



**Northeast  
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# Proposed Plan Application Analysis

## Sasco Creek 51R Temporary Transformer and 115-kV Circuit Breaker CL&P Service Area (Steady State Analysis)

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## Executive Summary

The new 115-kV circuit breaker and the 18 MVA temporary 115/13.8-kV transformer at Sasco Creek 51 R substation will provide immediate load relief to CL&P's Greens Farms 22W 26.7-kV distribution substation which is fed from Weston 115-kV substation. The Greens Farms distribution substation was overloaded this past summer due to unexpected high load growth. Also, on August 2, 2005 the Greens Farms 22W-2X distribution power transformer failed. The failed transformer has been replaced but Greens Farms still required load relief from Sasco Creek Substation. Therefore, a temporary transformer is needed to meet the summer 2006 and 2007 peak load. The expected in service date for this project is June 2006.

CL&P's proposal for a permanent solution to meet the growing electric power needs of the Town of Westport, and the overloaded Greens Farms distribution substation is to install two 47 MVA, 115/13.8-kV power transformers on an open property adjacent to Sasco Creek 51R. This permanent solution, along with other upgrades planned at other CL&P substations, will allow CL&P to meet the long term needs of the Westport area. The permanent solution has a proposed in-service date of June 2008. The analyses regarding the permanent solution will be handled in a future study.

The project includes the transfer of load from other substations in the area to Sasco Creek 51R substation as follows:

<b>Substation</b>	<b>Pre-project (MW)</b>	<b>Post-project (MW)</b>
Weston	34.4	27.4
Norwalk	61.7	57.7
Compo	40.6	34.6
Sasco Creek	13.4	30.4

The peak load case used in this study was obtained from the ISO-NE Library with all updates to the transmission system. The NEPOOL load was scaled to model a 2006 extreme summer peak load at approximately 28,785 MW (including losses) based on the 2006 CELT report 90/10 load forecast.

The thermal and voltage analyses were performed by using the PSS/E load flow software package version 28. All post-contingency thermal overloads above 95% of the LTE rating and voltage violations exceed  $\pm 5\%$  of nominal were reported. There were no voltage violations in the pre-project or post-project analyses. The pre-project thermal violations were relieved by the project. In addition, there were no new violations created by the project.

The transfer limit analysis was also performed by using the PSS/E-MUST software version 8.1 which determined that the load swapping to Sasco Creek 51R substation does not impact on the Norwalk – Stamford transfer limit. Sensitivity analysis considering the Plumtree – Norwalk (SWCT Phase I) line addition was also conducted.

Based on the results of the study, Northeast Utilities believes that this system change will not have a significant adverse impact on the reliability or operability of the New England Bulk Power System.

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**Introduction**

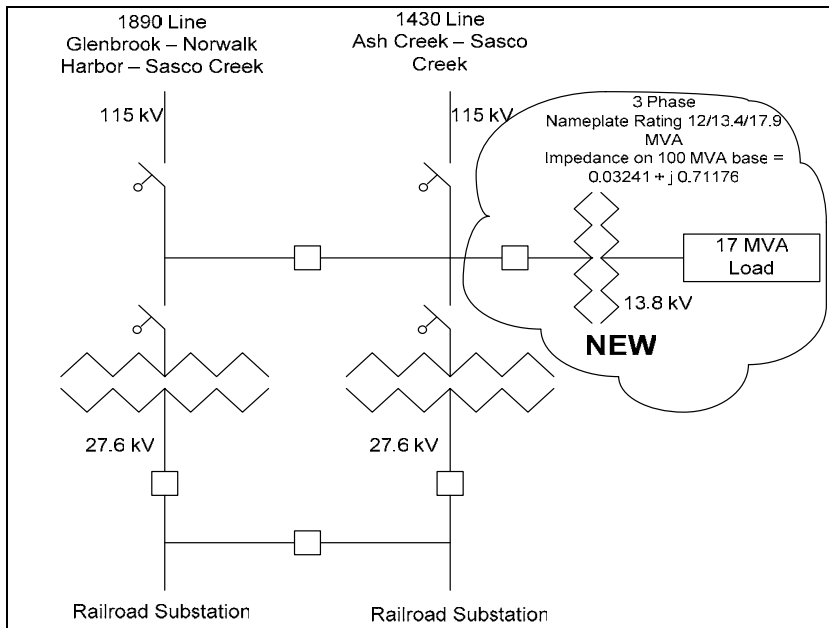
This report presents results of a NEPOOL Section I.3.9 steady-state analysis for the proposed temporary 18 MVA 115/13.8-kV power transformer addition at Sasco Creek 51R substation in Stamford, CT. The purpose of the installing a temporary transformer at Sasco Creek 51R substation is to provide immediate load relief to CL&P’s Greens Farms 22W 27.6-kV distribution substation which supplied by Weston 21M 115-kV transmission substation. The Greens Farms 22W substation was overloaded this past summer due to unexpected high load growth. Also, on August 2, 2005 the Greens Farms 22W-2X distribution power transformer failed. CDOT and Metro North have agreed to allow CL&P to install a temporary power transformer and supply the existing load to relieve Greens Farms 22W.

The first part of the CL&P plan is to install an 18 MVA, 115/13.8-kV, temporary power transformer and two 13.8-kV distribution feeders in the existing fenced area at Sasco Creek 51R substation by May 31, 2006 (Figure I). This aggressive schedule will allow for the required load relief of the Greens Farms 22W substation and its distribution feeders in time to meet the summer 2006 peak. The temporary power transformer installation at Sasco Creek 51R will help to maintain reliable service to Westport customers in this area until a permanent solution is complete. The temporary transformer and associated equipment at Sasco Creek 51R would be in place for approximately 30 months. The project includes the transfer of load from other substations in the area as follows:

Substation	Pre-project (MW)	Post-project (MW)
Weston	34.4	27.4
Norwalk	61.7	57.7
Compo	40.6	34.6
Sasco Creek	13.4	30.4

CL&P’s proposal for a permanent solution to meet the growing electric power needs of the Town of Westport is to install two 47 MVA, 115/13.8-kV power transformers on an open property adjacent to Sasco Creek 51R. This permanent solution, along with other upgrades planned at other CL&P substations, will allow CL&P to meet the long term needs of the Westport area. The analysis regarding the permanent solution will be handled in a separate study. At this point, the priority is to obtain approval for the temporary installation.

**Figure 1 – Location of the Proposed Temporary Transformer**



**Standards and Criteria**

Power flow analysis results were analyzed using the criteria in the Reliability Standards for the New England Power Pool (NEPOOL) and in the Transmission Reliability Standards for Northeast Utilities (NU) dated January 2004. Table 1 and Table 2 contain the thermal loading and the voltage performance criteria that are normally used in planning studies for the NU transmission system.

**Table 1 - Thermal Loading Performance Criteria**

System Condition	Maximum Allowable Facility Loading
<b>Pre-Contingency</b>	Normal Rating
<b>Post-Contingency</b>	LTE Rating

**Table 2 - Voltage Performance Criteria**

Voltage Level	NU’s Bus Voltage Limits
	Normal/Emergency Conditions
<b>&gt;115 kV</b> <b>Millstone 345 kV</b>	± 5% of nominal 100 to 105% of nominal
<b>&lt;115 kV</b>	± 5% of nominal

**Base Case Descriptions**

The power flow base case (presasco.sav) used in this study was taken from the ISO-NE Library with Glenbrook – Norwalk and Wilton projects being modeled in the case. The NEPOOL load was scaled to model a 2006 extreme summer peak load at approximately 28,785 MW (including losses) based on the 2006 CELT report 90/10 load forecast. The summary of the base case is provided in Appendix B.

**Methodology**

The post-project power flow case (postsasco.sav) was created by adding a distribution power transformer at Sasco Creek S/S and transferring 7 MVA from Weston S/S, 4 MVA from Norwalk and 6 MVA from Compo S/S to Sasco Creek S/S.

The thermal and voltage analyses were performed by using the PSS/E load flow software package version 28 with the contingency outages provided in Appendix C. All post-contingency thermal overloads above 95% of the LTE rating and voltage violations exceed ± 5% of nominal were reported.

The Bethel to Norwalk Project with one HPFF cable from Archers Lane to Norwalk Junction was also added to the power flow cases and simulated as a sensitivity test.

The transfer limit analysis was also performed by using the PSS-MUST software version 8.1. The linear FCITC calculation with a single transfer from Wyman to Norwalk Harbor was simulated to determine if any possible impact the load swap might have on the Norwalk-Stamford transfer limit in both before and after the Bethel to Norwalk Project.

## **Performance Evaluation**

### Thermal and Voltage Analyses Results

The thermal overload and voltage violation results of the pre-project, post-project and the sensitivity tests are summarized and reported in the Appendix D. All branch loading and voltage violations existed in the pre-project case. Some of the violations are reduced in the post-project case while the remainders are unchanged.

### Transfer Limit Analysis Results

Based on the results of the N-1 transfer limit study, the 17 MVA load transfer to Sasco Creek substation from Weston, Norwalk and Compo substations increases the Norwalk – Stamford transfer capability by approximately 10 MW without the Bethel – Norwalk Project, and approximately 17 MW with the Bethel – Norwalk Project.

Additional N-1 transfer limit tests with Cos Cob out-of-service and Cos Cob, Norwalk Harbor out-of-service with 200 MW export to Long Island on the 1385 cables were also performed. The results of the tests also had shown that the Norwalk – Stamford transfer capability increases by approximately 10 MW without the Bethel – Norwalk Project and approximately 17 MW with the Bethel – Norwalk Project.

The FCITC study reports are provided in Appendix E.

## **Conclusion**

Based on the results of the studies, no transmission elements are adversely impacted by adding the circuit breaker and the temporary transformer at Sasco Creek substation. The load being transferred to Sasco Creek is small and limited by the proposed temporary transformer. Therefore, Northeast Utilities believes that this system change will not have a significant adverse impact on the reliability or operability of the New England Bulk Power System.

**APPENDIX A – Transmission Network Maps & One-Line Drawings**



Figure 3: System One-Line Diagram After Project

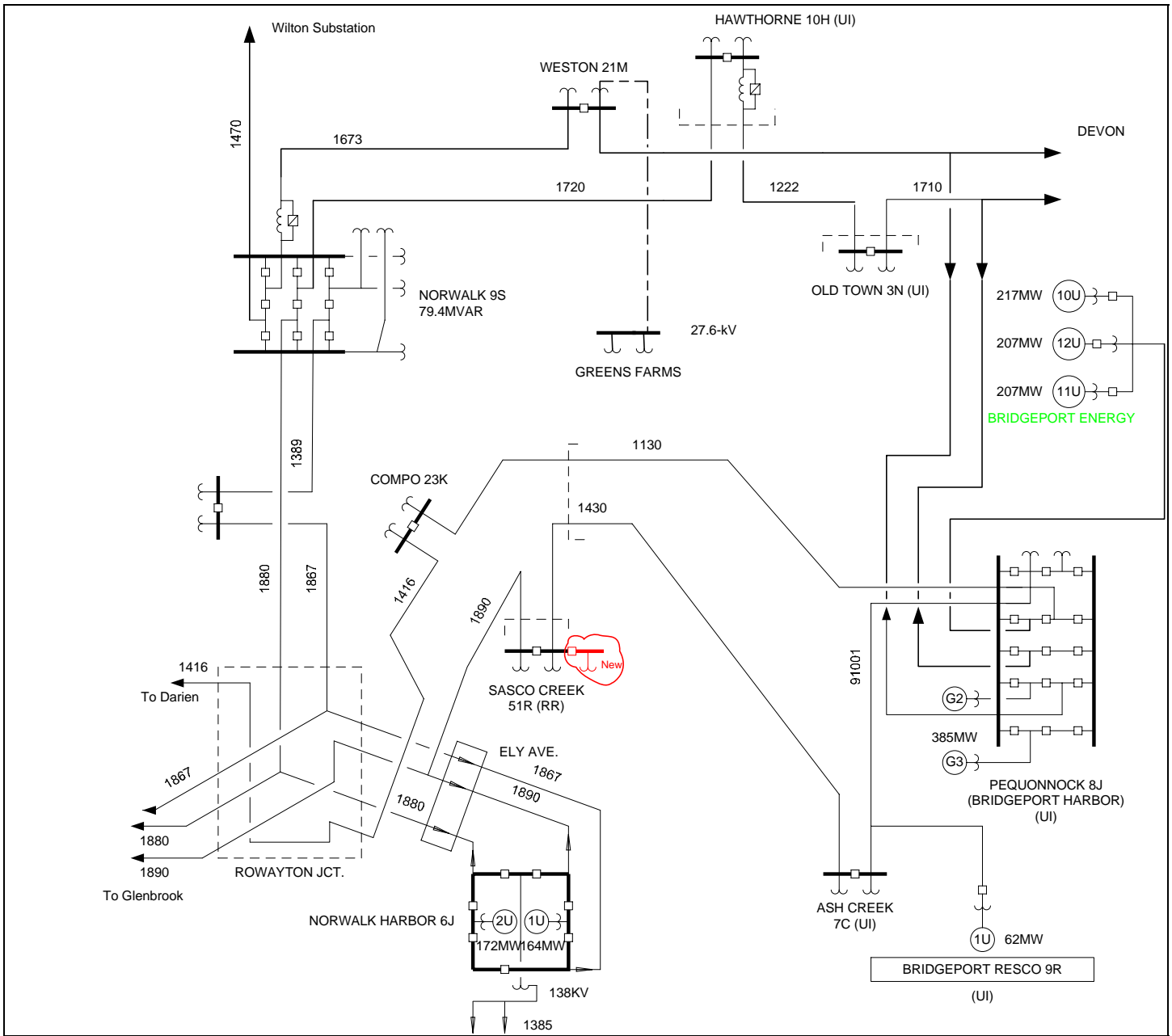


Figure 4: Geographical Location



**APPENDIX B– Case Summaries and All Line-In One-Line Diagrams**

Case Summary 1: Pre-Sasco Creek without Bethel – Norwalk Project

PRESASCO, 2006 SUMMER PEAK LOAD, CC GENS ON  
W/ALL\_NE\_I39\_CHNGS WO PHASE I

GENERATION

~~~~MAINE~~~~															
#	V	MW	MX	PMAX	#	V	MW	MX	PMAX	#	V	MW	MX	PMAX	
70060 MIS GT1	1.039	179	103*	179	70061 MIS GT2	1.039	179	103*	179	70062 MIS ST	1.046	191	118*	191	
70426 CHAMP G2	0.931	15	6*	21	70424 CHAMP G3	1.007	63	32*	72	70389 BUCKS G4	0.964	0	0	191	
70067 U P 5 PF	0.947	0	0	25	70070 U P 6 PF	0.949	0	0*	25	70069 WENFD PH	0.915	0	0	20	
70372 SEA STRN	0.978	47	1	47	70360 WYMAN #1	0.969	0	0	27	70361 WYMAN #2	0.976	20	2	27	
70362 WYMAN #3	0.976	19	2	25	70363 WILLM #1	1.030	4	1	8	70364 WILLM #2	1.033	3	1	7	
70356 HARRIS#1	0.963	16	3	17	70357 HARRIS#2	0.953	0	0	37	70358 HARRIS#3	0.973	27	6	36	
70381 RPA CG1	1.154	150	120*	179	70382 RPA SG2	1.092	0	0	94	70377 AEC G1	1.040	51	-7	58	
70378 AEC G2	1.040	51	-6	58	70379 AEC G3	1.040	51	-6	58	70370 AEI GEN	1.045	35	3*	39	
70365 WF WY #1	1.000	0	0	57	70366 WF WY #2	1.024	55	14*	57	70367 WF WY #3	1.024	121	30	125	
70368 WF WY #4	1.046	205	229	636	70386 WBK G1	1.006	0	0	185	70387 WBK G2	1.006	0	0	185	
70388 WBK G3	1.006	0	0	196	70140 CAPE	1.017	0	0*	24	70421 J/MILL B	1.015	16	27*	35	
70420 J/MILL A	1.011	29	20*	35	70432 J/MILL C	1.005	26	16*	40	70425 BC COGEN	1.060	65	46*	110	
70422 WARRN G1	1.030	49	15*	51	70423 WARRN G2	1.031	44	11*	62	70129 LOUDEN	1.021	7	0*	37	
70160 W.BUXTON	1.014	2	0*	37	70223 TOPSHMGN	1.040	13	0*	28	70118 GULF ISL	1.050	21	0*	34	
70104 LEW LWR	1.043	13	-3	30	70222 TOPSHAM	1.040	3	0	20	70371 GORBELL	0.997	16	4*	16	
70177 LWSTN GN	1.043	2	0*	17	70147 LAKEWOOD	1.006	7	4*	9	70410 HYDRO KN	1.035	5	0*	17	
70330 WINSLOW	1.033	7	0*	22											
~~~~NEW HAMPSHIRE / VERMONT~~~~															
#	V	MW	MX	PMAX	#	V	MW	MX	PMAX	#	V	MW	MX	PMAX	
72869 SBRK G1	1.007	1314	169	1314	72868 NWNGT G1	1.015	410	75	422	70010 NEW_G1	1.019	164	75	169	
70011 NEW_G2	1.019	164	75	169	70012 NEW_G3	1.015	189	75	195	72866 MERMK G1	1.036	109	27	113	
72867 MERMK G2	1.037	311	78	320	72870 SCHILLER	1.003	46	25*	48	72871 SCHILLER	1.002	48	25*	50	
72872 SCHILLER	1.003	47	25*	48	71950 GRANRDG1	1.032	0	0	280	71951 GRANRDG2	1.033	0	0	280	
72701 AESSTG	1.033	0	0	250	71857 COMRF G1	1.001	36	-5	41	71858 COMRF G2	1.013	0	0	41	
71859 COMRF G3	1.013	0	0	41	71860 COMRF G4	1.013	0	0	41	71861 MOORE G1	1.005	39	-1	48	
71862 MOORE G2	1.013	0	0	48	71863 MOORE G3	1.003	0	0	48	71864 MOORE G4	1.012	0	0	48	
72756 TAMW PF	1.075	19	0*	20	72918 L NATION	1.021	13	0*	13	72843 WHFDA PF	1.021	13	0*	14	
72847 PINET PF	0.993	15	0*	15	72760 POTOK PH	1.026	8	0*	11	72758 SMITH HY	1.021	9	0*	16	
72848 JAMES	0.000	0	0*	16	72846 ERROL PH	1.006	3	0*	3	70705 VTYAK G	1.013	667	150	667	
~~~~WESTERN MASSACHUSETTS~~~~															
#	V	MW	MX	PMAX	#	V	MW	MX	PMAX	#	V	MW	MX	PMAX	
72512 BRSPW G1	0.977	285	32	294	72513 BRSPW G2	0.977	285	32	294	73083 NRTHFD12	1.023	524	122*	540	
73084 NRTHFD34	1.023	524	122*	540	72243 MILLENCT	0.997	265	27	273	72244 MILLENST	0.998	114	12	117	
72930 STNYBK1A	1.043	63	9	65	72931 STNYBK1B	1.043	63	9	65	72932 STNYBK1C	1.043	63	9	65	
72933 STNYBK 1	1.043	84	10	87	72934 STNYBK2A	1.043	63	9	65	72935 STNYBK2B	1.043	63	9	65	
72986 BERKPRW	1.020	296	38	305	73069 MAPR1 PF	1.043	106	35	106	73070 MAPR2 PF	1.044	106	35	106	
73071 MAPR3 PF	1.036	95	35	95	73072 ALT12 PF	1.003	63	4	65	73073 ALT34 PF	1.002	78	4	81	
73080 WSPFLD 3	1.006	104	13	107	73085 MT.TOM	0.992	0	0	146						
~~~~NEMA / BOSTON~~~~															
#	V	MW	MX	PMAX	#	V	MW	MX	PMAX	#	V	MW	MX	PMAX	
71063 MYST G7	1.014	549	43	565	71067 MYS8 GTS	1.016	504	43	554	71068 MYS8 ST	1.022	310	43	312	
71069 MYS9 GTS	1.037	504	342*	554	71070 MYS9 ST	1.033	310	180	312	71946 SALEM G1	1.019	77	9	81	
71947 SALEM G2	1.019	76	9	78	71948 SALEM G3	1.019	139	18	143	71949 SALEM G4	1.019	398	55	400	
~~~~SEMA, SEMA / RHODE ISLAND~~~~															
#	V	MW	MX	PMAX	#	V	MW	MX	PMAX	#	V	MW	MX	PMAX	
72372 BP #1 GN	0.980	0	0	241	72375 BP #2 GN	0.980	0	0	241	72370 BP #3 GN	1.024	587	99	605	
72371 BP #4 GN	1.030	300	74	425	71743 TAU 9A,8	0.999	24	16	55	71744 TAUNT G9	1.039	83	52*	85	
72669 TIVER G1	1.040	183	41	189	72670 TIVER G2	1.038	89	21	92	71394 EMI_GEN	0.992	180	27	185	
71316 DPA PF	1.032	61	25*	68	71521 SOM G5	0.994	0	0	69	71522 SOM G6	0.966	68	6	105	
71523 SOMST JT	0.983	0	0	34	72661 MANCH09A	1.008	116	35*	119	72662 MANCH10A	1.008	116	35*	119	
72663 MANCH11A	1.008	116	35*	119	72666 FRSQ SC1	0.995	41	3	46	72667 FRSQ SC2	0.995	41	2	46	
72668 FRSQ SC3	0.995	41	1	46	71531 OSP1 PF	1.001	75	0	77	71532 OSP2 PF	1.001	75	0	77	
71533 OSP3 PF	1.001	104	0	108	71534 OSP4 PF	1.001	75	0	77	71535 OSP5 PF	1.005	0	0	77	
71536 OSP6 PF	1.005	0	0	108	71084 NEA GTFP	1.018	82	13	111	71085 NEA GTFP	1.018	82	13	110	
71086 NEA STFP	0.999	78	13	80	71251 CANAL G1	1.025	549	239*	566	71252 CANAL G2	0.982	0	0	576	
71094 PLGRM G1	1.041	728	260*	705	72373 MPLP 1PF	1.050	107	53*	109	72374 MPLP 2PF	1.032	43	27*	45	
71095 ANPBLCK1	1.037	282	91	9999	71096 ANPBLCK2	1.037	282	91	9999	72377 BELL #1	1.038	290	131	290	
72378 BELL #2	1.038	290	131	290	72671 HOPE G1	1.022	0	0	180	72672 HOPE G2	1.022	0	0	180	
72673 HOPE G3	1.022	0	0	185	71092 EDG ST	1.012	311	9	311	71093 EDG GTS	1.015	307	9	552	
~~~~CONNECTICUT~~~~															
#	V	MW	MX	PMAX	#	V	MW	MX	PMAX	#	V	MW	MX	PMAX	
73562 MILL#2	0.994	940	126	940	73563 MILL#3	0.990	1260	126	1260	73555 MIDDTN#2	1.006	117	24	117	
73556 MIDDTN#3	0.994	233	24	233	73557 MIDDTN#4	1.028	400	125	400	73558 MONTV#5	1.015	81	23	81	
73559 MONTV#6	1.013	402	118	402	73278 MONT DSL	1.017	0	0	6	73538 AESTH PF	1.019	180	52	180	
73565 LAKERD#1	1.014	280	74	310	73566 LAKERD#2	1.014	281	74	310	73567 LAKERD#3	1.014	280	74	310	

Sasco Creek 51R Substation – Temporary Transformer and Circuit Breaker

73588	MERIDEN1	1.037	195	98	195	73589	MERIDEN2	1.037	195	98	195	73590	MERIDEN3	1.035	196	98	196
73597	KLEENCT1	0.984	0	0	158	73598	KLEENCT2	0.984	0	0	158	73599	KLEENST1	0.984	0	0	319
73539	DEXTR PF	1.000	38	8	39	73203	CAMPV PH	1.014	6	0*	6	73281	EXETR PF	1.017	26	-8	26
73459	WNSRSLK	1.034	8	2*	8	73536	FORST PF	1.030	13	3	13	73537	RVRSD PF	1.039	0	0	26

73564	MIDD#10J	0.975	0	0	21	73616	SCRRA PF	1.005	13	0	14	73617	TUNNEL	1.000	17	3	18
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~~~SOUTH WEST CONNECTICUT~~~

