BothM+T							131.3	1

Complete N-1-1 Contingency Analysis Results for "D2"dispatch - Both Generating Plants Operational Simultaneously

Case Name	Contingency	From Bus / Inter	To Bus / Interface Name	Pre-load	Post-load	Rating	% Over	Ckt ID
							241.8	1
							208.8	1
							182.4	1
							179.7	1
							179.6	1
							167.4	1
							157.3	1
							153.5	1
							149.7	1
							148.2	1
							148.2	1
							147.5	1
							142.5	1
							141.4	1
							141.3	1
							140.9	1
							140.6	1

							132.8	1
							130.1	1
							125.7	1
							123.1	1
							123.1	1
							114.8	1
							113.8	1
							113.1	1
							110.7	1
							109.9	1
							105.7	1
							104.7	1
							103.4	1
							103.3	1
							101.7	1
							100.6	1
							100.2	1
							118.4	1
							101.4	1
							100.9	1
							100.9	1
							100.8	1
							100.7	1
							100.6	1
							102.9	1
							102.9	1
							102.7	1
							102.5	1
							130.8	1
							126.3	1
							117.6	1
							113.9	1
							113.8	1
							113.6	1
							113.5	1

							113.1	1
							108.3	1
							107.1	1
							107.1	1
							104.1	1
							102.9	1
							102.8	1
							102.6	1
							101.4	1
							100.9	1
							111.7	1
							111.6	1
							111.4	1
							111.2	1
							100.2	1
							137.3	1
							137.1	1
							136.8	1
							136.6	1
							112.5	1
							111.7	1
							107.9	1
							137.3	1
							137.1	1
							136.8	1
							136.6	1
							112.5	1
							111.7	1
							107.9	1
							137.3	2
							137.1	2
							136.8	2
							136.6	2
							112.5	2
							111.7	2

							107.9	2
							137.3	2
							137.1	2
							136.8	2
							136.6	2
							112.5	2
							111.7	2
							107.9	2
							136.8	1
							136.6	1
							136	1
							135.9	1
							133.1	1
							112.9	1
							110.4	1
							109.4	1
							140.8	1
							140.6	1
							140	1
							139.8	1
							136.7	1
							112.7	1
							110.3	1
							109.3	1
							125.6	1
							125.6	2
							109.5	1
							109.5	2
							200.4	1
							167.3	1
							140.4	1
							137.7	1
							137.6	1
							125	1
							114.5	1

							110.5	1
							106.1	1
							105.6	1
							105.5	1
							104.7	1

ATTACHMENT A.3

Complete N-1 Contingency Analysis Results for "D3"dispatch - Both Generating Plants Operational Simultaneously

Case Name	Contingency	From Bus / Inter	To Bus / Interface Name	Pre-load	Post-load	Rating	% Over	Ckt ID
2014P_2500_D3_New_None_N-1_BothM+T							125	1
2014P_2500_D3_New_None_N-1_BothM+T							185.4	1
2014P_2500_D3_New_None_N-1_BothM+T							100.5	1
2014P_2500_D3_New_None_N-1_BothM+T							100.4	1
2014P_2500_D3_New_None_N-1_BothM+T							104	1
2014P_2500_D3_New_None_N-1_BothM+T							102.2	1
2014P_2500_D3_New_None_N-1_BothM+T							120.8	1
2014P_2500_D3_New_None_N-1_BothM+T							115.5	1
2014P_2500_D3_New_None_N-1_BothM+T							142.4	1

Complete N-1-1 Contingency Analysis Results for "D3"dispatch - Both Generating Plants Operational Simultaneously

Case Name	Contingency	From Bus / Inter	To Bus / Interface Name	Pre-load	Post-load	Rating	% Over	Ckt ID
							114.9	1
							103.5	1
							134	1
							132.7	1

							127.6	1
							126.6	1
							125.9	1
							125.8	1
							125.7	1
							124.7	1
							124.4	1
							124.4	1
							124.2	1
							124.2	1
							123.5	1
							123.5	1
							123.4	1
							233.6	1
							217.1	1
							197.1	1
							196.8	1
							181.2	1
							180.9	1
							177.9	1
							171	1
							171	1
							169.7	1
							156.4	1
							153.8	1
							141.1	1
							134.2	1
							128.6	1
							123.9	1
							123.9	1
							122.9	1
							119.1	1
							113.4	1
							110.9	1
							110.1	1

							108.9	1
							108.4	1
							107.5	1
							105.8	1
							104.7	1
							104.4	1
							104	1
							103.8	1
							103.3	1
							100.8	1
							111.4	1
							110.3	1
							106.2	1
							105.3	1
							104.7	1
							104.7	1
							104.5	1
							103.7	1
							103.5	1
							103.4	1
							103.3	1
							103.3	1
							102.7	1
							102.7	1
							102.7	1
							109.6	1
							108.5	1
							104.3	1
							103.5	1
							102.9	1
							102.9	1
							102.7	1
							101.9	1
							101.7	1
							101.6	1

							101.5	1
							101.5	1
							100.9	1
							100.9	1
							100.9	1
							104.2	1
							117.1	1
							112.5	1
							110.7	1
							106.1	1
							103	1
							102.9	1
							112	2
							111.8	1
							111.7	2
							104.3	2
							101.6	2
							101.5	2
							101.4	1
							143.8	1
							138.2	1
							135.9	1
							130.3	1
							126.5	1
							126.4	1
							121.2	1
							121	1
							118.7	1
							118.6	1
							117.4	1
							117.2	1
							115.3	1
							113.9	1
							113.9	1
							113.3	1

							113.3	1
							113.3	1
							111.9	1
							111.7	1
							109.7	1
							108.7	1
							108.7	1
							108.1	1
							107.2	1
							107.2	1
							106.7	1
							105.2	1
							101.4	1
							101.4	1
							101.3	1
							100.1	1
							116.8	1
							116.8	2
							109.2	1
							109.2	2
							190.4	1
							172.6	1
							153.6	1
							153.5	1
							138	1
							137.8	1
							134.8	1
							127.7	1
							127.7	1
							126.4	1
							113.1	1
							110.6	1

ATTACHMENT A.4

- *Complete N-1-1 Contingency Analysis Results for "D2"dispatch - Both Generating Plants Operational Simultaneously; Export on Cross Sound Cable (CSC) to Long Island, NY set to 100 MW (Firm transfer level).*

Case Name	Contingency	From Bus / Inter	To Bus / Interface Name	Pre-load	Post-load	Rating	% Over	Ckt ID
							226.1	1
							197.8	1
							173.9	1
							168.8	1
							168.6	1
							157.9	1
							150.3	1
							145.3	1
							142.6	1
							141.5	1
							141.5	1
							137.5	1
							136.2	1
							125.6	1
							125.2	1
							124.8	1
							124.6	1
							123.3	1
							120.4	1
							118.3	1
							114.6	1
							113.1	1
							106.4	1
							102.3	1
							101.5	1
							101.1	1
							100.5	1

							110.8	1
							124.7	1
							120.2	1
							113.4	1
							109	1
							106.5	1
							106.3	1
							106.1	1
							106	1
							105	1
							103.1	1
							103	1
							100.8	1
							100.4	1
							100.1	1
							122.6	1
							122.2	1
							122	1
							121.9	1
							100.8	1
							100.1	1
							122.6	1
							122.2	1
							122	1
							121.9	1
							100.8	1
							100.1	1
							122.6	2
							122.2	2
							122	2
							121.9	2
							100.8	2
							100.1	2
							122.6	2
							122.2	2

							122	2
							121.9	2
							100.8	2
							100.1	2
							121.3	1
							121.1	1
							120.7	1
							120.4	1
							120.2	1
							104.5	1
							123	1
							122.8	1
							122.3	1
							121.9	1
							121.7	1
							103	1
							118.4	1
							118.4	2
							104.5	1
							104.5	2
							184.3	1
							155.9	1
							131.5	1
							126.5	1
							126.3	1
							115	1
							107.1	1
							101.9	1

ATTACHMENT A.5

- *Power Flow Summary for dispatches "D1", "D2" & "D3" are provided in PDF attachment* "Power Flow Dispatch Summary"

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ANALYSIS OF THE TECHNICAL EFFECTIVENESS OF PROPOSED GENERATION AT MERIDEN & OXFORD, CT IN RESOLVING SPRINGFIELD AND NORTH-CENTRAL CONNECTICUT AREA TRANSMISSION RELIABILITY PROBLEMS

ATTACHMENT A.5: *POWERFLOW DISPATCH SUMMARY DOCUMENT*

2014 90/10 (N.E. LOAD&LOSS 32775MW) PEAK CASE D1 CT 2500 MW

GENERATION

#		V	MW	MX	#		V	MW	MX	#		V	MW	MX
Vermont and Mass. generation														
70705	VTYAK G	0.983	667	150*	73072	ALT12 PF	1.016	65	7	73073	ALT34 PF	1.015	80	7
72986	BERKPWR	0.000	0	0	73069	MAPR1 PF	1.040	82	47*	73070	MAPR2 PF	1.041	82	47*
73071	MAPR3 PF	1.022	75	41*	73085	MT.TOM	0.000	0	0	72512	BRSWP G1	1.032	280	113
72513	BRSWP G2	0.000	0	0	73083	NRTHFD12	1.015	540	160*	73084	NRTHFD34	1.014	540	160*
72930	STNYBK1A	1.070	65	30*	72931	STNYBK1B	1.070	65	30*	72932	STNYBK1C	1.070	65	30*
72933	STNYBK 1	1.068	87	30*	72934	STNYBK2A	1.070	65	30*	72935	STNYBK2B	1.070	65	30*
73082	SPGFD PF	1.016	6	0	72244	MILLENST	1.013	117	30	72243	MILLENCT	1.017	273	66
73080	WSPFLD 3	0.000	0	0	73081	W.SPRING	0.000	0	0	73086	W.SPRCED	0.000	0	0
73077	ORCHARD	1.009	4	2*	73006	COBLEMTN	1.016	17	4*	73076	PROSPECT	1.044	26	7*
72956	WOODLAND	0.000	0	0	72957	DOREEN	0.000	0	0	72962	AGAWM PF	0.999	2	0*
Connecticut generation														
73562	MILL#2	1.018	940	372*	73563	MILL#3	1.010	1276	378	73558	MONTV#5	1.001	81	27*
73559	MONTV#6	0.000	0	0	73555	MIDDTN#2	0.000	0	0	73556	MIDDTN#3	0.989	233	41
73557	MIDDTN#4	0.000	0	0	73565	LAKERD#1	0.000	0	0	73566	LAKERD#2	0.000	0	0
73567	LAKERD#3	0.000	0	0	73549	SMD1112J	1.039	92	4*	73550	SMD1314J	1.042	46	2*
73594	WALL LV1	0.930	102	-50	73595	WALL LV2	0.000	0	0	73596	WALL LV3	0.000	0	0
73501	KLEENGT1	0.000	0	0	73502	KLEENGT2	0.000	0	0	73503	KLEEN ST	0.000	0	0
73538	AESTH PF	1.019	180	80*	73652	BE 11	0.992	170	27	73653	BE 12	0.992	170	27
73654	BE 10 ST	0.991	180	27	73647	BPTHBR#2	0.000	0	0	73648	BPTHBR#3	0.943	375	-75
73570	DEVGAS11	1.027	40	0	73571	DEVGAS12	1.026	40	0	73572	DEVGAS13	0.000	0	0
73573	DEVGAS14	0.000	0	0	73553	DEVON#7	0.000	0	0	73554	DEVON#8	0.000	0	0
73574	MILFD#1	1.034	280	29	73575	MILFD#2	1.034	280	29	73651	NH HARBR	0.993	447	175*
73551	NORHAR#1	0.000	0	0	73552	NORHAR#2	0.963	168	-33	73168	GLNBROOK	1.035	0	-103
73033	MRDN GT1	1.031	175	58*	73034	MRDN GT2	1.031	175	58*	73035	MRDN ST	1.031	180	59*
73051	TWNTICG1	1.038	169	31	73052	TWNTICG2	1.038	169	31	73053	TWNTICST	1.041	182	31
Maine and New Hampshire generation														
70060	MIS GT1	1.071	166	96	70061	MIS GT2	1.071	166	96	70062	MIS ST	1.070	191	96
70377	AEC G1	1.113	50	36	70378	AEC G2	1.114	50	36	70379	AEC G3	1.113	50	36