| #     | V        | MW    | MX  | PMAX | #   | V     | MW       | MX    | PMAX | #   | V   | MW    | MX       | PMAX  |     |    |     |
|-------|----------|-------|-----|------|-----|-------|----------|-------|------|-----|-----|-------|----------|-------|-----|----|-----|
| 73651 | NH HARBR | 1.001 | 447 | 106  | 447 | 73657 | ENGLISH7 | 1.050 | 0    | 0   | 34  | 73658 | ENGLISH8 | 1.050 | 0   | 0  | 38  |
| 73647 | BPTHBR#2 | 0.943 | 0   | 0    | 170 | 73648 | BPTHBR#3 | 0.989 | 375  | 109 | 375 | 73652 | BE 11    | 0.977 | 0   | 0  | 170 |
| 73653 | BE 12    | 0.977 | 0   | 0    | 170 | 73654 | BE 10 ST | 0.977 | 0    | 0   | 180 | 73649 | BPTHBR#4 | 1.030 | 0   | 0  | 22  |
| 73650 | CRRRA PF | 1.008 | 57  | 30*  | 59  | 73553 | DEVON#7  | 1.032 | 106  | 45  | 107 | 73554 | DEVON#8  | 1.029 | 106 | 45 | 107 |
| 73570 | DEVGAS11 | 1.024 | 0   | 0    | 42  | 73571 | DEVGAS12 | 1.024 | 0    | 0   | 42  | 73572 | DEVGAS13 | 1.024 | 0   | 0  | 42  |
| 73573 | DEVGAS14 | 1.024 | 0   | 0    | 42  | 73574 | MILFD#1  | 1.011 | 280  | 43  | 280 | 73575 | MILFD#2  | 1.040 | 280 | 43 | 280 |
| 73277 | DEVON10  | 1.026 | 0   | 0    | 18  | 73551 | NORHAR#1 | 0.980 | 162  | -2  | 162 | 73552 | NORHAR#2 | 0.981 | 168 | -2 | 168 |
| 73163 | COS COB  | 1.028 | 51  | 6*   | 57  | 73594 | WALL LV1 | 1.006 | 0    | 0   | 102 | 73595 | WALL LV2 | 1.006 | 0   | 0  | 102 |
| 73596 | WALL LV3 | 1.006 | 0   | 0    | 51  | 73631 | WLNGF PF | 1.031 | 6    | 0   | 7   | 73381 | BULLS BR | 0.998 | 5   | 1* | 5   |
| 73541 | ROCK RIV | 1.027 | 25  | 0    | 31  | 73280 | RKRIV PF | 1.023 | 3    | 0*  | 3   | 73341 | SHEPAUG  | 1.026 | 32  | 8* | 42  |
| 73187 | STEVENS  | 1.012 | 0   | 0    | 29  | 73188 | BCNFL PF | 1.000 | 3    | 0*  | 4   | 73765 | DERBY PH | 1.030 | 7   | 1  | 7   |

~~~GENERATION TOTALS~~~

|             | MW   | MX  |              | MW   | MX  |             | MW   | MX   |
|-------------|------|-----|--------------|------|-----|-------------|------|------|
| MIS         | 549  | 324 | BUCKSPORT    | 78   | 38  | WYMAN       | 40   | 3    |
| HARRIS      | 43   | 8   | WILLIAMS     | 7    | 2   | RUMFORD PWR | 150  | 120  |
| AEC         | 153  | -19 | WYMAN        | 382  | 273 | WESTBROOK   | 0    | 0    |
| COMERFORD   | 36   | -5  | MOORE        | 39   | -1  | SEABROOK    | 1314 | 168  |
| MERRIMACK   | 420  | 105 | AES          | 0    | 0   | SCHILLER    | 141  | 75   |
| NEWINGTON   | 410  | 75  | CONED-NEW    | 517  | 224 | MYSTIC      | 2177 | 653  |
| SALEMHBR    | 690  | 92  | MASSPWR      | 307  | 106 | ANPBLK      | 563  | 182  |
| ANPBELL     | 580  | 263 | BRAYTONPT    | 887  | 172 | MANCHSTRST  | 470  | 111  |
| OSP         | 329  | 0   | NEA          | 242  | 40  | CANAL       | 549  | 239  |
| PILGRIM     | 728  | 260 | HOPE         | 0    | 0   | EDGER       | 618  | 18   |
| DGHTN       | 180  | 27  | VTYANKEE     | 667  | 161 | BEARSWAMP   | 571  | 63   |
| NORTHFIELD  | 1048 | 245 | STONYBROOK   | 400  | 58  | MASSPWR     | 307  | 106  |
| BERKSHIRE   | 296  | 38  | MILLSTONE    | 2200 | 252 | LAKERD      | 841  | 222  |
| S_MEADOW    | 0    | 0   | MIDDLETOWN   | 750  | 173 | MONTVILLE   | 483  | 141  |
| NORWALK HBR | 330  | -4  | KLEEN        | 0    | 0   | Meriden     | 586  | 294  |
| NHHARBOR    | 447  | 106 | BRIDGEPORT   | 375  | 109 | DEVON       | 772  | 176  |
| MLFDPWR     | 560  | 86  | BPT_RESKO    | 57   | 30  | NORWALK     | 0    | 0    |
| Waterside   | 0    | 0   | COS_COB      | 51   | 6   | CT          | 6581 | 1388 |
| SWCT        | 1666 | 326 | NOR-STAM-PLA | 438  | 32  |             |      |      |

CAPACITORS

| #     | V         | MVAR  | MAX | #     | V     | MVAR     | MAX   | #   | V     | MVAR  | MAX       |       |      |       |
|-------|-----------|-------|-----|-------|-------|----------|-------|-----|-------|-------|-----------|-------|------|-------|
| 70001 | CHESTER   | 1.020 | 18  | 450.0 | 70024 | ORR CAP1 | 1.020 | 0   | 67.0  | 70025 | ORR CAP2  | 1.020 | 0    | 67.0  |
| 70026 | ORR CAP3  | 1.020 | 0   | 67.0  | 70036 | MAX CAP1 | 1.059 | 56  | 50.0  | 70037 | MAX CAP2  | 1.059 | 56   | 50.0  |
| 70043 | MAS CAP1  | 1.061 | 0   | 50.0  | 70044 | MAS CAP2 | 1.061 | 0   | 50.0  | 70050 | SUR CAP1  | 1.066 | 0    | 50.0  |
| 70051 | SUR CAP2  | 1.066 | 0   | 50.0  | 70052 | SUR CAP3 | 1.066 | 0   | 50.0  | 70056 | SGR CAP1  | 1.038 | 0    | 50.0  |
| 70057 | SGR CAP2  | 1.038 | 0   | 50.0  | 70162 | SANFORD  | 0.977 | 0   | 31.0  | 72712 | BEBEE     | 1.040 | 43   | 20.0  |
| 72738 | OCEAN ER  | 0.998 | 0   | 25.0  | 72739 | OCEAN UH | 1.010 | 0   | 25.0  | 72717 | CHSNT HL  | 1.044 | 57   | 50.0  |
| 72734 | MERRMACK  | 1.035 | 40  | 72.0  | 71996 | TEWKSBRY | 1.019 | 65  | 126.0 | 71786 | SANDY PD  | 1.037 | 1333 | 450.0 |
| 72102 | PRATTS J  | 1.023 | 66  | 63.0  | 72265 | NBORO RD | 0.997 | 0   | 54.0  | 72096 | MILLBURY  | 1.010 | 128  | 63.0  |
| 70507 | GEORG TP  | 0.995 | 0   | 24.8  | 70546 | BERLIN   | 1.015 | 26  | 24.8  | 70519 | MIDDLBRY  | 1.019 | 24   | 22.9  |
| 70512 | ESX B-2   | 1.010 | 126 | 99.2  | 70529 | WILLISTN | 1.010 | 25  | 24.8  | 70521 | RUTLAND   | 1.010 | 25   | 24.8  |
| 70508 | SANDB115  | 1.004 | 0   | 24.8  | 70504 | SBRAT 69 | 1.027 | 0   | 50.0  | 70547 | HIGHGATE  | 0.990 | 0    | 140.0 |
| 70870 | FRMNGHAM  | 1.015 | 55  | 53.6  | 70888 | BAKER ST | 1.019 | 111 | 107.2 | 70806 | LEXINGTN  | 1.015 | 55   | 53.6  |
| 73177 | MYSTICCT  | 1.014 | 52  | 53.6  | 70836 | K-ST-1   | 1.027 | 0   | 53.6  | 70837 | K-ST-2    | 1.026 | -84  | 53.6  |
| 70893 | NEEDHAM   | 1.018 | 0   | 53.6  | 72569 | FRSQ     | 1.029 | 0   | 63.0  | 72565 | KENT CO   | 1.022 | 66   | 63.0  |
| 72962 | AGAWM PF  | 1.022 | 109 | 104.8 | 73243 | BERLIN   | 1.014 | 136 | 132.0 | 73101 | BRANCAP   | 1.028 | 40   | 37.8  |
| 73262 | CANTON    | 1.013 | 54  | 50.4  | 73267 | DARIEN   | 1.030 | 0   | 39.6  | 73668 | E. SHORE  | 1.035 | 90   | 84.0  |
| 73260 | FRKLN DR  | 1.017 | 41  | 37.8  | 73202 | FROST BR | 1.028 | 273 | 262.0 | 73497 | GLNACAP   | 1.035 | 153  | 174.0 |
| 73498 | GLNBCAP   | 1.035 | 139 | 174.0 | 73230 | HADDAM   | 1.032 | 40  | 37.8  | 73242 | MANCHSTR  | 1.012 | 322  | 314.4 |
| 73210 | MONTVILLE | 1.017 | 108 | 104.8 | 73177 | MYSTICCT | 1.014 | 52  | 50.4  | 73244 | N. BLMFLD | 1.012 | 161  | 157.2 |
| 73102 | NH CAPS   | 1.034 | 45  | 42.0  | 73172 | NORWALK  | 1.027 | 0   | 0.0   | 73170 | PLUMTREE  | 1.021 | 96   | 92.2  |
| 73190 | ROCK RIV  | 1.023 | 26  | 25.2  | 73674 | SACKTAP  | 1.032 | 45  | 42.0  | 73154 | SGTN B    | 1.027 | 166  | 314.4 |
| 73165 | STONY HL  | 1.023 | 26  | 100.8 | 73162 | WATERSDE | 1.032 | 42  | 39.6  |       |           |       |      |       |

REACTORS

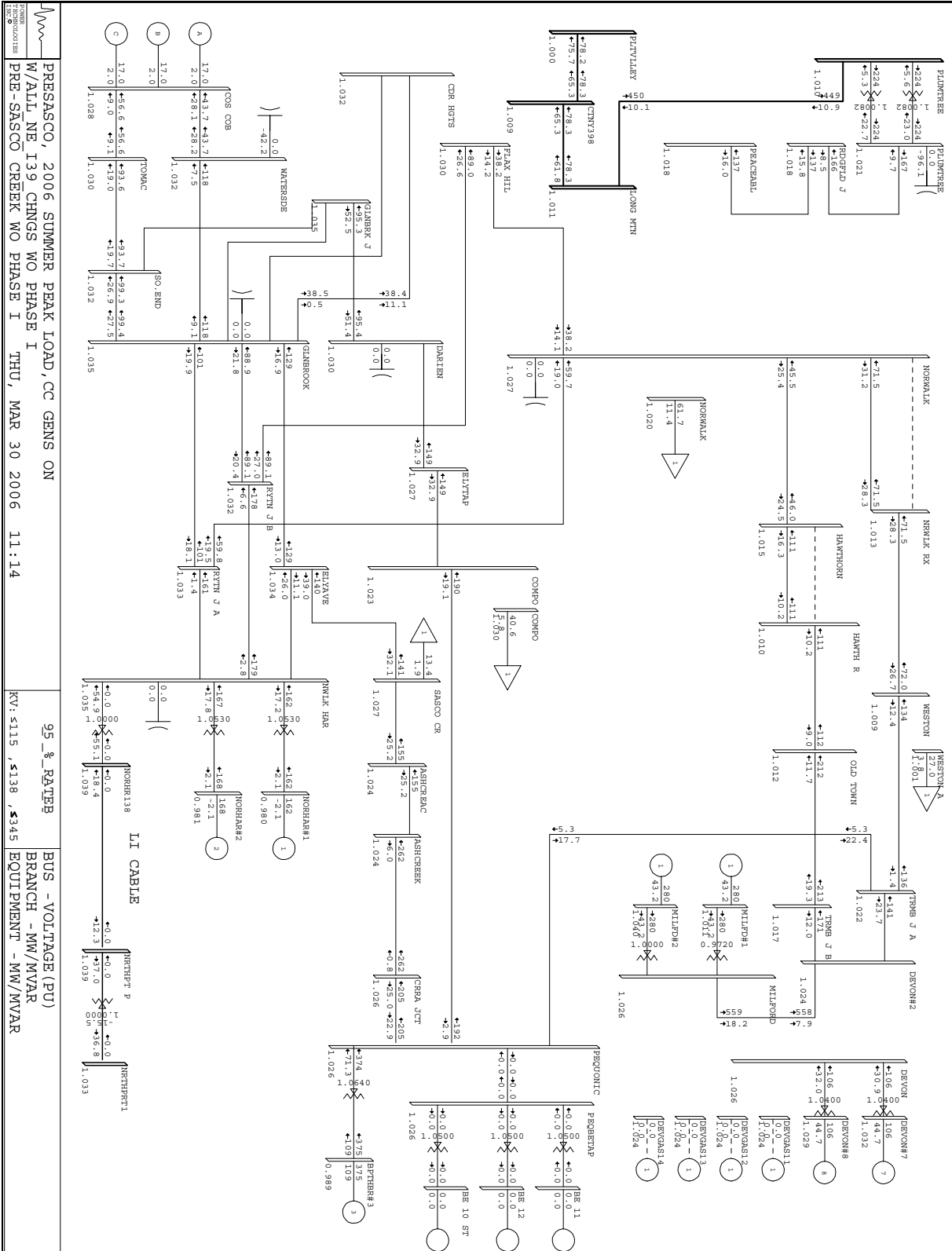
| #     | V        | MVAR  | MAX   | #     | V     | MVAR    | MAX   | #   | V     | MVAR  | MAX      |       |    |       |
|-------|----------|-------|-------|-------|-------|---------|-------|-----|-------|-------|----------|-------|----|-------|
| 87004 | KESICK   | 1.024 | 0     | 37.5  | 70001 | CHESTER | 1.020 | -18 | 125.0 | 70027 | ORRINGTN | 1.020 | 0  | 80.0  |
| 70125 | SUROWIEC | 1.066 | 0     | 80.0  | 72766 | SCOBIE1 | 1.041 | 0   | 40.0  | 72746 | SCOBIE2  | 1.041 | 0  | 40.0  |
| 71786 | SANDY PD | 1.037 | -1333 | 480.0 | 70837 | K-ST-2  | 1.026 | 84  | 80.0  | 70799 | WOBURN   | 1.020 | 0  | 240.0 |
| 70818 | MYSTC MA | 1.030 | -57   | 80.0  | 70815 | N.CAMB  | 1.028 | 0   | 160.0 | 73132 | PLUMREAC | 1.009 | 76 | 150.0 |
| 73135 | NOROH    | 1.008 | 76    | 300.0 | 73316 |         | 1.008 | 0   | 100.0 | 73317 |          | 1.008 | 0  | 100.0 |
| 73314 |          | 1.008 | 0     | 100.0 | 73315 |         | 1.008 | 0   | 100.0 | 73312 |          | 1.008 | 0  | 100.0 |
| 73313 |          | 1.008 | 0     | 100.0 |       |         |       |     |       |       |          |       |    |       |

INTERFACE FLOWS

| NB-NE           | 1003 | -55  | Orrington-South | 1124 | -63 | MEYANKEE-SOUTH | 720  | -105 |  |  |  |
|-----------------|------|------|-----------------|------|-----|----------------|------|------|--|--|--|
| SUR-SO          | 574  | -235 | MAINE-NH        | 352  | -89 | NNE-SCOBIE+394 | 1993 | -22  |  |  |  |
| SEABROOK-SOUTH  | 1464 | 40   | NORTH-SOUTH     | 1272 | -68 | EAST-WEST      | 1300 | 60   |  |  |  |
| WEST-EAST       | -462 | 57   | SNDYPOND-SOUTH  | 2149 | 136 | BOSTON IMPORT  | 2468 | -365 |  |  |  |
| SEMA/RI EXPORT  | 933  | -456 | CONN EXPORT     | -796 | 211 | CONN IMPORT    | 1634 | -94  |  |  |  |
| SW CONN IMPORT  | 2415 | 146* | NORWLK-STAMFORD | 970  | 6   | XSNDCABL TO NY | 352  | -17  |  |  |  |
| CT-LI 1385cable | 0    | -55  | NY-NE           | -619 | -88 | PV20           | 117  | -5   |  |  |  |



Diagram 1: Pre-Sasco Creek without Bethel – Norwalk Project



PRESSASCO, 2006 SUMMER PEAK LOAD, CC GENS ON  
 W/ALL NE I39 CHNGS WO PHASE I  
 PRE-SASCO CREEK WO PHASE I THU, MAR 30 2006 11:14

95\_8\_RAT2B  
 BUS - VOLTAGE (PU)  
 BRANCH - MW/MVAR  
 EQUIPMENT - MW/MVAR

LI CABLE  
 NORTHPT P  
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Case Summary 2: Post-Sasco Creek without Bethel – Norwalk Project

POSTSASCO, 2006 SUMMER PEAK LOAD, CC GENS ON  
W/ALL\_NE\_I39\_CHNGS WO PHASE I

GENERATION

| ---MAINE---                     |          |       |      |      |      |       |          |       |      |      |      |       |          |       |     |      |     |
|---------------------------------|----------|-------|------|------|------|-------|----------|-------|------|------|------|-------|----------|-------|-----|------|-----|
| #                               | V        | MW    | MX   | PMAX | #    | V     | MW       | MX    | PMAX | #    | V    | MW    | MX       | PMAX  |     |      |     |
| 70060                           | MIS GT1  | 1.039 | 179  | 103* | 179  | 70061 | MIS GT2  | 1.039 | 179  | 103* | 179  | 70062 | MIS ST   | 1.046 | 191 | 118* | 191 |
| 70426                           | CHAMP G2 | 0.931 | 15   | 6*   | 21   | 70424 | CHAMP G3 | 1.007 | 63   | 32*  | 72   | 70389 | BUCKS G4 | 0.964 | 0   | 0    | 191 |
| 70067                           | U P 5 PF | 0.947 | 0    | 0    | 25   | 70070 | U P 6 PF | 0.949 | 0    | 0*   | 25   | 70069 | WENFD PH | 0.915 | 0   | 0    | 20  |
| 70372                           | SEA STRN | 0.978 | 47   | 1    | 47   | 70360 | WYMAN #1 | 0.969 | 0    | 0    | 27   | 70361 | WYMAN #2 | 0.976 | 20  | 2    | 27  |
| 70362                           | WYMAN #3 | 0.976 | 19   | 2    | 25   | 70363 | WILLM #1 | 1.030 | 4    | 1    | 8    | 70364 | WILLM #2 | 1.033 | 3   | 1    | 7   |
| 70356                           | HARRIS#1 | 0.963 | 16   | 3    | 17   | 70357 | HARRIS#2 | 0.953 | 0    | 0    | 37   | 70358 | HARRIS#3 | 0.973 | 27  | 6    | 36  |
| 70381                           | RPA CG1  | 1.154 | 150  | 120* | 179  | 70382 | RPA CG2  | 1.092 | 0    | 0    | 94   | 70377 | AEC G1   | 1.040 | 51  | -7   | 58  |
| 70378                           | AEC G2   | 1.040 | 51   | -6   | 58   | 70379 | AEC G3   | 1.040 | 51   | -6   | 58   | 70370 | AEC GEN  | 1.045 | 35  | 3*   | 39  |
| 70365                           | WF WY #1 | 1.000 | 0    | 0    | 57   | 70366 | WF WY #2 | 1.024 | 55   | 14*  | 57   | 70367 | WF WY #3 | 1.024 | 121 | 30   | 125 |
| 70368                           | WF WY #4 | 1.046 | 205  | 229  | 636  | 70386 | WBK G1   | 1.006 | 0    | 0    | 185  | 70387 | WBK G2   | 1.006 | 0   | 0    | 185 |
| 70388                           | WBK G3   | 1.006 | 0    | 0    | 196  | 70140 | CAPE     | 1.017 | 0    | 0*   | 24   | 70421 | J/MILL B | 1.015 | 16  | 27*  | 35  |
| 70428                           | J/MILL A | 1.011 | 29   | 20*  | 35   | 70432 | J/MILL C | 1.005 | 26   | 16*  | 40   | 70425 | BC COGEN | 1.060 | 65  | 46*  | 110 |
| 70422                           | WARRN G1 | 1.030 | 49   | 15*  | 51   | 70423 | WARRN G2 | 1.031 | 44   | 11*  | 62   | 70129 | LOUDEN   | 1.021 | 7   | 0*   | 37  |
| 70160                           | W.BUXTON | 1.014 | 2    | 0*   | 37   | 70223 | TOPSHMGN | 1.040 | 13   | 0*   | 28   | 70118 | GULF ISL | 1.050 | 21  | 0*   | 34  |
| 70104                           | LEW LWR  | 1.043 | 13   | -3   | 30   | 70222 | TOPSHAM  | 1.040 | 3    | 0    | 20   | 70371 | GORBELL  | 0.997 | 16  | 4*   | 16  |
| 70177                           | LWSTN GN | 1.043 | 2    | 0*   | 17   | 70147 | LAKEWOOD | 1.006 | 7    | 4*   | 9    | 70410 | HYDRO KN | 1.035 | 5   | 0*   | 17  |
| 70330                           | WINSLOW  | 1.033 | 7    | 0*   | 22   |       |          |       |      |      |      |       |          |       |     |      |     |
| ---NEW HAMPSHIRE / VERMONT---   |          |       |      |      |      |       |          |       |      |      |      |       |          |       |     |      |     |
| #                               | V        | MW    | MX   | PMAX | #    | V     | MW       | MX    | PMAX | #    | V    | MW    | MX       | PMAX  |     |      |     |
| 72869                           | SBK G1   | 1.007 | 1314 | 168  | 1314 | 72868 | NWNGT G1 | 1.015 | 410  | 75   | 422  | 70010 | NEW_G1   | 1.019 | 164 | 75   | 169 |
| 70011                           | NEW_G2   | 1.019 | 164  | 75   | 169  | 70012 | NEW_G3   | 1.015 | 189  | 75   | 195  | 72866 | MERMK G1 | 1.036 | 109 | 27   | 113 |
| 72867                           | MERMK G2 | 1.037 | 311  | 78   | 320  | 72870 | SCHILLER | 1.003 | 46   | 25*  | 48   | 72871 | SCHILLER | 1.002 | 48  | 25*  | 50  |
| 72873                           | SCHILLER | 1.003 | 47   | 25*  | 48   | 71950 | GRANRDG1 | 1.032 | 0    | 0    | 280  | 71951 | GRANRDG2 | 1.033 | 0   | 0    | 280 |
| 72701                           | AESSTG   | 1.033 | 0    | 0    | 250  | 71857 | COMRF G1 | 1.001 | 36   | -5   | 41   | 71858 | COMRF G2 | 1.013 | 0   | 0    | 41  |
| 71859                           | COMRF G3 | 1.013 | 0    | 0    | 41   | 71860 | COMRF G4 | 1.013 | 0    | 0    | 41   | 71861 | MOORE G1 | 1.005 | 39  | -1   | 48  |
| 71862                           | MOORE G2 | 1.013 | 0    | 0    | 48   | 71863 | MOORE G3 | 1.003 | 0    | 0    | 48   | 71864 | MOORE G4 | 1.012 | 0   | 0    | 48  |
| 72756                           | TAMW PF  | 1.075 | 19   | 0*   | 20   | 72918 | L NATION | 1.021 | 13   | 0*   | 13   | 72843 | WHFPA PF | 1.021 | 13  | 0*   | 14  |
| 72847                           | PINET PF | 0.993 | 15   | 0*   | 15   | 72760 | POTOK PH | 1.026 | 8    | 0*   | 11   | 72758 | SMITH HY | 1.021 | 9   | 0*   | 16  |
| 72848                           | JAMES    | 0.000 | 0    | 0*   | 16   | 72846 | ERROL PH | 1.006 | 3    | 0*   | 3    | 70705 | VTYAK G  | 1.013 | 667 | 150  | 667 |
| ---WESTERN MASSACHUSETTS---     |          |       |      |      |      |       |          |       |      |      |      |       |          |       |     |      |     |
| #                               | V        | MW    | MX   | PMAX | #    | V     | MW       | MX    | PMAX | #    | V    | MW    | MX       | PMAX  |     |      |     |
| 72512                           | BRSWP G1 | 0.977 | 285  | 32   | 294  | 72513 | BRSWP G2 | 0.977 | 285  | 32   | 294  | 73083 | NRTHFD12 | 1.023 | 524 | 122* | 540 |
| 73084                           | NRTHFD34 | 1.023 | 524  | 122* | 540  | 72243 | MILLENCT | 0.997 | 265  | 27   | 273  | 72244 | MILLENST | 0.998 | 114 | 12   | 117 |
| 72930                           | STNYBK1A | 1.043 | 63   | 9    | 65   | 72931 | STNYBK1B | 1.043 | 63   | 9    | 65   | 72932 | STNYBK1C | 1.043 | 63  | 9    | 65  |
| 72933                           | STNYBK 1 | 1.043 | 84   | 10   | 87   | 72934 | STNYBK2A | 1.043 | 63   | 9    | 65   | 72935 | STNYBK2B | 1.043 | 63  | 9    | 65  |
| 72986                           | BERKPWR  | 1.020 | 296  | 38   | 305  | 73069 | MAPR1 PF | 1.043 | 106  | 35   | 106  | 73070 | MAPR2 PF | 1.044 | 106 | 35   | 106 |
| 73071                           | MAPR3 PF | 1.036 | 95   | 35   | 95   | 73072 | ALT12 PF | 1.003 | 63   | 4    | 65   | 73073 | ALT34 PF | 1.002 | 78  | 4    | 81  |
| 73080                           | WSPFLD 3 | 1.006 | 104  | 13   | 107  | 73085 | MT.TOM   | 0.992 | 0    | 0    | 146  |       |          |       |     |      |     |
| ---NEMA / BOSTON---             |          |       |      |      |      |       |          |       |      |      |      |       |          |       |     |      |     |
| #                               | V        | MW    | MX   | PMAX | #    | V     | MW       | MX    | PMAX | #    | V    | MW    | MX       | PMAX  |     |      |     |
| 71063                           | MYST G7  | 1.014 | 549  | 43   | 565  | 71067 | MYS8 GTS | 1.016 | 504  | 43   | 554  | 71068 | MYS8 ST  | 1.022 | 310 | 43   | 312 |
| 71069                           | MYS9 GTS | 1.037 | 504  | 342* | 554  | 71070 | MYS9 ST  | 1.033 | 310  | 180  | 312  | 71946 | SALEM G1 | 1.019 | 77  | 9    | 81  |
| 71947                           | SALEM G2 | 1.019 | 76   | 9    | 78   | 71948 | SALEM G3 | 1.019 | 139  | 18   | 143  | 71949 | SALEM G4 | 1.019 | 398 | 55   | 400 |
| ---SEMA, SEMA / RHODE ISLAND--- |          |       |      |      |      |       |          |       |      |      |      |       |          |       |     |      |     |
| #                               | V        | MW    | MX   | PMAX | #    | V     | MW       | MX    | PMAX | #    | V    | MW    | MX       | PMAX  |     |      |     |
| 72372                           | BP #1 GN | 0.980 | 0    | 0    | 241  | 72375 | BP #2 GN | 0.980 | 0    | 0    | 241  | 72370 | BP #3 GN | 1.024 | 587 | 99   | 605 |
| 72371                           | BP #4 GN | 1.030 | 300  | 74   | 425  | 71743 | TAU 9A,8 | 0.999 | 24   | 16   | 55   | 71744 | TAUNT G9 | 1.039 | 83  | 52*  | 85  |
| 72669                           | TIVER G1 | 1.040 | 183  | 41   | 189  | 72670 | TIVER G2 | 1.038 | 89   | 21   | 92   | 71394 | EMI_GEN  | 0.992 | 180 | 27   | 185 |
| 71316                           | DPA PF   | 1.032 | 61   | 25*  | 68   | 71521 | SOM G5   | 0.994 | 0    | 0    | 69   | 71522 | SOM G6   | 0.966 | 68  | 6    | 105 |
| 71523                           | SOMST JT | 0.983 | 0    | 0    | 34   | 72661 | MANCH09A | 1.008 | 116  | 35*  | 119  | 72662 | MANCH10A | 1.008 | 116 | 35*  | 119 |
| 72663                           | MANCH11A | 1.008 | 116  | 35*  | 119  | 72666 | FRSQ SC1 | 0.995 | 41   | 3    | 46   | 72667 | FRSQ SC2 | 0.995 | 41  | 2    | 46  |
| 72668                           | FRSQ SC3 | 0.995 | 41   | 1    | 46   | 71531 | OSP1 PF  | 1.001 | 75   | 0    | 77   | 71532 | OSP2 PF  | 1.001 | 75  | 0    | 77  |
| 71533                           | OSP3 PF  | 1.001 | 104  | 0    | 108  | 71534 | OSP4 PF  | 1.001 | 75   | 0    | 77   | 71535 | OSP5 PF  | 1.005 | 0   | 0    | 77  |
| 71536                           | OSP6 PF  | 1.005 | 0    | 0    | 108  | 71084 | NEA GTPF | 1.018 | 82   | 13   | 111  | 71085 | NEA GTPF | 1.018 | 82  | 13   | 110 |
| 71086                           | NEA STPF | 0.999 | 78   | 13   | 80   | 71251 | CANAL G1 | 1.025 | 549  | 239* | 566  | 71252 | CANAL G2 | 0.982 | 0   | 0    | 576 |
| 71094                           | PLGRM G1 | 1.041 | 728  | 260* | 705  | 72373 | MPLP 1PF | 1.050 | 107  | 53*  | 109  | 72374 | MPLP 2PF | 1.032 | 43  | 27*  | 45  |
| 71095                           | ANPBLCK1 | 1.037 | 282  | 91   | 9999 | 71096 | ANPBLCK2 | 1.037 | 282  | 91   | 9999 | 72377 | BELL #1  | 1.038 | 290 | 131  | 290 |
| 72378                           | BELL #2  | 1.038 | 290  | 131  | 290  | 72671 | HOPE G1  | 1.022 | 0    | 0    | 180  | 72672 | HOPE G2  | 1.022 | 0   | 0    | 180 |
| 72673                           | HOPE G3  | 1.022 | 0    | 0    | 185  | 71092 | EDG ST   | 1.012 | 311  | 9    | 311  | 71093 | EDG GTS  | 1.015 | 307 | 9    | 552 |
| ---CONNECTICUT---               |          |       |      |      |      |       |          |       |      |      |      |       |          |       |     |      |     |
| #                               | V        | MW    | MX   | PMAX | #    | V     | MW       | MX    | PMAX | #    | V    | MW    | MX       | PMAX  |     |      |     |
| 73562                           | MILL#2   | 0.994 | 940  | 126  | 940  | 73563 | MILL#3   | 0.990 | 1260 | 126  | 1260 | 73555 | MIDDTN#2 | 1.006 | 117 | 24   | 117 |
| 73556                           | MIDDTN#3 | 0.994 | 233  | 24   | 233  | 73557 | MIDDTN#4 | 1.028 | 400  | 125  | 400  | 73558 | MONTV#5  | 1.015 | 81  | 23   | 81  |
| 73559                           | MONTV#6  | 1.013 | 402  | 118  | 402  | 73278 | MONT DSL | 1.017 | 0    | 0    | 6    | 73538 | AESTH PF | 1.019 | 180 | 52   | 180 |
| 73565                           | LAKERD#1 | 1.014 | 280  | 74   | 310  | 73566 | LAKERD#2 | 1.014 | 281  | 74   | 310  | 73567 | LAKERD#3 | 1.014 | 280 | 74   | 310 |

Sasco Creek 51R Substation – Temporary Transformer and Circuit Breaker

|       |          |       |     |    |     |       |          |       |     |    |     |       |          |       |     |    |     |
|-------|----------|-------|-----|----|-----|-------|----------|-------|-----|----|-----|-------|----------|-------|-----|----|-----|
| 73588 | MERIDEN1 | 1.037 | 195 | 98 | 195 | 73589 | MERIDEN2 | 1.037 | 195 | 98 | 195 | 73590 | MERIDEN3 | 1.035 | 196 | 98 | 196 |
| 73597 | KLEENCT1 | 0.984 | 0   | 0  | 158 | 73598 | KLEENCT2 | 0.984 | 0   | 0  | 158 | 73599 | KLEENST1 | 0.984 | 0   | 0  | 319 |
| 73539 | DEXTR PF | 1.000 | 38  | 8  | 39  | 73203 | CAMPV PH | 1.014 | 6   | 0* | 6   | 73281 | EXETR PF | 1.017 | 26  | -8 | 26  |
| 73459 | WNSRRLK  | 1.034 | 8   | 2* | 8   | 73536 | FORST PF | 1.030 | 13  | 3  | 13  | 73537 | RVRSD PF | 1.039 | 0   | 0  | 26  |

|       |          |       |   |   |    |       |          |       |    |   |    |       |        |       |    |   |    |
|-------|----------|-------|---|---|----|-------|----------|-------|----|---|----|-------|--------|-------|----|---|----|
| 73564 | MIDD#10J | 0.975 | 0 | 0 | 21 | 73616 | SCRRA PF | 1.005 | 13 | 0 | 14 | 73617 | TUNNEL | 1.000 | 17 | 3 | 18 |
|-------|----------|-------|---|---|----|-------|----------|-------|----|---|----|-------|--------|-------|----|---|----|

---SOUTH WEST CONNECTICUT---

| #     | V        | MW    | MX  | PMAX | #   | V     | MW       | MX    | PMAX | #   | V   | MW    | MX       | PMAX  |     |    |     |
|-------|----------|-------|-----|------|-----|-------|----------|-------|------|-----|-----|-------|----------|-------|-----|----|-----|
| 73651 | NH HARBR | 1.001 | 447 | 106  | 447 | 73657 | ENGLISH7 | 1.050 | 0    | 0   | 34  | 73658 | ENGLISH8 | 1.050 | 0   | 0  | 38  |
| 73647 | BPTHBR#2 | 0.943 | 0   | 0    | 170 | 73648 | BPTHBR#3 | 0.990 | 375  | 111 | 375 | 73652 | BE 11    | 0.977 | 0   | 0  | 170 |
| 73653 | BE 12    | 0.977 | 0   | 0    | 170 | 73654 | BE 10 ST | 0.977 | 0    | 0   | 180 | 73649 | BPTHBR#4 | 1.030 | 0   | 0  | 22  |
| 73650 | CRRRA PF | 1.008 | 57  | 30*  | 59  | 73553 | DEVON#7  | 1.032 | 106  | 45  | 107 | 73554 | DEVON#8  | 1.028 | 106 | 45 | 107 |

|       |          |       |    |    |    |       |          |       |     |    |     |       |          |       |     |    |     |
|-------|----------|-------|----|----|----|-------|----------|-------|-----|----|-----|-------|----------|-------|-----|----|-----|
| 73570 | DEVGAS11 | 1.024 | 0  | 0  | 42 | 73571 | DEVGAS12 | 1.024 | 0   | 0  | 42  | 73572 | DEVGAS13 | 1.024 | 0   | 0  | 42  |
| 73573 | DEVGAS14 | 1.024 | 0  | 0  | 42 | 73574 | MILFD#1  | 1.011 | 280 | 43 | 280 | 73575 | MILFD#2  | 1.040 | 280 | 43 | 280 |
| 73277 | DEVON10  | 1.026 | 0  | 0  | 18 | 73551 | NORHAR#1 | 0.981 | 162 | -1 | 162 | 73552 | NORHAR#2 | 0.981 | 168 | -1 | 168 |
| 73163 | COS COB  | 1.028 | 51 | 6* | 57 | 73594 | WALL LV1 | 1.006 | 0   | 0  | 102 | 73595 | WALL LV2 | 1.006 | 0   | 0  | 102 |

|       |          |       |    |   |    |       |          |       |   |    |   |       |          |       |    |    |    |
|-------|----------|-------|----|---|----|-------|----------|-------|---|----|---|-------|----------|-------|----|----|----|
| 73596 | WALL LV3 | 1.006 | 0  | 0 | 51 | 73631 | WLNGF PF | 1.031 | 6 | 0  | 7 | 73381 | BULLS BR | 0.998 | 5  | 1* | 5  |
| 73541 | ROCK RIV | 1.027 | 25 | 0 | 31 | 73280 | RKRIV PF | 1.024 | 3 | 0* | 3 | 73341 | SHEPAUG  | 1.026 | 32 | 8* | 42 |
| 73187 | STEVENS  | 1.012 | 0  | 0 | 29 | 73188 | BCNFL PF | 1.000 | 3 | 0* | 4 | 73765 | DERBY PH | 1.030 | 7  | 1  | 7  |

---GENERATION TOTALS---

|             | MW   | MX  |              | MW   | MX  |             | MW   | MX   |
|-------------|------|-----|--------------|------|-----|-------------|------|------|
| MIS         | 549  | 324 | BUCKSPORT    | 78   | 38  | WYMAN       | 40   | 3    |
| HARRIS      | 43   | 8   | WILLIAMS     | 7    | 2   | RUMFORD PWR | 150  | 120  |
| AEC         | 153  | -19 | WYMAN        | 382  | 273 | WESTBROOK   | 0    | 0    |
| COMERFORD   | 36   | -5  | MOORE        | 39   | -1  | SEABROOK    | 1314 | 168  |
| MERRIMACK   | 420  | 105 | AES          | 0    | 0   | SCHILLER    | 141  | 75   |
| NEWINGTON   | 410  | 75  | CONED-NEW    | 517  | 224 | MYSTIC      | 2177 | 653  |
| SALEMHBR    | 690  | 92  | MASSPWR      | 307  | 106 | ANPLK       | 563  | 182  |
| ANPBELL     | 580  | 263 | BRAYTONPT    | 887  | 172 | MANCHSTRST  | 470  | 111  |
| OSP         | 329  | 0   | NEA          | 242  | 40  | CANAL       | 549  | 239  |
| PILGRIM     | 728  | 260 | HOPE         | 0    | 0   | EDGER       | 618  | 18   |
| DGHTN       | 180  | 27  | VTYANKEE     | 667  | 161 | BEARSWAMP   | 571  | 63   |
| NORTHFIELD  | 1048 | 245 | STONYBROOK   | 400  | 58  | MASSPWR     | 307  | 106  |
| BERKSHIRE   | 296  | 38  | MILLSTONE    | 2200 | 252 | LAKERD      | 841  | 222  |
| S_MEADOW    | 0    | 0   | MIDDLETOWN   | 750  | 173 | MONTVILLE   | 483  | 141  |
| NORWALK HBR | 330  | -3  | KLEEN        | 0    | 0   | Meriden     | 586  | 294  |
| NHHARBOR    | 447  | 106 | BRIDGEPORT   | 375  | 111 | DEVON       | 772  | 175  |
| MLFDPWR     | 560  | 86  | BPT_RESCO    | 57   | 30  | NORWALK     | 0    | 0    |
| Waterside   | 0    | 0   | COS_COB      | 51   | 6   | CT          | 6581 | 1389 |
| SWCT        | 1666 | 328 | NOR-STAM-PLA | 438  | 33  |             |      |      |

CAPACITORS

| #     | V         | MVAR  | MAX | #     | V     | MVAR     | MAX   | #   | V     | MVAR  | MAX       |       |      |       |
|-------|-----------|-------|-----|-------|-------|----------|-------|-----|-------|-------|-----------|-------|------|-------|
| 70001 | CHESTER   | 1.020 | 18  | 450.0 | 70024 | ORR CAP1 | 1.020 | 0   | 67.0  | 70025 | ORR CAP2  | 1.020 | 0    | 67.0  |
| 70026 | ORR CAP3  | 1.020 | 0   | 67.0  | 70036 | MAX CAP1 | 1.059 | 56  | 50.0  | 70037 | MAX CAP2  | 1.059 | 56   | 50.0  |
| 70043 | MAS CAP1  | 1.061 | 0   | 50.0  | 70044 | MAS CAP2 | 1.061 | 0   | 50.0  | 70050 | SUR CAP1  | 1.066 | 0    | 50.0  |
| 70051 | SUR CAP2  | 1.066 | 0   | 50.0  | 70052 | SUR CAP3 | 1.066 | 0   | 50.0  | 70056 | SGR CAP1  | 1.038 | 0    | 50.0  |
| 70057 | SGR CAP2  | 1.038 | 0   | 50.0  | 70162 | SANFORD  | 0.977 | 0   | 31.0  | 72712 | BEEBE     | 1.040 | 43   | 20.0  |
| 72738 | OCEAN ER  | 0.998 | 0   | 25.0  | 72739 | OCEAN UH | 1.010 | 0   | 25.0  | 72717 | CHSNT HL  | 1.044 | 57   | 50.0  |
| 72734 | MERRMACK  | 1.035 | 40  | 72.0  | 71996 | TEWKSBR  | 1.019 | 65  | 126.0 | 71786 | SANDY PD  | 1.037 | 1333 | 450.0 |
| 72102 | PRATTS J  | 1.023 | 66  | 63.0  | 72265 | NBORO RD | 0.997 | 0   | 54.0  | 72096 | MILLBURY  | 1.010 | 128  | 63.0  |
| 70507 | GEORG TP  | 0.995 | 0   | 24.8  | 70546 | BERLIN   | 1.015 | 26  | 24.8  | 70519 | MIDDLBRY  | 1.019 | 24   | 22.9  |
| 70512 | ESX B-2   | 1.010 | 126 | 99.2  | 70529 | WILLISTN | 1.010 | 25  | 24.8  | 70521 | RUTLAND   | 1.010 | 25   | 24.8  |
| 70508 | SANDB115  | 1.004 | 0   | 24.8  | 70504 | SBRAT 69 | 1.027 | 0   | 50.0  | 70547 | HIGHGATE  | 0.990 | 0    | 140.0 |
| 70870 | FRMNGHAM  | 1.015 | 55  | 53.6  | 70888 | BAKER ST | 1.019 | 111 | 107.2 | 70806 | LEXINGTON | 1.015 | 55   | 53.6  |
| 73177 | MYSTICCT  | 1.014 | 52  | 53.6  | 70836 | K-ST-1   | 1.027 | 0   | 53.6  | 70837 | K-ST-2    | 1.026 | -84  | 53.6  |
| 70893 | NEEDHAM   | 1.018 | 0   | 53.6  | 72569 | FRSQ     | 1.029 | 0   | 63.0  | 72565 | KENT CO   | 1.022 | 66   | 63.0  |
| 72962 | AGANM PF  | 1.022 | 109 | 104.8 | 73243 | BERLIN   | 1.014 | 136 | 132.0 | 73101 | BRANCAP   | 1.028 | 40   | 37.8  |
| 73262 | CANTON    | 1.013 | 54  | 50.4  | 73267 | DARIEN   | 1.030 | 0   | 39.6  | 73668 | E.SHORE   | 1.035 | 90   | 84.0  |
| 73260 | FRKLN DR  | 1.017 | 41  | 37.8  | 73202 | FROST BR | 1.028 | 273 | 262.0 | 73497 | GLNACAP   | 1.035 | 153  | 174.0 |
| 73498 | GLNBCAP   | 1.035 | 139 | 174.0 | 73230 | HADDAM   | 1.032 | 40  | 37.8  | 73242 | MANCHSTR  | 1.012 | 322  | 314.4 |
| 73210 | MONTVILLE | 1.017 | 108 | 104.8 | 73177 | MYSTICCT | 1.014 | 52  | 50.4  | 73244 | N.BLMPFLD | 1.012 | 161  | 157.2 |
| 73102 | NH CAPS   | 1.034 | 45  | 42.0  | 73172 | NORWALK  | 1.027 | 0   | 0.0   | 73170 | PLUMTREE  | 1.021 | 96   | 92.2  |
| 73190 | ROCK RIV  | 1.024 | 26  | 25.2  | 73674 | SACKTCAP | 1.032 | 45  | 42.0  | 73154 | SGTN B    | 1.027 | 166  | 314.4 |
| 73165 | STONY HL  | 1.023 | 26  | 100.8 | 73162 | WATERSDE | 1.032 | 42  | 39.6  |       |           |       |      |       |

REACTORS

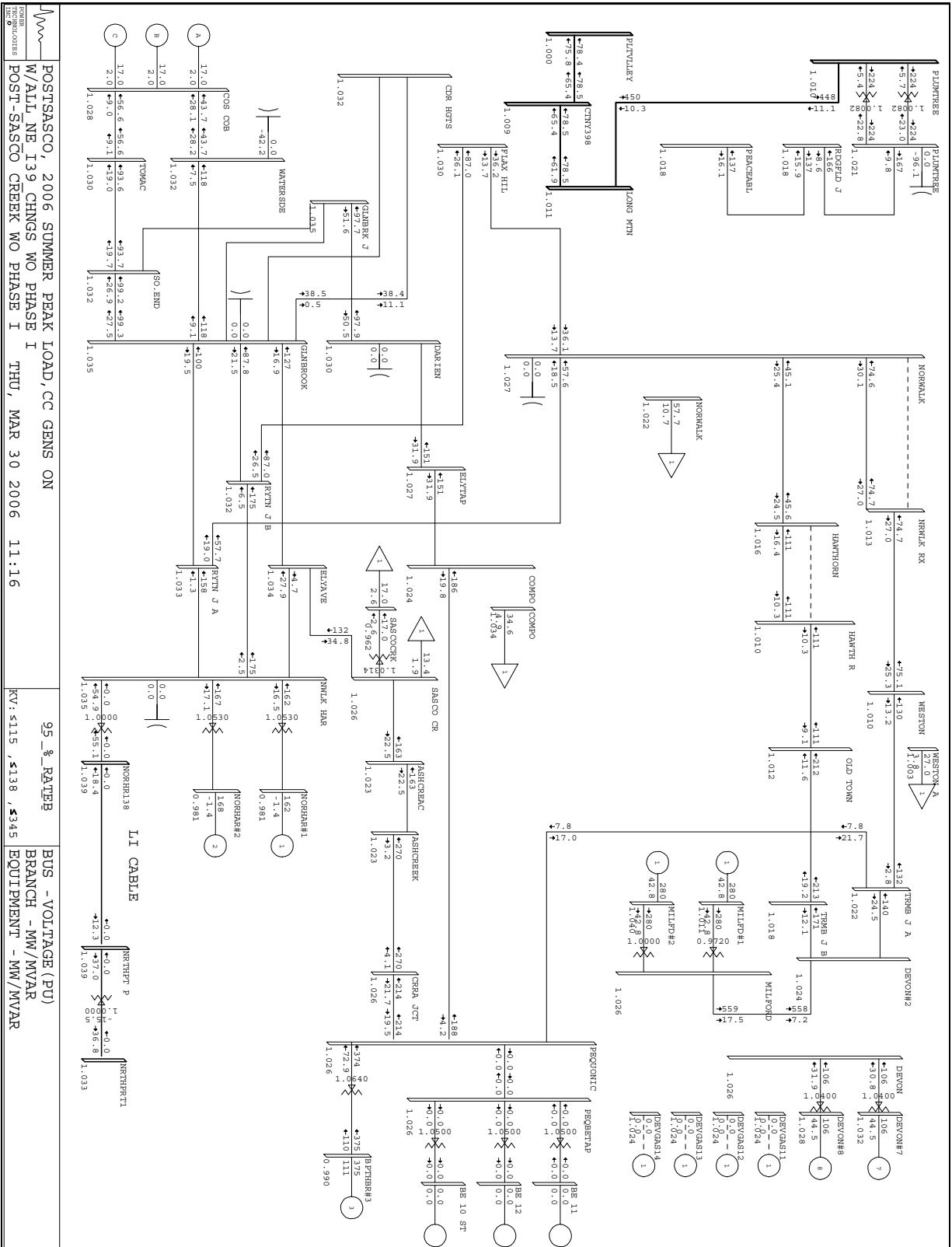
| #     | V        | MVAR  | MAX   | #     | V     | MVAR    | MAX   | #   | V     | MVAR  | MAX      |       |    |       |
|-------|----------|-------|-------|-------|-------|---------|-------|-----|-------|-------|----------|-------|----|-------|
| 87004 | KESICK   | 1.024 | 0     | 37.5  | 70001 | CHESTER | 1.020 | -18 | 125.0 | 70027 | ORRINGTN | 1.020 | 0  | 80.0  |
| 70125 | SUROWIEC | 1.066 | 0     | 80.0  | 72766 | SCOBIE1 | 1.041 | 0   | 40.0  | 72746 | SCOBIE2  | 1.041 | 0  | 40.0  |
| 71786 | SANDY PD | 1.037 | -1333 | 480.0 | 70837 | K-ST-2  | 1.026 | 84  | 80.0  | 70799 | WOBURN   | 1.020 | 0  | 240.0 |
| 70818 | MYSTC MA | 1.030 | -57   | 80.0  | 70815 | N.CAMB  | 1.028 | 0   | 160.0 | 73132 | PLUMREAC | 1.009 | 76 | 150.0 |
| 73135 | NOROH    | 1.008 | 76    | 300.0 | 73316 |         | 1.008 | 0   | 100.0 | 73317 |          | 1.008 | 0  | 100.0 |
| 73314 |          | 1.008 | 0     | 100.0 | 73315 |         | 1.008 | 0   | 100.0 | 73312 |          | 1.008 | 0  | 100.0 |
| 73313 |          | 1.008 | 0     | 100.0 |       |         |       |     |       |       |          |       |    |       |

INTERFACE FLOWS

| NB-NE           | 1003 | -55  | Orrington-South | 1124 | -63 | MEYANKEE-SOUTH | 720  | -105 |  |  |  |
|-----------------|------|------|-----------------|------|-----|----------------|------|------|--|--|--|
| SUR-SO          | 574  | -235 | MAINE-NH        | 352  | -89 | NNE-SCOBIE+394 | 1993 | -22  |  |  |  |
| SEABROOK-SOUTH  | 1464 | 40   | NORTH-SOUTH     | 1272 | -68 | EAST-WEST      | 1300 | 60   |  |  |  |
| WEST-EAST       | -462 | 57   | SNDYPOND-SOUTH  | 2149 | 136 | BOSTON IMPORT  | 2468 | -365 |  |  |  |
| SEMA/RI EXPORT  | 933  | -456 | CONN EXPORT     | -795 | 211 | CONN IMPORT    | 1634 | -94  |  |  |  |
| SW CONN IMPORT  | 2415 | 146* | NORWLK-STAMFORD | 970  | 6   | XSNDCABL TO NY | 352  | -17  |  |  |  |
| CT-LI 1385cable | 0    | -55  | NY-NE           | -619 | -88 | PV20           | 117  | -5   |  |  |  |



Diagram 2: Post-Sasco Creek without Bethel – Norwalk Project



**Case Summary 3: Pre-Sasco Creek with Bethel – Norwalk Project**

PRESASCO, 2006 SUMMER PEAK LOAD,CC GENS ON  
W/ALL\_NE\_I39\_CHNGS W PHASE I 1-ARCHERS\_CABLE

GENERATION