70389	BUCKS G4	0.000	0	0	70426	CHAMP G2	0.971	15	6*	70424	CHAMP G3	1.034	65	32*
70374	MASON G3	1.048	33	3	70375	MASON G4	1.048	33	3	70376	MASON G5	1.048	33	3
70425	MEADCOGN	1.012	93	46*	70381	RPA CG1	0.000	0	0	70382	RPA SG2	0.000	0	0
70422	WARRN G1	1.005	50	15*	70423	WARRN G2	1.025	45	11*	70386	WBK G1	1.032	172	62
70387	WBK G2	1.032	172	62	70388	WBK G3	1.031	187	62	70365	WF WY #1	0.994	50	14*
70366	WF WY #2	0.000	0	0	70367	WF WY #3	0.000	0	0	70368	WF WY #4	1.029	636	178
71857	COMRF G1	1.019	40	3	71858	COMRF G2	1.019	40	3	71859	COMRF G3	1.019	40	3
71860	COMRF G4	1.019	40	3	71861	MOORE G1	1.004	48	-3	71862	MOORE G2	1.004	48	-3
71863	MOORE G3	0.989	48	-3	71864	MOORE G4	1.001	48	-3	72868	NWNGT G1	1.001	422	84
70010	NEW_G1	1.020	169	84	70011	NEW_G2	1.020	169	84	70012	NEW_G3	1.016	195	84
71950	GRANRDG1	1.049	280	48	71951	GRANRDG2	1.037	280	48	72701	AESSTG	1.050	250	41
72866	MERMK G1	1.052	112	49	72867	MERMK G2	1.052	320	140	72869	SBRK G1	1.009	1315	335
72870	SCHILLER	0.990	47	-2	72872	SCHILLER	0.990	48	-2	72871	SCHILLER	0.990	50	-2
NEMA generation														
71126	KEND CT	0.000	0	0	71067	MYS8 GTS	1.011	520	1	71068	MYS8 ST	1.011	290	1
71069	MYS9 GTS	1.040	460	135	71070	MYS9 ST	1.084	290	200*	71060	MYST G4	0.000	0	0
71061	MYST 5G	0.000	0	0	71062	MYST G6	0.000	0	0	71063	MYST G7	1.010	565	1
71073	N.BOST 1	0.983	350	-46	71074	N.BOST 2	0.980	380	-50	71946	SALEM G1	1.024	79	11
71947	SALEM G2	1.024	78	11	71948	SALEM G3	1.020	143	21	71949	SALEM G4	1.021	400	63
72059	LENERG1	1.047	50	22	72060	LENERG2	1.035	20	9	0		0.000	0	0
SEMA and Rhode Island generation														
71095	ANPBLCK1	1.048	290	54	71096	ANPBLCK2	1.048	290	54	72377	BELL #1	1.056	290	70
72378	BELL #2	1.056	290	70	72372	BP #1 GN	1.021	238	86*	72375	BP #2 GN	1.021	241	86*
72370	BP #3 GN	1.024	605	82	72371	BP #4 GN	1.025	421	61	71531	OSP1 PF	1.048	77	38*
71532	OSP2 PF	1.048	77	38*	71533	OSP3 PF	1.051	107	52*	71534	OSP4 PF	1.048	77	38*
71535	OSP5 PF	1.048	77	38*	71536	OSP6 PF	1.051	107	52*	71084	NEA GTPF	1.046	85	40*
71085	NEA GTPF	1.046	85	40*	71086	NEA STPF	1.061	80	55*	72666	FRSQ SC1	0.991	43	-2
72667	FRSQ SC2	0.991	43	-1	72668	FRSQ SC3	0.991	42	0	72661	MANCH09A	1.010	119	35*
72662	MANCH10A	1.010	119	35*	72663	MANCH11A	1.010	119	35*	72671	RISE G1	1.043	176	88*
72672	RISE G2	0.000	0	0	72673	RISE G3	0.000	0	0	72373	MPLP 1PF	1.036	108	32
72374	MPLP 2PF	1.030	44	24	71251	CANAL G1	1.040	566	238	71252	CANAL G2	1.015	577	100*
71094	PLGRM G1	1.036	670	134	71092	EDG ST	1.036	148	28	71093	EDG GTS	1.026	552	28
71522	SOM G6	0.940	105	0	72669	TIVER G1	0.995	189	5	72670	TIVER G2	0.998	92	3
71524	DGHTNPWR	1.027	185	62	0		0.000	0	0	0		0.000	0	0

	MW	MX		MW	MX		MW	MX
MILLSTONE	2216	750	BRPT-ENERGY	520	80	MIDDLETOWN	233	41
MONTVILLE	81	27	NORWALK	168	-33	BPTHBR	375	-75
NHHARBOUR	447	175	DEVON	0	0	WALLINGFORD	102	-50
BERKSHIRE	0	0	LAKEROAD	0	0	STONYBROOK	412	180
MILLENNIUM	390	96	BRAYTONPT	1505	316	HOPE	176	88
FRSQ	485	103	SOMERSET	105	0	OSP	523	254
NEA	249	135	CANAL	1143	338	PILGRIM	670	134
MASSPWRR	239	135	ANP-BELLINGHAM	580	140	ANP-BLACKSTONE	580	107
EMI-TIVERTON	281	8	EMI-DIGHTON	185	62	SITHE-EDGAR	700	57
MYSTIC	565	1	NEWBOSTON	730	-96	SALEMHBR	700	106
SITHE-MYSTIC	1560	337	SEABROOK	1315	335	NEWINGTON	422	84
ConEd_Newington	533	251	SCHILLER	145	-6	MERRIMACK	432	189
WYMAN	686	192	VTYANKEE	667	150	BEARSWAMP	280	113
NORTHFIELD	1080	320	ALTRESCO	145	15	MIS	523	287
AEC	149	109	RPA	0	0	WESTBROOK	531	187
BUCKSPORT	0	0						

INTERFACE FLOWS

NB-NE	1004	-13	ORRING-SOUTH	1196	-9	SUROWIEC-SOUTH	590	-49
MEYANKEE-SOUTH	736	-165	MAINE-NH	1200	-140	NNE-SCOBIE+394	2400	141
SEABROOK-SOUTH	1418	175	NORTH-SOUTH	2398	-105	CMFD/MOORE-SO	264	-47
SNDYPOND-SOUTH	2282	172	CONN-IMPORT	2546	-44	SWCT	1932	126
NE-NRWLK-STFD	1291	96	BOSTON IMPORT	2230	-448	SEMA/RI EXPORT	2174	-283
SEMA EXPORT	815	-581	EAST-WEST	2631	80	NY-NE	12	-199
NW VT	324	-8	PLAT PAR	119	-38	BLISS PAR	137	-43
UPNY-CONED	4761	80	CENTRAL_EAST	1851	-148<5	CROSS-SOUND	-351	22
CONN-EXPORT	-2536	175	LILCO	-1	-57	RI_IMP	-1609	-7
CT_WCT	2874	-118	GRI EXP + LK	1597	265			

HVDC TRANSFERS FROM H-Q

CHAT-1	= 373			HIGHGATE = 200	
MADAWASK	= 0	PHII-P1	= 1000	PHII-P2	= 1000
EEL	= 0				

BUS VOLTAGES

AREA/ZONE TOTALS
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2014 90/10 (N.E. LOAD&LOSS 32775MW) PEAK CASE D1 CT 1700 MW