~~~~~MAINE~~~~~

| #              | V     | MW  | MX   | PMAX | #              | V     | MW  | MX   | PMAX | #              | V     | MW  | MX   | PMAX |
|----------------|-------|-----|------|------|----------------|-------|-----|------|------|----------------|-------|-----|------|------|
| 70060 MIS GT1  | 1.039 | 179 | 103* | 179  | 70061 MIS GT2  | 1.039 | 179 | 103* | 179  | 70062 MIS ST   | 1.046 | 191 | 118* | 191  |
| 70426 CHAMP G2 | 0.931 | 15  | 6*   | 21   | 70424 CHAMP G3 | 1.007 | 63  | 32*  | 72   | 70389 BUCKS G4 | 0.964 | 0   | 0    | 191  |
| 70067 U P 5 PF | 0.947 | 0   | 0    | 25   | 70070 U P 6 PF | 0.949 | 0   | 0*   | 25   | 70069 WENFD PH | 0.915 | 0   | 0    | 20   |
| 70372 SEA STRN | 0.978 | 47  | 1    | 47   | 70360 WYMAN #1 | 0.969 | 0   | 0    | 27   | 70361 WYMAN #2 | 0.976 | 20  | 2    | 27   |
| 70362 WYMAN #3 | 0.976 | 19  | 2    | 25   | 70363 WILLM #1 | 1.030 | 4   | 1    | 8    | 70364 WILLM #2 | 1.033 | 3   | 1    | 7    |
| 70356 HARRIS#1 | 0.963 | 16  | 3    | 17   | 70357 HARRIS#2 | 0.953 | 0   | 0    | 37   | 70358 HARRIS#3 | 0.973 | 27  | 6    | 36   |
| 70381 RPA CG1  | 1.154 | 150 | 120* | 179  | 70382 RPA SG2  | 1.092 | 0   | 0    | 94   | 70377 AEC G1   | 1.040 | 51  | -7   | 58   |
| 70378 AEC G2   | 1.040 | 51  | -6   | 58   | 70379 AEC G3   | 1.040 | 51  | -6   | 58   | 70370 AEI GEN  | 1.045 | 35  | 3*   | 39   |
| 70365 WF WY #1 | 1.000 | 0   | 0    | 57   | 70366 WF WY #2 | 1.024 | 55  | 14*  | 57   | 70367 WF WY #3 | 1.024 | 121 | 30   | 125  |
| 70368 WF WY #4 | 1.046 | 205 | 229  | 636  | 70386 WBK G1   | 1.006 | 0   | 0    | 185  | 70387 WBK G2   | 1.006 | 0   | 0    | 185  |
| 70388 WBK G3   | 1.006 | 0   | 0    | 196  | 70140 CAPE     | 1.017 | 0   | 0*   | 24   | 70421 J/MILL B | 1.015 | 16  | 27*  | 35   |
| 70420 J/MILL A | 1.011 | 29  | 20*  | 35   | 70432 J/MILL C | 1.005 | 26  | 16*  | 40   | 70425 BC COGEN | 1.060 | 65  | 46*  | 110  |
| 70422 WARRN G1 | 1.030 | 49  | 15*  | 51   | 70423 WARRN G2 | 1.031 | 44  | 11*  | 62   | 70129 LOUDEN   | 1.021 | 7   | 0*   | 37   |
| 70160 W.BUXTON | 1.014 | 2   | 0*   | 37   | 70223 TOPSHMN  | 1.040 | 13  | 0*   | 28   | 70118 GULF ISL | 1.050 | 21  | 0*   | 34   |
| 70104 LEW LWR  | 1.043 | 13  | -3   | 30   | 70222 TOPSHAM  | 1.040 | 3   | 0    | 20   | 70371 GORBELL  | 0.997 | 16  | 4*   | 16   |
| 70177 LWSTN GN | 1.042 | 2   | 0*   | 17   | 70147 LAKEWOOD | 1.006 | 7   | 4*   | 9    | 70410 HYDRO KN | 1.035 | 5   | 0*   | 17   |
| 70330 WINSLOW  | 1.033 | 7   | 0*   | 22   |                |       |     |      |      |                |       |     |      |      |

~~~~~NEW HAMPSHIRE / VERMONT~~~~~

| #              | V     | MW   | MX  | PMAX | #              | V     | MW  | MX  | PMAX | #              | V     | MW  | MX  | PMAX |
|----------------|-------|------|-----|------|----------------|-------|-----|-----|------|----------------|-------|-----|-----|------|
| 72869 SBRK G1  | 1.007 | 1314 | 168 | 1314 | 72868 NWNGT G1 | 1.015 | 410 | 75  | 422  | 70010 NEW_G1   | 1.019 | 164 | 75  | 169  |
| 70011 NEW_G2   | 1.019 | 164  | 75  | 169  | 70012 NEW_G3   | 1.015 | 189 | 75  | 195  | 72866 MERMK G1 | 1.036 | 109 | 27  | 113  |
| 72867 MERMK G2 | 1.037 | 311  | 78  | 320  | 72870 SCHILLER | 1.003 | 46  | 25* | 48   | 72871 SCHILLER | 1.002 | 48  | 25* | 50   |
| 72872 SCHILLER | 1.003 | 47   | 25* | 48   | 71950 GRANRDG1 | 1.032 | 0   | 0   | 280  | 71951 GRANRDG2 | 1.033 | 0   | 0   | 280  |
| 72701 AESSTG   | 1.033 | 0    | 0   | 250  | 71857 COMRF G1 | 1.000 | 36  | -5  | 41   | 71858 COMRF G2 | 1.013 | 0   | 0   | 41   |
| 71859 COMRF G3 | 1.013 | 0    | 0   | 41   | 71860 COMRF G4 | 1.013 | 0   | 0   | 41   | 71861 MOORE G1 | 1.005 | 39  | -1  | 48   |
| 71862 MOORE G2 | 1.013 | 0    | 0   | 48   | 71863 MOORE G3 | 1.003 | 0   | 0   | 48   | 71864 MOORE G4 | 1.012 | 0   | 0   | 48   |
| 72756 TAMW PF  | 1.075 | 19   | 0*  | 20   | 72918 L NATION | 1.021 | 13  | 0*  | 13   | 72843 WHFDA PF | 1.021 | 13  | 0*  | 14   |
| 72847 PINET PF | 0.993 | 15   | 0*  | 15   | 72760 POTOK PH | 1.026 | 8   | 0*  | 11   | 72758 SMITH HY | 1.021 | 9   | 0*  | 16   |
| 72848 JAMES    | 0.000 | 0    | 0*  | 16   | 72846 ERROL PH | 1.006 | 3   | 0*  | 3    | 70705 VTYAK G  | 1.013 | 667 | 150 | 667  |

~~~~~WESTERN MASSACHUSETTS~~~~~

| #              | V     | MW  | MX   | PMAX | #              | V     | MW  | MX | PMAX | #              | V     | MW  | MX   | PMAX |
|----------------|-------|-----|------|------|----------------|-------|-----|----|------|----------------|-------|-----|------|------|
| 72512 BRSPW G1 | 0.977 | 285 | 32   | 294  | 72513 BRSPW G2 | 0.977 | 285 | 32 | 294  | 73083 NRTHFD12 | 1.023 | 524 | 123* | 540  |
| 73084 NRTHFD34 | 1.023 | 524 | 123* | 540  | 72243 MILLENCT | 0.997 | 265 | 27 | 273  | 72244 MILLENST | 0.998 | 114 | 12   | 117  |
| 72930 STNYBK1A | 1.043 | 63  | 9    | 65   | 72931 STNYBK1B | 1.043 | 63  | 9  | 65   | 72932 STNYBK1C | 1.043 | 63  | 9    | 65   |
| 72933 STNYBK 1 | 1.043 | 84  | 10   | 87   | 72934 STNYBK2A | 1.043 | 63  | 9  | 65   | 72935 STNYBK2B | 1.043 | 63  | 9    | 65   |
| 72986 BERKPWR  | 1.020 | 296 | 37   | 305  | 73069 MAPR1 PF | 1.043 | 106 | 35 | 106  | 73070 MAPR2 PF | 1.043 | 106 | 35   | 106  |
| 73071 MAPR3 PF | 1.036 | 95  | 35   | 95   | 73072 ALT12 PF | 1.003 | 63  | 4  | 65   | 73073 ALT14 PF | 1.002 | 78  | 4    | 81   |
| 73080 WSPFLD 3 | 1.006 | 104 | 13   | 107  | 73085 MT.TOM   | 0.992 | 0   | 0  | 146  |                |       |     |      |      |

~~~~~NEMA / BOSTON~~~~~

| #              | V     | MW  | MX   | PMAX | #              | V     | MW  | MX  | PMAX | #              | V     | MW  | MX | PMAX |
|----------------|-------|-----|------|------|----------------|-------|-----|-----|------|----------------|-------|-----|----|------|
| 71063 MYST G7  | 1.014 | 549 | 43   | 565  | 71067 MYS8 GTS | 1.016 | 504 | 43  | 554  | 71068 MYS8 ST  | 1.022 | 310 | 43 | 312  |
| 71069 MYS9 GTS | 1.036 | 504 | 342* | 554  | 71070 MYS9 ST  | 1.033 | 110 | 180 | 312  | 71946 SALEM G1 | 1.019 | 77  | 9  | 81   |
| 71947 SALEM G2 | 1.019 | 76  | 9    | 78   | 71948 SALEM G3 | 1.019 | 139 | 18  | 143  | 71949 SALEM G4 | 1.019 | 398 | 55 | 400  |

~~~~~SEMA, SEMA / RHODE ISLAND~~~~~

| #              | V     | MW  | MX   | PMAX | #              | V     | MW  | MX   | PMAX | #              | V     | MW  | MX  | PMAX |
|----------------|-------|-----|------|------|----------------|-------|-----|------|------|----------------|-------|-----|-----|------|
| 72372 BP #1 GN | 0.980 | 0   | 0    | 241  | 72375 BP #2 GN | 0.980 | 0   | 0    | 241  | 72370 BP #3 GN | 1.024 | 587 | 99  | 605  |
| 72371 BP #4 GN | 1.030 | 300 | 74   | 425  | 71743 TAU 9A,8 | 0.999 | 24  | 16   | 55   | 71744 TAUNT G9 | 1.039 | 83  | 52* | 85   |
| 72669 TIVER G1 | 1.040 | 183 | 41   | 189  | 72670 TIVER G2 | 1.038 | 89  | 21   | 92   | 71394 EMI_GEN  | 0.992 | 180 | 27  | 185  |
| 71316 DPA PF   | 1.032 | 61  | 25*  | 68   | 71521 SOM G5   | 0.994 | 0   | 0    | 69   | 71522 SOM G6   | 0.966 | 68  | 6   | 105  |
| 71523 SOMST JT | 0.983 | 0   | 0    | 34   | 72661 MANCH09A | 1.008 | 116 | 35*  | 119  | 72662 MANCH10A | 1.008 | 116 | 35* | 119  |
| 72663 MANCH11A | 1.008 | 116 | 35*  | 119  | 72666 FRSQ SC1 | 0.995 | 41  | 3    | 46   | 72667 FRSQ SC2 | 0.995 | 41  | 2   | 46   |
| 72668 FRSQ SC3 | 0.995 | 41  | 1    | 46   | 71531 OSP1 PF  | 1.001 | 75  | 0    | 77   | 71532 OSP2 PF  | 1.001 | 75  | 0   | 77   |
| 71533 OSP3 PF  | 1.001 | 104 | 0    | 108  | 71534 OSP4 PF  | 1.001 | 75  | 0    | 77   | 71535 OSP5 PF  | 1.005 | 0   | 0   | 77   |
| 71536 OSP6 PF  | 1.005 | 0   | 0    | 108  | 71084 NEA GTPF | 1.018 | 82  | 13   | 111  | 71085 NEA GTPF | 1.018 | 82  | 13  | 110  |
| 71086 NEA STPF | 0.999 | 78  | 13   | 80   | 71251 CANAL G1 | 1.025 | 549 | 239* | 566  | 71252 CANAL G2 | 0.982 | 0   | 0   | 576  |
| 71094 PLGRM G1 | 1.041 | 728 | 260* | 705  | 72373 MPLP 1PF | 1.050 | 107 | 53*  | 109  | 72374 MPLP 2PF | 1.033 | 43  | 27* | 45   |
| 71095 ANPBLCK1 | 1.037 | 282 | 91   | 9999 | 71096 ANPBLCK2 | 1.037 | 282 | 91   | 9999 | 72377 BELL #1  | 1.038 | 290 | 131 | 290  |
| 72378 BELL #2  | 1.038 | 290 | 131  | 290  | 72671 HOPE G1  | 1.022 | 0   | 0    | 180  | 72672 HOPE G2  | 1.022 | 0   | 0   | 180  |
| 72673 HOPE G3  | 1.022 | 0   | 0    | 185  | 71092 EDG ST   | 1.012 | 311 | 9    | 311  | 71093 EDG GTS  | 1.015 | 307 | 9   | 552  |

~~~~~CONNECTICUT~~~~~

| #              | V     | MW  | MX  | PMAX | #              | V     | MW   | MX  | PMAX | #              | V     | MW  | MX | PMAX |
|----------------|-------|-----|-----|------|----------------|-------|------|-----|------|----------------|-------|-----|----|------|
| 73562 MILL#2   | 0.994 | 940 | 125 | 940  | 73563 MILL#3   | 0.990 | 1260 | 125 | 1260 | 73555 MIDDTN#2 | 1.006 | 117 | 24 | 117  |
| 73556 MIDDTN#3 | 0.994 | 233 | 24  | 233  | 73557 MIDDTN#4 | 1.025 | 400  | 114 | 400  | 73558 MONTV#5  | 1.015 | 81  | 23 | 81   |

Sasco Creek 51R Substation – Temporary Transformer and Circuit Breaker

|       |          |       |     |     |     |       |          |       |     |     |     |       |          |       |     |     |     |
|-------|----------|-------|-----|-----|-----|-------|----------|-------|-----|-----|-----|-------|----------|-------|-----|-----|-----|
| 73559 | MONIV#6  | 1.013 | 402 | 118 | 402 | 73278 | MONT DSL | 1.017 | 0   | 0   | 6   | 73538 | AESTH PF | 1.019 | 180 | 52  | 180 |
| 73565 | LAKERD#1 | 1.013 | 280 | 74  | 310 | 73566 | LAKERD#2 | 1.013 | 281 | 74  | 310 | 73567 | LAKERD#3 | 1.013 | 280 | 74  | 310 |
| 73588 | MERIDEN1 | 1.039 | 195 | 102 | 195 | 73589 | MERIDEN2 | 1.039 | 195 | 102 | 195 | 73590 | MERIDEN3 | 1.037 | 196 | 102 | 196 |
| 73597 | KLEENCT1 | 0.984 | 0   | 0   | 158 | 73598 | KLEENCT2 | 0.984 | 0   | 0   | 158 | 73599 | KLEENST1 | 0.984 | 0   | 0   | 319 |
| 73539 | DEXTR PF | 1.000 | 38  | 8   | 39  | 73203 | CAMPV PH | 1.014 | 6   | 0*  | 6   | 73281 | EXETR PF | 1.017 | 26  | -8  | 26  |
| 73459 | WNSRDLK  | 1.034 | 8   | 2*  | 8   | 73536 | FORST PF | 1.030 | 13  | 3   | 13  | 73537 | RVRSD PF | 1.039 | 0   | 0   | 26  |
| 73564 | MIDD#10J | 0.975 | 0   | 0   | 21  | 73616 | SCRRA PF | 1.005 | 13  | 0   | 14  | 73617 | TUNNEL   | 1.000 | 17  | 3   | 18  |

| ~~~SOUTH WEST CONNECTICUT~~~ |          |       |     |      |     |       |          |       |      |     |     |       |          |       |     |     |     |
|------------------------------|----------|-------|-----|------|-----|-------|----------|-------|------|-----|-----|-------|----------|-------|-----|-----|-----|
| #                            | V        | MW    | MX  | PMAX | #   | V     | MW       | MX    | PMAX | #   | V   | MW    | MX       | PMAX  |     |     |     |
| 73651                        | NH HARBR | 1.000 | 447 | 96   | 447 | 73657 | ENGLISH7 | 1.050 | 0    | 0   | 34  | 73658 | ENGLISH8 | 1.050 | 0   | 0   | 38  |
| 73647                        | BPTHBR#2 | 0.943 | 0   | 0    | 170 | 73648 | BPTHBR#3 | 0.983 | 375  | 83  | 375 | 73652 | BE 11    | 0.977 | 0   | 0   | 170 |
| 73653                        | BE 12    | 0.977 | 0   | 0    | 170 | 73654 | BE 10 ST | 0.977 | 0    | 0   | 180 | 73649 | BPTHBR#4 | 1.030 | 0   | 0   | 22  |
| 73650                        | CRRRA PF | 1.008 | 57  | 30*  | 59  | 73553 | DEVON#7  | 1.027 | 106  | 40  | 107 | 73554 | DEVON#8  | 1.024 | 106 | 40  | 107 |
| 73570                        | DEVGAS11 | 1.024 | 0   | 0    | 42  | 73571 | DEVGAS12 | 1.024 | 0    | 0   | 42  | 73572 | DEVGAS13 | 1.024 | 0   | 0   | 42  |
| 73573                        | DEVGAS14 | 1.024 | 0   | 0    | 42  | 73574 | MILFD#1  | 1.011 | 280  | 42  | 280 | 73575 | MILFD#2  | 1.040 | 280 | 42  | 280 |
| 73277                        | DEVON10  | 1.026 | 0   | 0    | 18  | 73551 | NORHAR#1 | 0.972 | 162  | -17 | 162 | 73552 | NORHAR#2 | 0.973 | 168 | -17 | 168 |
| 73163                        | COS COB  | 1.028 | 51  | 6*   | 57  | 73594 | WALL LV1 | 1.006 | 0    | 0   | 102 | 73595 | WALL LV2 | 1.006 | 0   | 0   | 102 |
| 73596                        | WALL LV3 | 1.006 | 0   | 0    | 51  | 73631 | WLNGF PF | 1.031 | 6    | 0   | 7   | 73381 | BULLS BR | 0.997 | 5   | 1*  | 5   |
| 73541                        | ROCK RIV | 1.026 | 25  | 0    | 31  | 73280 | RKRIV PF | 1.023 | 3    | 0*  | 3   | 73341 | SHEPAUG  | 1.025 | 32  | 8*  | 42  |
| 73187                        | STEVENS  | 1.011 | 0   | 0    | 29  | 73188 | BCNFL PF | 1.000 | 3    | 0*  | 4   | 73765 | DERBY PH | 1.030 | 7   | 1   | 7   |

| ~~~GENERATION TOTALS~~~ |      |     |              |      |     |             |      |      |  |  |  |  |  |  |  |  |  |
|-------------------------|------|-----|--------------|------|-----|-------------|------|------|--|--|--|--|--|--|--|--|--|
|                         | MW   | MX  |              | MW   | MX  |             | MW   | MX   |  |  |  |  |  |  |  |  |  |
| MIS                     | 549  | 324 | BUCKSPORT    | 78   | 38  | WYMAN       | 40   | 3    |  |  |  |  |  |  |  |  |  |
| HARRIS                  | 43   | 8   | WILLIAMS     | 7    | 2   | RUMFORD PWR | 150  | 120  |  |  |  |  |  |  |  |  |  |
| AEC                     | 153  | -19 | WYMAN        | 382  | 273 | WESTBROOK   | 0    | 0    |  |  |  |  |  |  |  |  |  |
| COMERFORD               | 36   | -5  | MOORE        | 39   | -1  | SEABROOK    | 1314 | 168  |  |  |  |  |  |  |  |  |  |
| MERRIMACK               | 420  | 105 | AES          | 0    | 0   | SCHILLER    | 141  | 75   |  |  |  |  |  |  |  |  |  |
| NEWINGTON               | 410  | 75  | CONED-NEW    | 517  | 224 | MYSTIC      | 2177 | 652  |  |  |  |  |  |  |  |  |  |
| SALEMHBR                | 690  | 92  | MASSPWR      | 307  | 105 | ANPBLK      | 563  | 182  |  |  |  |  |  |  |  |  |  |
| ANPBELL                 | 580  | 262 | BRAYTONPT    | 887  | 172 | MANCHSTRST  | 470  | 111  |  |  |  |  |  |  |  |  |  |
| OSP                     | 329  | 0   | NEA          | 242  | 40  | CANAL       | 549  | 239  |  |  |  |  |  |  |  |  |  |
| PILGRIM                 | 728  | 260 | HOPE         | 0    | 0   | EDGER       | 618  | 18   |  |  |  |  |  |  |  |  |  |
| DGHTN                   | 180  | 27  | VTYANKEE     | 667  | 161 | BEARSWAMP   | 571  | 64   |  |  |  |  |  |  |  |  |  |
| NORTHFIELD              | 1048 | 246 | STONYBROOK   | 400  | 57  | MASSPWR     | 307  | 105  |  |  |  |  |  |  |  |  |  |
| BERKSHIRE               | 296  | 37  | MILLSTONE    | 2200 | 251 | LAKERD      | 841  | 221  |  |  |  |  |  |  |  |  |  |
| S_MEADOW                | 0    | 0   | MIDDLETOWN   | 750  | 161 | MONTVILLE   | 483  | 141  |  |  |  |  |  |  |  |  |  |
| NORWALK HBR             | 330  | -33 | KLEEN        | 0    | 0   | Meriden     | 586  | 306  |  |  |  |  |  |  |  |  |  |
| NHHARBOR                | 447  | 96  | BRIDGEPORT   | 375  | 83  | DEVON       | 772  | 165  |  |  |  |  |  |  |  |  |  |
| MLFDPWR                 | 560  | 85  | BPT_RESCO    | 57   | 30  | NORWALK     | 0    | 0    |  |  |  |  |  |  |  |  |  |
| Waterside               | 0    | 0   | COS_COB      | 51   | 6   | CT          | 6581 | 1311 |  |  |  |  |  |  |  |  |  |
| SWCT                    | 1666 | 260 | NOR-STAM-PLA | 438  | 3   |             |      |      |  |  |  |  |  |  |  |  |  |

| CAPACITORS |           |       |     |       |       |          |       |     |       |       |           |       |      |       |  |  |  |
|------------|-----------|-------|-----|-------|-------|----------|-------|-----|-------|-------|-----------|-------|------|-------|--|--|--|
| #          | V         | MVAR  | MAX | #     | V     | MVAR     | MAX   | #   | V     | MVAR  | MAX       |       |      |       |  |  |  |
| 70001      | CHESTER   | 1.020 | 18  | 450.0 | 70024 | ORR CAP1 | 1.020 | 0   | 67.0  | 70025 | ORR CAP2  | 1.020 | 0    | 67.0  |  |  |  |
| 70026      | ORR CAP3  | 1.020 | 0   | 67.0  | 70036 | MAX CAP1 | 1.059 | 56  | 50.0  | 70037 | MAX CAP2  | 1.059 | 56   | 50.0  |  |  |  |
| 70043      | MAS CAP1  | 1.061 | 0   | 50.0  | 70044 | MAS CAP2 | 1.061 | 0   | 50.0  | 70050 | SUR CAP1  | 1.066 | 0    | 50.0  |  |  |  |
| 70051      | SUR CAP2  | 1.066 | 0   | 50.0  | 70052 | SUR CAP3 | 1.066 | 0   | 50.0  | 70056 | SGR CAP1  | 1.038 | 0    | 50.0  |  |  |  |
| 70057      | SGR CAP2  | 1.038 | 0   | 50.0  | 70162 | SANFORD  | 0.977 | 0   | 31.0  | 72712 | BEEBE     | 1.040 | 43   | 20.0  |  |  |  |
| 72738      | OCEAN ER  | 0.998 | 0   | 25.0  | 72739 | OCEAN UH | 1.010 | 0   | 25.0  | 72717 | CHSNT HL  | 1.044 | 57   | 50.0  |  |  |  |
| 72734      | MERRIMACK | 1.035 | 40  | 72.0  | 71996 | TEWKSBRY | 1.019 | 65  | 126.0 | 71786 | SANDY PD  | 1.037 | 1333 | 450.0 |  |  |  |
| 72102      | PRATTS J  | 1.023 | 66  | 63.0  | 72265 | NBORO RD | 0.997 | 0   | 54.0  | 72096 | MILLBURY  | 1.010 | 128  | 63.0  |  |  |  |
| 70507      | GEORG TP  | 0.995 | 0   | 24.8  | 70546 | BERLIN   | 1.015 | 26  | 24.8  | 70519 | MIDDLBRY  | 1.019 | 24   | 22.9  |  |  |  |
| 70512      | ESX B-2   | 1.010 | 126 | 99.2  | 70529 | WILLISTN | 1.010 | 25  | 24.8  | 70521 | RUTLAND   | 1.010 | 25   | 24.8  |  |  |  |
| 70508      | SANDB115  | 1.004 | 0   | 24.8  | 70504 | SBRAT 69 | 1.026 | 0   | 50.0  | 70547 | HIGHGATE  | 0.990 | 0    | 140.0 |  |  |  |
| 70870      | FRMNGHAM  | 1.015 | 55  | 53.6  | 70888 | BAKER ST | 1.019 | 111 | 107.2 | 70806 | LEXINGTN  | 1.015 | 55   | 53.6  |  |  |  |
| 73177      | MYSTICCT  | 1.014 | 52  | 53.6  | 70836 | K-ST-1   | 1.027 | 0   | 53.6  | 70837 | K-ST-2    | 1.026 | -84  | 53.6  |  |  |  |
| 70893      | NEEDHAM   | 1.018 | 0   | 53.6  | 72569 | FRSQ     | 1.029 | 0   | 63.0  | 72565 | KENT CO   | 1.022 | 66   | 63.0  |  |  |  |
| 72962      | AGAWM PF  | 1.022 | 109 | 104.8 | 73243 | BERLIN   | 1.014 | 136 | 132.0 | 73101 | BRANCAP   | 1.028 | 40   | 37.8  |  |  |  |
| 73262      | CANTON    | 1.013 | 54  | 50.4  | 73267 | DARIEN   | 1.030 | 0   | 39.6  | 73668 | E. SHORE  | 1.035 | 90   | 84.0  |  |  |  |
| 73260      | FRKLN DR  | 1.016 | 41  | 37.8  | 73202 | FROST BR | 1.027 | 272 | 262.0 | 73497 | GLNACAP   | 1.035 | 153  | 174.0 |  |  |  |
| 73498      | GLNBCAP   | 1.035 | 139 | 174.0 | 73230 | HADDAM   | 1.032 | 40  | 37.8  | 73242 | MANCHSTR  | 1.012 | 322  | 314.4 |  |  |  |
| 73210      | MONTVILLE | 1.017 | 108 | 104.8 | 73177 | MYSTICCT | 1.014 | 52  | 50.4  | 73244 | N. BLMFLD | 1.012 | 161  | 157.2 |  |  |  |
| 73102      | NH CAPS   | 1.034 | 45  | 42.0  | 73172 | NORWALK  | 1.032 | 0   | 0.0   | 73170 | PLUMTREE  | 1.021 | 96   | 92.2  |  |  |  |
| 73190      | ROCK RIV  | 1.023 | 26  | 25.2  | 73674 | SACKTAP  | 1.032 | 45  | 42.0  | 73154 | SGTN B    | 1.027 | 166  | 314.4 |  |  |  |
| 73165      | STONY HL  | 1.023 | 26  | 100.8 | 73162 | WATERSDE | 1.032 | 42  | 39.6  |       |           |       |      |       |  |  |  |

| REACTORS |          |       |       |       |       |         |       |     |       |       |          |       |    |       |  |  |  |
|----------|----------|-------|-------|-------|-------|---------|-------|-----|-------|-------|----------|-------|----|-------|--|--|--|
| #        | V        | MVAR  | MAX   | #     | V     | MVAR    | MAX   | #   | V     | MVAR  | MAX      |       |    |       |  |  |  |
| 87004    | KESICK   | 1.024 | 0     | 37.5  | 70001 | CHESTER | 1.020 | -18 | 125.0 | 70027 | ORRINGTN | 1.020 | 0  | 80.0  |  |  |  |
| 70125    | SUROWIEC | 1.066 | 0     | 80.0  | 72766 | SCOBIE1 | 1.041 | 0   | 40.0  | 72746 | SCOBIE2  | 1.041 | 0  | 40.0  |  |  |  |
| 71786    | SANDY PD | 1.037 | -1333 | 480.0 | 70837 | K-ST-2  | 1.026 | 84  | 80.0  | 70799 | WOBURN   | 1.020 | 0  | 240.0 |  |  |  |
| 70818    | MYSTC MA | 1.030 | -57   | 80.0  | 70815 | N. CAMB | 1.028 | 0   | 160.0 | 73132 | PLUMREAC | 1.008 | 99 | 150.0 |  |  |  |
| 73135    | NOROH    | 1.008 | 85    | 300.0 | 73316 |         | 1.008 | 0   | 100.0 | 73317 |          | 1.008 | 0  | 100.0 |  |  |  |
| 73314    |          | 1.008 | 0     | 100.0 | 73315 |         | 1.008 | 0   | 100.0 | 73312 |          | 1.008 | 0  | 100.0 |  |  |  |
| 73313    |          | 1.008 | 0     | 100.0 |       |         |       |     |       |       |          |       |    |       |  |  |  |

| INTERFACE FLOWS |  |      |  |      |                 |      |  |     |                |      |  |      |  |  |  |  |  |
|-----------------|--|------|--|------|-----------------|------|--|-----|----------------|------|--|------|--|--|--|--|--|
|                 |  |      |  |      |                 |      |  |     |                |      |  |      |  |  |  |  |  |
| NB-NE           |  | 1003 |  | -55  | Orrington-South | 1124 |  | -63 | MEYANKEE-SOUTH | 720  |  | -105 |  |  |  |  |  |
| SUR-SO          |  | 574  |  | -235 | MAINE-NH        | 352  |  | -89 | NNE-SCOBIE+394 | 1993 |  | -22  |  |  |  |  |  |
| SEABROOK-SOUTH  |  | 1463 |  | 40   | NORTH-SOUTH     | 1272 |  | -68 | EAST-WEST      | 1300 |  | 58   |  |  |  |  |  |
| WEST-EAST       |  | -461 |  | 57   | SNDYPOND-SOUTH  | 2147 |  | 136 | BOSTON IMPORT  | 2468 |  | -364 |  |  |  |  |  |
| SEMA/R1 EXPORT  |  | 933  |  | -457 | CONN EXPORT     | -789 |  | 206 | CONN IMPORT    | 1627 |  | -90  |  |  |  |  |  |
| SW CONN IMPORT  |  | 2408 |  | 148* | NORWLK-STAMPORD | 966  |  | -4  | XSNDCABL TO NY | 352  |  | -17  |  |  |  |  |  |
| CT-LI 1385cable |  | 0    |  | -56  | NY-NE           | -626 |  | -78 | PV20           | 117  |  | -5   |  |  |  |  |  |

Sasco Creek 51R Substation – Temporary Transformer and Circuit Breaker

| HVDC TRANSFERS FROM H-Q |       |             |       |
|-------------------------|-------|-------------|-------|
| ~~~~~                   |       |             |       |
| CHAT-1 =                | 0     | CHAT-2 =    | 0     |
| CHAT-2B =               | -237  | HIGHGATE =  | 205   |
| PHIT-P1 =               | 1000  | PHIT-P2 =   | 1000  |
|                         |       | CHAT-1B =   | -237  |
|                         |       | MADAWASK =  | -151  |
|                         |       | EEL =       | 74    |
| BUS VOLTAGES            |       |             |       |
| ~~~~~                   |       |             |       |
|                         | V     | LMT         |       |
| 70001 CHESTER           | 345   | 352.        |       |
| 70086 ME YANK           | 345   | 345.        |       |
| 70089 S.GORHAM          | 345   | 354.        |       |
| 70144 BOLT HL           | 115   | 115.        |       |
| 72691 DRFLD345          | 345   | 352.        |       |
| 71789 TEWKS             | 345   | 358.        |       |
| 71336 SHERMAN           | 345   | 355.        |       |
| 70818 MYSTC MA          | 115   | 118.        |       |
| 73108 CARD              | 345   | 355.        |       |
| 73110 MILLSTNE          | 345   | 357.        |       |
| 73663 E.SHORE           | 345   | 356.        |       |
| 73115 PLUMTREE          | 345   | 348.        |       |
| 73297 E.DEVON           | 345   | 0.          | *E    |
| 71326 BRIDGWTR          | 345   | 354.        |       |
| 70780 WWALP345          | 345   | 352.        |       |
| 71133 CARVER            | 345   | 351.        |       |
| 73215 CARD              | 115   | 115.        |       |
| 71377 SOMERSET          | 115   | 116.        |       |
| 71202 BRNSTBL           | 115   | 117.        |       |
| 73195 DEVON             | 115   | 118.        |       |
| 73700 PEQUONIC          | 115   | 118.        |       |
| 73168 GLNBROOK          | 115   | 119.        |       |
| 73170 PLUMTREE          | 115   | 117.        |       |
|                         | V     | LMT         |       |
| 70002 ORRINGTON         | 345   | 350.        |       |
| 70087 SUROWIEC          | 345   | 345.        |       |
| 70088 WYMAN             | 345   | 362.        |       |
| 72745 SCHILLER          | 115   | 115.        |       |
| 72692 NWGTN345          | 345   | 358.        |       |
| 71786 SANDY PD          | 345   | 358.        |       |
| 70783 PILGRIM           | 345   | 355.        |       |
| 72926 NRTHFLD           | 345   | 357.        |       |
| 73119 LAKEROAD          | 345   | 357.        |       |
| 73116 MIDDLETWN         | 345   | 358.        |       |
| 73106 SOUTHGTN          | 345   | 355.        |       |
| 73293 NORWALK           | 345   | 347.        |       |
| 73295 BESECK            | 345   | 0.          | *E    |
| 71336 SHERMAN           | 345   | 355.        |       |
| 70783 PILGRIM           | 345   | 355.        |       |
| 73244 N.BLMFLD          | 115   | 116.        |       |
| 73241 MIDDLETWN         | 115   | 118.        |       |
| 71378 BELLROCK          | 115   | 116.        |       |
| 72569 FRSQ              | 115   | 118.        |       |
| 73129 E.DEVONJ          | 115   | 0.          | *E    |
| 73172 NORWALK           | 115   | 119.        |       |
| 73198 SOUTHGTN          | 115   | 119.        |       |
| 73153 BRANFORD          | 115   | 118.        | H     |
|                         | V     | LMT         |       |
| 70003 MAXCYS            | 345   | 344.        |       |
| 70090 BUXTON            | 345   | 352.        |       |
| 72754 3 RIVERS          | 115   | 114.        |       |
| 72732 MADBURY           | 115   | 115.        |       |
| 72694 SEBRK345          | 345   | 355.        |       |
| 71801 BRAYTN P          | 345   | 358.        |       |
| 71193 CANAL             | 345   | 352.        |       |
| 73111 NOBLMFLD          | 345   | 355.        |       |
| 73109 MONTVILE          | 345   | 359.        |       |
| 73107 SCOVL RK          | 345   | 357.        |       |
| 73105 LONG MTN          | 345   | 349.        |       |
| 73301 PEQUONNO          | 345   | 0.          | *E    |
| 71801 BRAYTN P          | 345   | 358.        |       |
| 71337 WFARNUM           | 345   | 355.        |       |
| 71193 CANAL             | 345   | 352.        |       |
| 73242 MANCHSTR          | 115   | 116.        |       |
| 72590 TIVERTON          | 115   | 117.        |       |
| 71347 BRIDGWTR          | 115   | 117.        |       |
| 73668 E.SHORE           | 115   | 119.        |       |
| 73125 MILFORD           | 115   | 118.        |       |
| 73171 NWLK HAR          | 115   | 119.        |       |
| 73202 FROST BR          | 115   | 118.        |       |
| 73230 HADDAM            | 115   | 119.        | H     |
| AREA/ZONE TOTALS        |       |             |       |
| ~~~~~                   |       |             |       |
| NEPOOL_GEN              | 26179 | NEPOOL_LOAD | 28101 |
| NEPOOL_INT              | -2616 | NEPOOL_LOSS | 677   |



Case Summary 4: Post-Sasco Creek with Bethel – Norwalk Project

POSTSASCO, 2006 SUMMER PEAK LOAD, CC GENS ON  
W/ALL\_NE\_I39\_CHNGS W PHASE I 1-ARCHERS\_CABLE

GENERATION

| ---MAINE---                     |          |       |      |      |      |       |          |       |      |      |      |       |          |       |     |      |     |
|---------------------------------|----------|-------|------|------|------|-------|----------|-------|------|------|------|-------|----------|-------|-----|------|-----|
| #                               | V        | MW    | MX   | PMAX | #    | V     | MW       | MX    | PMAX | #    | V    | MW    | MX       | PMAX  |     |      |     |
| 70060                           | MIS GT1  | 1.039 | 179  | 103* | 179  | 70061 | MIS GT2  | 1.039 | 179  | 103* | 179  | 70062 | MIS ST   | 1.046 | 191 | 118* | 191 |
| 70426                           | CHAMP G2 | 0.931 | 15   | 6*   | 21   | 70424 | CHAMP G3 | 1.007 | 63   | 32*  | 72   | 70389 | BUCKS G4 | 0.964 | 0   | 0    | 191 |
| 70067                           | U P 5 PF | 0.947 | 0    | 0    | 25   | 70070 | U P 6 PF | 0.949 | 0    | 0*   | 25   | 70069 | WENFD PH | 0.915 | 0   | 0    | 20  |
| 70372                           | SEA STRN | 0.978 | 47   | 1    | 47   | 70360 | WYMAN #1 | 0.969 | 0    | 0    | 27   | 70361 | WYMAN #2 | 0.976 | 20  | 2    | 27  |
| 70362                           | WYMAN #3 | 0.976 | 19   | 2    | 25   | 70363 | WILLM #1 | 1.030 | 4    | 1    | 8    | 70364 | WILLM #2 | 1.033 | 3   | 1    | 7   |
| 70356                           | HARRIS#1 | 0.963 | 16   | 3    | 17   | 70357 | HARRIS#2 | 0.953 | 0    | 0    | 37   | 70358 | HARRIS#3 | 0.973 | 27  | 6    | 36  |
| 70381                           | RPA CG1  | 1.154 | 150  | 120* | 179  | 70382 | RPA SG2  | 1.092 | 0    | 0    | 94   | 70377 | AEC G1   | 1.040 | 51  | -7   | 58  |
| 70378                           | AEC G2   | 1.040 | 51   | -6   | 58   | 70379 | AEC G3   | 1.040 | 51   | -6   | 58   | 70370 | AEI GEN  | 1.045 | 35  | 3*   | 39  |
| 70365                           | WF WY #1 | 1.000 | 0    | 0    | 57   | 70366 | WF WY #2 | 1.024 | 55   | 14*  | 57   | 70367 | WF WY #3 | 1.024 | 121 | 30   | 125 |
| 70368                           | WF WY #4 | 1.046 | 205  | 229  | 636  | 70386 | WBK G1   | 1.006 | 0    | 0    | 185  | 70387 | WBK G2   | 1.006 | 0   | 0    | 185 |
| 70388                           | WBK G3   | 1.006 | 0    | 0    | 196  | 70140 | CAPE     | 1.017 | 0    | 0*   | 24   | 70421 | J/MILL B | 1.015 | 16  | 27*  | 35  |
| 70420                           | J/MILL A | 1.011 | 29   | 20*  | 35   | 70432 | J/MILL C | 1.005 | 26   | 16*  | 40   | 70425 | BC COGEN | 1.060 | 65  | 46*  | 110 |
| 70422                           | WARRN G1 | 1.030 | 49   | 15*  | 51   | 70423 | WARRN G2 | 1.031 | 44   | 11*  | 62   | 70129 | LOUDEN   | 1.021 | 7   | 0*   | 37  |
| 70160                           | W.BUXTON | 1.014 | 2    | 0*   | 37   | 70223 | TOPSHMGN | 1.040 | 13   | 0*   | 28   | 70118 | GULF ISL | 1.050 | 21  | 0*   | 34  |
| 70104                           | LEW LWR  | 1.043 | 13   | -3   | 30   | 70222 | TOPSHAM  | 1.040 | 3    | 0    | 20   | 70371 | GORBELL  | 0.997 | 16  | 4*   | 16  |
| 70177                           | LWSTN GN | 1.042 | 2    | 0*   | 17   | 70147 | LAKWOOD  | 1.006 | 7    | 4*   | 9    | 70410 | HYDRO KN | 1.035 | 5   | 0*   | 17  |
| 70330                           | WINSLOW  | 1.033 | 7    | 0*   | 22   |       |          |       |      |      |      |       |          |       |     |      |     |
| ---NEW HAMPSHIRE / VERMONT---   |          |       |      |      |      |       |          |       |      |      |      |       |          |       |     |      |     |
| #                               | V        | MW    | MX   | PMAX | #    | V     | MW       | MX    | PMAX | #    | V    | MW    | MX       | PMAX  |     |      |     |
| 72869                           | SBRK G1  | 1.007 | 1314 | 168  | 1314 | 72868 | NWNGT G1 | 1.015 | 410  | 75   | 422  | 70010 | NEW_G1   | 1.019 | 164 | 75   | 169 |
| 70011                           | NEW_G2   | 1.019 | 164  | 75   | 169  | 70012 | NEW_G3   | 1.015 | 189  | 75   | 195  | 72866 | MERMK G1 | 1.036 | 109 | 27   | 113 |
| 72867                           | MERMK G2 | 1.037 | 311  | 78   | 320  | 72870 | SCHILLER | 1.003 | 46   | 25*  | 48   | 72871 | SCHILLER | 1.002 | 48  | 25*  | 50  |
| 72872                           | SCHILLER | 1.003 | 47   | 25*  | 48   | 71950 | GRANRDG1 | 1.032 | 0    | 0    | 280  | 71951 | GRANRDG2 | 1.033 | 0   | 0    | 280 |
| 72701                           | AESSTG   | 1.033 | 0    | 0    | 250  | 71857 | COMRF G1 | 1.000 | 36   | -5   | 41   | 71858 | COMRF G2 | 1.013 | 0   | 0    | 41  |
| 71859                           | COMRF G3 | 1.013 | 0    | 0    | 41   | 71860 | COMRF G4 | 1.013 | 0    | 0    | 41   | 71861 | MOORE G1 | 1.005 | 39  | -1   | 48  |
| 71862                           | MOORE G2 | 1.013 | 0    | 0    | 48   | 71863 | MOORE G3 | 1.003 | 0    | 0    | 48   | 71864 | MOORE G4 | 1.012 | 0   | 0    | 48  |
| 72756                           | TAMW PF  | 1.075 | 19   | 0*   | 20   | 72918 | L NATION | 1.021 | 13   | 0*   | 13   | 72843 | WHFDA PF | 1.021 | 13  | 0*   | 14  |
| 72847                           | PINET PF | 0.993 | 15   | 0*   | 15   | 72760 | POTOK PH | 1.026 | 8    | 0*   | 11   | 72758 | SMITH HY | 1.021 | 9   | 0*   | 16  |
| 72848                           | JAMES    | 0.000 | 0    | 0*   | 16   | 72846 | ERROL PH | 1.006 | 3    | 0*   | 3    | 70705 | VTYAK G  | 1.013 | 667 | 150  | 667 |
| ---WESTERN MASSACHUSETTS---     |          |       |      |      |      |       |          |       |      |      |      |       |          |       |     |      |     |
| #                               | V        | MW    | MX   | PMAX | #    | V     | MW       | MX    | PMAX | #    | V    | MW    | MX       | PMAX  |     |      |     |
| 72512                           | BRSWP G1 | 0.977 | 285  | 32   | 294  | 72513 | BRSWP G2 | 0.977 | 285  | 32   | 294  | 73083 | NRTHFD12 | 1.023 | 524 | 123* | 540 |
| 73084                           | NRTHFD34 | 1.023 | 524  | 123* | 540  | 72243 | MILLENCT | 0.997 | 265  | 27   | 273  | 72244 | MILLENST | 0.998 | 114 | 12   | 117 |
| 72930                           | STNYBK1A | 1.043 | 63   | 9    | 65   | 72931 | STNYBK1B | 1.043 | 63   | 9    | 65   | 72932 | STNYBK1C | 1.043 | 63  | 9    | 65  |
| 72933                           | STNYBK 1 | 1.043 | 84   | 10   | 87   | 72934 | STNYBK2A | 1.043 | 63   | 9    | 65   | 72935 | STNYBK2B | 1.043 | 63  | 9    | 65  |
| 72986                           | BERKPWR  | 1.020 | 296  | 37   | 305  | 73069 | MAPR1 PF | 1.043 | 106  | 35   | 106  | 73070 | MAPR2 PF | 1.043 | 106 | 35   | 106 |
| 73071                           | MAPR3 PF | 1.036 | 95   | 35   | 95   | 73072 | ALT12 PF | 1.003 | 63   | 4    | 65   | 73073 | ALT34 PF | 1.002 | 78  | 4    | 81  |
| 73080                           | WSPFLD 3 | 1.006 | 104  | 13   | 107  | 73085 | MT.TOM   | 0.992 | 0    | 0    | 146  |       |          |       |     |      |     |
| ---NEMA / BOSTON---             |          |       |      |      |      |       |          |       |      |      |      |       |          |       |     |      |     |
| #                               | V        | MW    | MX   | PMAX | #    | V     | MW       | MX    | PMAX | #    | V    | MW    | MX       | PMAX  |     |      |     |
| 71063                           | MYST G7  | 1.014 | 549  | 43   | 565  | 71067 | MYS8 GTS | 1.016 | 504  | 43   | 554  | 71068 | MYS8 ST  | 1.022 | 310 | 43   | 312 |
| 71069                           | MYS9 GTS | 1.036 | 504  | 342* | 554  | 71070 | MYS9 ST  | 1.033 | 110  | 180  | 312  | 71946 | SALEM G1 | 1.019 | 77  | 9    | 81  |
| 71947                           | SALEM G2 | 1.019 | 76   | 9    | 78   | 71948 | SALEM G3 | 1.019 | 139  | 18   | 143  | 71949 | SALEM G4 | 1.019 | 398 | 55   | 400 |
| ---SEMA, SEMA / RHODE ISLAND--- |          |       |      |      |      |       |          |       |      |      |      |       |          |       |     |      |     |
| #                               | V        | MW    | MX   | PMAX | #    | V     | MW       | MX    | PMAX | #    | V    | MW    | MX       | PMAX  |     |      |     |
| 72372                           | BP #1 GN | 0.980 | 0    | 0    | 241  | 72375 | BP #2 GN | 0.980 | 0    | 0    | 241  | 72370 | BP #3 GN | 1.024 | 587 | 99   | 605 |
| 72371                           | BP #4 GN | 1.030 | 300  | 74   | 425  | 71743 | TAU 9A,8 | 0.999 | 24   | 16   | 55   | 71744 | TAUNT G9 | 1.039 | 83  | 52*  | 85  |
| 72669                           | TIVER G1 | 1.040 | 183  | 41   | 189  | 72670 | TIVER G2 | 1.038 | 89   | 21   | 92   | 71394 | EMI_GEN  | 0.992 | 180 | 27   | 185 |
| 71316                           | DPA PF   | 1.032 | 61   | 25*  | 68   | 71521 | SOM G5   | 0.994 | 0    | 0    | 69   | 71522 | SOM G6   | 0.966 | 68  | 6    | 105 |
| 71523                           | SOMST JT | 0.983 | 0    | 0    | 34   | 72661 | MANCH09A | 1.008 | 116  | 35*  | 119  | 72662 | MANCH10A | 1.008 | 116 | 35*  | 119 |
| 72663                           | MANCH11A | 1.008 | 116  | 35*  | 119  | 72666 | FRSQ SC1 | 0.995 | 41   | 3    | 46   | 72667 | FRSQ SC2 | 0.995 | 41  | 2    | 46  |
| 72668                           | FRSQ SC3 | 0.995 | 41   | 1    | 46   | 71531 | OSP1 PF  | 1.001 | 75   | 0    | 77   | 71532 | OSP2 PF  | 1.001 | 75  | 0    | 77  |
| 71533                           | OSP3 PF  | 1.001 | 104  | 0    | 108  | 71534 | OSP4 PF  | 1.001 | 75   | 0    | 77   | 71535 | OSP5 PF  | 1.005 | 0   | 0    | 77  |
| 71536                           | OSP6 PF  | 1.005 | 0    | 0    | 108  | 71084 | NEA GTPF | 1.018 | 82   | 13   | 111  | 71085 | NEA GTPF | 1.018 | 82  | 13   | 110 |
| 71086                           | NEA STPF | 0.999 | 78   | 13   | 80   | 71251 | CANAL G1 | 1.025 | 549  | 239* | 566  | 71252 | CANAL G2 | 0.982 | 0   | 0    | 576 |
| 71094                           | PLGRM G1 | 1.041 | 728  | 260* | 705  | 72373 | MPLP 1PF | 1.050 | 107  | 53*  | 109  | 72374 | MPLP 2PF | 1.033 | 43  | 27*  | 45  |
| 71095                           | ANPBLCK1 | 1.037 | 282  | 91   | 9999 | 71096 | ANPBLCK2 | 1.037 | 282  | 91   | 9999 | 72377 | BELL #1  | 1.038 | 290 | 131  | 290 |
| 72378                           | BELL #2  | 1.038 | 290  | 131  | 290  | 72671 | HOPE G1  | 1.022 | 0    | 0    | 180  | 72672 | HOPE G2  | 1.022 | 0   | 0    | 180 |
| 72673                           | HOPE G3  | 1.022 | 0    | 0    | 185  | 71092 | EDG ST   | 1.012 | 311  | 9    | 311  | 71093 | EDG GTS  | 1.015 | 307 | 9    | 552 |