GENERATION

#		V	MW	MX	#		V	MW	MX	#		V	MW	MX
Vermont and Mass. generation														
70705	VTYAK G	0.983	667	150*	73072	ALT12 PF	1.026	65	16*	73073	ALT34 PF	1.025	80	16
72986	BERKPWR	0.000	0	0	73069	MAPR1 PF	1.045	82	45	73070	MAPR2 PF	1.045	82	45
73071	MAPR3 PF	1.030	75	41*	73085	MT.TOM	0.000	0	0	72512	BRSWP G1	0.000	0	0
72513	BRSWP G2	0.000	0	0	73083	NRTHFD12	1.020	540	160*	73084	NRTHFD34	1.020	540	160*
72930	STNYBK1A	1.083	65	30*	72931	STNYBK1B	1.083	65	30*	72932	STNYBK1C	1.083	65	30*
72933	STNYBK 1	1.080	87	30*	72934	STNYBK2A	1.083	65	30*	72935	STNYBK2B	1.083	65	30*
73082	SPGFD PF	1.019	6	0	72244	MILLENST	1.007	117	23	72243	MILLENCT	1.009	273	50
73080	WSPFLD 3	0.000	0	0	73081	W.SPRING	0.000	0	0	73086	W.SPRCED	0.000	0	0
73077	ORCHARD	1.006	4	2*	73006	COBLEMTN	1.013	17	4*	73076	PROSPECT	1.041	26	7*
72956	WOODLAND	0.000	0	0	72957	DOREEN	0.000	0	0	72962	AGAWM PF	1.008	2	0*
Connecticut generation														
73562	MILL#2	1.002	940	227	73563	MILL#3	0.996	1276	227	73558	MONTV#5	1.006	81	27*
73559	MONTV#6	0.000	0	0	73555	MIDDTN#2	0.000	0	0	73556	MIDDTN#3	0.987	233	37
73557	MIDDTN#4	0.000	0	0	73565	LAKERD#1	0.000	0	0	73566	LAKERD#2	0.000	0	0
73567	LAKERD#3	0.000	0	0	73549	SMD1112J	1.041	92	4*	73550	SMD1314J	1.044	46	2*
73594	WALL LV1	0.962	102	-22	73595	WALL LV2	0.962	102	-22	73596	WALL LV3	0.967	51	-22
73501	KLEENGT1	1.039	158	101	73502	KLEENGT2	1.039	158	101	73503	KLEEN ST	1.013	318	101
73538	AESTH PF	1.024	180	80*	73652	BE 11	0.990	170	24	73653	BE 12	0.990	170	24
73654	BE 10 ST	0.988	180	24	73647	BPTHBR#2	0.000	0	0	73648	BPTHBR#3	0.942	375	-80
73570	DEVGAS11	1.027	40	0	73571	DEVGAS12	1.026	40	0	73572	DEVGAS13	0.000	0	0
73573	DEVGAS14	0.000	0	0	73553	DEVON#7	0.000	0	0	73554	DEVON#8	0.000	0	0
73574	MILFD#1	1.032	280	25	73575	MILFD#2	1.032	280	25	73651	NH HARBR	0.993	447	175*
73551	NORHAR#1	0.000	0	0	73552	NORHAR#2	0.962	168	-36	73168	GLNBROOK	1.035	0	-112
73033	MRDN GT1	1.040	175	58*	73034	MRDN GT2	1.040	175	58*	73035	MRDN ST	1.040	180	59*
73051	TWNTICG1	1.037	169	29	73052	TWNTICG2	1.037	169	29	73053	TWNTICST	1.039	182	30
Maine and New Hampshire generation														
70060	MIS GT1	1.071	166	95	70061	MIS GT2	1.071	166	95	70062	MIS ST	1.070	191	95
70377	AEC G1	1.112	50	36	70378	AEC G2	1.113	50	36	70379	AEC G3	1.112	50	36

70389	BUCKS G4	0.000	0	0	70426	CHAMP G2	0.972	15	6*	70424	CHAMP G3	1.035	65	32*
70374	MASON G3	1.048	33	3	70375	MASON G4	1.048	33	3	70376	MASON G5	1.048	33	3
70425	MEADCOGN	1.011	93	46*	70381	RPA CG1	0.000	0	0	70382	RPA SG2	0.000	0	0
70422	WARRN G1	1.011	50	15*	70423	WARRN G2	1.030	45	11*	70386	WBK G1	1.032	172	63
70387	WBK G2	1.032	172	63	70388	WBK G3	1.031	187	63	70365	WF WY #1	0.994	50	14*
70366	WF WY #2	0.000	0	0	70367	WF WY #3	0.000	0	0	70368	WF WY #4	1.030	636	179
71857	COMRF G1	1.019	40	3	71858	COMRF G2	1.019	40	3	71859	COMRF G3	1.019	40	3
71860	COMRF G4	1.019	40	3	71861	MOORE G1	1.004	48	-3	71862	MOORE G2	1.004	48	-3
71863	MOORE G3	0.989	48	-3	71864	MOORE G4	1.001	48	-3	72868	NWNGT G1	1.001	422	84
70010	NEW_G1	1.020	169	84	70011	NEW_G2	1.020	169	84	70012	NEW_G3	1.016	195	84
71950	GRANRDG1	1.050	280	49	71951	GRANRDG2	1.038	280	49	72701	AESSTG	1.050	250	41
72866	MERMK G1	1.052	112	49	72867	MERMK G2	1.052	320	140	72869	SBRK G1	1.009	1279	331
72870	SCHILLER	0.990	47	-2	72872	SCHILLER	0.990	48	-2	72871	SCHILLER	0.989	50	-2
NEMA generation														
71126	KEND CT	0.000	0	0	71067	MYS8 GTS	1.013	520	8	71068	MYS8 ST	1.014	290	8
71069	MYS9 GTS	1.044	460	152	71070	MYS9 ST	1.084	290	200*	71060	MYST G4	0.000	0	0
71061	MYST 5G	0.000	0	0	71062	MYST G6	0.000	0	0	71063	MYST G7	1.010	565	8
71073	N.BOST 1	0.982	350	-46	71074	N.BOST 2	0.980	380	-50	71946	SALEM G1	1.024	79	11
71947	SALEM G2	1.024	78	11	71948	SALEM G3	1.020	143	21	71949	SALEM G4	1.021	400	64
72059	LENERG1	1.048	50	23	72060	LENERG2	1.035	20	10	0		0.000	0	0
SEMA and Rhode Island generation														
71095	ANPBLCK1	1.025	290	7	71096	ANPBLCK2	1.025	290	7	72377	BELL #1	1.052	290	62
72378	BELL #2	1.052	290	62	72372	BP #1 GN	1.021	238	85*	72375	BP #2 GN	1.020	241	85*
72370	BP #3 GN	1.022	605	68	72371	BP #4 GN	1.022	421	51	71531	OSP1 PF	1.052	77	38*
71532	OSP2 PF	1.052	77	38*	71533	OSP3 PF	1.055	107	52*	71534	OSP4 PF	1.052	77	38*
71535	OSP5 PF	1.052	77	38*	71536	OSP6 PF	1.055	107	52*	71084	NEA GTPF	1.046	85	40*
71085	NEA GTPF	1.046	85	40*	71086	NEA STPF	1.061	80	55*	72666	FRSQ SC1	0.991	43	-4
72667	FRSQ SC2	0.991	43	-3	72668	FRSQ SC3	0.991	42	-2	72661	MANCH09A	1.012	119	35*
72662	MANCH10A	1.012	119	35*	72663	MANCH11A	1.012	119	35*	72671	RISE G1	1.047	176	88*
72672	RISE G2	0.000	0	0	72673	RISE G3	0.000	0	0	72373	MPLP 1PF	1.037	108	32
72374	MPLP 2PF	1.030	44	24	71251	CANAL G1	1.040	566	236	71252	CANAL G2	1.015	577	100*
71094	PLGRM G1	1.035	670	130	71092	EDG ST	1.035	148	26	71093	EDG GTS	1.025	552	26
71522	SOM G6	0.941	105	0	72669	TIVER G1	0.993	189	4	72670	TIVER G2	0.997	92	2
71524	DGHTNPWR	1.021	185	54	0		0.000	0	0	0		0.000	0	0

	MW	MX		MW	MX		MW	MX
MILLSTONE	2216	455	BRPT-ENERGY	520	72	MIDDLETOWN	233	37
MONTVILLE	81	27	NORWALK	168	-36	BPTHBR	375	-80
NHHARBOUR	447	175	DEVON	0	0	WALLINGFORD	255	-65
BERKSHIRE	0	0	LAKEROAD	0	0	STONYBROOK	412	180
MILLENNIUM	390	73	BRAYTONPT	1505	288	HOPE	176	88
FRSQ	485	96	SOMERSET	105	0	OSP	523	254
NEA	249	135	CANAL	1143	336	PILGRIM	670	130
MASSPWRR	239	130	ANP-BELLINGHAM	580	124	ANP-BLACKSTONE	580	14
EMI-TIVERTON	281	5	EMI-DIGHTON	185	54	SITHE-EDGAR	700	51
MYSTIC	565	8	NEWBOSTON	730	-96	SALEMHBR	700	107
SITHE-MYSTIC	1560	368	SEABROOK	1279	331	NEWINGTON	422	84
ConEd_Newington	533	251	SCHILLER	145	-6	MERRIMACK	432	189
WYMAN	686	193	VTYANKEE	667	150	BEARSWAMP	0	0
NORTHFIELD	1080	320	ALTRESCO	145	32	MIS	523	286
AEC	149	108	RPA	0	0	WESTBROOK	531	189
BUCKSPORT	0	0						

INTERFACE FLOWS

NB-NE	1004	-13	ORRING-SOUTH	1195	-10	SUROWIEC-SOUTH	607	-50
MEYANKEE-SOUTH	745	-165	MAINE-NH	1216	-141	NNE-SCOBIE+394	2382	139
SEABROOK-SOUTH	1403	175	NORTH-SOUTH	2371	-148	CMFD/MOORE-SO	266	-48
SNDYPOND-SOUTH	2299	170	CONN-IMPORT	1745	-89	SWCT	1781	195
NE-NRWLK-STFD	1293	107	BOSTON IMPORT	2356	-444	SEMA/RI EXPORT	1802	-310
SEMA EXPORT	447	-548	EAST-WEST	2111	47	NY-NE	-3	-213
NW VT	326	-8	PLAT PAR	119	-38	BLISS PAR	137	-44
UPNY-CONED	4771	88	CENTRAL_EAST	1891	-136<6	CROSS-SOUND	-352	-57
CONN-EXPORT	-1739	155	LILCO	0	-57	RI_IMP	-1611	4
CT_WCT	2084	-265	GRI EXP + LK	1600	205			