| ---CONNECTICUT---               |          |       |      |      |      |       |          |       |      |      |      |       |          |       |     |      |     |
| #                               | V        | MW    | MX   | PMAX | #    | V     | MW       | MX    | PMAX | #    | V    | MW    | MX       | PMAX  |     |      |     |
| 73562                           | MILL#2   | 0.994 | 940  | 125  | 940  | 73563 | MILL#3   | 0.990 | 1260 | 125  | 1260 | 73555 | MIDDTN#2 | 1.006 | 117 | 24   | 117 |
| 73556                           | MIDDTN#3 | 0.994 | 233  | 24   | 233  | 73557 | MIDDTN#4 | 1.025 | 400  | 114  | 400  | 73558 | MONTV#5  | 1.015 | 81  | 23   | 81  |
| 73559                           | MONTV#6  | 1.013 | 402  | 118  | 402  | 73278 | MONT DSL | 1.017 | 0    | 0    | 6    | 73538 | AESTH PF | 1.019 | 180 | 52   | 180 |

Sasco Creek 51R Substation – Temporary Transformer and Circuit Breaker

|                |       |     |     |     |                 |       |     |     |     |                |       |     |     |     |
|----------------|-------|-----|-----|-----|-----------------|-------|-----|-----|-----|----------------|-------|-----|-----|-----|
| 73565 LAKERD#1 | 1.013 | 280 | 74  | 310 | 73566 LAKERD#2  | 1.013 | 281 | 74  | 310 | 73567 LAKERD#3 | 1.013 | 280 | 74  | 310 |
| 73588 MERIDEN1 | 1.039 | 195 | 102 | 195 | 73589 MERIDEN2  | 1.039 | 195 | 102 | 195 | 73590 MERIDEN3 | 1.037 | 196 | 102 | 196 |
| 73597 KLEENCT1 | 0.984 | 0   | 0   | 158 | 73598 KLEENCT2  | 0.984 | 0   | 0   | 158 | 73599 KLEENST1 | 0.984 | 0   | 0   | 319 |
| 73539 DEXTR PF | 1.000 | 38  | 8   | 39  | 73203 CAMPV PH  | 1.014 | 6   | 0*  | 6   | 73281 EXETR PF | 1.017 | 26  | -8  | 26  |
| 73459 WNSRSLK  | 1.034 | 8   | 2*  | 8   | 73536 FORST PF  | 1.030 | 13  | 3   | 13  | 73537 RVRSD PF | 1.039 | 0   | 0   | 26  |
| 73564 MIDD#10J | 0.975 | 0   | 0   | 21  | 73616 SCRRRA PF | 1.005 | 13  | 0   | 14  | 73617 TUNNEL   | 1.000 | 17  | 3   | 18  |

---SOUTH WEST CONNECTICUT---

| #              | V     | MW  | MX  | PMAX | #              | V     | MW  | MX  | PMAX | #              | V     | MW  | MX  | PMAX |
|----------------|-------|-----|-----|------|----------------|-------|-----|-----|------|----------------|-------|-----|-----|------|
| 73651 NH HARBR | 1.000 | 447 | 97  | 447  | 73657 ENGLISH7 | 1.050 | 0   | 0   | 34   | 73658 ENGLISH8 | 1.050 | 0   | 0   | 38   |
| 73647 BPTHBR#2 | 0.943 | 0   | 0   | 170  | 73648 BPTHBR#3 | 0.983 | 375 | 85  | 375  | 73652 BE 11    | 0.977 | 0   | 0   | 170  |
| 73653 BE 12    | 0.977 | 0   | 0   | 170  | 73654 BE 10 ST | 0.977 | 0   | 0   | 180  | 73649 BPTHBR#4 | 1.030 | 0   | 0   | 22   |
| 73650 CRRRA PF | 1.008 | 57  | 30* | 59   | 73553 DEVON#7  | 1.027 | 106 | 40  | 107  | 73554 DEVON#8  | 1.024 | 106 | 40  | 107  |
| 73570 DEVGAS11 | 1.024 | 0   | 0   | 42   | 73571 DEVGAS12 | 1.024 | 0   | 0   | 42   | 73572 DEVGAS13 | 1.024 | 0   | 0   | 42   |
| 73573 DEVGAS14 | 1.024 | 0   | 0   | 42   | 73574 MILFD#1  | 1.011 | 280 | 42  | 280  | 73575 MILFD#2  | 1.040 | 280 | 42  | 280  |
| 73277 DEVON10  | 1.026 | 0   | 0   | 18   | 73551 NORHAR#1 | 0.972 | 162 | -16 | 162  | 73552 NORHAR#2 | 0.973 | 168 | -16 | 168  |
| 73163 COS COB  | 1.028 | 51  | 6*  | 57   | 73594 WALL LV1 | 1.006 | 0   | 0   | 102  | 73595 WALL LV2 | 1.006 | 0   | 0   | 102  |
| 73596 WALL LV3 | 1.006 | 0   | 0   | 51   | 73631 WLNGF PF | 1.031 | 6   | 0   | 7    | 73381 BULLS BR | 0.997 | 5   | 1*  | 5    |
| 73541 ROCK RIV | 1.026 | 25  | 0   | 31   | 73280 RKRIV PF | 1.023 | 3   | 0*  | 3    | 73341 SHEPAUG  | 1.025 | 32  | 8*  | 42   |
| 73187 STEVENSN | 1.011 | 0   | 0   | 29   | 73188 BCNPL PF | 1.000 | 3   | 0*  | 4    | 73765 DERBY PH | 1.030 | 7   | 1   | 7    |

---GENERATION TOTALS---

|             | MW   | MX  |              | MW   | MX  |             | MW   | MX   |
|-------------|------|-----|--------------|------|-----|-------------|------|------|
| MIS         | 549  | 324 | BUCKSPORT    | 78   | 38  | WYMAN       | 40   | 3    |
| HARRIS      | 43   | 8   | WILLIAMS     | 7    | 2   | RUMFORD PWR | 150  | 120  |
| AEC         | 153  | -19 | WYMAN        | 382  | 273 | WESTBROOK   | 0    | 0    |
| COMERFORD   | 36   | -5  | MOORE        | 39   | -1  | SEABROOK    | 1314 | 168  |
| MERRIMACK   | 420  | 105 | AES          | 0    | 0   | SCHILLER    | 141  | 75   |
| NEWINGTON   | 410  | 75  | CONED-NEW    | 517  | 224 | MYSTIC      | 2177 | 652  |
| SALEMHBR    | 690  | 92  | MASSPWR      | 307  | 105 | ANPBLK      | 563  | 182  |
| ANPBELL     | 580  | 262 | BRAYTONPT    | 887  | 172 | MANCHSTRST  | 470  | 111  |
| OSP         | 329  | 0   | NEA          | 242  | 40  | CANAL       | 549  | 239  |
| PILGRIM     | 728  | 260 | HOPE         | 0    | 0   | EDGER       | 618  | 18   |
| DGHTN       | 180  | 27  | VTYANKEE     | 667  | 161 | BEARSWAMP   | 571  | 64   |
| NORTHFIELD  | 1048 | 246 | STONYBROOK   | 400  | 57  | MASSPWR     | 307  | 105  |
| BERKSHIRE   | 296  | 37  | MILLSTONE    | 2200 | 251 | LAKERD      | 841  | 221  |
| S_MEADOW    | 0    | 0   | MIDDLETOWN   | 750  | 161 | MONTVILLE   | 483  | 141  |
| NORWALK HBR | 330  | -32 | KLEEN        | 0    | 0   | Meriden     | 586  | 306  |
| NHHARBOR    | 447  | 97  | BRIDGEPORT   | 375  | 85  | DEVON       | 772  | 164  |
| MLFDPWR     | 560  | 84  | BPT_RESCO    | 57   | 30  | NORWALK     | 0    | 0    |
| Waterside   | 0    | 0   | COS_COB      | 51   | 6   | CT          | 6581 | 1313 |
| SWCT        | 1666 | 262 | NOR-STAM-PLA | 438  | 4   |             |      |      |

CAPACITORS

| #               | V     | MVAR | MAX   | #              | V     | MVAR | MAX   | #               | V     | MVAR | MAX   |
|-----------------|-------|------|-------|----------------|-------|------|-------|-----------------|-------|------|-------|
| 70001 CHESTER   | 1.020 | 18   | 450.0 | 70024 ORR CAP1 | 1.020 | 0    | 67.0  | 70025 ORR CAP2  | 1.020 | 0    | 67.0  |
| 70026 ORR CAP3  | 1.020 | 0    | 67.0  | 70036 MAX CAP1 | 1.059 | 56   | 50.0  | 70037 MAX CAP2  | 1.059 | 56   | 50.0  |
| 70043 MAS CAP1  | 1.061 | 0    | 50.0  | 70044 MAS CAP2 | 1.061 | 0    | 50.0  | 70050 SUR CAP1  | 1.066 | 0    | 50.0  |
| 70051 SUR CAP2  | 1.066 | 0    | 50.0  | 70052 SUR CAP3 | 1.066 | 0    | 50.0  | 70056 SGR CAP1  | 1.038 | 0    | 50.0  |
| 70057 SGR CAP2  | 1.038 | 0    | 50.0  | 70162 SANFORD  | 0.977 | 0    | 31.0  | 72712 BEEBE     | 1.040 | 43   | 20.0  |
| 72738 OCEAN ER  | 0.998 | 0    | 25.0  | 72739 OCEAN UH | 1.010 | 0    | 25.0  | 72717 CHSNT HL  | 1.044 | 57   | 50.0  |
| 72734 MERRMACK  | 1.035 | 40   | 72.0  | 71996 TEWKSBRY | 1.019 | 65   | 126.0 | 71786 SANDY PD  | 1.037 | 1333 | 450.0 |
| 72102 PRATTS J  | 1.023 | 66   | 63.0  | 72265 NBORO RD | 0.997 | 0    | 54.0  | 72096 MILLBURY  | 1.010 | 128  | 63.0  |
| 70507 GEORG TP  | 0.995 | 0    | 24.8  | 70546 BERLIN   | 1.015 | 26   | 24.8  | 70519 MIDDLEBRY | 1.019 | 24   | 22.9  |
| 70512 ESX B-2   | 1.010 | 126  | 99.2  | 70529 WILLISTN | 1.010 | 25   | 24.8  | 70521 RUTLAND   | 1.010 | 25   | 24.8  |
| 70508 SANDB115  | 1.004 | 0    | 24.8  | 70504 SBRAT 69 | 1.026 | 0    | 50.0  | 70547 HIGHGATE  | 0.990 | 0    | 140.0 |
| 70870 FRMNGHAM  | 1.015 | 55   | 53.6  | 70888 BAKER ST | 1.019 | 111  | 107.2 | 70806 LEXINGTN  | 1.015 | 55   | 53.6  |
| 73177 MYSTICCT  | 1.014 | 52   | 53.6  | 70836 K-ST-1   | 1.027 | 0    | 53.6  | 70837 K-ST-2    | 1.026 | -84  | 53.6  |
| 70893 NEEDHAM   | 1.018 | 0    | 53.6  | 72569 FRSQ     | 1.029 | 0    | 63.0  | 72565 KENT CO   | 1.022 | 66   | 63.0  |
| 72962 AGAWM PF  | 1.022 | 109  | 104.8 | 73243 BERLIN   | 1.014 | 136  | 132.0 | 73101 BRANCAP   | 1.028 | 40   | 37.8  |
| 73262 CANTON    | 1.013 | 54   | 50.4  | 73267 DARIEN   | 1.030 | 0    | 39.6  | 73668 E.SHORE   | 1.035 | 90   | 84.0  |
| 73260 FRKLN DR  | 1.016 | 41   | 37.8  | 73202 FROST BR | 1.027 | 272  | 262.0 | 73497 GLNACAP   | 1.035 | 153  | 174.0 |
| 73498 GLNBCAP   | 1.035 | 139  | 174.0 | 73230 HADDAM   | 1.032 | 40   | 37.8  | 73242 MANCHSTR  | 1.012 | 322  | 314.4 |
| 73210 MONTVILLE | 1.017 | 108  | 104.8 | 73177 MYSTICCT | 1.014 | 52   | 50.4  | 73244 N.BLMPFLD | 1.012 | 161  | 157.2 |
| 73102 NH CAPS   | 1.034 | 45   | 42.0  | 73172 NORWALK  | 1.032 | 0    | 0.0   | 73170 PLUMTREE  | 1.021 | 96   | 92.2  |
| 73190 ROCK RIV  | 1.023 | 26   | 25.2  | 73674 SACKTCAP | 1.032 | 45   | 42.0  | 73154 SGTN B    | 1.027 | 166  | 314.4 |
| 73165 STONY HL  | 1.023 | 26   | 100.8 | 73162 WATERSDE | 1.032 | 42   | 39.6  |                 |       |      |       |

REACTORS

| #              | V     | MVAR  | MAX   | #             | V     | MVAR | MAX   | #               | V     | MVAR | MAX   |
|----------------|-------|-------|-------|---------------|-------|------|-------|-----------------|-------|------|-------|
| 87004 KESICK   | 1.024 | 0     | 37.5  | 70001 CHESTER | 1.020 | -18  | 125.0 | 70027 ORRINGTON | 1.020 | 0    | 80.0  |
| 70125 SUROWIEC | 1.066 | 0     | 80.0  | 72766 SCOBIE1 | 1.041 | 0    | 40.0  | 72746 SCOBIE2   | 1.041 | 0    | 40.0  |
| 71786 SANDY PD | 1.037 | -1333 | 480.0 | 70837 K-ST-2  | 1.026 | 84   | 80.0  | 70799 WOBURN    | 1.020 | 0    | 240.0 |
| 70818 MYSTC MA | 1.030 | -57   | 80.0  | 70815 N.CAMB  | 1.028 | 0    | 160.0 | 73132 PLUMREAC  | 1.008 | 99   | 150.0 |
| 73135 NOROH    | 1.008 | 85    | 300.0 | 73316         | 1.008 | 0    | 100.0 | 73317           | 1.008 | 0    | 100.0 |
| 73314          | 1.008 | 0     | 100.0 | 73315         | 1.008 | 0    | 100.0 | 73312           | 1.008 | 0    | 100.0 |
| 73313          | 1.008 | 0     | 100.0 |               |       |      |       |                 |       |      |       |

INTERFACE FLOWS

| NB-NE           | 1003 | -55  | Orrington-South | 1124 | -63 | MEYANKEE-SOUTH | 720  | -105 |  |
|-----------------|------|------|-----------------|------|-----|----------------|------|------|--|
| SUR-SO          | 574  | -235 | MAINE-NH        | 352  | -89 | NNE-SCOBIE+394 | 1993 | -22  |  |
| SEABROOK-SOUTH  | 1463 | 40   | NORTH-SOUTH     | 1272 | -68 | EAST-WEST      | 1300 | 58   |  |
| WEST-EAST       | -461 | 57   | SNDYPOND-SOUTH  | 2147 | 136 | BOSTON IMPORT  | 2468 | -364 |  |
| SEMA/R1 EXPORT  | 933  | -457 | CONN EXPORT     | -788 | 206 | CONN IMPORT    | 1627 | -91  |  |
| SW CONN IMPORT  | 2408 | 148* | NORWLK-STAMFORD | 965  | -4  | XSNDCABL TO NY | 352  | -17  |  |
| CT-LI 1385cable | 0    | -56  | NY-NE           | -626 | -79 | PV20           | 117  | -5   |  |

Sasco Creek 51R Substation – Temporary Transformer and Circuit Breaker

| HVDC TRANSFERS FROM H-Q |      |  | CHAT-1B = -237  |      |  |
|-------------------------|------|--|-----------------|------|--|
| ~~~~~                   |      |  | MADAWASK = -151 |      |  |
| CHAT-1 =                | 0    |  | CHAT-2 =        | 0    |  |
| CHAT-2B =               | -237 |  | HIGHGATE =      | 205  |  |
| PHIT-P1 =               | 1000 |  | PHIT-P2 =       | 1000 |  |
|                         |      |  | EEL =           | 74   |  |

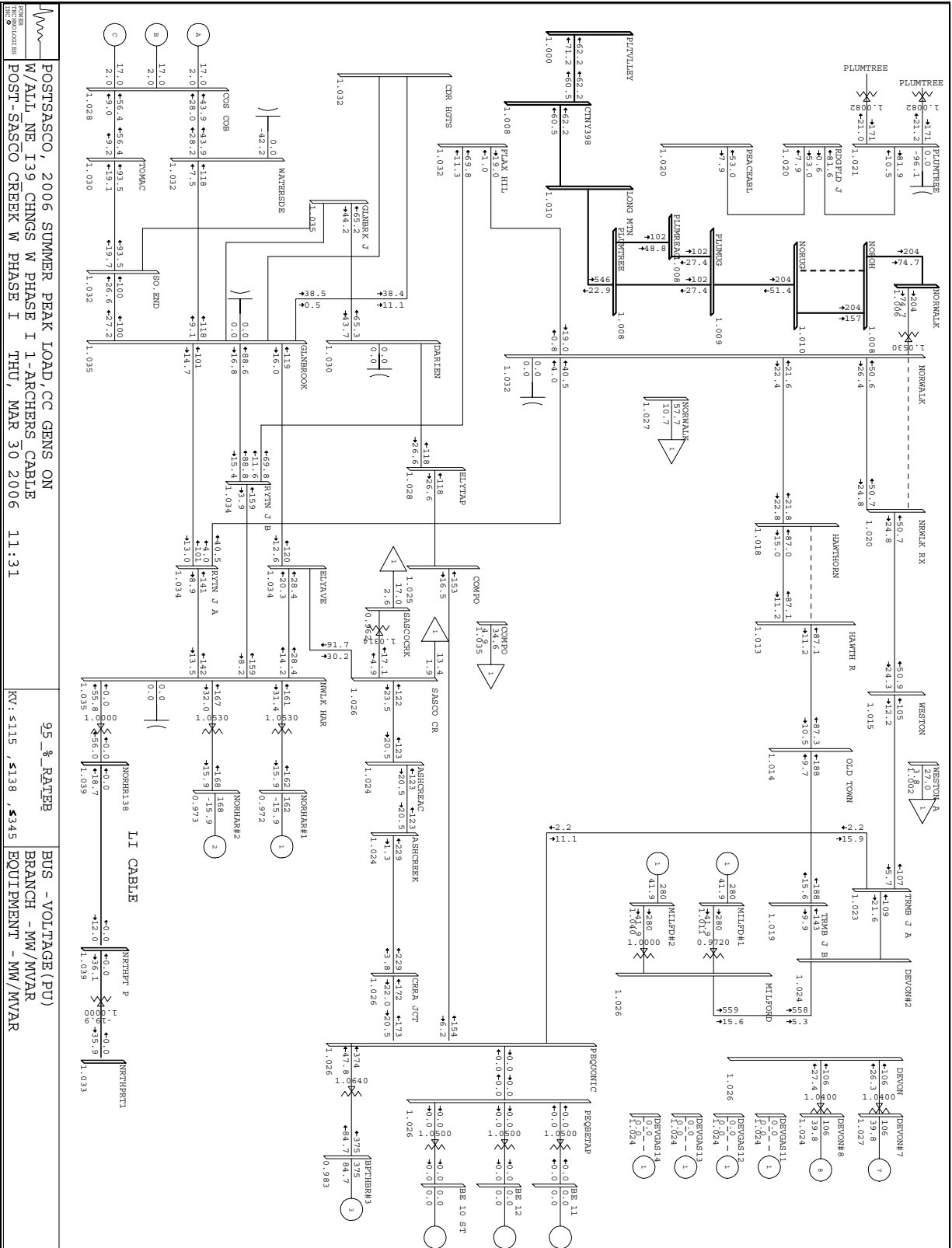
  

| BUS VOLTAGES   |     |      |                 |     |      |
|----------------|-----|------|-----------------|-----|------|
| ~~~~~          |     |      |                 |     |      |
|                | V   | LMT  |                 | V   | LMT  |
| 70001 CHESTER  | 345 | 352. | 70002 ORRINGTON | 345 | 350. |
| 70086 ME YANK  | 345 | 345. | 70087 SUROWIEC  | 345 | 345. |
| 70089 S.GORHAM | 345 | 354. | 70088 WYMAN     | 345 | 362. |
| 70144 BOLT HL  | 115 | 115. | 72745 SCHILLER  | 115 | 115. |
| 72691 DRFLD345 | 345 | 352. | 72692 NWGTN345  | 345 | 358. |
| 71789 TEWKS    | 345 | 358. | 71786 SANDY PD  | 345 | 358. |
| 71336 SHERMAN  | 345 | 355. | 70783 PILGRIM   | 345 | 355. |
| 70818 MYSTC MA | 115 | 118. | 72926 NRTHFLD   | 345 | 357. |
| 73108 CARD     | 345 | 355. | 73119 LAKEROAD  | 345 | 357. |
| 73110 MILLSTNE | 345 | 357. | 73116 MDDLWTN   | 345 | 358. |
| 73663 E.SHORE  | 345 | 356. | 73106 SOUTHGTN  | 345 | 355. |
| 73115 PLUMTREE | 345 | 348. | 73293 NORWALK   | 345 | 347. |
| 73297 E.DEVON  | 345 | 0.   | 73295 BESECK    | 345 | 0.   |
| 71326 BRIDGWTR | 345 | 354. | 71336 SHERMAN   | 345 | 355. |
| 70780 WWALP345 | 345 | 352. | 70783 PILGRIM   | 345 | 355. |
| 71133 CARVER   | 345 | 351. | 73244 N.BLMFLD  | 115 | 116. |
| 73215 CARD     | 115 | 115. | 73241 MDDLWTN   | 115 | 118. |
| 71377 SOMERSET | 115 | 116. | 71378 BELLROCK  | 115 | 116. |
| 71202 BRNSTBL  | 115 | 117. | 72569 FRSQ      | 115 | 118. |
| 73195 DEVON    | 115 | 118. | 73129 E.DEVONJ  | 115 | 0.   |
| 73700 PEQUONIC | 115 | 118. | 73172 NORWALK   | 115 | 119. |
| 73168 GLNBROOK | 115 | 119. | 73198 SOUTHGTN  | 115 | 119. |
| 73170 PLUMTREE | 115 | 117. | 73153 BRANFORD  | 115 | 118. |
|                |     |      |                 |     | H    |

| AREA/ZONE TOTALS |       |             |       |
|------------------|-------|-------------|-------|
| ~~~~~            |       |             |       |
| NEPOOL_GEN       | 26179 | NEPOOL_LOAD | 28101 |
| NEPOOL_INT       | -2616 | NEPOOL_LOSS | 676   |

Diagram 4: Post-Sasco Creek with Bethel – Norwalk Project



**APPENDIX C – Contingency List**

| 115-kV Lines |                  |                 |
|--------------|------------------|-----------------|
| Line Number  | From             | To              |
| 1130         | Compo            | Pequonnock      |
| 1130+1416    | Compo            | Pequonnock      |
|              | Compo            | Darien          |
| 1222         | Old Town         | Hawthorne       |
| 1385         | Norwalk Harbor   | Long Island     |
| 1385 + Auto  | Norwalk Harbor   | Long Island     |
| 1389         | Flax Hill        | Norwalk         |
| 1416         | Compo            | Darien          |
| 1430         | Ash Creek        | Sasco Creek     |
| 1470         | Wilton           | Peaceable       |
| 1565         | Plumtree         | Peaceable       |
| 1637         | Weston           | Norwalk         |
| 1682         | Wilton           | Norwalk         |
| 1710         | Devon            | Trumbull Jct. B |
|              | Pequonnock       | Trumbull Jct. B |
|              | Old Town         | Trumbull Jct. B |
| 1720         | Hawthorne        | Norwalk         |
| 1730         | Weston           | Trumbull Jct. A |
|              | Pequonnock       | Trumbull Jct. A |
|              | Devon            | Trumbull Jct. A |
| 1867         | Norwalk Harbor   | Rowayton Jct. B |
|              | Flax Hill        | Rowayton Jct. B |
|              | Glenbrook        | Rowayton Jct. B |
| 1880         | Norwalk Harbor   | Rowayton Jct. A |
|              | Glenbrook        | Rowayton Jct. A |
|              | Norwalk          | Rowayton Jct. A |
| 1890         | Norwalk Harbor   | Ely Ave         |
|              | Sasco Creek      | Ely Ave         |
|              | Glenbrook        | Ely Ave         |
| 1977         | South End        | Glenbrook Jct.  |
|              | Darien           | Glenbrook Jct.  |
|              | Glenbrook        | Glenbrook Jct.  |
| 91001        | Ash Creek        | CRRA Jct.       |
|              | Pequonnock       | CRRA Jct.       |
|              | Bridgeport Resco | CRRA Jct.       |

| 115-kV Double Circuit Towers |                  |                 |
|------------------------------|------------------|-----------------|
| Line Number                  | From             | To              |
| 1130 + 1430 DCT              | Compo            | Pequonnock      |
|                              | Ash Creek        | Sasco Creek     |
| 1130 + 91001 DCT             | Compo            | Pequonnock      |
|                              | Ash Creek        | CRRA Jct.       |
|                              | Pequonnock       | CRRA Jct.       |
|                              | Bridgeport Resco | CRRA Jct.       |
| 1389 + 1880 DCT              | Flax Hill        | Norwalk         |
|                              | Norwalk Harbor   | Rowayton Jct.   |
|                              | Glenbrook        | Rowayton Jct.   |
| 1416 + 1867 DCT              | Compo            | Darien          |
|                              | Norwalk Harbor   | Rowayton Jct.   |
|                              | Flax Hill        | Rowayton Jct.   |
| 1416 + 1880 DCT              | Compo            | Darien          |
|                              | Norwalk Harbor   | Rowayton Jct.   |
|                              | Glenbrook        | Rowayton Jct.   |
| 1416 + 1890 DCT              | Compo            | Darien          |
|                              | Norwalk Harbor   | Ely Ave         |
|                              | Sasco Creek      | Ely Ave         |
| 1637 + 1720 DCT              | Weston           | Norwalk         |
|                              | Hawthorne        | Norwalk         |
| 1637 + 1682 DCT              | Weston           | Norwalk         |
|                              | Wilton           | Norwalk         |
| 1710 + 1730 DCT              | Devon            | Trumbull Jct. B |
|                              | Pequonnock       | Trumbull Jct. B |
|                              | Old Town         | Trumbull Jct. B |
|                              | Weston           | Trumbull Jct. A |
|                              | Pequonnock       | Trumbull Jct. A |
| 1720 + 1730 DCT              | Devon            | Trumbull Jct. A |
|                              | Hawthorne        | Norwalk         |
|                              | Weston           | Trumbull Jct. A |
|                              | Pequonnock       | Trumbull Jct. A |
|                              | Devon            | Trumbull Jct. A |

| 115-kV Double Circuit Towers (Cont.) |                |                 |
|--------------------------------------|----------------|-----------------|
| Line Number                          | From           | To              |
| 1867 + 1880 DCT                      | Norwalk Harbor | Rowayton Jct. B |
|                                      | Flax Hill      | Rowayton Jct. B |
|                                      | Glenbrook      | Rowayton Jct. B |
|                                      | Norwalk Harbor | Rowayton Jct. A |
|                                      | Glenbrook      | Rowayton Jct. A |
| 1867 + 1890 DCT                      | Norwalk Harbor | Rowayton Jct. B |
|                                      | Flax Hill      | Rowayton Jct. B |
|                                      | Glenbrook      | Rowayton Jct. B |
|                                      | Norwalk Harbor | Ely Ave         |
|                                      | Sasco Creek    | Ely Ave         |
| 1867 + 1977 DCT                      | Glenbrook      | Ely Ave         |
|                                      | Norwalk Harbor | Rowayton Jct. B |
|                                      | Flax Hill      | Rowayton Jct. B |
|                                      | Glenbrook      | Rowayton Jct. B |
|                                      | South End      | Glenbrook Jct.  |
| 1880 + 1890 DCT                      | Darien         | Glenbrook Jct.  |
|                                      | Glenbrook      | Glenbrook Jct.  |
|                                      | Norwalk Harbor | Rowayton Jct. A |
|                                      | Glenbrook      | Rowayton Jct. A |
|                                      | Norwalk        | Rowayton Jct. A |
| 1880 + 1977 DCT                      | Norwalk Harbor | Ely Ave         |
|                                      | Sasco Creek    | Ely Ave         |
|                                      | Glenbrook      | Ely Ave         |
|                                      | Norwalk Harbor | Rowayton Jct. A |
|                                      | Glenbrook      | Rowayton Jct. A |
| 1890 + 1977 DCT                      | Norwalk        | Rowayton Jct. A |
|                                      | South End      | Glenbrook Jct.  |
|                                      | Darien         | Glenbrook Jct.  |
|                                      | Glenbrook      | Glenbrook Jct.  |
|                                      | Norwalk Harbor | Ely Ave         |
| 1890 + 1977 DCT                      | Sasco Creek    | Ely Ave         |
|                                      | Glenbrook      | Ely Ave         |
|                                      | South End      | Glenbrook Jct.  |
|                                      | Darien         | Glenbrook Jct.  |
|                                      | Glenbrook      | Glenbrook Jct.  |

| 115-kV Stuck Breakers |                  |                 |
|-----------------------|------------------|-----------------|
| Line Number           | From             | To              |
| Ash Creek Breaker     | Ash Creek        | CRRR Jct.       |
|                       | Pequonnock       | CRRR Jct.       |
|                       | Bridgeport Resco | CRRR Jct.       |
|                       | Ash Creek        | Sasco Creek     |
| Darien 1T             | South End        | Glenbrook Jct.  |
|                       | Darien           | Glenbrook Jct.  |
|                       | Glenbrook        | Glenbrook Jct.  |
| Devon 1T              | Compo            | Darien          |
|                       | Devon            | Trumbull Jct. B |
|                       | Pequonnock       | Trumbull Jct. B |
|                       | Old Town         | Trumbull Jct. B |
| Devon 2T              | Devon            | S. Naugatuck    |
|                       | Devon            | Trumbull Jct. B |
|                       | Pequonnock       | Trumbull Jct. B |
|                       | Old Town         | Trumbull Jct. B |
| Devon 3T              | Devon            | Milford         |
|                       | Devon Gas 11     |                 |
| Devon 4T              | Devon Gas 13     |                 |
|                       | Devon            | Devon #2        |
| Devon 5T              | Devon            | Devon #2        |
|                       | Devon            | Trap Falls      |
| Devon 6T              | Devon            | Trap Falls      |
|                       | Devon            | Derby Jct.      |
|                       | Beacon Falls     | Derby Jct.      |
| Devon 7T              | Indian Well      | Derby Jct.      |
|                       | Devon            | Derby Jct.      |
|                       | Beacon Falls     | Derby Jct.      |
| Devon 8T              | Indian Well      | Derby Jct.      |
|                       | Devon Gas 14     |                 |
|                       | Devon Gas 14     |                 |
| Devon 10T             | Weston           | Trumbull Jct. A |
|                       | Pequonnock       | Trumbull Jct. A |
|                       | Devon            | Trumbull Jct. A |
| Devon 11T             | Devon Gas 12     |                 |
|                       | Weston           | Trumbull Jct. A |
|                       | Pequonnock       | Trumbull Jct. A |
| Devon 12T             | Devon            | Trumbull Jct. A |
|                       | Devon Gas 12     |                 |
|                       | Devon            | S. Naugatuck    |
| Devon 21T             | Devon Gas 11     |                 |
|                       | Devon Gas 13     |                 |
|                       | Devon            | Devon #2        |
|                       | Devon            | Lucchini Jct.   |
| Devon 22T             | Southington      | Lucchini Jct.   |
|                       | Hanover          | Lucchini Jct.   |
|                       | Devon            | Devon #2        |
| Devon 23T             | Devon 7          |                 |
|                       | Devon            | Devon #2        |
| Devon 24T             | Devon            | Devon 1790      |
|                       | Devon            | Devon 1780      |
| Devon 25T             | Devon            | Devon 1780      |
|                       | Devon 8          |                 |
| Devon 26T             | Devon 8          |                 |
|                       | Devon            | June            |
| Devon 27T             | Devon            | June            |
|                       | Devon            | Wallingford     |
| Devon 28T             | Devon            | Wallingford     |
|                       | Devon Gas 10     |                 |
| Flax Hill 2T          | Flax Hill        | Norwalk         |
|                       | Norwalk Harbor   | Rowayton Jct. B |
|                       | Flax Hill        | Rowayton Jct. B |
|                       | Glenbrook        | Rowayton Jct. B |
| Glenbrook 3T          | Norwalk Harbor   | Rowayton Jct. A |
|                       | Glenbrook        | Rowayton Jct. A |
|                       | Norwalk          | Rowayton Jct. A |
|                       | Glenbrook        | Waterside       |

| 115-kV Stuck Breakers (Cont.) |                     |                 |
|-------------------------------|---------------------|-----------------|
| Line Number                   | From                | To              |
| Glenbrook 8T                  | Glenbrook           | Southend        |
|                               | Norwalk Harbor      | Ely Ave         |
|                               | Sasco Creek         | Ely Ave         |
|                               | Glenbrook           | Ely Ave         |
| Glenbrook A Bus               | Glenbrook           | Cedar Heights   |
|                               | Glenbrook           | Glenbrook Jct.  |
|                               | Glenbrook           | Norwalk         |
|                               | Glenbrook Cap       | 166 MVAR        |
| Glenbrook B Bus               | Glenbrook           | Rowayton Jct. B |
|                               | Glenbrook           | Cedar Heights   |
|                               | Glenbrook           | Norwalk         |
|                               | Glenbrook Cap       | 166 MVAR        |
| Norwalk 5T                    | Norwalk             | Glenbrook       |
|                               | Norwalk             | Wilton          |
| Norwalk 8T                    | Norwalk             | Flax Hill       |
|                               | Norwalk             | Hawthorne       |
| Norwalk 11T                   | Norwalk Harbor      | Rowayton Jct. A |
|                               | Glenbrook           | Rowayton Jct. A |
|                               | Norwalk             | Rowayton Jct. A |
|                               | Weston              | Norwalk         |
| 1682 1880                     | Norwalk             | Wilton          |
|                               | Norwalk Harbor      | Rowayton Jct. A |
|                               | Glenbrook           | Rowayton Jct. A |
|                               | Norwalk             | Rowayton Jct. A |
| Norwalk Harbor 1T             | Norwalk Harbor      | Ely Ave         |
|                               | Sasco Creek         | Ely Ave         |
|                               | Glenbrook           | Ely Ave         |
|                               | Norwalk Harbor 1    |                 |
| Norwalk Harbor 2T             | Norwalk Harbor      | Ely Ave         |
|                               | Sasco Creek         | Ely Ave         |
|                               | Glenbrook           | Ely Ave         |
|                               | Norwalk Harbor      | Northport       |
| Norwalk Harbor 3T             | Norwalk Harbor      | Rowayton Jct. A |
|                               | Glenbrook           | Rowayton Jct. A |
|                               | Norwalk             | Rowayton Jct. A |
|                               | Norwalk Harbor      | Northport       |
| Norwalk Harbor 4T             | Norwalk Harbor      | Rowayton Jct. A |
|                               | Glenbrook           | Rowayton Jct. A |
|                               | Norwalk             | Rowayton Jct. A |
|                               | Norwalk Harbor 2    |                 |
| Norwalk Harbor 7T             | Norwalk Harbor      | Rowayton Jct. B |
|                               | Flax Hill           | Rowayton Jct. B |
|                               | Glenbrook           | Rowayton Jct. B |
|                               | Norwalk Harbor 1    |                 |
| Peaceable 1T                  | Plumtree            | Peaceable       |
|                               | Peaceable           | Norwalk         |
| Pequonnock 12T                | Compo               | Pequonnock      |
|                               | Pequonnock          | BE 10, 11, 12   |
| Pequonnock 22T                | Devon               | Trumbull Jct. B |
|                               | Pequonnock          | Trumbull Jct. B |
|                               | Old Town            | Trumbull Jct. B |
|                               | Pequonnock          | Congress        |
| Pequonnock 32T                | Weston              | Trumbull Jct. A |
|                               | Pequonnock          | Trumbull Jct. A |
|                               | Devon               | Trumbull Jct. A |
|                               | Bridgeport Harbor 2 |                 |
| Pequonnock 42T                | Pequonnock          | Congress        |
|                               | Bridgeport Harbor 3 |                 |
| Wilton 1T                     | Norwalk             | Wilton          |
|                               | Wilton              | Peaceable       |

| <b>Generators</b>   |
|---------------------|
| Bridgeport Energy   |
| Bridgeport Harbor 3 |
| Devon 7             |
| Norwalk Harbor 1    |
| Norwalk Harbor 2    |

## **APPENDIX D – Summary of ACCC Results**

**ACCC Summary 1: Pre and Post-Sasco Creek without Bethel – Norwalk Project**

| Contingency  | Overloaded Facilities |           |        | Overload Percent |           |
|--------------|-----------------------|-----------|--------|------------------|-----------|
|              | From Bus              | To Bus    | Rating | PRESASCO         | POSTSASCO |
| 113091001DCT | WESTON                | TRMB J A  | 228    | 99.6             | 98.7      |
| 1416-1867DCT | RYTN J A              | NWLK HAR  | 274    | 104.4            | 102.9     |
| 1416-1880DCT | NWLK HAR              | RYTN J B  | 304    | 95.7             |           |
| 1867-1880DCT | GLNBROOK              | ELYAVE    | 279    | 113.3            | 110.9     |
| 1867-1977DCT | RYTN J A              | NWLK HAR  | 274    | 100.3            | 98.8      |
| 1880-1890DCT | NWLK HAR              | RYTN J B  | 304    | 104.5            | 104.5     |
| DEVON24TSTK  | DEVON#2               | TRMB J A  | 228    | 100.5            | 100.1     |
|              |                       | TRMB J B  | 228    | 109.7            | 110       |
| DEVON5TSTK   | DRBY J B              | IND.WELL  | 150    | 104.2            | 104.2     |
| DEVON6TSTK   | BALDWNJA              | FROST BR  | 287    | 114.5            | 114.5     |
|              |                       | STEVENS N | 282    | 104.8            | 104.7     |
|              | DRBY J A              | ANSONIA   | 150    | 133.1            | 133.1     |
|              | STEVENS N             | DRBY J A  | 283    | 134.6            | 134.6     |
| PEQUON22TSTK | DEVON#2               | TRMB J A  | 228    | 95.7             | 95.2      |
| PEQUON42TSTK | BAIRD A               | CNGRES2A  | 264    | 98.5             | 98.9      |
|              | BARNUM A              | BAIRD A   | 264    | 111.8            | 112.2     |
|              | DEVON                 | DEVON178  | 264    | 99.1             | 99.5      |
|              | DEVON#2               | TRMB J B  | 228    | 103.5            | 103.8     |

| Contingency | Voltage Violations |           |          |
|-------------|--------------------|-----------|----------|
|             | Bus Name           | POSTSASCO | PRESASCO |
| DEVON6TSTK  | ANSONIA            | 0.724     | 0.723    |
|             | BALDWINA           | 0.916     | 0.915    |
|             | BALDWNJA           | 0.920     | 0.920    |
|             | BCNFL PF           | 0.941     | 0.941    |
|             | DRBY J A           | 0.769     | 0.769    |
|             | IND.WELL           | 0.704     | 0.704    |
|             | NEWTOWN            | 0.914     | 0.914    |
|             | SNDYHK             | 0.883     | 0.883    |
|             | STEVENS N          | 0.860     | 0.860    |
|             | TRAP FLS           | 0.737     | 0.737    |

**ACCC Summary 2: Pre and Post-Sasco Creek with Bethel – Norwalk Project**

| Contingency  | Overloaded Facilities |          |        | Overload Percent |           |
|--------------|-----------------------|----------|--------|------------------|-----------|
|              | From Bus              | To Bus   | Rating | PRESASCO         | POSTSASCO |
| 1880-1890DCT | NWLK HAR              | RYTN J B | 304    | 104.7            | 104.7     |
| DEVON5TSTK   | DRBY J B              | IND.WELL | 150    | 115.9            | 115.9     |
| DEVON6TSTK   | BALDWNJA              | FROST BR | 287    | 114.5            | 114.5     |
|              |                       | STEVENSN | 282    | 104.7            | 104.7     |
|              | DRBY J A              | ANSONIA  | 150    | 133              | 132.9     |
|              | STEVENSN              | DRBY J A | 283    | 134.4            | 134.4     |

| Contingency | Voltage Violations |             |              |
|-------------|--------------------|-------------|--------------|
|             | Bus Name           | PRESASCO+P1 | POSTSASCO+P1 |
| DEVON6TSTK  | ANSONIA            | 0.727       | 0.727        |
|             | BALDWINA           | 0.917       | 0.917        |
|             | BALDWNJA           | 0.922       | 0.922        |
|             | BCNFL PF           | 0.942       | 0.942        |
|             | DRBY J A           | 0.773       | 0.773        |
|             | IND.WELL           | 0.708       | 0.708        |
|             | NEWTOWN            | 0.919       | 0.919        |
|             | SNDYHK             | 0.886       | 0.886        |
|             | STEVENSN           | 0.863       | 0.863        |
|             | TRAP FLS           | 0.741       | 0.741        |

**APPENDIX E – FCITC Single Study Reports**

# FCITC Single Study Pre-Sasco Creek without Bethel – Norwalk Project

PSS/MUST 8.1 -- Managing and Utilizing System Transmission -- FRI, MAR 31 2006 9:38  
 PRESASCO, 2006 SUMMER PEAK LOAD, CC GENS ON  
 W/ALL\_NE\_I39\_CHNGS WO PHASE I

Case.File C:\Projects\Sasco Creek\Thermal Study\Without Phase I\presasco.sav  
 Subsys.File C:\Projects\Sasco Creek\Transfer Limit\swctnew.sub  
 Monit.File C:\Projects\Sasco Creek\Transfer Limit\sasco\_pre\_P\_I.mon  
 Contin.File C:\Projects\Sasco Creek\Transfer Limit\sascocontingency.con  
 Exclud.File none

Study transfer. From WYMAN To NORGEN . Transfer level - 500.0 MW

Violations report ordered by transfer capability. Total 55 violations

Interface-1 Interface 1 NORWLK-STMPD Init.Flow= 965.16 TDF= 0.6082

| N | IntFcel | L: Limiting constraint              | PreShift | MW    | TDF      | PTDF  | =Base Case Flow=    |                                 |
|---|---------|-------------------------------------|----------|-------|----------|-------|---------------------|---------------------------------|
|   |         | C: Contingency description          | Ncon     | Flow  | Rating   | LODF  | Init Final          |                                 |
| 1 | 974.8   | L: 73224 TRMB J A<br>C:113091001DCT | 115      | 73158 | WESTON   | 115 1 | 225.8 228.0 0.13873 | 0.07181 133.7 134.8             |
|   |         | Open 73701 CRRA JCT                 | 115      | 73702 | CRRA XFO | 115 1 | NA                  |                                 |
|   |         | Open 73700 PEQUONIC                 | 115      | 73701 | CRRA JCT | 115 1 |                     | 0.22553 0.17853 205.0 207.9     |
|   |         | Open 73701 CRRA JCT                 | 115      | 73703 | ASHCREEK | 115 1 |                     | -0.10703 0.00000 -56.3 -56.3    |
|   |         | Open 73286 COMPO                    | 115      | 73700 | PEQUONIC | 115 1 |                     | -0.23523 -0.11333 -190.3 -192.1 |
|   |         | Open 73267 DARIEN                   | 115      | 73300 | ELYTAP   | 115 1 |                     | -0.11672 0.00000 41.7 41.7      |
|   |         | Open 73286 COMPO                    | 115      | 73300 | ELYTAP   | 115 1 | NA                  |                                 |
| 2 | 1046.0  | L: 73126 DEVON#2<br>C:1730LINE      | 115      | 73225 | TRMB J B | 115 1 | 212.4 228.0 0.11744 | 0.08938 172.3 184.1             |
|   |         | Open 73224 TRMB J A                 | 115      | 73700 | PEQUONIC | 115 1 |                     | 0.02234 0.02522 5.4 8.7         |
|   |         | Open 73224 TRMB J A                 | 115      | 73126 | DEVON#2  | 115 1 |                     | -0.28333 -0.09703 -142.5 -155.4 |
|   |         | Open 73158 WESTON                   | 115      | 73224 | TRMB J A | 115 1 |                     | -0.10486 0.00000 3.4 3.4        |
| 3 | 1050.6  | L: 73224 TRMB J A<br>C:1130-1430DCT | 115      | 73158 | WESTON   | 115 1 | 208.5 228.0 0.13873 | 0.07181 133.7 143.8             |
|   |         | Open 73286 COMPO                    | 115      | 73700 | PEQUONIC | 115 1 |                     | -0.23523 -0.11333 -190.3 -206.2 |

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|    |           |      |                |          |      |       |          |      |    |       |       |         |          |          |        |        |
|----|-----------|------|----------------|----------|------|-------|----------|------|----|-------|-------|---------|----------|----------|--------|--------|
|    |           | Open | 73267          | DARIEN   | 115  | 73300 | ELYTAP   | 115  | 1  |       |       |         | -0.11672 | 0.00000  | 41.7   | 41.7   |
|    |           | Open | 73286          | COMPO    | 115  | 73300 | ELYTAP   | 115  | 1  | NA    |       |         |          |          |        |        |
|    |           | Open | 73173          | SASCO CR | 115  | 73714 | ASHCREAC | 115  | 1  |       |       |         | -0.22553 | -0.17853 | -155.0 | -180.1 |
|    |           | Open | 73703          | ASHCREEK | 115  | 73714 | ASHCREAC | 115  | 1  |       |       |         | -0.00000 | 0.17793  | 154.5  | 179.5  |
|    |           | Open | 73703          | ASHCREEK | 115  | 73714 | ASHCREAC | 115  | 2  |       |       |         | 0.11850  | 0.00000  | -0.0   | -0.0   |
| 4  | 1058.8*L: |      | 73224          | TRMB J A | 115  | 73158 | WESTON   | 115  | 1  | 206.9 | 228.0 | 0.13731 |          | 0.07181  | 133.7  | 144.7  |
|    |           |      | C:1416-1890DCT |          |      |       |          |      | 26 |       |       |         |          |          |        |        |
|    |           | Open | 73173          | SASCO CR | 115  | 73237 | ELYAVE   | 115  | 1  |       |       |         | 0.22295  | 0.17853  | 140.2  | 167.7  |
|    |           | Open | 73168          | GLNBROOK | 115  | 73237 | ELYAVE   | 115  | 1  |       |       |         | -0.01437 | 0.08330  | -129.0 | -116.2 |
|    |           | Open | 73171          | NWLK HAR | 115  | 73237 | ELYAVE   | 115  | 1  |       |       |         | -0.10506 | 0.00000  | 0.8    | 0.8    |
|    |           | Open | 73286          | COMPO    | 115  | 73700 | PEQUONIC | 115  | 1  |       |       |         | -0.23732 | -0.11333 | -190.3 | -207.7 |
|    |           | Open | 73267          | DARIEN   | 115  | 73300 | ELYTAP   | 115  | 1  |       |       |         | -0.11943 | 0.00000  | 41.7   | 41.7   |
|    |           | Open | 73286          | COMPO    | 115  | 73300 | ELYTAP   | 115  | 1  | NA    |       |         |          |          |        |        |
| 5  | 1078.8 L: |      | 73709          | OLD TOWN | 115  | 73711 | HAWTH R  | 115  | 1  | 202.6 | 228.0 | 0.13608 |          | 0.06991  | 111.5  | 124.5  |
|    |           |      | C:113091001DCT |          |      |       |          |      | 22 |       |       |         |          |          |        |        |
|    |           | Open | 73701          | CRRA JCT | 115  | 73702 | CRRA XFO | 115  | 1  | NA    |       |         |          |          |        |        |
|    |           | Open | 73700          | PEQUONIC | 115  | 73701 | CRRA JCT | 115  | 1  |       |       |         | 0.22304  | 0.17853  | 205.0  | 238.4  |
|    |           | Open | 73701          | CRRA JCT | 115  | 73703 | ASHCREEK | 115  | 1  |       |       |         | -0.10495 | 0.00000  | -56.3  | -56.3  |
|    |           | Open | 73286          | COMPO    | 115  | 73700 | PEQUONIC | 115  | 1  |       |       |         | -0.23255 | -0.11333 | -190.3 | -211.4 |
|    |           | Open | 73267          | DARIEN   | 115  | 73300 | ELYTAP   | 115  | 1  |       |       |         | -0.11446 | 0.00000  | 41.7   | 41.7   |
|    |           | Open | 73286          | COMPO    | 115  | 73300 | ELYTAP   | 115  | 1  | NA    |       |         |          |          |        |        |
| 6  | 1103.1 L: |      | 73126          | DEVON#2  | 115  | 73225 | TRMB J B | 115  | 1  | 207.7 | 228.0 | 0.08938 |          | 0.08938  | 172.3  | 192.5  |
|    |           |      | C:LOSSBPT3     |          |      |       |          |      | 38 |       |       |         |          |          |        |        |
|    |           | Open | 73648          | BPTHBR#3 | 22.0 | 73700 | PEQUONIC | 115  | 1  |       |       |         | -0.09482 | 0.00000  | -374.1 | -374.1 |
| 7  | 1108.9 L: |      | 73174          | PEACEABL | 115  | 73296 | WLTON115 | 115  | 1  | 172.8 | 228.0 | 0.23341 |          | 0.17459  | 90.2   | 131.4  |
|    |           |      | C:113091001DCT |          |      |       |          |      | 22 |       |       |         |          |          |        |        |
|    |           | Open | 73701          | CRRA JCT | 115  | 73702 | CRRA XFO | 115  | 1  | NA    |       |         |          |          |        |        |
|    |           | Open | 73700          | PEQUONIC | 115  | 73701 | CRRA JCT | 115  | 1  |       |       |         | 0.19388  | 0.17853  | 205.0  | 247.2  |
|    |           | Open | 73701          | CRRA JCT | 115  | 73703 | ASHCREEK | 115  | 1  |       |       |         | -0.21332 | 0.00000  | -56.3  | -56.3  |
|    |           | Open | 73286          | COMPO    | 115  | 73700 | PEQUONIC | 115  | 1  |       |       |         | -0.21355 | -0.11333 | -190.3 | -217.0 |
|    |           | Open | 73267          | DARIEN   | 115  | 73300 | ELYTAP   | 115  | 1  |       |       |         | -0.23298 | 0.00000  | 41.7   | 41.7   |
|    |           | Open | 73286          | COMPO    | 115  | 73300 | ELYTAP   | 115  | 1  | NA    |       |         |          |          |        |        |
| 8  | 1131.4*L: |      | 73126          | DEVON#2  | 115  | 73225 | TRMB J B | 115  | 1  | 196.6 | 228.0 | 0.11489 |          | 0.08938  | 172.3  | 196.7  |
|    |           |      | C:1565LINE     |          |      |       |          |      | 11 |       |       |         |          |          |        |        |
|    |           | Open | 73155          | RDGFLD J | 115  | 73170 | PLUMTREE | 115  | 1  |       |       |         | -0.14607 | -0.17459 | -167.5 | -215.2 |
|    |           | Open | 73155          | RDGFLD J | 115  | 73174 | PEACEABL | 115  | 1  |       |       |         | -0.00000 | 0.17436  | 137.7  | 185.4  |
|    |           | Open | 73146          | RDGEFLDB | 115  | 73155 | RDGFLD J | 115  | 1  | NA    |       |         |          |          |        |        |
|    |           | Open | 73146          | RDGEFLDB | 115  | 73372 | RDGEFLD  | 13.8 | 1  |       |       |         | -0.11101 | 0.00000  | 1.2    | 1.2    |
| 10 | 1137.6 L: |      | 73174          | PEACEABL | 115  | 73296 | WLTON115 | 115  | 1  | 121.3 | 228.0 | 0.37612 |          | 0.17459  | 90.2   | 139.7  |
|    |           |      | C:1880-1890DCT |          |      |       |          |      | 34 |       |       |         |          |          |        |        |

Sasco Creek 51R Substation – Temporary Transformer and Circuit Breaker

|    |        |      |                |          |     |       |          |      |   |       |          |          |         |        |       |
|----|--------|------|----------------|----------|-----|-------|----------|------|---|-------|----------|----------|---------|--------|-------|
|    |        | Open | 73169          | RYTN J A | 115 | 73171 | NWLK HAR | 115  | 1 |       | 0.00967  | 0.17455  | -161.5  | -112.0 |       |
|    |        | Open | 73169          | RYTN J A | 115 | 73172 | NORWALK  | 115  | 1 |       | 0.01951  | -0.10771 | 59.5    | 29.0   |       |
|    |        | Open | 73168          | GLNBROOK | 115 | 73169 | RYTN J A | 115  | 1 |       | -0.39258 | 0.00000  | 0.6     | 0.6    |       |
|    |        | Open | 73168          | GLNBROOK | 115 | 73237 | ELYAVE   | 115  | 1 |       | -0.22922 | 0.08330  | -129.0  | -105.4 |       |
|    |        | Open | 73171          | NWLK HAR | 115 | 73237 | ELYAVE   | 115  | 1 |       | -0.23889 | -0.26182 | -10.4   | -84.7  |       |
|    |        | Open | 73173          | SASCO CR | 115 | 73237 | ELYAVE   | 115  | 1 |       | -0.16336 | 0.00000  | 0.8     | 0.8    |       |
|    |        | Open | 75051          | NRTHPRT1 | 138 | 75053 | NRTHPT P | 138  | 1 |       | 0.40447  | 0.39183  | -0.3    | 110.8  |       |
|    |        | Open | 73166          | NORHR138 | 138 | 75053 | NRTHPT P | 138  | 1 | NA    |          |          |         |        |       |
|    |        | Open | 73166          | NORHR138 | 138 | 73171 | NWLK HAR | 115  | 1 |       | -0.40225 | 0.00000  | 0.0     | 0.0    |       |
| 12 | 1144.5 | L:   | 73155          | RDGFLD J | 115 | 73174 | PEACEABL | 115  | 1 | 220.3 | 289.0    | 0.23310  | 0.17436 | 137.7  | 189.1 |
|    |        |      | C:113091001DCT |          |     |       |          |      |   | 22    |          |          |         |        |       |
|    |        | Open | 73701          | CRRA JCT | 115 | 73702 | CRRA XFO | 115  | 1 | NA    |          |          |         |        |       |
|    |        | Open | 73700          | PEQUONIC | 115 | 73701 | CRRA JCT | 115  | 1 |       | 0.19363  | 0.17853  | 205.0   | 257.7  |       |
|    |        | Open | 73701          | CRRA JCT | 115 | 73703 | ASHCREEK | 115  | 1 |       | -0.21303 | 0.00000  | -56.3   | -56.3  |       |
|    |        | Open | 73286          | COMPO    | 115 | 73700 | PEQUONIC | 115  | 1 |       | -0.21326 | -0.11333 | -190.3  | -223.7 |       |
|    |        | Open | 73267          | DARIEN   | 115 | 73300 | ELYTAP   | 115  | 1 |       | -0.23267 | 0.00000  | 41.7    | 41.7   |       |
|    |        | Open | 73286          | COMPO    | 115 | 73300 | ELYTAP   | 115  | 1 | NA    |          |          |         |        |       |
| 13 | 1152.2 | *L:  | 73174          | PEACEABL | 115 | 73296 | WLTON115 | 115  | 1 | 163.0 | 228.0    | 0.21147  | 0.17459 | 90.2   | 143.9 |
|    |        |      | C:1710-1730DCT |          |     |       |          |      |   | 29    |          |          |         |        |       |
|    |        | Open | 73225          | TRMB J B | 115 | 73709 | OLD TOWN | 115  | 1 |       | 0.18343  | 0.06991  | 212.4   | 233.9  |       |
|    |        | Open | 73225          | TRMB J B | 115 | 73126 | DEVON#2  | 115  | 1 |       | -0.05835 | -0.08938 | -172.3  | -199.8 |       |
|    |        | Open | 73225          | TRMB J B | 115 | 73700 | PEQUONIC | 115  | 2 |       | -0.06793 | 0.00000  | 2.3     | 2.3    |       |
|    |        | Open | 73709          | OLD TOWN | 115 | 73768 | OLDTWN1  | 13.8 | 1 |       | -0.25136 | 0.00000  | 34.5    | 34.5   |       |
|    |        | Open | 73224          | TRMB J A | 115 | 73700 | PEQUONIC | 115  | 1 |       | -0.18343 | 0.02522  | 5.4     | 13.1   |       |
|    |        | Open | 73224          | TRMB J A | 115 | 73126 | DEVON#2  | 115  | 1 |       | -0.24178 | -0.09703 | -142.5  | -172.3 |       |
|    |        | Open | 73158          | WESTON   | 115 | 73224 | TRMB J A | 115  | 1 |       | -0.25136 | 0.00000  | 3.4     | 3.4    |       |
| 14 | 1155.0 | L:   | 73709          | OLD TOWN | 115 | 73711 | HAWTH R  | 115  | 1 | 185.5 | 228.0    | 0.13608  | 0.06991 | 111.5  | 133.3 |
|    |        |      | C:1130-1430DCT |          |     |       |          |      |   | 21    |          |          |         |        |       |
|    |        | Open | 73286          | COMPO    | 115 | 73700 | PEQUONIC | 115  | 1 |       | -0.23255 | -0.11333 | -190.3  | -225.6 |       |
|    |        | Open | 73267          | DARIEN   | 115 | 73300 | ELYTAP   | 115  | 1 |       | -0.11446 | 0.00000  | 41.7    | 41.7   |       |
|    |        | Open | 73286          | COMPO    | 115 | 73300 | ELYTAP   | 115  | 1 | NA    |          |          |         |        |       |
|    |        | Open | 73173          | SASCO CR | 115 | 73714 | ASHCREAC | 115  | 1 |       | -0.22304 | -0.17853 | -155.0  | -210.8 |       |
|    |        | Open | 73703          | ASHCREEK | 115 | 73714 | ASHCREAC | 115  | 1 |       | -0.00000 | 0.17793  | 154.5   | 210.1  |       |
|    |        | Open | 73703          | ASHCREEK | 115 | 73714 | ASHCREAC | 115  | 2 |       | 0.11809  | 0.00000  | -0.0    | -0.0   |       |
| 15 | 1156.0 | L:   | 73126          | DEVON#2  | 115 | 73224 | TRMB J A | 115  | 1 | 189.0 | 228.0    | 0.12426  | 0.09703 | 142.5  | 172.9 |
|    |        |      | C:1710+LOAD    |          |     |       |          |      |   | 13    |          |          |         |        |       |
|    |        | Open | 73225          | TRMB J B | 115 | 73126 | DEVON#2  | 115  | 1 |       | -0.29963 | -0.08938 | -172.3  | -200.3 |       |
|    |        | Open | 73225          | TRMB J B | 115 | 73700 | PEQUONIC | 115  | 2 |       | 0.02275  | 0.01948  | -42.4   | -36.3  |       |
|    |        | Open | 73225          | TRMB J B | 115 | 73709 | OLD TOWN | 115  | 1 |       | -0.11105 | 0.00000  | 2.3     | 2.3    |       |
|    |        | Open | 73709          | OLD TOWN | 115 | 73768 | OLDTWN1  | 13.8 | 1 |       | -0.11105 | 0.00000  | 34.5    | 34.5   |       |

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|    |        |      |                |          |     |       |          |      |    |        |        |          |          |        |        |
|----|--------|------|----------------|----------|-----|-------|----------|------|----|--------|--------|----------|----------|--------|--------|
| 16 | 1159.8 | L:   | 73155          | RDGFLD J | 115 | 73174 | PEACEABL | 115  | 1  | 168.8  | 289.0  | 0.37562  | 0.17436  | 137.7  | 193.5  |
|    |        |      | C:1880-1890DCT |          |     |       |          |      | 34 |        |        |          |          |        |        |
|    |        | Open | 73169          | RYTN J A | 115 | 73171 | NWLK HAR | 115  | 1  |        |        | 0.00966  | 0.17455  | -161.5 | -105.7 |
|    |        | Open | 73169          | RYTN J A | 115 | 73172 | NORWALK  | 115  | 1  |        |        | 0.01949  | -0.10771 | 59.5   | 25.0   |
|    |        | Open | 73168          | GLNBROOK | 115 | 73169 | RYTN J A | 115  | 1  |        |        | -0.39206 | 0.00000  | 0.6    | 0.6    |
|    |        | Open | 73168          | GLNBROOK | 115 | 73237 | ELYAVE   | 115  | 1  |        |        | -0.22891 | 0.08330  | -129.0 | -102.3 |
|    |        | Open | 73171          | NWLK HAR | 115 | 73237 | ELYAVE   | 115  | 1  |        |        | -0.23857 | -0.26182 | -10.4  | -94.2  |
|    |        | Open | 73173          | SASCO CR | 115 | 73237 | ELYAVE   | 115  | 1  |        |        | -0.16314 | 0.00000  | 0.8    | 0.8    |
|    |        | Open | 75051          | NRTHPRT1 | 138 | 75053 | NRTHPT P | 138  | 1  |        |        | 0.40393  | 0.39183  | -0.3   | 125.0  |
|    |        | Open | 73166          | NORHR138 | 138 | 75053 | NRTHPT P | 138  | 1  | NA     |        |          |          |        |        |
|    |        | Open | 73166          | NORHR138 | 138 | 73171 | NWLK HAR | 115  | 1  |        |        | -0.40172 | 0.00000  | 0.0    | 0.0    |
| 17 | 1160.9 | L:   | 73695          | BAIRD B  | 115 | 73693 | BARNUM B | 115  | 1  | -206.4 | -264.0 | -0.17884 | -0.12358 | -138.6 | -178.4 |
|    |        |      | C:1710-1730DCT |          |     |       |          |      | 29 |        |        |          |          |        |        |
|    |        | Open | 73225          | TRMB J B | 115 | 73709 | OLD TOWN | 115  | 1  |        |        | 0.17949  | 0.06991  | 212.4  | 234.9  |
|    |        | Open | 73225          | TRMB J B | 115 | 73126 | DEVON#2  | 115  | 1  |        |        | 0.43289  | -0.08938 | -172.3 | -201.0 |
|    |        | Open | 73225          | TRMB J B | 115 | 73700 | PEQUONIC | 115  | 2  |        |        | 0.31146  | 0.00000  | 2.3    | 2.3    |
|    |        | Open | 73709          | OLD TOWN | 115 | 73768 | OLDTWN1  | 13.8 | 1  |        |        | 0.13197  | 0.00000  | 34.5   | 34.5   |
|    |        | Open | 73224          | TRMB J A | 115 | 73700 | PEQUONIC | 115  | 1  |        |        | -0.17949 | 0.02522  | 5.4    | 13.5   |
|    |        | Open | 73224          | TRMB J A | 115 | 73126 | DEVON#2  | 115  | 1  |        |        | 0.25340  | -0.09703 | -142.5 | -173.7 |
|    |        | Open | 73158          | WESTON   | 115 | 73224 | TRMB J A | 115  | 1  |        |        | 0.13197  | 0.00000  | 3.4    | 3.4    |
| 18 | 1161.4 | L:   | 73694          | BAIRD A  | 115 | 73692 | BARNUM A | 115  | 1  | -206.3 | -264.0 | -0.17884 | -0.12358 | -138.5 | -178.4 |
|    |        |      | C:1710-1730DCT |          |     |       |          |      | 29 |        |        |          |          |        |        |
|    |        | Open | 73225          | TRMB J B | 115 | 73709 | OLD TOWN | 115  | 1  |        |        | 0.17949  | 0.06991  | 212.4  | 235.0  |
|    |        | Open | 73225          | TRMB J B | 115 | 73126 | DEVON#2  | 115  | 1  |        |        | 0.43289  | -0.08938 | -172.3 | -201.1 |
|    |        | Open | 73225          | TRMB J B | 115 | 73700 | PEQUONIC | 115  | 2  |        |        | 0.31146  | 0.00000  | 2.3    | 2.3    |
|    |        | Open | 73709          | OLD TOWN | 115 | 73768 | OLDTWN1  | 13.8 | 1  |        |        | 0.13197  | 0.00000  | 34.5   | 34.5   |
|    |        | Open | 73224          | TRMB J A | 115 | 73700 | PEQUONIC | 115  | 1  |        |        | -0.17949 | 0.02522  | 5.4    | 13.5   |
|    |        | Open | 73224          | TRMB J A | 115 | 73126 | DEVON#2  | 115  | 1  |        |        | 0.25340  | -0.09703 | -142.5 | -173.8 |
|    |        | Open | 73158          | WESTON   | 115 | 73224 | TRMB J A | 115  | 1  |        |        | 0.13197  | 0.00000  | 3.4    | 3.4    |
| 19 | 1164.4 | *L:  | 73709          | OLD TOWN | 115 | 73711 | HAWTH R  | 115  | 1  | 183.9  | 228.0  | 0.13469  | 0.06991  | 111.5  | 134.4  |
|    |        |      | C:1416-1890DCT |          |     |       |          |      | 26 |        |        |          |          |        |        |
|    |        | Open | 73173          | SASCO CR | 115 | 73237 | ELYAVE   | 115  | 1  |        |        | 0.22052  | 0.17853  | 140.2  | 198.7  |
|    |        | Open | 73168          | GLNBROOK | 115 | 73237 | ELYAVE   | 115  | 1  |        |        | -0.01409 | 0.08330  | -129.0 | -101.7 |
|    |        | Open | 73171          | NWLK HAR | 115 | 73237 | ELYAVE   | 115  | 1  |        |        | -0.10302 | 0.00000  | 0.8    | 0.8    |
|    |        | Open | 73286          | COMPO    | 115 | 73700 | PEQUONIC | 115  | 1  |        |        | -0.23461 | -0.11333 | -190.3 | -227.4 |
|    |        | Open | 73267          | DARIEN   | 115 | 73300 | ELYTAP   | 115  | 1  |        |        | -0.11711 | 0.00000  | 41.7   | 41.7   |
|    |        | Open | 73286          | COMPO    | 115 | 73300 | ELYTAP   | 115  | 1  | NA     |        |          |          |        |        |
| 20 | 1165.4 | L:   | 73691          | DEVON179 | 115 | 73195 | DEVON    | 115  | 1  | -232.6 | -263.0 | -0.09239 | -0.02904 | -142.2 | -151.7 |
|    |        |      | C:1710-1730DCT |          |     |       |          |      | 29 |        |        |          |          |        |        |
|    |        | Open | 73225          | TRMB J B | 115 | 73709 | OLD TOWN | 115  | 1  |        |        | 0.11918  | 0.06991  | 212.4  | 235.4  |

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|    |        |      |                |          |      |       |          |      |   |    |          |          |          |          |        |        |
|----|--------|------|----------------|----------|------|-------|----------|------|---|----|----------|----------|----------|----------|--------|--------|
|    |        | Open | 73225          | TRMB J B | 115  | 73126 | DEVON#2  | 115  | 1 |    | 0.43040  | -0.08938 | -172.3   | -201.7   |        |        |
|    |        | Open | 73225          | TRMB J B | 115  | 73700 | PEQUONIC | 115  | 2 |    | 0.19623  | 0.00000  | 2.3      | 2.3      |        |        |
|    |        | Open | 73709          | OLD TOWN | 115  | 73768 | OLDTWN1  | 13.8 | 1 |    | 0.07705  | 0.00000  | 34.5     | 34.5     |        |        |
|    |        | Open | 73224          | TRMB J A | 115  | 73700 | PEQUONIC | 115  | 1 |    | -0.11918 | 0.02522  | 5.4      | 13.7     |        |        |
|    |        | Open | 73224          | TRMB J A | 115  | 73126 | DEVON#2  | 115  | 1 |    | 0.31122  | -0.09703 | -142.5   | -174.4   |        |        |
|    |        | Open | 73158          | WESTON   | 115  | 73224 | TRMB J A | 115  | 1 |    | 0.07705  | 0.00000  | 3.4      | 3.4      |        |        |
| 23 | 1174.2 | L:   | 73690          | DEVON178 | 115  | 73195 | DEVON    | 115  | 1 |    | -232.3   | -264.0   | -0.09235 | -0.02901 | -141.8 | -151.8 |
|    |        |      | C:1710-1730DCT |          |      |       |          |      |   | 29 |          |          |          |          |        |        |
|    |        | Open | 73225          | TRMB J B | 115  | 73709 | OLD TOWN | 115  | 1 |    | 0.11916  | 0.06991  | 212.4    | 236.4    |        |        |
|    |        | Open | 73225          | TRMB J B | 115  | 73126 | DEVON#2  | 115  | 1 |    | 0.43040  | -0.08938 | -172.3   | -203.0   |        |        |
|    |        | Open | 73225          | TRMB J B | 115  | 73700 | PEQUONIC | 115  | 2 |    | 0.19619  | 0.00000  | 2.3      | 2.3      |        |        |
|    |        | Open | 73709          | OLD TOWN | 115  | 73768 | OLDTWN1  | 13.8 | 1 |    | 0.07702  | 0.00000  | 34.5     | 34.5     |        |        |
|    |        | Open | 73224          | TRMB J A | 115  | 73700 | PEQUONIC | 115  | 1 |    | -0.11916 | 0.02522  | 5.4      | 14.1     |        |        |
|    |        | Open | 73224          | TRMB J A | 115  | 73126 | DEVON#2  | 115  | 1 |    | 0.31124  | -0.09703 | -142.5   | -175.8   |        |        |
|    |        | Open | 73158          | WESTON   | 115  | 73224 | TRMB J A | 115  | 1 |    | 0.07702  | 0.00000  | 3.4      | 3.4      |        |        |
| 25 | 1191.6 | *L:  | 73155          | RDGFLD J | 115  | 73174 | PEACEABL | 115  | 1 |    | 210.4    | 289.0    | 0.21118  | 0.17436  | 137.7  | 202.6  |
|    |        |      | C:1710-1730DCT |          |      |       |          |      |   | 29 |          |          |          |          |        |        |
|    |        | Open | 73225          | TRMB J B | 115  | 73709 | OLD TOWN | 115  | 1 |    | 0.18319  | 0.06991  | 212.4    | 238.4    |        |        |
|    |        | Open | 73225          | TRMB J B | 115  | 73126 | DEVON#2  | 115  | 1 |    | -0.05827 | -0.08938 | -172.3   | -205.5   |        |        |
|    |        | Open | 73225          | TRMB J B | 115  | 73700 | PEQUONIC | 115  | 2 |    | -0.06784 | 0.00000  | 2.3      | 2.3      |        |        |
|    |        | Open | 73709          | OLD TOWN | 115  | 73768 | OLDTWN1  | 13.8 | 1 |    | -0.25103 | 0.00000  | 34.5     | 34.5     |        |        |
|    |        | Open | 73224          | TRMB J A | 115  | 73700 | PEQUONIC | 115  | 1 |    | -0.18319 | 0.02522  | 5.4      | 14.8     |        |        |
|    |        | Open | 73224          | TRMB J A | 115  | 73126 | DEVON#2  | 115  | 1 |    | -0.24146 | -0.09703 | -142.5   | -178.6   |        |        |
|    |        | Open | 73158          | WESTON   | 115  | 73224 | TRMB J A | 115  | 1 |    | -0.25103 | 0.00000  | 3.4      | 3.4      |        |        |
| 31 | 1201.3 | L:   | 73695          | BAIRD B  | 115  | 73693 | BARNUM B | 115  | 1 |    | -216.0   | -264.0   | -0.12358 | -0.12358 | -138.6 | -186.6 |
|    |        |      | C:LOSSBPT3     |          |      |       |          |      |   | 38 |          |          |          |          |        |        |
|    |        | Open | 73648          | BPTHBR#3 | 22.0 | 73700 | PEQUONIC | 115  | 1 |    | 0.20685  | 0.00000  | -374.1   | -374.1   |        |        |
| 32 | 1202.0 | L:   | 73694          | BAIRD A  | 115  | 73692 | BARNUM A | 115  | 1 |    | -215.9   | -264.0   | -0.12358 | -0.12358 | -138.5 | -186.6 |
|    |        |      | C:LOSSBPT3     |          |      |       |          |      |   | 38 |          |          |          |          |        |        |
|    |        | Open | 73648          | BPTHBR#3 | 22.0 | 73700 | PEQUONIC | 115  | 1 |    | 0.20685  | 0.00000  | -374.1   | -374.1   |        |        |
| 35 | 1205.7 | L:   | 73701          | CRRA JCT | 115  | 73703 | ASHCREEK | 115  | 1 |    | 354.5    | 439.0    | 0.21367  | 0.17853  | 261.3  | 331.9  |
|    |        |      | C:1710-1730DCT |          |      |       |          |      |   | 29 |          |          |          |          |        |        |
|    |        | Open | 73225          | TRMB J B | 115  | 73709 | OLD TOWN | 115  | 1 |    | 0.34814  | 0.06991  | 212.4    | 240.1    |        |        |
|    |        | Open | 73225          | TRMB J B | 115  | 73126 | DEVON#2  | 115  | 1 |    | 0.07618  | -0.08938 | -172.3   | -207.6   |        |        |
|    |        | Open | 73225          | TRMB J B | 115  | 73700 | PEQUONIC | 115  | 2 |    | 0.21679  | 0.00000  | 2.3      | 2.3      |        |        |