HVDC TRANSFERS FROM H-Q

CHAT-1	= 373			HIGHGATE =	200
MADAWASK	= 0	PHII-P1	= 1000	PHII-P2 =	1000
EEL	= 0				

BUS VOLTAGES

AREA/ZONE TOTALS

2014 90/10 (N.E. LOAD&LOSS 32775MW) PEAK CASE D2 CT 2500 MW

GENERATION

#		V	MW	MX	#		V	MW	MX	#		V	MW	MX
Vermont and Mass. generation														
70705	VTYAK G	0.981	667	150*	73072	ALT12 PF	1.021	65	11	73073	ALT34 PF	1.020	80	11
72986	BERKPWR	1.043	280	63	73069	MAPR1 PF	1.019	82	25	73070	MAPR2 PF	1.019	82	25
73071	MAPR3 PF	1.014	75	25	73085	MT.TOM	1.002	147	13	72512	BRSWP G1	0.000	0	0
72513	BRSWP G2	0.000	0	0	73083	NRTHFD12	1.018	540	160*	73084	NRTHFD34	1.018	540	160*
72930	STNYBK1A	1.081	65	30*	72931	STNYBK1B	1.081	65	30*	72932	STNYBK1C	1.081	65	30*
72933	STNYBK 1	1.078	87	30*	72934	STNYBK2A	1.081	65	30*	72935	STNYBK2B	1.081	65	30*
73082	SPGFD PF	1.018	6	0	72244	MILLENST	1.007	117	22	72243	MILLENCT	1.008	273	49
73080	WSPFLD 3	0.987	101	-7	73081	W.SPRING	1.018	55	-7	73086	W.SPRCED	0.967	38	-7
73077	ORCHARD	1.012	4	2*	73006	COBLEMTN	1.017	17	4*	73076	PROSPECT	1.044	26	7*
72956	WOODLAND	0.000	0	0	72957	DOREEN	0.000	0	0	72962	AGAWM PF	1.019	2	0*
Connecticut generation														
73562	MILL#2	1.015	940	347	73563	MILL#3	1.007	1276	347	73558	MONTV#5	1.002	81	27*
73559	MONTV#6	0.000	0	0	73555	MIDDTN#2	0.000	0	0	73556	MIDDTN#3	0.988	233	38
73557	MIDDTN#4	0.000	0	0	73565	LAKERD#1	0.000	0	0	73566	LAKERD#2	0.000	0	0
73567	LAKERD#3	0.000	0	0	73549	SMD1112J	1.041	92	4*	73550	SMD1314J	1.044	46	2*
73594	WALL LV1	0.931	102	-50	73595	WALL LV2	0.000	0	0	73596	WALL LV3	0.000	0	0
73501	KLEENGT1	0.000	0	0	73502	KLEENGT2	0.000	0	0	73503	KLEEN ST	0.000	0	0
73538	AESTH PF	1.020	180	80*	73652	BE 11	0.993	170	27	73653	BE 12	0.993	170	27
73654	BE 10 ST	0.991	180	27	73647	BPTHBR#2	0.000	0	0	73648	BPTHBR#3	0.944	375	-73
73570	DEVGAS11	1.027	40	0	73571	DEVGAS12	1.026	40	0	73572	DEVGAS13	0.000	0	0
73573	DEVGAS14	0.000	0	0	73553	DEVON#7	0.000	0	0	73554	DEVON#8	0.000	0	0
73574	MILFD#1	1.034	280	29	73575	MILFD#2	1.034	280	29	73651	NH HARBR	0.993	447	175*
73551	NORHAR#1	0.000	0	0	73552	NORHAR#2	0.963	168	-33	73168	GLNBROOK	1.035	0	-101
73033	MRDN GT1	1.029	175	58*	73034	MRDN GT2	1.029	175	58*	73035	MRDN ST	1.030	180	59*
73051	TWNTICG1	1.016	169	8	73052	TWNTICG2	1.016	169	8	73053	TWNTICST	1.018	182	8
Maine and New Hampshire generation														
70060	MIS GT1	1.072	166	97	70061	MIS GT2	1.072	166	97	70062	MIS ST	1.070	191	97
70377	AEC G1	1.114	50	37	70378	AEC G2	1.115	50	37	70379	AEC G3	1.114	50	37

70389	BUCKS G4	0.000	0	0	70426	CHAMP G2	0.971	15	6*	70424	CHAMP G3	1.034	65	32*
70374	MASON G3	1.047	33	3*	70375	MASON G4	1.047	33	3*	70376	MASON G5	1.047	33	3*
70425	MEADCOGN	1.011	93	46*	70381	RPA CG1	0.000	0	0	70382	RPA SG2	0.000	0	0
70422	WARRN G1	1.005	50	15*	70423	WARRN G2	1.024	45	11*	70386	WBK G1	1.029	172	58
70387	WBK G2	1.029	172	58	70388	WBK G3	1.028	187	58	70365	WF WY #1	1.016	50	13
70366	WF WY #2	1.016	50	13	70367	WF WY #3	1.015	100	25	70368	WF WY #4	1.031	636	185
71857	COMRF G1	1.019	40	3	71858	COMRF G2	1.019	40	3	71859	COMRF G3	1.019	40	3
71860	COMRF G4	1.019	40	3	71861	MOORE G1	1.004	48	-3	71862	MOORE G2	1.004	48	-3
71863	MOORE G3	0.989	48	-3	71864	MOORE G4	1.001	48	-3	72868	NWNGT G1	1.002	422	86
70010	NEW_G1	1.021	169	86	70011	NEW_G2	1.021	169	86	70012	NEW_G3	1.017	195	86
71950	GRANRDG1	1.050	280	50	71951	GRANRDG2	1.039	280	50	72701	AESSTG	1.052	250	45
72866	MERMK G1	1.052	112	50	72867	MERMK G2	1.053	320	142	72869	SBRK G1	1.010	1252	343
72870	SCHILLER	0.989	47	-2	72872	SCHILLER	0.989	48	-2	72871	SCHILLER	0.989	50	-2
NEMA generation														
71126	KEND CT	0.000	0	0	71067	MYS8 GTS	1.014	520	13	71068	MYS8 ST	1.016	290	13
71069	MYS9 GTS	1.046	460	163	71070	MYS9 ST	1.084	290	200*	71060	MYST G4	0.000	0	0
71061	MYST 5G	0.000	0	0	71062	MYST G6	0.000	0	0	71063	MYST G7	1.011	565	13
71073	N.BOST 1	0.982	350	-46	71074	N.BOST 2	0.980	380	-50	71946	SALEM G1	1.024	79	11
71947	SALEM G2	1.024	78	11	71948	SALEM G3	1.020	143	22	71949	SALEM G4	1.021	400	65
72059	LENERG1	1.048	50	23	72060	LENERG2	1.036	20	10	0		0.000	0	0
SEMA and Rhode Island generation														
71095	ANPBLCK1	1.039	290	35	71096	ANPBLCK2	1.039	290	35	72377	BELL #1	1.055	290	67
72378	BELL #2	1.055	290	67	72372	BP #1 GN	1.021	238	87*	72375	BP #2 GN	1.021	241	87*
72370	BP #3 GN	1.023	605	77	72371	BP #4 GN	1.024	421	58	71531	OSP1 PF	1.050	77	38*
71532	OSP2 PF	1.050	77	38*	71533	OSP3 PF	1.052	107	52*	71534	OSP4 PF	1.050	77	38*
71535	OSP5 PF	1.050	77	38*	71536	OSP6 PF	1.052	107	52*	71084	NEA GTPF	1.046	85	40*
71085	NEA GTPF	1.046	85	40*	71086	NEA STPF	1.061	80	55*	72666	FRSQ SC1	0.991	43	-3
72667	FRSQ SC2	0.991	43	-2	72668	FRSQ SC3	0.991	42	0	72661	MANCH09A	1.011	119	35*
72662	MANCH10A	1.011	119	35*	72663	MANCH11A	1.011	119	35*	72671	RISE G1	1.045	176	88*
72672	RISE G2	0.000	0	0	72673	RISE G3	0.000	0	0	72373	MPLP 1PF	1.040	108	39
72374	MPLP 2PF	1.031	44	27*	71251	CANAL G1	1.042	566	243	71252	CANAL G2	1.015	577	100*
71094	PLGRM G1	1.036	670	137	71092	EDG ST	1.036	148	29	71093	EDG GTS	1.026	552	29
71522	SOM G6	0.000	0	0	72669	TIVER G1	0.997	189	9	72670	TIVER G2	1.000	92	5
71524	DGHTNPWR	1.033	185	70	0		0.000	0	0	0		0.000	0	0

	MW	MX		MW	MX		MW	MX
MILLSTONE	2216	694	BRPT-ENERGY	520	82	MIDDLETOWN	233	38
MONTVILLE	81	27	NORWALK	168	-33	BPTHBR	375	-73
NHHARBOUR	447	175	DEVON	0	0	WALLINGFORD	102	-50
BERKSHIRE	280	63	LAKEROAD	0	0	STONYBROOK	412	180
MILLENNIUM	390	72	BRAYTONPT	1505	309	HOPE	176	88
FRSQ	485	100	SOMERSET	0	0	OSP	523	254
NEA	249	135	CANAL	1143	343	PILGRIM	670	137
MASSPWRR	239	74	ANP-BELLINGHAM	580	135	ANP-BLACKSTONE	580	70
EMI-TIVERTON	281	13	EMI-DIGHTON	185	70	SITHE-EDGAR	700	58
MYSTIC	565	13	NEWBOSTON	730	-96	SALEMHBR	700	108
SITHE-MYSTIC	1560	389	SEABROOK	1252	343	NEWINGTON	422	86
ConEd_Newington	533	259	SCHILLER	145	-6	MERRIMACK	432	192
WYMAN	836	235	VTYANKEE	667	150	BEARSWAMP	0	0
NORTHFIELD	1080	320	ALTRESCO	145	23	MIS	523	290
AEC	149	111	RPA	0	0	WESTBROOK	531	173
BUCKSPORT	0	0						

INTERFACE FLOWS

NB-NE	1004	-12	ORRING-SOUTH	1196	-6	SUROWIEC-SOUTH	584	-44
MEYANKEE-SOUTH	738	-164	MAINE-NH	1345	-139	NNE-SCOBIE+394	2468	157
SEABROOK-SOUTH	1412	188	NORTH-SOUTH	2467	-145	CMFD/MOORE-SO	266	-47
SNDYPOND-SOUTH	2333	162	CONN-IMPORT	2548	11	SWCT	1933	190
NE-NRWLK-STFD	1292	92	BOSTON IMPORT	2446	-449	SEMA/RI EXPORT	1956	-288
SEMA EXPORT	638	-568	EAST-WEST	2272	66	NY-NE	13	-165
NW VT	325	-8	PLAT PAR	119	-38	BLISS PAR	137	-43
UPNY-CONED	4766	81	CENTRAL_EAST	1872	-132<5	CROSS-SOUND	-351	19
CONN-EXPORT	-2532	154	LILCO	-1	-57	RI_IMP	-1608	-2
CT_WCT	2873	-68	GRI EXP + LK	1599	244			

HVDC TRANSFERS FROM H-Q

CHAT-1	= 373			HIGHGATE =	200
MADAWASK	= 0	PHII-P1	= 1000	PHII-P2 =	1000
EEL	= 0				

BUS VOLTAGES

AREA/ZONE TOTALS
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2014 90/10 (N.E. LOAD&LOSS 32775MW) PEAK CASE D2 CT 1700 MW

GENERATION

#	V	MW	MX	#	V	MW	MX	#	V	MW	MX
Vermont and Mass. generation											
70705 VTYAK G	0.987	667	150*	73072 ALT12 PF	1.014	65	5	73073 ALT34 PF	1.012	80	5
72986 BERKPWR	1.037	280	52	73069 MAPR1 PF	1.017	82	23	73070 MAPR2 PF	1.017	82	23
73071 MAPR3 PF	1.012	75	23	73085 MT.TOM	1.001	147	12	72512 BRSWP G1	0.000	0	0
72513 BRSWP G2	0.000	0	0	73083 NRTHFD12	1.026	540	160*	73084 NRTHFD34	1.026	540	160*
72930 STNYBK1A	1.093	65	30*	72931 STNYBK1B	1.093	65	30*	72932 STNYBK1C	1.093	65	30*
72933 STNYBK 1	1.091	87	30*	72934 STNYBK2A	1.093	65	30*	72935 STNYBK2B	1.093	65	30*
73082 SPGFD PF	1.024	6	0	72244 MILLENST	1.002	117	16	72243 MILLENCT	1.001	273	36
73080 WSPFLD 3	0.987	101	-7	73081 W.SPRING	1.024	55	-7	73086 W.SPRCED	0.965	38	-7
73077 ORCHARD	1.007	4	2*	73006 COBLEMTN	1.017	17	4*	73076 PROSPECT	1.044	26	7*
72956 WOODLAND	0.000	0	0	72957 DOREEN	0.000	0	0	72962 AGAWM PF	1.019	2	0*
Connecticut generation											
73562 MILL#2	0.999	940	201	73563 MILL#3	0.994	1276	201	73558 MONTV#5	1.006	81	27*
73559 MONTV#6	0.000	0	0	73555 MIDDTN#2	0.000	0	0	73556 MIDDTN#3	0.987	233	37
73557 MIDDTN#4	0.000	0	0	73565 LAKERD#1	0.000	0	0	73566 LAKERD#2	0.000	0	0
73567 LAKERD#3	0.000	0	0	73549 SMD1112J	1.040	92	4*	73550 SMD1314J	1.043	46	2*
73594 WALL LV1	0.962	102	-22	73595 WALL LV2	0.962	102	-22	73596 WALL LV3	0.966	51	-22
73501 KLEENGT1	1.030	158	84	73502 KLEENGT2	1.030	158	84	73503 KLEEN ST	1.008	318	84
73538 AESTH PF	1.024	180	80*	73652 BE 11	0.990	170	24	73653 BE 12	0.990	170	24
73654 BE 10 ST	0.988	180	24	73647 BPTHBR#2	0.000	0	0	73648 BPTHBR#3	0.942	375	-80
73570 DEVGAS11	1.027	40	0	73571 DEVGAS12	1.026	40	0	73572 DEVGAS13	0.000	0	0
73573 DEVGAS14	0.000	0	0	73553 DEVON#7	0.000	0	0	73554 DEVON#8	0.000	0	0
73574 MILFD#1	1.032	280	24	73575 MILFD#2	1.032	280	24	73651 NH HARBR	0.993	447	175*
73551 NORHAR#1	0.000	0	0	73552 NORHAR#2	0.962	168	-36	73168 GLNBROOK	1.035	0	-113
73033 MRDN GT1	1.040	175	58*	73034 MRDN GT2	1.040	175	58*	73035 MRDN ST	1.040	180	59*
73051 TWNTICG1	1.037	169	29	73052 TWNTICG2	1.037	169	29	73053 TWNTICST	1.039	182	30
Maine and New Hampshire generation											
70060 MIS GT1	1.071	166	96	70061 MIS GT2	1.071	166	96	70062 MIS ST	1.070	191	96
70377 AEC G1	1.112	50	36	70378 AEC G2	1.113	50	36	70379 AEC G3	1.113	50	36

70389	BUCKS G4	0.000	0	0	70426	CHAMP G2	0.972	15	6*	70424	CHAMP G3	1.035	65	32*
70374	MASON G3	1.047	33	3*	70375	MASON G4	1.047	33	3*	70376	MASON G5	1.047	33	3*
70425	MEADCOGN	1.010	93	46*	70381	RPA CG1	0.000	0	0	70382	RPA SG2	0.000	0	0
70422	WARRN G1	1.016	50	15*	70423	WARRN G2	1.035	45	11*	70386	WBK G1	1.029	172	58
70387	WBK G2	1.029	172	58	70388	WBK G3	1.028	187	58	70365	WF WY #1	1.016	50	13
70366	WF WY #2	1.016	50	13	70367	WF WY #3	1.015	100	25	70368	WF WY #4	1.031	636	186
71857	COMRF G1	1.019	40	3	71858	COMRF G2	1.019	40	3	71859	COMRF G3	1.019	40	3
71860	COMRF G4	1.019	40	3	71861	MOORE G1	1.003	48	-3	71862	MOORE G2	1.004	48	-3
71863	MOORE G3	0.989	48	-3	71864	MOORE G4	1.001	48	-3	72868	NWNGT G1	1.002	422	86
70010	NEW_G1	1.021	169	86	70011	NEW_G2	1.021	169	86	70012	NEW_G3	1.017	195	86
71950	GRANRDG1	1.051	280	51	71951	GRANRDG2	1.039	280	51	72701	AESSTG	1.050	250	43
72866	MERMK G1	1.052	112	49	72867	MERMK G2	1.052	320	141	72869	SBRK G1	1.011	1299	359
72870	SCHILLER	0.989	47	-2	72872	SCHILLER	0.989	48	-2	72871	SCHILLER	0.989	50	-2
NEMA generation														
71126	KEND CT	0.000	0	0	71067	MYS8 GTS	1.017	520	26	71068	MYS8 ST	1.022	290	26
71069	MYS9 GTS	1.039	460	129	71070	MYS9 ST	1.084	290	200*	71060	MYST G4	0.000	0	0
71061	MYST 5G	0.000	0	0	71062	MYST G6	0.000	0	0	71063	MYST G7	1.013	565	26
71073	N.BOST 1	0.983	350	-46	71074	N.BOST 2	0.000	0	0	71946	SALEM G1	1.024	79	11
71947	SALEM G2	1.024	78	11	71948	SALEM G3	1.020	143	22	71949	SALEM G4	1.021	400	66
72059	LENERG1	1.049	50	23	72060	LENERG2	1.036	20	10	0		0.000	0	0
SEMA and Rhode Island generation														
71095	ANPBLCK1	1.015	290	-15	71096	ANPBLCK2	1.015	290	-15	72377	BELL #1	1.047	290	52
72378	BELL #2	1.047	290	52	72372	BP #1 GN	1.021	238	85*	72375	BP #2 GN	1.020	241	85*
72370	BP #3 GN	1.021	605	62	72371	BP #4 GN	1.021	421	46	71531	OSP1 PF	1.054	77	38*
71532	OSP2 PF	1.054	77	38*	71533	OSP3 PF	1.057	107	52*	71534	OSP4 PF	1.054	77	38*
71535	OSP5 PF	1.054	77	38*	71536	OSP6 PF	1.057	107	52*	71084	NEA GTPF	1.046	85	40*
71085	NEA GTPF	1.046	85	40*	71086	NEA STPF	1.061	80	55*	72666	FRSQ SC1	0.991	43	-5
72667	FRSQ SC2	0.991	43	-4	72668	FRSQ SC3	0.991	42	-3	72661	MANCH09A	1.013	119	35*
72662	MANCH10A	1.013	119	35*	72663	MANCH11A	1.013	119	35*	72671	RISE G1	1.048	176	88*
72672	RISE G2	0.000	0	0	72673	RISE G3	0.000	0	0	72373	MPLP 1PF	1.038	108	35
72374	MPLP 2PF	1.031	44	26	71251	CANAL G1	1.041	566	241	71252	CANAL G2	1.015	577	100*
71094	PLGRM G1	1.035	670	133	71092	EDG ST	1.035	148	26	71093	EDG GTS	1.025	552	26
71522	SOM G6	0.000	0	0	72669	TIVER G1	0.996	189	7	72670	TIVER G2	0.999	92	4
71524	DGHTNPWR	1.027	185	61	0		0.000	0	0	0		0.000	0	0

	MW	MX		MW	MX		MW	MX
MILLSTONE	2216	401	BRPT-ENERGY	520	71	MIDDLETOWN	233	37
MONTVILLE	81	27	NORWALK	168	-36	BPTHBR	375	-80
NHHARBOUR	447	175	DEVON	0	0	WALLINGFORD	255	-67
BERKSHIRE	280	52	LAKEROAD	0	0	STONYBROOK	412	180
MILLENNIUM	390	53	BRAYTONPT	1505	278	HOPE	176	88
FRSQ	485	93	SOMERSET	0	0	OSP	523	254
NEA	249	135	CANAL	1143	341	PILGRIM	670	133
MASSPWRR	239	69	ANP-BELLINGHAM	580	104	ANP-BLACKSTONE	580	-29
EMI-TIVERTON	281	11	EMI-DIGHTON	185	61	SITHE-EDGAR	700	53
MYSTIC	565	26	NEWBOSTON	350	-46	SALEMHBR	700	110
SITHE-MYSTIC	1560	380	SEABROOK	1299	359	NEWINGTON	422	86
ConEd_Newington	533	258	SCHILLER	145	-6	MERRIMACK	432	190
WYMAN	836	237	VTYANKEE	667	150	BEARSWAMP	0	0
NORTHFIELD	1080	320	ALTRESCO	145	10	MIS	523	287
AEC	149	109	RPA	0	0	WESTBROOK	531	175
BUCKSPORT	0	0						

INTERFACE FLOWS

NB-NE	1004	-12	ORRING-SOUTH	1195	-9	SUROWIEC-SOUTH	616	-47
MEYANKEE-SOUTH	755	-164	MAINE-NH	1377	-142	NNE-SCOBIE+394	2544	154
SEABROOK-SOUTH	1477	193	NORTH-SOUTH	2550	-162	CMFD/MOORE-SO	271	-48
SNDYPOND-SOUTH	2394	151	CONN-IMPORT	1743	-55	SWCT	1781	199
NE-NRWLK-STFD	1293	108	BOSTON IMPORT	2954	-476	SEMA/RI EXPORT	1591	-350
SEMA EXPORT	270	-538	EAST-WEST	1500	17	NY-NE	1	-228
NW VT	327	-6	PLAT PAR	119	-39	BLISS PAR	137	-45
UPNY-CONED	4772	89	CENTRAL_EAST	1895	-134<6	CROSS-SOUND	-351	-58
CONN-EXPORT	-1732	150	LILCO	0	-57	RI_IMP	-1610	7
CT_WCT	2082	-235	GRI EXP + LK	1603	159			

HVDC TRANSFERS FROM H-Q

CHAT-1	= 373			HIGHGATE =	200
MADAWASK	= 0	PHII-P1	= 1000	PHII-P2 =	1000
EEL	= 0				

BUS VOLTAGES

AREA/ZONE TOTALS
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2014 90/10 (N.E. LOAD&LOSS 32775MW) PEAK CASE D3 CT 2500 MW