|    |        | Open | 73709          | OLD TOWN | 115  | 73768 | OLDTWN1  | 13.8 | 1 |    | -0.13135 | 0.00000  | 34.5     | 34.5     |        |        |
|    |        | Open | 73224          | TRMB J A | 115  | 73700 | PEQUONIC | 115  | 1 |    | -0.34814 | 0.02522  | 5.4      | 15.4     |        |        |
|    |        | Open | 73224          | TRMB J A | 115  | 73126 | DEVON#2  | 115  | 1 |    | -0.27197 | -0.09703 | -142.5   | -180.8   |        |        |
|    |        | Open | 73158          | WESTON   | 115  | 73224 | TRMB J A | 115  | 1 |    | -0.13135 | 0.00000  | 3.4      | 3.4      |        |        |
| 36 | 1220.6 | L:   | 73296          | WLTON115 | 115  | 73172 | NORWALK  | 115  | 1 |    | 70.0     | 228.0    | 0.37612  | 0.17459  | 38.9   | 112.2  |



Sasco Creek 51R Substation – Temporary Transformer and Circuit Breaker

|    |        |      |                |      |                |      |   |       |          |          |         |        |       |
|----|--------|------|----------------|------|----------------|------|---|-------|----------|----------|---------|--------|-------|
|    |        | Open | 73700 PEQUONIC | 115  | 73701 CRRA JCT | 115  | 1 |       | 0.19388  | 0.17853  | 205.0   | 288.3  |       |
|    |        | Open | 73701 CRRA JCT | 115  | 73703 ASHCREEK | 115  | 1 |       | -0.21332 | 0.00000  | -56.3   | -56.3  |       |
|    |        | Open | 73286 COMPO    | 115  | 73700 PEQUONIC | 115  | 1 |       | -0.21355 | -0.11333 | -190.3  | -243.1 |       |
|    |        | Open | 73267 DARIEN   | 115  | 73300 ELYTAP   | 115  | 1 |       | -0.23298 | 0.00000  | 41.7    | 41.7   |       |
|    |        | Open | 73286 COMPO    | 115  | 73300 ELYTAP   | 115  | 1 | NA    |          |          |         |        |       |
| 48 | 1253.4 | L:   | 73126 DEVON#2  | 115  | 73224 TRMB J A | 115  | 1 | 168.9 | 228.0    | 0.12474  | 0.09703 | 142.5  | 188.4 |
|    |        |      | C:1565LINE     |      |                |      |   |       |          |          |         |        | 11    |
|    |        | Open | 73155 RDGFLD J | 115  | 73170 PLUMTREE | 115  | 1 |       | -0.15868 | -0.17459 | -167.5  | -250.3 |       |
|    |        | Open | 73155 RDGFLD J | 115  | 73174 PEACEABL | 115  | 1 |       | -0.00000 | 0.17436  | 137.7   | 220.3  |       |
|    |        | Open | 73146 RDGEFLDB | 115  | 73155 RDGFLD J | 115  | 1 | NA    |          |          |         |        |       |
|    |        | Open | 73146 RDGEFLDB | 115  | 73372 RDGEFLD  | 13.8 | 1 |       | -0.12066 | 0.00000  | 1.2     | 1.2    |       |
| 49 | 1262.2 | *L:  | 73126 DEVON#2  | 115  | 73224 TRMB J A | 115  | 1 | 180.6 | 228.0    | 0.09703  | 0.09703 | 142.5  | 189.8 |
|    |        |      | C:LOSSBPT3     |      |                |      |   |       |          |          |         |        | 38    |
|    |        | Open | 73648 BPTHBR#3 | 22.0 | 73700 PEQUONIC | 115  | 1 |       | -0.10200 | 0.00000  | -374.1  | -374.1 |       |

# FCITC Single Study Post-Sasco Creek without Bethel-Norwalk Project

PSS/MUST 8.1 -- Managing and Utilizing System Transmission -- FRI, MAR 31 2006 9:39  
 POSTSASCO, 2006 SUMMER PEAK LOAD, CC GENS ON  
 W/ALL\_NE\_I39\_CHNGS WO PHASE I

Case.File C:\Projects\Sasco Creek\Thermal Study\Without Phase I\postsasco.sav  
 Subsys.File C:\Projects\Sasco Creek\Transfer Limit\swctnew.sub  
 Monit.File C:\Projects\Sasco Creek\Transfer Limit\sasco\_pre\_P\_I.mon  
 Contin.File C:\Projects\Sasco Creek\Transfer Limit\sascocontingency.con  
 Exclud.File none

Study transfer. From WYMAN To NORGEN . Transfer level - 500.0 MW

Violations report ordered by transfer capability. Total 55 violations

Interface-1 Interface 1 NORWLK-STMPD Init.Flow= 965.03 TDF= 0.6082

| N | IntFcel | L: Limiting constraint     |     |                | PreShift | MW          | TDF   |       | PTDF     | =Base Case Flow= |        |        |
|---|---------|----------------------------|-----|----------------|----------|-------------|-------|-------|----------|------------------|--------|--------|
|   |         | C: Contingency description |     |                | Ncon     | Flow Rating |       | LODF  |          | Init             | Final  |        |
| 1 | 984.0   | L: 73224 TRMB J A          | 115 | 73158 WESTON   | 115      | 1           | 223.7 | 228.0 | 0.13873  | 0.07181          | 129.8  | 132.0  |
|   |         | C:113091001DCT             |     |                |          | 22          |       |       |          |                  |        |        |
|   |         | Open 73701 CRRA JCT        | 115 | 73702 CRRA XFO | 115      | 1           | NA    |       |          |                  |        |        |
|   |         | Open 73700 PEQUONIC        | 115 | 73701 CRRA JCT | 115      | 1           |       |       | 0.22553  | 0.17853          | 213.3  | 218.9  |
|   |         | Open 73701 CRRA JCT        | 115 | 73703 ASHCREEK | 115      | 1           |       |       | -0.10703 | 0.00000          | -56.2  | -56.2  |
|   |         | Open 73286 COMPO           | 115 | 73700 PEQUONIC | 115      | 1           |       |       | -0.23522 | -0.11332         | -186.6 | -190.2 |
|   |         | Open 73267 DARIEN          | 115 | 73300 ELYTAP   | 115      | 1           |       |       | -0.11672 | 0.00000          | 35.7   | 35.7   |
|   |         | Open 73286 COMPO           | 115 | 73300 ELYTAP   | 115      | 1           | NA    |       |          |                  |        |        |
| 2 | 1045.7  | L: 73126 DEVON#2           | 115 | 73225 TRMB J B | 115      | 1           | 212.4 | 228.0 | 0.11744  | 0.08938          | 172.7  | 184.5  |
|   |         | C:1730LINE                 |     |                |          | 15          |       |       |          |                  |        |        |
|   |         | Open 73224 TRMB J A        | 115 | 73700 PEQUONIC | 115      | 1           |       |       | 0.02234  | 0.02522          | 7.9    | 11.2   |
|   |         | Open 73224 TRMB J A        | 115 | 73126 DEVON#2  | 115      | 1           |       |       | -0.28333 | -0.09703         | -140.9 | -153.8 |
|   |         | Open 73158 WESTON          | 115 | 73224 TRMB J A | 115      | 1           |       |       | -0.10486 | 0.00000          | 3.2    | 3.2    |
| 3 | 1059.9  | L: 73224 TRMB J A          | 115 | 73158 WESTON   | 115      | 1           | 206.4 | 228.0 | 0.13873  | 0.07181          | 129.8  | 141.0  |



Sasco Creek 51R Substation – Temporary Transformer and Circuit Breaker

|    |           |                     |     |                |      |   |        |        |          |          |        |        |
|----|-----------|---------------------|-----|----------------|------|---|--------|--------|----------|----------|--------|--------|
| 10 | 1139.8    | L: 73155 RDGFLD J   | 115 | 73174 PEACEABL | 115  | 1 | 222.0  | 289.0  | 0.23309  | 0.17436  | 137.2  | 187.3  |
|    |           | C:113091001DCT      |     |                |      |   |        |        |          |          | 22     |        |
|    |           | Open 73701 CRRA JCT | 115 | 73702 CRRA XFO | 115  | 1 | NA     |        |          |          |        |        |
|    |           | Open 73700 PEQUONIC | 115 | 73701 CRRA JCT | 115  | 1 |        |        | 0.19362  | 0.17853  | 213.3  | 264.6  |
|    |           | Open 73701 CRRA JCT | 115 | 73703 ASHCREEK | 115  | 1 |        |        | -0.21303 | 0.00000  | -56.2  | -56.2  |
|    |           | Open 73286 COMPO    | 115 | 73700 PEQUONIC | 115  | 1 |        |        | -0.21326 | -0.11332 | -186.6 | -219.2 |
|    |           | Open 73267 DARIEN   | 115 | 73300 ELYTAP   | 115  | 1 |        |        | -0.23266 | 0.00000  | 35.7   | 35.7   |
|    |           | Open 73286 COMPO    | 115 | 73300 ELYTAP   | 115  | 1 | NA     |        |          |          |        |        |
| 11 | 1141.5    | L: 73174 PEACEABL   | 115 | 73296 WLTON115 | 115  | 1 | 118.8  | 228.0  | 0.37612  | 0.17459  | 89.7   | 140.4  |
|    |           | C:1880-1890DCT      |     |                |      |   |        |        |          |          | 34     |        |
|    |           | Open 73169 RYTN J A | 115 | 73171 NWLK HAR | 115  | 1 |        |        | 0.00967  | 0.17454  | -158.2 | -107.6 |
|    |           | Open 73169 RYTN J A | 115 | 73172 NORWALK  | 115  | 1 |        |        | 0.01951  | -0.10771 | 57.5   | 26.2   |
|    |           | Open 73168 GLNBROOK | 115 | 73169 RYTN J A | 115  | 1 |        |        | -0.39258 | 0.00000  | 0.5    | 0.5    |
|    |           | Open 73168 GLNBROOK | 115 | 73237 ELYAVE   | 115  | 1 |        |        | -0.22922 | 0.08330  | -126.6 | -102.4 |
|    |           | Open 73171 NWLK HAR | 115 | 73237 ELYAVE   | 115  | 1 |        |        | -0.23889 | -0.26182 | -4.1   | -80.1  |
|    |           | Open 73173 SASCO CR | 115 | 73237 ELYAVE   | 115  | 1 |        |        | -0.16336 | 0.00000  | 0.7    | 0.7    |
|    |           | Open 75051 NRTHPT1  | 138 | 75053 NRTHPT P | 138  | 1 |        |        | 0.40447  | 0.39184  | -0.3   | 113.4  |
|    |           | Open 73166 NORHR138 | 138 | 75053 NRTHPT P | 138  | 1 | NA     |        |          |          |        |        |
|    |           | Open 73166 NORHR138 | 138 | 73171 NWLK HAR | 115  | 1 |        |        | -0.40225 | 0.00000  | 0.0    | 0.0    |
| 12 | 1149.2    | L: 73709 OLD TOWN   | 115 | 73711 HAWTH R  | 115  | 1 | 186.8  | 228.0  | 0.13608  | 0.06991  | 111.1  | 132.2  |
|    |           | C:1130-1430DCT      |     |                |      |   |        |        |          |          | 21     |        |
|    |           | Open 73286 COMPO    | 115 | 73700 PEQUONIC | 115  | 1 |        |        | -0.23255 | -0.11332 | -186.6 | -220.9 |
|    |           | Open 73267 DARIEN   | 115 | 73300 ELYTAP   | 115  | 1 |        |        | -0.11446 | 0.00000  | 35.7   | 35.7   |
|    |           | Open 73286 COMPO    | 115 | 73300 ELYTAP   | 115  | 1 | NA     |        |          |          |        |        |
|    |           | Open 73173 SASCO CR | 115 | 73714 ASHCREAC | 115  | 1 |        |        | -0.22304 | -0.17853 | -163.3 | -217.3 |
|    |           | Open 73703 ASHCREEK | 115 | 73714 ASHCREAC | 115  | 1 |        |        | -0.00000 | 0.17793  | 162.7  | 216.6  |
|    |           | Open 73703 ASHCREEK | 115 | 73714 ASHCREAC | 115  | 2 |        |        | 0.11809  | 0.00000  | -0.0   | -0.0   |
| 13 | 1155.8*L: | 73174 PEACEABL      | 115 | 73296 WLTON115 | 115  | 1 | 161.7  | 228.0  | 0.21146  | 0.17459  | 89.7   | 144.5  |
|    |           | C:1710-1730DCT      |     |                |      |   |        |        |          |          | 29     |        |
|    |           | Open 73225 TRMB J B | 115 | 73709 OLD TOWN | 115  | 1 |        |        | 0.18343  | 0.06991  | 212.0  | 234.0  |
|    |           | Open 73225 TRMB J B | 115 | 73126 DEVON#2  | 115  | 1 |        |        | -0.05835 | -0.08938 | -172.7 | -200.7 |
|    |           | Open 73225 TRMB J B | 115 | 73700 PEQUONIC | 115  | 2 |        |        | -0.06793 | 0.00000  | 2.3    | 2.3    |
|    |           | Open 73709 OLD TOWN | 115 | 73768 OLDTWN1  | 13.8 | 1 |        |        | -0.25136 | 0.00000  | 34.5   | 34.5   |
|    |           | Open 73224 TRMB J A | 115 | 73700 PEQUONIC | 115  | 1 |        |        | -0.18343 | 0.02522  | 7.9    | 15.8   |
|    |           | Open 73224 TRMB J A | 115 | 73126 DEVON#2  | 115  | 1 |        |        | -0.24178 | -0.09703 | -140.9 | -171.4 |
|    |           | Open 73158 WESTON   | 115 | 73224 TRMB J A | 115  | 1 |        |        | -0.25136 | 0.00000  | 3.2    | 3.2    |
| 14 | 1157.4    | L: 73695 BAIRD B    | 115 | 73693 BARNUM B | 115  | 1 | -207.4 | -264.0 | -0.17884 | -0.12358 | -139.3 | -178.4 |
|    |           | C:1710-1730DCT      |     |                |      |   |        |        |          |          | 29     |        |
|    |           | Open 73225 TRMB J B | 115 | 73709 OLD TOWN | 115  | 1 |        |        | 0.17949  | 0.06991  | 212.0  | 234.1  |
|    |           | Open 73225 TRMB J B | 115 | 73126 DEVON#2  | 115  | 1 |        |        | 0.43289  | -0.08938 | -172.7 | -200.9 |

Sasco Creek 51R Substation – Temporary Transformer and Circuit Breaker

|    |        |      |                |          |     |       |          |      |   |    |          |          |          |          |        |        |
|----|--------|------|----------------|----------|-----|-------|----------|------|---|----|----------|----------|----------|----------|--------|--------|
|    |        | Open | 73225          | TRMB J B | 115 | 73700 | PEQUONIC | 115  | 2 |    | 0.31146  | 0.00000  | 2.3      | 2.3      |        |        |
|    |        | Open | 73709          | OLD TOWN | 115 | 73768 | OLDTWN1  | 13.8 | 1 |    | 0.13197  | 0.00000  | 34.5     | 34.5     |        |        |
|    |        | Open | 73224          | TRMB J A | 115 | 73700 | PEQUONIC | 115  | 1 |    | -0.17949 | 0.02522  | 7.9      | 15.9     |        |        |
|    |        | Open | 73224          | TRMB J A | 115 | 73126 | DEVON#2  | 115  | 1 |    | 0.25340  | -0.09703 | -140.9   | -171.6   |        |        |
|    |        | Open | 73158          | WESTON   | 115 | 73224 | TRMB J A | 115  | 1 |    | 0.13197  | 0.00000  | 3.2      | 3.2      |        |        |
| 15 | 1157.9 | L:   | 73694          | BAIRD A  | 115 | 73692 | BARNUM A | 115  | 1 |    | -207.3   | -264.0   | -0.17884 | -0.12358 | -139.2 | -178.4 |
|    |        |      | C:1710-1730DCT |          |     |       |          |      |   | 29 |          |          |          |          |        |        |
|    |        | Open | 73225          | TRMB J B | 115 | 73709 | OLD TOWN | 115  | 1 |    | 0.17949  | 0.06991  | 212.0    | 234.2    |        |        |
|    |        | Open | 73225          | TRMB J B | 115 | 73126 | DEVON#2  | 115  | 1 |    | 0.43289  | -0.08938 | -172.7   | -201.0   |        |        |
|    |        | Open | 73225          | TRMB J B | 115 | 73700 | PEQUONIC | 115  | 2 |    | 0.31146  | 0.00000  | 2.3      | 2.3      |        |        |
|    |        | Open | 73709          | OLD TOWN | 115 | 73768 | OLDTWN1  | 13.8 | 1 |    | 0.13197  | 0.00000  | 34.5     | 34.5     |        |        |
|    |        | Open | 73224          | TRMB J A | 115 | 73700 | PEQUONIC | 115  | 1 |    | -0.17949 | 0.02522  | 7.9      | 15.9     |        |        |
|    |        | Open | 73224          | TRMB J A | 115 | 73126 | DEVON#2  | 115  | 1 |    | 0.25340  | -0.09703 | -140.9   | -171.7   |        |        |
|    |        | Open | 73158          | WESTON   | 115 | 73224 | TRMB J A | 115  | 1 |    | 0.13197  | 0.00000  | 3.2      | 3.2      |        |        |
| 18 | 1160.9 | L:   | 73691          | DEVON179 | 115 | 73195 | DEVON    | 115  | 1 |    | -233.3   | -263.0   | -0.09239 | -0.02904 | -142.8 | -152.1 |
|    |        |      | C:1710-1730DCT |          |     |       |          |      |   | 29 |          |          |          |          |        |        |
|    |        | Open | 73225          | TRMB J B | 115 | 73709 | OLD TOWN | 115  | 1 |    | 0.11919  | 0.06991  | 212.0    | 234.5    |        |        |
|    |        | Open | 73225          | TRMB J B | 115 | 73126 | DEVON#2  | 115  | 1 |    | 0.43040  | -0.08938 | -172.7   | -201.4   |        |        |
|    |        | Open | 73225          | TRMB J B | 115 | 73700 | PEQUONIC | 115  | 2 |    | 0.19623  | 0.00000  | 2.3      | 2.3      |        |        |
|    |        | Open | 73709          | OLD TOWN | 115 | 73768 | OLDTWN1  | 13.8 | 1 |    | 0.07704  | 0.00000  | 34.5     | 34.5     |        |        |
|    |        | Open | 73224          | TRMB J A | 115 | 73700 | PEQUONIC | 115  | 1 |    | -0.11919 | 0.02522  | 7.9      | 16.0     |        |        |
|    |        | Open | 73224          | TRMB J A | 115 | 73126 | DEVON#2  | 115  | 1 |    | 0.31122  | -0.09703 | -140.9   | -172.2   |        |        |
|    |        | Open | 73158          | WESTON   | 115 | 73224 | TRMB J A | 115  | 1 |    | 0.07704  | 0.00000  | 3.2      | 3.2      |        |        |
| 19 | 1162.6 | L:   | 73126          | DEVON#2  | 115 | 73224 | TRMB J A | 115  | 1 |    | 187.6    | 228.0    | 0.12426  | 0.09703  | 140.9  | 172.5  |
|    |        |      | C:1710+LOAD    |          |     |       |          |      |   | 13 |          |          |          |          |        |        |
|    |        | Open | 73225          | TRMB J B | 115 | 73126 | DEVON#2  | 115  | 1 |    | -0.29963 | -0.08938 | -172.7   | -201.7   |        |        |
|    |        | Open | 73225          | TRMB J B | 115 | 73700 | PEQUONIC | 115  | 2 |    | 0.02275  | 0.01948  | -41.6    | -35.3    |        |        |
|    |        | Open | 73225          | TRMB J B | 115 | 73709 | OLD TOWN | 115  | 1 |    | -0.11105 | 0.00000  | 2.3      | 2.3      |        |        |
|    |        | Open | 73709          | OLD TOWN | 115 | 73768 | OLDTWN1  | 13.8 | 1 |    | -0.11105 | 0.00000  | 34.5     | 34.5     |        |        |
| 20 | 1163.7 | L:   | 73155          | RDGFLD J | 115 | 73174 | PEACEABL | 115  | 1 |    | 166.3    | 289.0    | 0.37562  | 0.17436  | 137.2  | 194.2  |
|    |        |      | C:1880-1890DCT |          |     |       |          |      |   | 34 |          |          |          |          |        |        |
|    |        | Open | 73169          | RYTN J A | 115 | 73171 | NWLK HAR | 115  | 1 |    | 0.00966  | 0.17454  | -158.2   | -101.2   |        |        |
|    |        | Open | 73169          | RYTN J A | 115 | 73172 | NORWALK  | 115  | 1 |    | 0.01949  | -0.10771 | 57.5     | 22.3     |        |        |
|    |        | Open | 73168          | GLNBROOK | 115 | 73169 | RYTN J A | 115  | 1 |    | -0.39206 | 0.00000  | 0.5      | 0.5      |        |        |
|    |        | Open | 73168          | GLNBROOK | 115 | 73237 | ELYAVE   | 115  | 1 |    | -0.22891 | 0.08330  | -126.6   | -99.3    |        |        |
|    |        | Open | 73171          | NWLK HAR | 115 | 73237 | ELYAVE   | 115  | 1 |    | -0.23857 | -0.26182 | -4.1     | -89.7    |        |        |
|    |        | Open | 73173          | SASCO CR | 115 | 73237 | ELYAVE   | 115  | 1 |    | -0.16314 | 0.00000  | 0.7      | 0.7      |        |        |
|    |        | Open | 75051          | NRTHPRT1 | 138 | 75053 | NRTHPT P | 138  | 1 |    | 0.40393  | 0.39184  | -0.3     | 127.6    |        |        |
|    |        | Open | 73166          | NORHR138 | 138 | 75053 | NRTHPT P | 138  | 1 |    | NA       |          |          |          |        |        |
|    |        | Open | 73166          | NORHR138 | 138 | 73171 | NWLK HAR | 115  | 1 |    | -0.40172 | 0.00000  | 0.0      | 0.0      |        |        |

Sasco Creek 51R Substation – Temporary Transformer and Circuit Breaker

|    |           |                     |      |                |      |    |        |        |          |          |        |        |
|----|-----------|---------------------|------|----------------|------|----|--------|--------|----------|----------|--------|--------|
| 21 | 1169.7 L: | 73690 DEVON178      | 115  | 73195 DEVON    | 115  | 1  | -232.9 | -264.0 | -0.09235 | -0.02901 | -142.4 | -152.2 |
|    |           | C:1710-1730DCT      |      |                |      | 29 |        |        |          |          |        |        |
|    |           | Open 73225 TRMB J B | 115  | 73709 OLD TOWN | 115  | 1  |        |        | 0.11916  | 0.06991  | 212.0  | 235.6  |
|    |           | Open 73225 TRMB J B | 115  | 73126 DEVON#2  | 115  | 1  |        |        | 0.43040  | -0.08938 | -172.7 | -202.7 |
|    |           | Open 73225 TRMB J B | 115  | 73700 PEQUONIC | 115  | 2  |        |        | 0.19618  | 0.00000  | 2.3    | 2.3    |
|    |           | Open 73709 OLD TOWN | 115  | 73768 OLDTWN1  | 13.8 | 1  |        |        | 0.07702  | 0.00000  | 34.5   | 34.5   |
|    |           | Open 73224 TRMB J A | 115  | 73700 PEQUONIC | 115  | 1  |        |        | -0.11916 | 0.02522  | 7.9    | 16.4   |
|    |           | Open 73224 TRMB J A | 115  | 73126 DEVON#2  | 115  | 1  |        |        | 0.31124  | -0.09703 | -140.9 | -173.6 |
|    |           | Open 73158 WESTON   | 115  | 73224 TRMB J A | 115  | 1  |        |        | 0.07702  | 0.00000  | 3.2    | 3.2    |
| 23 | 1175.6*L: | 73709 OLD TOWN      | 115  | 73711 HAWTH R  | 115  | 1  | 181.4  | 228.0  | 0.13469  | 0.06991  | 111.1  | 135.3  |
|    |           | C:1416-1890DCT      |      |                |      | 26 |        |        |          |          |        |        |
|    |           | Open 73173 SASCO CR | 115  | 73237 ELYAVE   | 115  | 1  |        |        | 0.22052  | 0.17853  | 131.4  | 193.2  |
|    |           | Open 73168 GLNBROOK | 115  | 73237 ELYAVE   | 115  | 1  |        |        | -0.01409 | 0.08330  | -126.6 | -97.7  |
|    |           | Open 73171 NWLK HAR | 115  | 73237 ELYAVE   | 115  | 1  |        |        | -0.10302 | 0.00000  | 0.7    | 0.7    |
|    |           | Open 73286 COMPO    | 115  | 73700 PEQUONIC | 115  | 1  |        |        | -0.23461 | -0.11332 | -186.6 | -225.8 |
|    |           | Open 73267 DARIEN   | 115  | 73300 ELYTAP   | 115  | 1  |        |        | -0.11711 | 0.00000  | 35.7   | 35.7   |
|    |           | Open 73286 COMPO    | 115  | 73300 ELYTAP   | 115  | 1  | NA     |        |          |          |        |        |
| 24 | 1186.1 L: | 73701 CRRA JCT      | 115  | 73703 ASHCREEK | 115  | 1  | 361.3  | 439.0  | 0.21366  | 0.17853  | 269.5  | 334.4  |
|    |           | C:1710-1730DCT      |      |                |      | 29 |        |        |          |          |        |        |
|    |           | Open 73225 TRMB J B | 115  | 73709 OLD TOWN | 115  | 1  |        |        | 0.34814  | 0.06991  | 212.0  | 237.4  |
|    |           | Open 73225 TRMB J B | 115  | 73126 DEVON#2  | 115  | 1  |        |        | 0.07618  | -0.08938 | -172.7 | -205.2 |
|    |           | Open 73225 TRMB J B | 115  | 73700 PEQUONIC | 115  | 2  |        |        | 0.21680  | 0.00000  | 2.3    | 2.3    |
|    |           | Open 73709 OLD TOWN | 115  | 73768 OLDTWN1  | 13.8 | 1  |        |        | -0.13135 | 0.00000  | 34.5   | 34.5   |
|    |           | Open 73224 TRMB J A | 115  | 73700 PEQUONIC | 115  | 1  |        |        | -0.34814 | 0.02522  | 7.9    | 17.0   |
|    |           | Open 73224 TRMB J A | 115  | 73126 DEVON#2  | 115  | 1  |        |        | -0.27197 | -0.09703 | -140.9 | -176.2 |
|    |           | Open 73158 WESTON   | 115  | 73224 TRMB J A | 115  | 1  |        |        | -0.13135 | 0.00000  | 3.2    | 3.2    |
| 27 | 1195.2*L: | 73155 RDGFLD J      | 115  | 73174 PEACEABL | 115  | 1  | 209.1  | 289.0  | 0.21118  | 0.17436  | 137.2  | 203.2  |
|    |           | C:1710-1730DCT      |      |                |      | 29 |        |        |          |          |        |        |
|    |           | Open 73225 TRMB J B | 115  | 73709 OLD TOWN | 115  | 1  |        |        | 0.18318  | 0.06991  | 212.0  | 238.5  |
|    |           | Open 73225 TRMB J B | 115  | 73126 DEVON#2  | 115  | 1  |        |        | -0.05827 | -0.08938 | -172.7 | -206.5 |
|    |           | Open 73225 TRMB J B | 115  | 73700 PEQUONIC | 115  | 2  |        |        | -0.06784 | 0.00000  | 2.3    | 2.3    |
|    |           | Open 73709 OLD TOWN | 115  | 73768 OLDTWN1  | 13.8 | 1  |        |        | -0.25102 | 0.00000  | 34.5   | 34.5   |
|    |           | Open 73224 TRMB J A | 115  | 73700 PEQUONIC | 115  | 1  |        |        | -0.18318 | 0.02522  | 7.9    | 17.4   |
|    |           | Open 73224 TRMB J A | 115  | 73126 DEVON#2  | 115  | 1  |        |        | -0.24146 | -0.09703 | -140.9 | -177.6 |
|    |           | Open 73158 WESTON   | 115  | 73224 TRMB J A | 115  | 1  |        |        | -0.25102 | 0.00000  | 3.2    | 3.2    |
| 31 | 1197.9 L: | 73695 BAIRD B       | 115  | 73693 BARNUM B | 115  | 1  | -216.7 | -264.0 | -0.12358 | -0.12358 | -139.3 | -186.6 |
|    |           | C:LOSSBPT3          |      |                |      | 38 |        |        |          |          |        |        |
|    |           | Open 73648 BPTHBR#3 | 22.0 | 73700 PEQUONIC | 115  | 1  |        |        | 0.20685  | 0.00000  | -374.1 | -374.1 |
| 32 | 1198.6 L: | 73694 BAIRD A       | 115  | 73692 BARNUM A | 115  | 1  | -216.5 | -264.0 | -0.12358 | -0.12358 | -139.2 | -186.6 |
|    |           | C:LOSSBPT3          |      |                |      | 38 |        |        |          |          |        |        |

Sasco Creek 51R Substation – Temporary Transformer and Circuit Breaker

|    |        |      |                |          |      |       |          |     |   |       |       |         |          |          |        |        |
|----|--------|------|----------------|----------|------|-------|----------|-----|---|-------|-------|---------|----------|----------|--------|--------|
|    |        | Open | 73648          | BPTHBR#3 | 22.0 | 73700 | PEQUONIC | 115 | 1 |       |       |         | 0.20685  | 0.00000  | -374.1 | -374.1 |
| 36 | 1224.5 | L:   | 73296          | WLTON115 | 115  | 73172 | NORWALK  | 115 | 1 | 67.5  | 228.0 | 0.37612 |          | 0.17459  | 38.4   | 112.9  |
|    |        |      | C:1880-1890DCT |          |      |       |          |     |   |       |       |         | 34       |          |        |        |
|    |        | Open | 73169          | RYTN J A | 115  | 73171 | NWLK HAR | 115 | 1 |       |       |         | 0.00967  | 0.17454  | -158.2 | -83.8  |
|    |        | Open | 73169          | RYTN J A | 115  | 73172 | NORWALK  | 115 | 1 |       |       |         | 0.01951  | -0.10771 | 57.5   | 11.5   |
|    |        | Open | 73168          | GLNBROOK | 115  | 73169 | RYTN J A | 115 | 1 |       |       |         | -0.39258 | 0.00000  | 0.5    | 0.5    |
|    |        | Open | 73168          | GLNBROOK | 115  | 73237 | ELYAVE   | 115 | 1 |       |       |         | -0.22922 | 0.08330  | -126.6 | -91.0  |
|    |        | Open | 73171          | NWLK HAR | 115  | 73237 | ELYAVE   | 115 | 1 |       |       |         | -0.23889 | -0.26182 | -4.1   | -115.9 |
|    |        | Open | 73173          | SASCO CR | 115  | 73237 | ELYAVE   | 115 | 1 |       |       |         | -0.16336 | 0.00000  | 0.7    | 0.7    |
|    |        | Open | 75051          | NRTHPRT1 | 138  | 75053 | NRTHPT P | 138 | 1 |       |       |         | 0.40447  | 0.39184  | -0.3   | 166.8  |
|    |        | Open | 73166          | NORHR138 | 138  | 75053 | NRTHPT P | 138 | 1 | NA    |       |         |          |          |        |        |
|    |        | Open | 73166          | NORHR138 | 138  | 73171 | NWLK HAR | 115 | 1 |       |       |         | -0.40225 | 0.00000  | 0.0    | 0.0    |
| 37 | 1225.4 | L:   | 73158          | WESTON   | 115  | 73292 | NRWLK RX | 115 | 1 | 168.6 | 228.0 | 0.13873 |          | 0.07181  | 74.7   | 105.5  |
|    |        |      | C:113091001DCT |          |      |       |          |     |   |       |       |         | 22       |          |        |        |
|    |        | Open | 73701          | CRRA JCT | 115  | 73702 | CRRA XFO | 115 | 1 | NA    |       |         |          |          |        |        |
|    |        | Open | 73700          | PEQUONIC | 115  | 73701 | CRRA JCT | 115 | 1 |       |       |         | 0.22553  | 0.17853  | 213.3  | 289.8  |
|    |        | Open | 73701          | CRRA JCT | 115  | 73703 | ASHCREEK | 115 | 1 |       |       |         | -0.10703 | 0.00000  | -56.2  | -56.2  |
|    |        | Open | 73286          | COMPO    | 115  | 73700 | PEQUONIC | 115 | 1 |       |       |         | -0.23522 | -0.11332 | -186.6 | -235.1 |
|    |        | Open | 73267          | DARIEN   | 115  | 73300 | ELYTAP   | 115 | 1 |       |       |         | -0.11672 | 0.00000  | 35.7   | 35.7   |
|    |        | Open | 73286          | COMPO    | 115  | 73300 | ELYTAP   | 115 | 1 | NA    |       |         |          |          |        |        |
| 39 | 1228.3 | L:   | 73170          | PLUMTREE | 115  | 73155 | RDGFLD J | 115 | 1 | 196.2 | 359.0 | 0.37612 |          | 0.17459  | 167.0  | 242.6  |
|    |        |      | C:1880-1890DCT |          |      |       |          |     |   |       |       |         | 34       |          |        |        |
|    |        | Open | 73169          | RYTN J A | 115  | 73171 | NWLK HAR | 115 | 1 |       |       |         | 0.00967  | 0.17454  | -158.2 | -82.7  |
|    |        | Open | 73169          | RYTN J A | 115  | 73172 | NORWALK  | 115 | 1 |       |       |         | 0.01951  | -0.10771 | 57.5   | 10.8   |
|    |        | Open | 73168          | GLNBROOK | 115  | 73169 | RYTN J A | 115 | 1 |       |       |         | -0.39258 | 0.00000  | 0.5    | 0.5    |
|    |        | Open | 73168          | GLNBROOK | 115  | 73237 | ELYAVE   | 115 | 1 |       |       |         | -0.22922 | 0.08330  | -126.6 | -90.5  |
|    |        | Open | 73171          | NWLK HAR | 115  | 73237 | ELYAVE   | 115 | 1 |       |       |         | -0.23889 | -0.26182 | -4.1   | -117.5 |
|    |        | Open | 73173          | SASCO CR | 115  | 73237 | ELYAVE   | 115 | 1 |       |       |         | -0.16336 | 0.00000  | 0.7    | 0.7    |
|    |        | Open | 75051          | NRTHPRT1 | 138  | 75053 | NRTHPT P | 138 | 1 |       |       |         | 0.40447  | 0.39184  | -0.3   | 169.3  |
|    |        | Open | 73166          | NORHR138 | 138  | 75053 | NRTHPT P | 138 | 1 | NA    |       |         |          |          |        |        |
|    |        | Open | 73166          | NORHR138 | 138  | 73171 | NWLK HAR | 115 | 1 |       |       |         | -0.40225 | 0.00000  | 0.0    | 0.0    |
| 41 | 1237.9 | L:   | 73296          | WLTON115 | 115  | 73172 | NORWALK  | 115 | 1 | 123.3 | 228.0 | 0.23340 |          | 0.17459  | 38.4   | 116.7  |
|    |        |      | C:113091001DCT |          |      |       |          |     |   |       |       |         | 22       |          |        |        |
|    |        | Open | 73701          | CRRA JCT | 115  | 73702 | CRRA XFO | 115 | 1 | NA    |       |         |          |          |        |        |
|    |        | Open | 73700          | PEQUONIC | 115  | 73701 | CRRA JCT | 115 | 1 |       |       |         | 0.19388  | 0.17853  | 213.3  | 293.4  |
|    |        | Open | 73701          | CRRA JCT | 115  | 73703 | ASHCREEK | 115 | 1 |       |       |         | -0.21331 | 0.00000  | -56.2  | -56.2  |
|    |        | Open | 73286          | COMPO    | 115  | 73700 | PEQUONIC | 115 | 1 |       |       |         | -0.21354 | -0.11332 | -186.6 | -237.4 |
|    |        | Open | 73267          | DARIEN   | 115  | 73300 | ELYTAP   | 115 | 1 |       |       |         | -0.23297 | 0.00000  | 35.7   | 35.7   |
|    |        | Open | 73286          | COMPO    | 115  | 73300 | ELYTAP   | 115 | 1 | NA    |       |         |          |          |        |        |
| 44 | 1244.0 | L:   | 73170          | PLUMTREE | 115  | 73155 | RDGFLD J | 115 | 1 | 251.9 | 359.0 | 0.23340 |          | 0.17459  | 167.0  | 247.1  |



# FCITC Single Study Pre-Sasco Creek with Bethel – Norwalk Project

PSS/MUST 8.1 -- Managing and Utilizing System Transmission -- FRI, MAR 31 2006 9:40  
 PRESASCO, 2006 SUMMER PEAK LOAD, CC GENS ON  
 W/ALL\_NE\_I39\_CHNGS W PHASE I 1-ARCHERS\_CABLE