GENERATION

#	V	MW	MX	#	V	MW	MX	#	V	MW	MX
Vermont and Mass. generation											
70705 VTYAK G	0.981	667	150*	73072 ALT12 PF	1.013	65	4	73073 ALT34 PF	1.011	80	4
72986 BERKPWR	1.047	280	72	73069 MAPR1 PF	0.000	0	0	73070 MAPR2 PF	0.000	0	0
73071 MAPR3 PF	0.000	0	0	73085 MT.TOM	0.000	0	0	72512 BRSWP G1	1.014	280	64
72513 BRSWP G2	1.014	280	64	73083 NRTHFD12	1.015	540	160*	73084 NRTHFD34	1.015	540	160*
72930 STNYBK1A	0.000	0	0	72931 STNYBK1B	0.000	0	0	72932 STNYBK1C	0.000	0	0
72933 STNYBK 1	0.000	0	0	72934 STNYBK2A	0.000	0	0	72935 STNYBK2B	0.000	0	0
73082 SPGFD PF	1.022	6	0	72244 MILLENST	1.012	117	28	72243 MILLENCT	1.015	273	62
73080 WSPFLD 3	0.999	101	9	73081 W.SPRING	1.022	38	9*	73086 W.SPRCED	1.024	38	9
73077 ORCHARD	1.009	4	2*	73006 COBLEMTN	1.014	17	4*	73076 PROSPECT	1.042	26	7*
72956 WOODLAND	0.000	0	0	72957 DOREEN	0.000	0	0	72962 AGAWM PF	1.016	2	0*
Connecticut generation											
73562 MILL#2	1.014	940	339	73563 MILL#3	1.006	1276	339	73558 MONTV#5	1.001	81	27*
73559 MONTV#6	0.000	0	0	73555 MIDDTN#2	0.000	0	0	73556 MIDDTN#3	0.987	233	37
73557 MIDDTN#4	0.000	0	0	73565 LAKERD#1	1.039	280	133	73566 LAKERD#2	1.039	280	133
73567 LAKERD#3	1.039	280	133	73549 SMD1112J	1.042	92	4*	73550 SMD1314J	1.044	46	2*
73594 WALL LV1	0.931	102	-50	73595 WALL LV2	0.000	0	0	73596 WALL LV3	0.000	0	0
73501 KLEENGT1	0.000	0	0	73502 KLEENGT2	0.000	0	0	73503 KLEEN ST	0.000	0	0
73538 AESTH PF	1.020	180	80*	73652 BE 11	0.993	170	27	73653 BE 12	0.993	170	27
73654 BE 10 ST	0.992	180	27	73647 BPTHBR#2	0.000	0	0	73648 BPTHBR#3	0.944	375	-73
73570 DEVGAS11	1.027	40	0	73571 DEVGAS12	1.026	40	0	73572 DEVGAS13	0.000	0	0
73573 DEVGAS14	0.000	0	0	73553 DEVON#7	0.000	0	0	73554 DEVON#8	0.000	0	0
73574 MILFD#1	1.034	280	30	73575 MILFD#2	1.034	280	30	73651 NH HARBR	0.993	447	175*
73551 NORHAR#1	0.000	0	0	73552 NORHAR#2	0.963	168	-32	73168 GLNBROOK	1.035	0	-100
73033 MRDN GT1	1.029	175	58*	73034 MRDN GT2	1.029	175	58*	73035 MRDN ST	1.030	180	59*
73051 TWNTICG1	1.016	169	8	73052 TWNTICG2	1.016	169	8	73053 TWNTICST	1.017	182	8
Maine and New Hampshire generation											
70060 MIS GT1	1.071	166	96	70061 MIS GT2	1.071	166	96	70062 MIS ST	1.070	191	96
70377 AEC G1	1.111	50	35	70378 AEC G2	1.112	50	35	70379 AEC G3	1.111	50	35

70389	BUCKS G4	0.000	0	0	70426	CHAMP G2	0.971	15	6*	70424	CHAMP G3	1.034	65	32*
70374	MASON G3	1.048	33	3	70375	MASON G4	1.048	33	3	70376	MASON G5	1.048	33	3
70425	MEADCOGN	1.014	93	46*	70381	RPA CG1	0.000	0	0	70382	RPA SG2	0.000	0	0
70422	WARRN G1	1.005	50	15*	70423	WARRN G2	1.024	45	11*	70386	WBK G1	1.029	172	58
70387	WBK G2	1.029	172	58	70388	WBK G3	1.028	187	58	70365	WF WY #1	1.016	50	13
70366	WF WY #2	1.016	50	13	70367	WF WY #3	1.015	100	25	70368	WF WY #4	0.000	0	0
71857	COMRF G1	1.020	40	3	71858	COMRF G2	1.020	40	3	71859	COMRF G3	1.019	40	3
71860	COMRF G4	1.020	40	3	71861	MOORE G1	1.004	48	-3	71862	MOORE G2	1.004	48	-3
71863	MOORE G3	0.989	48	-3	71864	MOORE G4	1.001	48	-3	72868	NWNGT G1	1.000	422	79
70010	NEW_G1	1.018	169	79	70011	NEW_G2	1.018	169	79	70012	NEW_G3	1.014	195	79
71950	GRANRDG1	1.048	280	46	71951	GRANRDG2	1.036	280	46	72701	AESSTG	1.046	250	33
72866	MERMK G1	1.050	112	47	72867	MERMK G2	1.050	320	133	72869	SBRK G1	1.006	1315	294
72870	SCHILLER	0.990	47	-2	72872	SCHILLER	0.990	48	-2	72871	SCHILLER	0.990	50	-2
NEMA generation														
71126	KEND CT	0.000	0	0	71067	MYS8 GTS	1.011	520	-3	71068	MYS8 ST	1.010	290	-3
71069	MYS9 GTS	1.045	460	160	71070	MYS9 ST	1.084	290	200*	71060	MYST G4	0.000	0	0
71061	MYST 5G	0.000	0	0	71062	MYST G6	0.000	0	0	71063	MYST G7	1.009	565	-3
71073	N.BOST 1	0.982	350	-46	71074	N.BOST 2	0.980	380	-50	71946	SALEM G1	1.023	79	10
71947	SALEM G2	1.024	78	10	71948	SALEM G3	1.019	143	21	71949	SALEM G4	1.020	400	62
72059	LENERG1	1.044	50	19	72060	LENERG2	1.033	20	8	0		0.000	0	0
SEMA and Rhode Island generation														
71095	ANPBLCK1	1.014	290	-16	71096	ANPBLCK2	1.014	290	-16	72377	BELL #1	1.058	290	74
72378	BELL #2	1.058	290	74	72372	BP #1 GN	1.021	238	86*	72375	BP #2 GN	1.021	241	86*
72370	BP #3 GN	1.021	605	61	72371	BP #4 GN	1.021	421	45	71531	OSP1 PF	1.031	77	20
71532	OSP2 PF	1.031	77	20	71533	OSP3 PF	1.032	107	27	71534	OSP4 PF	1.031	77	20
71535	OSP5 PF	1.031	77	20	71536	OSP6 PF	1.032	107	27	71084	NEA GTPF	1.046	85	40*
71085	NEA GTPF	1.046	85	40*	71086	NEA STPF	1.061	80	55*	72666	FRSQ SC1	0.991	43	-4
72667	FRSQ SC2	0.991	43	-3	72668	FRSQ SC3	0.991	42	-2	72661	MANCH09A	1.012	119	35*
72662	MANCH10A	1.012	119	35*	72663	MANCH11A	1.012	119	35*	72671	RISE G1	1.047	176	88*
72672	RISE G2	0.000	0	0	72673	RISE G3	0.000	0	0	72373	MPLP 1PF	1.038	108	35
72374	MPLP 2PF	1.031	44	27	71251	CANAL G1	1.042	566	244	71252	CANAL G2	1.015	577	100*
71094	PLGRM G1	1.036	670	139	71092	EDG ST	1.037	148	30	71093	EDG GTS	1.026	552	30
71522	SOM G6	0.000	0	0	72669	TIVER G1	0.997	189	8	72670	TIVER G2	1.000	92	4
71524	DGHTNPWR	1.032	185	69	0		0.000	0	0	0		0.000	0	0

	MW	MX		MW	MX		MW	MX
MILLSTONE	2216	678	BRPT-ENERGY	520	82	MIDDLETOWN	233	37
MONTVILLE	81	27	NORWALK	168	-32	BPTHBR	375	-73
NHHARBOUR	447	175	DEVON	0	0	WALLINGFORD	102	-50
BERKSHIRE	280	72	LAKEROAD	840	398	STONYBROOK	0	0
MILLENNIUM	390	90	BRAYTONPT	1505	279	HOPE	176	88
FRSQ	485	96	SOMERSET	0	0	OSP	523	135
NEA	249	135	CANAL	1143	344	PILGRIM	670	139
MASSPWRR	0	0	ANP-BELLINGHAM	580	147	ANP-BLACKSTONE	580	-33
EMI-TIVERTON	281	13	EMI-DIGHTON	185	69	SITHE-EDGAR	700	60
MYSTIC	565	-3	NEWBOSTON	730	-96	SALEMHBR	700	104
SITHE-MYSTIC	1560	355	SEABROOK	1315	294	NEWINGTON	422	79
ConEd_Newington	533	236	SCHILLER	145	-6	MERRIMACK	432	179
WYMAN	200	50	VTYANKEE	667	150	BEARSWAMP	560	128
NORTHFIELD	1080	320	ALTRESCO	145	8	MIS	523	289
AEC	149	106	RPA	0	0	WESTBROOK	531	174
BUCKSPORT	0	0						

INTERFACE FLOWS

NB-NE	1004	-12	ORRING-SOUTH	1195	-8	SUROWIEC-SOUTH	603	-42
MEYANKEE-SOUTH	740	-165	MAINE-NH	714	-167	NNE-SCOBIE+394	1966	92
SEABROOK-SOUTH	1334	142	NORTH-SOUTH	1944	-109	CMFD/MOORE-SO	268	-48
SNDYPOND-SOUTH	2095	193	CONN-IMPORT	2549	68	SWCT	1933	190
NE-NRWLK-STFD	1292	92	BOSTON IMPORT	2455	-438	SEMA/RI EXPORT	2776	-178
SEMA EXPORT	631	-567	EAST-WEST	2573	260	NY-NE	3	-183
NW VT	326	-8	PLAT PAR	119	-39	BLISS PAR	137	-44
UPNY-CONED	4761	78	CENTRAL_EAST	1845	-148<5	CROSS-SOUND	-351	18
CONN-EXPORT	-1702	301	LILCO	-1	-57	RI_IMP	-1613	-5
CT_WCT	2874	-57	GRI EXP + LK	2439	356			

HVDC TRANSFERS FROM H-Q

CHAT-1 = 373
MADAWASK = 0
EEL = 0

PHII-P1 = 1000

HIGHGATE = 200
PHII-P2 = 1000

BUS VOLTAGES

AREA/ZONE TOTALS

2014 90/10 (N.E. LOAD&LOSS 32775MW) PEAK CASE D3 CT 1700 MW

GENERATION

#		V	MW	MX	#		V	MW	MX	#		V	MW	MX
Vermont and Mass. generation														
70705	VTYAK G	0.983	667	150*	73072	ALT12 PF	1.023	65	13	73073	ALT34 PF	1.021	80	13
72986	BERKPWR	1.040	280	57	73069	MAPR1 PF	0.000	0	0	73070	MAPR2 PF	0.000	0	0
73071	MAPR3 PF	0.000	0	0	73085	MT.TOM	0.000	0	0	72512	BRSWP G1	0.000	0	0
72513	BRSWP G2	0.000	0	0	73083	NRTHFD12	1.019	540	160*	73084	NRTHFD34	1.019	540	160*
72930	STNYBK1A	0.000	0	0	72931	STNYBK1B	0.000	0	0	72932	STNYBK1C	0.000	0	0
72933	STNYBK 1	0.000	0	0	72934	STNYBK2A	0.000	0	0	72935	STNYBK2B	0.000	0	0
73082	SPGFD PF	1.021	6	0	72244	MILLENST	1.009	117	24	72243	MILLENCT	1.011	273	54
73080	WSPFLD 3	0.996	101	5	73081	W.SPRING	1.021	38	5*	73086	W.SPRCED	1.008	38	5
73077	ORCHARD	1.008	4	2*	73006	COBLEMTN	1.016	17	4*	73076	PROSPECT	1.045	26	7*
72956	WOODLAND	0.000	0	0	72957	DOREEN	0.000	0	0	72962	AGAWM PF	1.017	2	0*
Connecticut generation														
73562	MILL#2	1.002	940	224	73563	MILL#3	0.996	1276	224	73558	MONTV#5	1.005	81	27*
73559	MONTV#6	0.000	0	0	73555	MIDDTN#2	0.000	0	0	73556	MIDDTN#3	0.986	233	33
73557	MIDDTN#4	0.000	0	0	73565	LAKERD#1	1.025	280	100	73566	LAKERD#2	1.025	280	100
73567	LAKERD#3	1.025	280	100	73549	SMD1112J	1.041	92	4*	73550	SMD1314J	1.043	46	2*
73594	WALL LV1	0.962	102	-22	73595	WALL LV2	0.962	102	-22	73596	WALL LV3	0.966	51	-22
73501	KLEENGT1	1.042	158	106	73502	KLEENGT2	1.042	158	106	73503	KLEEN ST	1.015	318	106
73538	AESTH PF	1.023	180	80*	73652	BE 11	0.991	170	25	73653	BE 12	0.991	170	25
73654	BE 10 ST	0.989	180	25	73647	BPTHBR#2	0.000	0	0	73648	BPTHBR#3	0.943	375	-76
73570	DEVGAS11	1.027	40	0	73571	DEVGAS12	1.026	40	0	73572	DEVGAS13	0.000	0	0
73573	DEVGAS14	0.000	0	0	73553	DEVON#7	0.000	0	0	73554	DEVON#8	0.000	0	0
73574	MILFD#1	1.033	280	26	73575	MILFD#2	1.033	280	26	73651	NH HARBR	0.993	447	175*
73551	NORHAR#1	0.000	0	0	73552	NORHAR#2	0.962	168	-36	73168	GLNBROOK	1.035	0	-107
73033	MRDN GT1	1.037	175	58*	73034	MRDN GT2	1.037	175	58*	73035	MRDN ST	1.037	180	59*
73051	TWNTICG1	1.016	169	8	73052	TWNTICG2	1.016	169	8	73053	TWNTICST	1.018	182	8
Maine and New Hampshire generation														
70060	MIS GT1	1.071	166	96	70061	MIS GT2	1.071	166	96	70062	MIS ST	1.070	191	96
70377	AEC G1	1.109	50	35	70378	AEC G2	1.110	50	35	70379	AEC G3	1.110	50	35

70389	BUCKS G4	0.000	0	0	70426	CHAMP G2	0.972	15	6*	70424	CHAMP G3	1.035	65	32*
70374	MASON G3	1.047	33	3*	70375	MASON G4	1.047	33	3*	70376	MASON G5	1.047	33	3*
70425	MEADCOGN	1.013	93	46*	70381	RPA CG1	0.000	0	0	70382	RPA SG2	0.000	0	0
70422	WARRN G1	1.016	50	15*	70423	WARRN G2	1.035	45	11*	70386	WBK G1	1.030	172	60
70387	WBK G2	1.030	172	60	70388	WBK G3	1.029	187	60	70365	WF WY #1	1.016	50	13
70366	WF WY #2	1.016	50	13	70367	WF WY #3	1.015	100	25	70368	WF WY #4	0.000	0	0
71857	COMRF G1	1.020	40	3	71858	COMRF G2	1.020	40	3	71859	COMRF G3	1.020	40	3
71860	COMRF G4	1.020	40	3	71861	MOORE G1	1.004	48	-3	71862	MOORE G2	1.004	48	-3
71863	MOORE G3	0.989	48	-3	71864	MOORE G4	1.001	48	-3	72868	NWNGT G1	1.001	422	80
70010	NEW_G1	1.019	169	80	70011	NEW_G2	1.019	169	80	70012	NEW_G3	1.015	195	80
71950	GRANRDG1	1.049	280	48	71951	GRANRDG2	1.037	280	48	72701	AESSTG	1.047	250	36
72866	MERMK G1	1.050	112	47	72867	MERMK G2	1.051	320	134	72869	SBRK G1	1.007	1298	307
72870	SCHILLER	0.990	47	-2	72872	SCHILLER	0.990	48	-2	72871	SCHILLER	0.990	50	-2
NEMA generation														
71126	KEND CT	0.000	0	0	71067	MYS8 GTS	1.013	520	8	71068	MYS8 ST	1.014	290	8
71069	MYS9 GTS	1.045	460	161	71070	MYS9 ST	1.084	290	200*	71060	MYST G4	0.000	0	0
71061	MYST 5G	0.000	0	0	71062	MYST G6	0.000	0	0	71063	MYST G7	1.010	565	8
71073	N.BOST 1	0.982	350	-46	71074	N.BOST 2	0.980	380	-50	71946	SALEM G1	1.024	79	11
71947	SALEM G2	1.024	78	11	71948	SALEM G3	1.020	143	21	71949	SALEM G4	1.021	400	64
72059	LENERG1	1.048	50	23	72060	LENERG2	1.035	20	9	0		0.000	0	0
SEMA and Rhode Island generation														
71095	ANPBLCK1	1.015	290	-15	71096	ANPBLCK2	1.015	290	-15	72377	BELL #1	1.060	290	80
72378	BELL #2	1.060	290	80	72372	BP #1 GN	1.021	238	87*	72375	BP #2 GN	1.021	241	87*
72370	BP #3 GN	1.020	605	59	72371	BP #4 GN	1.021	421	45	71531	OSP1 PF	1.029	77	18
71532	OSP2 PF	1.029	77	18	71533	OSP3 PF	1.029	107	24	71534	OSP4 PF	1.029	77	18
71535	OSP5 PF	1.029	77	18	71536	OSP6 PF	1.029	107	24	71084	NEA GTPF	1.046	85	40*
71085	NEA GTPF	1.046	85	40*	71086	NEA STPF	1.061	80	55*	72666	FRSQ SC1	0.991	43	-5
72667	FRSQ SC2	0.991	43	-4	72668	FRSQ SC3	0.991	42	-3	72661	MANCH09A	1.013	119	35*
72662	MANCH10A	1.013	119	35*	72663	MANCH11A	1.013	119	35*	72671	RISE G1	1.048	176	88*
72672	RISE G2	0.000	0	0	72673	RISE G3	0.000	0	0	72373	MPLP 1PF	1.040	108	39
72374	MPLP 2PF	1.031	44	27*	71251	CANAL G1	1.042	566	243	71252	CANAL G2	1.015	577	100*
71094	PLGRM G1	1.036	670	139	71092	EDG ST	1.036	148	28	71093	EDG GTS	1.025	552	28
71522	SOM G6	0.000	0	0	72669	TIVER G1	0.996	189	7	72670	TIVER G2	0.999	92	4
71524	DGHTNPWR	1.028	185	62	0		0.000	0	0	0		0.000	0	0

	MW	MX		MW	MX		MW	MX
MILLSTONE	2216	447	BRPT-ENERGY	520	75	MIDDLETOWN	233	33
MONTVILLE	81	27	NORWALK	168	-36	BPTHBR	375	-76
NHHARBOUR	447	175	DEVON	0	0	WALLINGFORD	255	-67
BERKSHIRE	280	57	LAKEROAD	840	299	STONYBROOK	0	0
MILLENNIUM	390	78	BRAYTONPT	1505	277	HOPE	176	88
FRSQ	485	94	SOMERSET	0	0	OSP	523	122
NEA	249	135	CANAL	1143	343	PILGRIM	670	139
MASSPWRR	0	0	ANP-BELLINGHAM	580	160	ANP-BLACKSTONE	580	-30
EMI-TIVERTON	281	11	EMI-DIGHTON	185	62	SITHE-EDGAR	700	55
MYSTIC	565	8	NEWBOSTON	730	-96	SALEMHBR	700	107
SITHE-MYSTIC	1560	377	SEABROOK	1298	307	NEWINGTON	422	80
ConEd_Newington	533	241	SCHILLER	145	-6	MERRIMACK	432	182
WYMAN	200	51	VTYANKEE	667	150	BEARSWAMP	0	0
NORTHFIELD	1080	320	ALTRESCO	145	25	MIS	523	287
AEC	149	104	RPA	0	0	WESTBROOK	531	179
BUCKSPORT	0	0						

INTERFACE FLOWS

NB-NE	1004	-12	ORRING-SOUTH	1195	-9	SUROWIEC-SOUTH	638	-44
MEYANKEE-SOUTH	759	-164	MAINE-NH	751	-169	NNE-SCOBIE+394	1981	110
SEABROOK-SOUTH	1328	156	NORTH-SOUTH	1942	-100	CMFD/MOORE-SO	269	-48
SNDYPOND-SOUTH	2112	124	CONN-IMPORT	1749	-19	SWCT	1781	251
NE-NRWLK-STFD	1293	102	BOSTON IMPORT	2426	-465	SEMA/RI EXPORT	2469	-221
SEMA EXPORT	336	-537	EAST-WEST	2292	158	NY-NE	0	-199
NW VT	327	-8	PLAT PAR	119	-39	BLISS PAR	137	-45
UPNY-CONED	4774	89	CENTRAL_EAST	1902	-137<6	CROSS-SOUND	-351	-52
CONN-EXPORT	-907	238	LILCO	-1	-57	RI_IMP	-1614	1
CT_WCT	2086	-210	GRI EXP + LK	2439	283			

HVDC TRANSFERS FROM H-Q

CHAT-1	= 373			HIGHGATE =	200
MADAWASK	= 0	PHII-P1	= 1000	PHII-P2 =	1000
EEL	= 0				

BUS VOLTAGES

AREA/ZONE TOTALS

2014 90/10 (N.E. LOAD&LOSS 32775MW) PEAK CASE D2 CT 1700 MW

GENERATION

#		V	MW	MX	#		V	MW	MX	#		V	MW	MX
Vermont and Mass. generation														
70705	VTYAK G	0.988	667	150*	73072	ALT12 PF	1.012	65	3	73073	ALT34 PF	1.010	80	3
72986	BERKPWR	1.033	280	45	73069	MAPR1 PF	1.015	82	22	73070	MAPR2 PF	1.016	82	22
73071	MAPR3 PF	1.011	75	22	73085	MT.TOM	1.001	147	11	72512	BRSWP G1	0.000	0	0
72513	BRSWP G2	0.000	0	0	73083	NRTHFD12	1.025	540	153*	73084	NRTHFD34	1.025	540	153*
72930	STNYBK1A	1.095	65	30*	72931	STNYBK1B	1.095	65	30*	72932	STNYBK1C	1.095	65	30*
72933	STNYBK 1	1.092	87	30*	72934	STNYBK2A	1.095	65	30*	72935	STNYBK2B	1.095	65	30*
73082	SPGFD PF	1.024	6	0	72244	MILLENST	1.000	117	15	72243	MILLENCT	1.000	273	33
73080	WSPFLD 3	0.986	101	-8	73081	W.SPRING	1.024	55	-8	73086	W.SPRCED	0.963	38	-8
73077	ORCHARD	1.008	4	2*	73006	COBLEMTN	1.017	17	4*	73076	PROSPECT	1.044	26	7*
72956	WOODLAND	0.000	0	0	72957	DOREEN	0.000	0	0	72962	AGAWM PF	1.019	2	0*
Connecticut generation														
73562	MILL#2	0.998	940	186	73563	MILL#3	0.993	1276	186	73558	MONTV#5	1.006	81	27*
73559	MONTV#6	0.000	0	0	73555	MIDDTN#2	0.000	0	0	73556	MIDDTN#3	0.985	233	32
73557	MIDDTN#4	0.000	0	0	73565	LAKERD#1	0.000	0	0	73566	LAKERD#2	0.000	0	0
73567	LAKERD#3	0.000	0	0	73549	SMD1112J	1.042	92	4*	73550	SMD1314J	1.045	46	2*
73594	WALL LV1	0.959	102	-25	73595	WALL LV2	0.959	102	-25	73596	WALL LV3	0.963	51	-25
73501	KLEENGT1	1.017	158	59	73502	KLEENGT2	1.017	158	59	73503	KLEEN ST	1.001	318	59
73538	AESTH PF	1.023	180	77	73652	BE 11	0.989	170	23	73653	BE 12	0.989	170	23
73654	BE 10 ST	0.987	180	23	73647	BPTHBR#2	0.000	0	0	73648	BPTHBR#3	0.941	375	-84
73570	DEVGAS11	1.027	40	0	73571	DEVGAS12	1.027	40	0	73572	DEVGAS13	0.000	0	0
73573	DEVGAS14	0.000	0	0	73553	DEVON#7	0.000	0	0	73554	DEVON#8	0.000	0	0
73574	MILFD#1	1.031	280	21	73575	MILFD#2	1.031	280	21	73651	NH HARBR	0.985	447	113
73551	NORHAR#1	0.000	0	0	73552	NORHAR#2	0.962	168	-36	73168	GLNBROOK	1.035	0	-114
73033	MRDN GT1	1.040	175	55	73034	MRDN GT2	1.040	175	55	73035	MRDN ST	1.040	180	57
73051	TWNTICG1	1.036	169	28	73052	TWNTICG2	1.036	169	28	73053	TWNTICST	1.038	182	29
Maine and New Hampshire generation														
70060	MIS GT1	1.071	166	95	70061	MIS GT2	1.071	166	95	70062	MIS ST	1.070	191	95
70377	AEC G1	1.112	50	36	70378	AEC G2	1.113	50	36	70379	AEC G3	1.112	50	36

70389	BUCKS G4	0.000	0	0	70426	CHAMP G2	0.973	15	6*	70424	CHAMP G3	1.035	65	32*
70374	MASON G3	1.048	33	3*	70375	MASON G4	1.048	33	3*	70376	MASON G5	1.048	33	3*
70425	MEADCOGN	1.010	93	46*	70381	RPA CG1	0.000	0	0	70382	RPA SG2	0.000	0	0
70422	WARRN G1	1.016	50	15*	70423	WARRN G2	1.036	45	11*	70386	WBK G1	1.029	172	58
70387	WBK G2	1.029	172	58	70388	WBK G3	1.028	187	58	70365	WF WY #1	1.016	50	13
70366	WF WY #2	1.016	50	13	70367	WF WY #3	1.015	100	25	70368	WF WY #4	1.031	636	184
71857	COMRF G1	1.019	40	3	71858	COMRF G2	1.019	40	3	71859	COMRF G3	1.019	40	3
71860	COMRF G4	1.019	40	3	71861	MOORE G1	1.003	48	-3	71862	MOORE G2	1.004	48	-3
71863	MOORE G3	0.989	48	-3	71864	MOORE G4	1.001	48	-3	72868	NWNGT G1	1.002	422	85
70010	NEW_G1	1.021	169	85	70011	NEW_G2	1.021	169	85	70012	NEW_G3	1.016	195	85
71950	GRANRDG1	1.051	280	50	71951	GRANRDG2	1.039	280	50	72701	AESSTG	1.049	250	39
72866	MERMK G1	1.051	112	48	72867	MERMK G2	1.051	320	138	72869	SBRK G1	1.008	1032	295
72870	SCHILLER	0.989	47	-2	72872	SCHILLER	0.989	48	-2	72871	SCHILLER	0.989	50	-2
NEMA generation														
71126	KEND CT	0.000	0	0	71067	MYS8 GTS	1.015	520	18	71068	MYS8 ST	1.018	290	18
71069	MYS9 GTS	1.038	460	125	71070	MYS9 ST	1.084	290	200*	71060	MYST G4	0.000	0	0
71061	MYST 5G	0.000	0	0	71062	MYST G6	0.000	0	0	71063	MYST G7	1.012	565	18
71073	N.BOST 1	0.983	350	-46	71074	N.BOST 2	0.000	0	0	71946	SALEM G1	1.024	79	11
71947	SALEM G2	1.024	78	11	71948	SALEM G3	1.020	143	22	71949	SALEM G4	1.021	400	65
72059	LENERG1	1.047	50	22	72060	LENERG2	1.035	20	9	0		0.000	0	0
SEMA and Rhode Island generation														
71095	ANPBLCK1	1.011	290	-23	71096	ANPBLCK2	1.011	290	-23	72377	BELL #1	1.046	290	49
72378	BELL #2	1.046	290	49	72372	BP #1 GN	1.020	238	84*	72375	BP #2 GN	1.020	241	84*
72370	BP #3 GN	1.020	605	59	72371	BP #4 GN	1.020	421	44	71531	OSP1 PF	1.054	77	38*
71532	OSP2 PF	1.054	77	38*	71533	OSP3 PF	1.057	107	52*	71534	OSP4 PF	1.054	77	38*
71535	OSP5 PF	1.054	77	38*	71536	OSP6 PF	1.057	107	52*	71084	NEA GTPF	1.046	85	40*
71085	NEA GTPF	1.046	85	40*	71086	NEA STPF	1.061	80	55*	72666	FRSQ SC1	0.992	43	-5
72667	FRSQ SC2	0.991	43	-5	72668	FRSQ SC3	0.991	42	-3	72661	MANCH09A	1.014	119	35
72662	MANCH10A	1.014	119	35	72663	MANCH11A	1.014	119	35	72671	RISE G1	1.049	176	88*
72672	RISE G2	0.000	0	0	72673	RISE G3	0.000	0	0	72373	MPLP 1PF	1.038	108	35
72374	MPLP 2PF	1.031	44	26	71251	CANAL G1	1.041	566	241	71252	CANAL G2	1.015	577	100*
71094	PLGRM G1	1.035	670	133	71092	EDG ST	1.035	148	27	71093	EDG GTS	1.025	552	27
71522	SOM G6	0.000	0	0	72669	TIVER G1	0.996	189	7	72670	TIVER G2	0.999	92	4
71524	DGHTNPWR	1.027	185	61	0		0.000	0	0	0		0.000	0	0

	MW	MX		MW	MX		MW	MX
MILLSTONE	2216	373	BRPT-ENERGY	520	70	MIDDLETOWN	233	32
MONTVILLE	81	27	NORWALK	168	-36	BPTHBR	375	-84
NHHARBOUR	447	113	DEVON	0	0	WALLINGFORD	255	-74
BERKSHIRE	280	45	LAKEROAD	0	0	STONYBROOK	412	180
MILLENNIUM	390	48	BRAYTONPT	1505	272	HOPE	176	88
FRSQ	485	92	SOMERSET	0	0	OSP	523	254
NEA	249	135	CANAL	1143	341	PILGRIM	670	133
MASSPWRR	239	65	ANP-BELLINGHAM	580	97	ANP-BLACKSTONE	580	-45
EMI-TIVERTON	281	11	EMI-DIGHTON	185	61	SITHE-EDGAR	700	53
MYSTIC	565	18	NEWBOSTON	350	-46	SALEMHBR	700	108
SITHE-MYSTIC	1560	360	SEABROOK	1032	295	NEWINGTON	422	85
ConEd_Newington	533	254	SCHILLER	145	-6	MERRIMACK	432	186
WYMAN	836	235	VTYANKEE	667	150	BEARSWAMP	0	0
NORTHFIELD	1080	306	ALTRESCO	145	7	MIS	523	286
AEC	149	108	RPA	0	0	WESTBROOK	531	175
BUCKSPORT	0	0						

INTERFACE FLOWS

NB-NE	1004	-12	ORRING-SOUTH	1195	-9	SUROWIEC-SOUTH	618	-47
MEYANKEE-SOUTH	755	-164	MAINE-NH	1377	-146	NNE-SCOBIE+394	2295	127
SEABROOK-SOUTH	1266	172	NORTH-SOUTH	2289	-173	CMFD/MOORE-SO	273	-48
SNDYPOND-SOUTH	2328	157	CONN-IMPORT	1485	-52	SWCT	1781	216
NE-NRWLK-STFD	1294	109	BOSTON IMPORT	2951	-486	SEMA/RI EXPORT	1590	-365
SEMA EXPORT	270	-538	EAST-WEST	1247	27	NY-NE	-3	-235
NW VT	327	-5	PLAT PAR	119	-38	BLISS PAR	137	-46
UPNY-CONED	4775	91	CENTRAL_EAST	1904	-134<6	CROSS-SOUND	-100	-26
CONN-EXPORT	-1476	127	LILCO	0	-57	RI_IMP	-1610	10
CT_WCT	1826	-221	GRI EXP + LK	1604	145			

HVDC TRANSFERS FROM H-Q

CHAT-1	= 373			HIGHGATE =	200
MADAWASK	= 0	PHII-P1	= 1000	PHII-P2 =	1000
EEL	= 0				

BUS VOLTAGES

AREA/ZONE TOTALS
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