Case.File C:\Projects\Sasco Creek\Thermal Study\With Phase I\presasco+P1.sav  
 Subsys.File C:\Projects\Sasco Creek\Transfer Limit\swctnew.sub  
 Monit.File C:\Projects\Sasco Creek\Transfer Limit\sasco\_post\_P\_I.mon  
 Contin.File C:\Projects\Sasco Creek\Transfer Limit\sascocontingency.con  
 Exclud.File none

Study transfer. From WYMAN To NORGEN . Transfer level - 1000.0 MW

Violations report ordered by transfer capability. Total 39 violations

Interface-1 Interface 1 NORWLK-STMPD Init.Flow= 962.59 TDF= 0.6847

| N | IntFcel | L: Limiting constraint              | PreShift | MW          | TDF    | PTDF     | =Base Case Flow=       |
|---|---------|-------------------------------------|----------|-------------|--------|----------|------------------------|
|   | C:      | Contingency description             | Ncon     | Flow Rating | LODF   |          | Init Final             |
| 1 | 1339.9  | L: 73224 TRMB J A<br>C:113091001DCT | 115 1    | 173.6       | 228.0  | 0.09871  | 0.05105 109.4 137.5    |
|   |         | Open 73701 CRRA JCT                 | 115 1    | NA          |        |          |                        |
|   |         | Open 73700 PEQUONIC                 | 115 1    |             |        | 0.19469  | 0.15326 163.8 248.3    |
|   |         | Open 73701 CRRA JCT                 | 115 1    |             |        | -0.06920 | 0.00000 -56.4 -56.4    |
|   |         | Open 73286 COMPO                    | 115 1    |             |        | -0.20079 | -0.08870 -157.1 -206.0 |
|   |         | Open 73267 DARIEN                   | 115 1    |             |        | -0.07531 | 0.00000 41.4 41.4      |
|   |         | Open 73286 COMPO                    | 115 1    | NA          |        |          |                        |
| 2 | 1383.4  | L: 73207 FLAX HIL<br>C:1880-1890DCT | 115 1    | 84.8        | -256.0 | -0.55455 | -0.14175 20.8 -66.3    |
|   |         | Open 73169 RYTN J A                 | 115 1    |             |        | -0.40927 | 0.21612 -144.8 -12.0   |
|   |         | Open 73169 RYTN J A                 | 115 1    |             |        | 0.17438  | -0.14149 42.3 -44.7    |
|   |         | Open 73168 GLNBROOK                 | 115 1    |             |        | 0.14903  | 0.00000 0.4 0.4        |
|   |         | Open 73168 GLNBROOK                 | 115 1    |             |        | 0.12348  | 0.10240 -121.7 -58.7   |

Sasco Creek 51R Substation – Temporary Transformer and Circuit Breaker

|   |        |      |                |          |     |       |          |     |   |       |          |          |          |        |       |  |
|---|--------|------|----------------|----------|-----|-------|----------|-----|---|-------|----------|----------|----------|--------|-------|--|
|   |        | Open | 73171          | NWLK HAR | 115 | 73237 | ELYAVE   | 115 | 1 |       | 0.53275  | -0.25566 | 22.6     | -134.6 |       |  |
|   |        | Open | 73173          | SASCO CR | 115 | 73237 | ELYAVE   | 115 | 1 |       | 0.02555  | 0.00000  | 0.7      | 0.7    |       |  |
|   |        | Open | 75051          | NRTHPRT1 | 138 | 75053 | NRTHPT P | 138 | 1 |       | -0.55862 | 0.31526  | -0.5     | 193.3  |       |  |
|   |        | Open | 73166          | NORHR138 | 138 | 75053 | NRTHPT P | 138 | 1 | NA    |          |          |          |        |       |  |
|   |        | Open | 73166          | NORHR138 | 138 | 73171 | NWLK HAR | 115 | 1 |       | 0.55830  | 0.00000  | 0.0      | 0.0    |       |  |
| 3 | 1396.3 | L:   | 73171          | NWLK HAR | 115 | 73271 | RYTN J B | 115 | 1 | 329.5 | -304.0   | -1.00000 | -0.21295 | 161.6  | 26.7  |  |
|   |        |      | C:1880-1890DCT |          |     |       |          |     |   | 34    |          |          |          |        |       |  |
|   |        | Open | 73169          | RYTN J A | 115 | 73171 | NWLK HAR | 115 | 1 |       | -1.00000 | 0.21612  | -144.8   | -7.9   |       |  |
|   |        | Open | 73169          | RYTN J A | 115 | 73172 | NORWALK  | 115 | 1 |       | 0.00000  | -0.14149 | 42.3     | -47.3  |       |  |
|   |        | Open | 73168          | GLNBROOK | 115 | 73169 | RYTN J A | 115 | 1 |       | 0.00000  | 0.00000  | 0.4      | 0.4    |       |  |
|   |        | Open | 73168          | GLNBROOK | 115 | 73237 | ELYAVE   | 115 | 1 |       | -0.00000 | 0.10240  | -121.7   | -56.8  |       |  |
|   |        | Open | 73171          | NWLK HAR | 115 | 73237 | ELYAVE   | 115 | 1 |       | 1.00000  | -0.25566 | 22.6     | -139.4 |       |  |
|   |        | Open | 73173          | SASCO CR | 115 | 73237 | ELYAVE   | 115 | 1 |       | 0.00000  | 0.00000  | 0.7      | 0.7    |       |  |
|   |        | Open | 75051          | NRTHPRT1 | 138 | 75053 | NRTHPT P | 138 | 1 |       | -1.00000 | 0.31526  | -0.5     | 199.2  |       |  |
|   |        | Open | 73166          | NORHR138 | 138 | 75053 | NRTHPT P | 138 | 1 | NA    |          |          |          |        |       |  |
|   |        | Open | 73166          | NORHR138 | 138 | 73171 | NWLK HAR | 115 | 1 |       | 1.00000  | 0.00000  | 0.0      | 0.0    |       |  |
| 4 | 1403.1 | L:   | 73126          | DEVON#2  | 115 | 73225 | TRMB J B | 115 | 1 | 171.8 | 228.0    | 0.08734  | 0.06763  | 143.6  | 187.1 |  |
|   |        |      | C:1730LINE     |          |     |       |          |     |   | 15    |          |          |          |        |       |  |
|   |        | Open | 73224          | TRMB J A | 115 | 73700 | PEQUONIC | 115 | 1 |       | 0.04577  | 0.02233  | -0.3     | 14.1   |       |  |
|   |        | Open | 73224          | TRMB J A | 115 | 73126 | DEVON#2  | 115 | 1 |       | -0.25473 | -0.07339 | -111.3   | -158.5 |       |  |
|   |        | Open | 73158          | WESTON   | 115 | 73224 | TRMB J A | 115 | 1 |       | -0.06751 | 0.00000  | 2.2      | 2.2    |       |  |
| 5 | 1434.4 | L:   | 73224          | TRMB J A | 115 | 73158 | WESTON   | 115 | 1 | 160.0 | 228.0    | 0.09871  | 0.05105  | 109.4  | 144.5 |  |
|   |        |      | C:1130-1430DCT |          |     |       |          |     |   | 21    |          |          |          |        |       |  |
|   |        | Open | 73286          | COMPO    | 115 | 73700 | PEQUONIC | 115 | 1 |       | -0.20079 | -0.08870 | -157.1   | -218.3 |       |  |
|   |        | Open | 73267          | DARIEN   | 115 | 73300 | ELYTAP   | 115 | 1 |       | -0.07531 | 0.00000  | 41.4     | 41.4   |       |  |
|   |        | Open | 73286          | COMPO    | 115 | 73300 | ELYTAP   | 115 | 1 | NA    |          |          |          |        |       |  |
|   |        | Open | 73173          | SASCO CR | 115 | 73714 | ASHCREAC | 115 | 1 |       | -0.19469 | -0.15326 | -114.0   | -219.6 |       |  |
|   |        | Open | 73703          | ASHCREEK | 115 | 73714 | ASHCREAC | 115 | 1 |       | -0.00000 | 0.15276  | 113.6    | 218.9  |       |  |
|   |        | Open | 73703          | ASHCREEK | 115 | 73714 | ASHCREAC | 115 | 2 |       | 0.12549  | 0.00000  | -0.0     | -0.0   |       |  |
| 6 | 1452.0 | *L:  | 73224          | TRMB J A | 115 | 73158 | WESTON   | 115 | 1 | 158.2 | 228.0    | 0.09761  | 0.05105  | 109.4  | 145.9 |  |
|   |        |      | C:1416-1890DCT |          |     |       |          |     |   | 26    |          |          |          |        |       |  |
|   |        | Open | 73173          | SASCO CR | 115 | 73237 | ELYAVE   | 115 | 1 |       | 0.19292  | 0.15326  | 99.8     | 209.4  |       |  |
|   |        | Open | 73168          | GLNBROOK | 115 | 73237 | ELYAVE   | 115 | 1 |       | -0.00902 | 0.10240  | -121.7   | -48.5  |       |  |
|   |        | Open | 73171          | NWLK HAR | 115 | 73237 | ELYAVE   | 115 | 1 |       | -0.06777 | 0.00000  | 0.7      | 0.7    |       |  |
|   |        | Open | 73286          | COMPO    | 115 | 73700 | PEQUONIC | 115 | 1 |       | -0.20194 | -0.08870 | -157.1   | -220.6 |       |  |
|   |        | Open | 73267          | DARIEN   | 115 | 73300 | ELYTAP   | 115 | 1 |       | -0.07680 | 0.00000  | 41.4     | 41.4   |       |  |
|   |        | Open | 73286          | COMPO    | 115 | 73300 | ELYTAP   | 115 | 1 | NA    |          |          |          |        |       |  |
| 7 | 1480.7 | L:   | 73271          | RYTN J B | 115 | 73207 | FLAX HIL | 115 | 1 | 135.6 | -284.0   | -0.55455 | -0.14175 | 71.6   | -35.6 |  |
|   |        |      | C:1880-1890DCT |          |     |       |          |     |   | 34    |          |          |          |        |       |  |
|   |        | Open | 73169          | RYTN J A | 115 | 73171 | NWLK HAR | 115 | 1 |       | -0.40927 | 0.21612  | -144.8   | 18.7   |       |  |

Sasco Creek 51R Substation – Temporary Transformer and Circuit Breaker

|    |        |      |                |          |      |       |          |      |   |        |          |          |          |        |        |
|----|--------|------|----------------|----------|------|-------|----------|------|---|--------|----------|----------|----------|--------|--------|
|    |        | Open | 73169          | RYTN J A | 115  | 73172 | NORWALK  | 115  | 1 |        | 0.17438  | -0.14149 | 42.3     | -64.8  |        |
|    |        | Open | 73168          | GLNBROOK | 115  | 73169 | RYTN J A | 115  | 1 |        | 0.14903  | 0.00000  | 0.4      | 0.4    |        |
|    |        | Open | 73168          | GLNBROOK | 115  | 73237 | ELYAVE   | 115  | 1 |        | 0.12348  | 0.10240  | -121.7   | -44.2  |        |
|    |        | Open | 73171          | NWLK HAR | 115  | 73237 | ELYAVE   | 115  | 1 |        | 0.53275  | -0.25566 | 22.6     | -170.9 |        |
|    |        | Open | 73173          | SASCO CR | 115  | 73237 | ELYAVE   | 115  | 1 |        | 0.02555  | 0.00000  | 0.7      | 0.7    |        |
|    |        | Open | 75051          | NRTHPT1  | 138  | 75053 | NRTHPT P | 138  | 1 |        | -0.55862 | 0.31526  | -0.5     | 238.1  |        |
|    |        | Open | 73166          | NORHR138 | 138  | 75053 | NRTHPT P | 138  | 1 | NA     |          |          |          |        |        |
|    |        | Open | 73166          | NORHR138 | 138  | 73171 | NWLK HAR | 115  | 1 |        | 0.55830  | 0.00000  | 0.0      | 0.0    |        |
| 8  | 1497.3 | L:   | 73237          | ELYAVE   | 115  | 73171 | NWLK HAR | 115  | 1 | -22.7  | 263.0    | 0.36589  | 0.25566  | -22.6  | 177.1  |
|    |        |      | C:1385LN+AUTO  |          |      |       |          |      |   | 5      |          |          |          |        |        |
|    |        | Open | 75051          | NRTHPT1  | 138  | 75053 | NRTHPT P | 138  | 1 |        | 0.34965  | 0.31526  | -0.5     | 245.7  |        |
|    |        | Open | 73166          | NORHR138 | 138  | 75053 | NRTHPT P | 138  | 1 | NA     |          |          |          |        |        |
|    |        | Open | 73166          | NORHR138 | 138  | 75053 | NRTHPT P | 138  | 2 | NA     |          |          |          |        |        |
|    |        | Open | 73166          | NORHR138 | 138  | 75053 | NRTHPT P | 138  | 3 | NA     |          |          |          |        |        |
|    |        | Open | 73166          | NORHR138 | 138  | 73171 | NWLK HAR | 115  | 1 |        | -0.35092 | 0.00000  | 0.0      | 0.0    |        |
| 9  | 1497.3 | L:   | 73237          | ELYAVE   | 115  | 73171 | NWLK HAR | 115  | 1 | -22.7  | 263.0    | 0.36589  | 0.25566  | -22.6  | 177.1  |
|    |        |      | C:ONE1385      |          |      |       |          |      |   | 4      |          |          |          |        |        |
|    |        | Open | 73166          | NORHR138 | 138  | 75053 | NRTHPT P | 138  | 1 |        | -0.34965 | -0.10509 | 0.2      | -81.9  |        |
|    |        | Open | 73166          | NORHR138 | 138  | 75053 | NRTHPT P | 138  | 2 |        | -0.34965 | -0.10509 | 0.2      | -81.9  |        |
|    |        | Open | 73166          | NORHR138 | 138  | 75053 | NRTHPT P | 138  | 3 |        | -0.34965 | -0.10509 | 0.2      | -81.9  |        |
|    |        | Open | 75051          | NRTHPT1  | 138  | 75053 | NRTHPT P | 138  | 1 |        | -0.00127 | 0.00000  | 0.0      | 0.0    |        |
| 10 | 1501.1 | L:   | 73126          | DEVON#2  | 115  | 73225 | TRMB J B | 115  | 1 | 174.8  | 228.0    | 0.06763  | 0.06763  | 143.6  | 196.8  |
|    |        |      | C:LOSSBPT3     |          |      |       |          |      |   | 38     |          |          |          |        |        |
|    |        | Open | 73648          | BPTHBR#3 | 22.0 | 73700 | PEQUONIC | 115  | 1 |        | -0.08339 | 0.00000  | -374.1   | -374.1 |        |
| 11 | 1506.3 | L:   | 73709          | OLD TOWN | 115  | 73711 | HAWTH R  | 115  | 1 | 151.1  | 228.0    | 0.09684  | 0.04966  | 87.5   | 126.9  |
|    |        |      | C:113091001DCT |          |      |       |          |      |   | 22     |          |          |          |        |        |
|    |        | Open | 73701          | CRRA JCT | 115  | 73702 | CRRA XFO | 115  | 1 | NA     |          |          |          |        |        |
|    |        | Open | 73700          | PEQUONIC | 115  | 73701 | CRRA JCT | 115  | 1 |        | 0.19281  | 0.15326  | 163.8    | 285.5  |        |
|    |        | Open | 73701          | CRRA JCT | 115  | 73703 | ASHCREEK | 115  | 1 |        | -0.06787 | 0.00000  | -56.4    | -56.4  |        |
|    |        | Open | 73286          | COMPO    | 115  | 73700 | PEQUONIC | 115  | 1 |        | -0.19880 | -0.08870 | -157.1   | -227.6 |        |
|    |        | Open | 73267          | DARIEN   | 115  | 73300 | ELYTAP   | 115  | 1 |        | -0.07386 | 0.00000  | 41.4     | 41.4   |        |
|    |        | Open | 73286          | COMPO    | 115  | 73300 | ELYTAP   | 115  | 1 | NA     |          |          |          |        |        |
| 12 | 1540.7 | L:   | 73695          | BAIRD B  | 115  | 73693 | BARNUM B | 115  | 1 | -146.5 | -264.0   | -0.13914 | -0.10083 | -105.9 | -191.0 |
|    |        |      | C:1710-1730DCT |          |      |       |          |      |   | 29     |          |          |          |        |        |
|    |        | Open | 73225          | TRMB J B | 115  | 73709 | OLD TOWN | 115  | 1 |        | 0.21237  | 0.04966  | 188.3    | 230.2  |        |
|    |        | Open | 73225          | TRMB J B | 115  | 73126 | DEVON#2  | 115  | 1 |        | 0.42332  | -0.06763 | -143.6   | -200.7 |        |
|    |        | Open | 73225          | TRMB J B | 115  | 73700 | PEQUONIC | 115  | 2 |        | 0.29570  | 0.00000  | 1.7      | 1.7    |        |
|    |        | Open | 73709          | OLD TOWN | 115  | 73768 | OLDTWN1  | 13.8 | 1 |        | 0.08333  | 0.00000  | 34.5     | 34.5   |        |
|    |        | Open | 73224          | TRMB J A | 115  | 73700 | PEQUONIC | 115  | 1 |        | -0.21237 | 0.02233  | -0.3     | 18.6   |        |
|    |        | Open | 73224          | TRMB J A | 115  | 73126 | DEVON#2  | 115  | 1 |        | 0.21094  | -0.07339 | -111.3   | -173.3 |        |

Sasco Creek 51R Substation – Temporary Transformer and Circuit Breaker

|    |        |      |                |      |                |      |   |        |        |          |          |        |        |
|----|--------|------|----------------|------|----------------|------|---|--------|--------|----------|----------|--------|--------|
|    |        | Open | 73158 WESTON   | 115  | 73224 TRMB J A | 115  | 1 |        |        | 0.08333  | 0.00000  | 2.2    | 2.2    |
| 13 | 1541.2 | L:   | 73695 BAIRD B  | 115  | 73693 BARNUM B | 115  | 1 | -178.8 | -264.0 | -0.10083 | -0.10083 | -105.9 | -191.1 |
|    |        |      | C:LOSSBPT3     |      |                |      |   |        |        |          |          |        | 38     |
|    |        | Open | 73648 BPTHBR#3 | 22.0 | 73700 PEQUONIC | 115  | 1 |        |        | 0.19493  | 0.00000  | -374.1 | -374.1 |
| 14 | 1541.4 | L:   | 73694 BAIRD A  | 115  | 73692 BARNUM A | 115  | 1 | -146.4 | -264.0 | -0.13914 | -0.10083 | -105.7 | -191.0 |
|    |        |      | C:1710-1730DCT |      |                |      |   |        |        |          |          |        | 29     |
|    |        | Open | 73225 TRMB J B | 115  | 73709 OLD TOWN | 115  | 1 |        |        | 0.21237  | 0.04966  | 188.3  | 230.3  |
|    |        | Open | 73225 TRMB J B | 115  | 73126 DEVON#2  | 115  | 1 |        |        | 0.42332  | -0.06763 | -143.6 | -200.8 |
|    |        | Open | 73225 TRMB J B | 115  | 73700 PEQUONIC | 115  | 2 |        |        | 0.29570  | 0.00000  | 1.7    | 1.7    |
|    |        | Open | 73709 OLD TOWN | 115  | 73768 OLDTWN1  | 13.8 | 1 |        |        | 0.08333  | 0.00000  | 34.5   | 34.5   |
|    |        | Open | 73224 TRMB J A | 115  | 73700 PEQUONIC | 115  | 1 |        |        | -0.21237 | 0.02233  | -0.3   | 18.6   |
|    |        | Open | 73224 TRMB J A | 115  | 73126 DEVON#2  | 115  | 1 |        |        | 0.21094  | -0.07339 | -111.3 | -173.3 |
|    |        | Open | 73158 WESTON   | 115  | 73224 TRMB J A | 115  | 1 |        |        | 0.08333  | 0.00000  | 2.2    | 2.2    |
| 15 | 1542.2 | L:   | 73694 BAIRD A  | 115  | 73692 BARNUM A | 115  | 1 | -178.6 | -264.0 | -0.10083 | -0.10083 | -105.7 | -191.1 |
|    |        |      | C:LOSSBPT3     |      |                |      |   |        |        |          |          |        | 38     |
|    |        | Open | 73648 BPTHBR#3 | 22.0 | 73700 PEQUONIC | 115  | 1 |        |        | 0.19493  | 0.00000  | -374.1 | -374.1 |
| 16 | 1553.2 | L:   | 73701 CRRA JCT | 115  | 73703 ASHCREEK | 115  | 1 | 290.0  | 439.0  | 0.17278  | 0.15326  | 220.3  | 352.5  |
|    |        |      | C:1710-1730DCT |      |                |      |   |        |        |          |          |        | 29     |
|    |        | Open | 73225 TRMB J B | 115  | 73709 OLD TOWN | 115  | 1 |        |        | 0.31421  | 0.04966  | 188.3  | 231.2  |
|    |        | Open | 73225 TRMB J B | 115  | 73126 DEVON#2  | 115  | 1 |        |        | 0.08604  | -0.06763 | -143.6 | -201.9 |
|    |        | Open | 73225 TRMB J B | 115  | 73700 PEQUONIC | 115  | 2 |        |        | 0.23297  | 0.00000  | 1.7    | 1.7    |
|    |        | Open | 73709 OLD TOWN | 115  | 73768 OLDTWN1  | 13.8 | 1 |        |        | -0.08124 | 0.00000  | 34.5   | 34.5   |
|    |        | Open | 73224 TRMB J A | 115  | 73700 PEQUONIC | 115  | 1 |        |        | -0.31421 | 0.02233  | -0.3   | 19.0   |
|    |        | Open | 73224 TRMB J A | 115  | 73126 DEVON#2  | 115  | 1 |        |        | -0.22816 | -0.07339 | -111.3 | -174.6 |
|    |        | Open | 73158 WESTON   | 115  | 73224 TRMB J A | 115  | 1 |        |        | -0.08124 | 0.00000  | 2.2    | 2.2    |
| 17 | 1559.1 | *L:  | 73237 ELYAVE   | 115  | 73171 NWLK HAR | 115  | 1 | 29.2   | 263.0  | 0.26841  | 0.25566  | -22.6  | 200.2  |
|    |        |      | C:1710-1730DCT |      |                |      |   |        |        |          |          |        | 29     |
|    |        | Open | 73225 TRMB J B | 115  | 73709 OLD TOWN | 115  | 1 |        |        | 0.23927  | 0.04966  | 188.3  | 231.6  |
|    |        | Open | 73225 TRMB J B | 115  | 73126 DEVON#2  | 115  | 1 |        |        | 0.08049  | -0.06763 | -143.6 | -202.5 |
|    |        | Open | 73225 TRMB J B | 115  | 73700 PEQUONIC | 115  | 2 |        |        | 0.24192  | 0.00000  | 1.7    | 1.7    |
|    |        | Open | 73709 OLD TOWN | 115  | 73768 OLDTWN1  | 13.8 | 1 |        |        | 0.00265  | 0.00000  | 34.5   | 34.5   |
|    |        | Open | 73224 TRMB J A | 115  | 73700 PEQUONIC | 115  | 1 |        |        | -0.23927 | 0.02233  | -0.3   | 19.2   |
|    |        | Open | 73224 TRMB J A | 115  | 73126 DEVON#2  | 115  | 1 |        |        | -0.15878 | -0.07339 | -111.3 | -175.2 |
|    |        | Open | 73158 WESTON   | 115  | 73224 TRMB J A | 115  | 1 |        |        | 0.00265  | 0.00000  | 2.2    | 2.2    |
| 20 | 1574.3 | *L:  | 73126 DEVON#2  | 115  | 73225 TRMB J B | 115  | 1 | 143.6  | 228.0  | 0.09451  | 0.06763  | 143.6  | 204.0  |
|    |        |      | C:1385LN+AUTO  |      |                |      |   |        |        |          |          |        | 5      |
|    |        | Open | 75051 NRTHPT1  | 138  | 75053 NRTHPT P | 138  | 1 |        |        | 0.08527  | 0.31526  | -0.5   | 281.1  |
|    |        | Open | 73166 NORHR138 | 138  | 75053 NRTHPT P | 138  | 1 |        |        | NA       |          |        |        |
|    |        | Open | 73166 NORHR138 | 138  | 75053 NRTHPT P | 138  | 2 |        |        | NA       |          |        |        |
|    |        | Open | 73166 NORHR138 | 138  | 75053 NRTHPT P | 138  | 3 |        |        | NA       |          |        |        |



# FCITC Single Study Post-Sasco Creek with Bethel – Norwalk Project

PSS/MUST 8.1 -- Managing and Utilizing System Transmission -- FRI, MAR 31 2006 10:10  
 POSTSASCO, 2006 SUMMER PEAK LOAD,CC GENS ON  
 W/ALL\_NE\_I39\_CHNGS W PHASE I 1-ARCHERS\_CABLE

Case.File C:\Projects\Sasco Creek\Thermal Study\With Phase I\postsasco+P1.sav  
 Subsys.File C:\Projects\Sasco Creek\Transfer Limit\swctnew.sub  
 Monit.File C:\Projects\Sasco Creek\Transfer Limit\sasco\_post\_P\_I.mon  
 Contin.File C:\Projects\Sasco Creek\Transfer Limit\sascocontingency.con  
 Exclud.File none

Study transfer. From WYMAN To NORGEN . Transfer level - 1000.0 MW

Violations report ordered by transfer capability. Total 38 violations

Interface-1 Interface 1 NORWLK-STMPD Init.Flow= 962.55 TDF= 0.6847

| N | IntFcel | L: Limiting constraint              | PreShift | MW    | TDF      | PTDF  | =Base Case Flow=     |                                 |
|---|---------|-------------------------------------|----------|-------|----------|-------|----------------------|---------------------------------|
|   | C:      | Contingency description             | Ncon     | Flow  | Rating   | LODF  | Init Final           |                                 |
| 1 | 1356.9  | L: 73224 TRMB J A<br>C:113091001DCT | 115      | 73158 | WESTON   | 115 1 | 171.2 228.0 0.09870  | 0.05105 105.5 134.9             |
|   |         | Open 73701 CRRA JCT                 | 115      | 73702 | CRRA XFO | 115 1 | NA                   |                                 |
|   |         | Open 73700 PEQUONIC                 | 115      | 73701 | CRRA JCT | 115 1 |                      | 0.19469 0.15326 172.2 260.5     |
|   |         | Open 73701 CRRA JCT                 | 115      | 73703 | ASHCREEK | 115 1 |                      | -0.06920 0.00000 -56.4 -56.4    |
|   |         | Open 73286 COMPO                    | 115      | 73700 | PEQUONIC | 115 1 |                      | -0.20079 -0.08870 -153.6 -204.7 |
|   |         | Open 73267 DARIEN                   | 115      | 73300 | ELYTAP   | 115 1 |                      | -0.07531 0.00000 35.3 35.3      |
|   |         | Open 73286 COMPO                    | 115      | 73300 | ELYTAP   | 115 1 |                      | NA                              |
| 2 | 1383.4  | L: 73207 FLAX HIL<br>C:1880-1890DCT | 115      | 73172 | NORWALK  | 115 1 | 84.8 -256.0 -0.55455 | -0.14175 18.8 -68.3             |
|   |         | Open 73169 RYTN J A                 | 115      | 73171 | NWLK HAR | 115 1 |                      | -0.40927 0.21612 -141.7 -8.8    |
|   |         | Open 73169 RYTN J A                 | 115      | 73172 | NORWALK  | 115 1 |                      | 0.17438 -0.14148 40.3 -46.7     |
|   |         | Open 73168 GLNBROOK                 | 115      | 73169 | RYTN J A | 115 1 |                      | 0.14903 0.00000 0.4 0.4         |
|   |         | Open 73168 GLNBROOK                 | 115      | 73237 | ELYAVE   | 115 1 |                      | 0.12348 0.10239 -119.3 -56.4    |

Sasco Creek 51R Substation – Temporary Transformer and Circuit Breaker

|   |        |      |                |          |     |       |          |     |   |    |          |          |          |          |       |       |
|---|--------|------|----------------|----------|-----|-------|----------|-----|---|----|----------|----------|----------|----------|-------|-------|
|   |        | Open | 73171          | NWLK HAR | 115 | 73237 | ELYAVE   | 115 | 1 |    | 0.53275  | -0.25566 | 28.9     | -128.2   |       |       |
|   |        | Open | 73173          | SASCO CR | 115 | 73237 | ELYAVE   | 115 | 1 |    | 0.02555  | 0.00000  | 0.7      | 0.7      |       |       |
|   |        | Open | 75051          | NRTHPRT1 | 138 | 75053 | NRTHPT P | 138 | 1 |    | -0.55862 | 0.31528  | -0.5     | 193.3    |       |       |
|   |        | Open | 73166          | NORHR138 | 138 | 75053 | NRTHPT P | 138 | 1 | NA |          |          |          |          |       |       |
|   |        | Open | 73166          | NORHR138 | 138 | 73171 | NWLK HAR | 115 | 1 |    | 0.55830  | 0.00000  | 0.0      | 0.0      |       |       |
| 3 | 1396.3 | L:   | 73171          | NWLK HAR | 115 | 73271 | RYTN J B | 115 | 1 |    | 329.5    | -304.0   | -1.00000 | -0.21295 | 158.5 | 23.6  |
|   |        |      | C:1880-1890DCT |          |     |       |          |     |   | 34 |          |          |          |          |       |       |
|   |        | Open | 73169          | RYTN J A | 115 | 73171 | NWLK HAR | 115 | 1 |    | -1.00000 | 0.21612  | -141.7   | -4.7     |       |       |
|   |        | Open | 73169          | RYTN J A | 115 | 73172 | NORWALK  | 115 | 1 |    | -0.00000 | -0.14148 | 40.3     | -49.4    |       |       |
|   |        | Open | 73168          | GLNBROOK | 115 | 73169 | RYTN J A | 115 | 1 |    | 0.00000  | 0.00000  | 0.4      | 0.4      |       |       |
|   |        | Open | 73168          | GLNBROOK | 115 | 73237 | ELYAVE   | 115 | 1 |    | 0.00000  | 0.10239  | -119.3   | -54.4    |       |       |
|   |        | Open | 73171          | NWLK HAR | 115 | 73237 | ELYAVE   | 115 | 1 |    | 1.00000  | -0.25566 | 28.9     | -133.1   |       |       |
|   |        | Open | 73173          | SASCO CR | 115 | 73237 | ELYAVE   | 115 | 1 |    | -0.00000 | 0.00000  | 0.7      | 0.7      |       |       |
|   |        | Open | 75051          | NRTHPRT1 | 138 | 75053 | NRTHPT P | 138 | 1 |    | -1.00000 | 0.31528  | -0.5     | 199.3    |       |       |
|   |        | Open | 73166          | NORHR138 | 138 | 75053 | NRTHPT P | 138 | 1 | NA |          |          |          |          |       |       |
|   |        | Open | 73166          | NORHR138 | 138 | 73171 | NWLK HAR | 115 | 1 |    | 1.00000  | 0.00000  | 0.0      | 0.0      |       |       |
| 4 | 1401.1 | L:   | 73126          | DEVON#2  | 115 | 73225 | TRMB J B | 115 | 1 |    | 172.1    | 228.0    | 0.08734  | 0.06762  | 144.1 | 187.4 |
|   |        |      | C:1730LINE     |          |     |       |          |     |   | 15 |          |          |          |          |       |       |
|   |        | Open | 73224          | TRMB J A | 115 | 73700 | PEQUONIC | 115 | 1 |    | 0.04577  | 0.02233  | 2.3      | 16.6     |       |       |
|   |        | Open | 73224          | TRMB J A | 115 | 73126 | DEVON#2  | 115 | 1 |    | -0.25473 | -0.07339 | -109.9   | -156.9   |       |       |
|   |        | Open | 73158          | WESTON   | 115 | 73224 | TRMB J A | 115 | 1 |    | -0.06751 | 0.00000  | 2.1      | 2.1      |       |       |
| 5 | 1451.3 | L:   | 73224          | TRMB J A | 115 | 73158 | WESTON   | 115 | 1 |    | 157.5    | 228.0    | 0.09870  | 0.05105  | 105.5 | 142.0 |
|   |        |      | C:1130-1430DCT |          |     |       |          |     |   | 21 |          |          |          |          |       |       |
|   |        | Open | 73286          | COMPO    | 115 | 73700 | PEQUONIC | 115 | 1 |    | -0.20079 | -0.08870 | -153.6   | -216.9   |       |       |
|   |        | Open | 73267          | DARIEN   | 115 | 73300 | ELYTAP   | 115 | 1 |    | -0.07531 | 0.00000  | 35.3     | 35.3     |       |       |
|   |        | Open | 73286          | COMPO    | 115 | 73300 | ELYTAP   | 115 | 1 | NA |          |          |          |          |       |       |
|   |        | Open | 73173          | SASCO CR | 115 | 73714 | ASHCREAC | 115 | 1 |    | -0.19469 | -0.15326 | -122.4   | -231.8   |       |       |
|   |        | Open | 73703          | ASHCREEK | 115 | 73714 | ASHCREAC | 115 | 1 |    | 0.00000  | 0.15275  | 122.0    | 231.0    |       |       |
|   |        | Open | 73703          | ASHCREEK | 115 | 73714 | ASHCREAC | 115 | 2 |    | 0.12549  | 0.00000  | -0.0     | -0.0     |       |       |
| 6 | 1480.6 | L:   | 73271          | RYTN J B | 115 | 73207 | FLAX HIL | 115 | 1 |    | 135.6    | -284.0   | -0.55455 | -0.14175 | 69.6  | -37.7 |
|   |        |      | C:1880-1890DCT |          |     |       |          |     |   | 34 |          |          |          |          |       |       |
|   |        | Open | 73169          | RYTN J A | 115 | 73171 | NWLK HAR | 115 | 1 |    | -0.40927 | 0.21612  | -141.7   | 21.9     |       |       |
|   |        | Open | 73169          | RYTN J A | 115 | 73172 | NORWALK  | 115 | 1 |    | 0.17438  | -0.14148 | 40.3     | -66.8    |       |       |
|   |        | Open | 73168          | GLNBROOK | 115 | 73169 | RYTN J A | 115 | 1 |    | 0.14903  | 0.00000  | 0.4      | 0.4      |       |       |
|   |        | Open | 73168          | GLNBROOK | 115 | 73237 | ELYAVE   | 115 | 1 |    | 0.12348  | 0.10239  | -119.3   | -41.8    |       |       |
|   |        | Open | 73171          | NWLK HAR | 115 | 73237 | ELYAVE   | 115 | 1 |    | 0.53275  | -0.25566 | 28.9     | -164.6   |       |       |
|   |        | Open | 73173          | SASCO CR | 115 | 73237 | ELYAVE   | 115 | 1 |    | 0.02555  | 0.00000  | 0.7      | 0.7      |       |       |
|   |        | Open | 75051          | NRTHPRT1 | 138 | 75053 | NRTHPT P | 138 | 1 |    | -0.55862 | 0.31528  | -0.5     | 238.1    |       |       |
|   |        | Open | 73166          | NORHR138 | 138 | 75053 | NRTHPT P | 138 | 1 | NA |          |          |          |          |       |       |
|   |        | Open | 73166          | NORHR138 | 138 | 73171 | NWLK HAR | 115 | 1 |    | 0.55830  | 0.00000  | 0.0      | 0.0      |       |       |

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|    |           |                     |      |                |      |   |       |       |          |          |        |        |
|----|-----------|---------------------|------|----------------|------|---|-------|-------|----------|----------|--------|--------|
| 7  | 1492.5*L: | 73224 TRMB J A      | 115  | 73158 WESTON   | 115  | 1 | 152.5 | 228.0 | 0.09761  | 0.05105  | 105.5  | 145.0  |
|    |           | C:1416-1890DCT      |      |                |      |   |       |       |          |          | 26     |        |
|    |           | Open 73173 SASCO CR | 115  | 73237 ELYAVE   | 115  | 1 |       |       | 0.19292  | 0.15326  | 91.1   | 209.8  |
|    |           | Open 73168 GLNBROOK | 115  | 73237 ELYAVE   | 115  | 1 |       |       | -0.00902 | 0.10239  | -119.3 | -40.1  |
|    |           | Open 73171 NWLK HAR | 115  | 73237 ELYAVE   | 115  | 1 |       |       | -0.06777 | 0.00000  | 0.7    | 0.7    |
|    |           | Open 73286 COMPO    | 115  | 73700 PEQUONIC | 115  | 1 |       |       | -0.20194 | -0.08870 | -153.6 | -222.3 |
|    |           | Open 73267 DARIEN   | 115  | 73300 ELYTAP   | 115  | 1 |       |       | -0.07679 | 0.00000  | 35.3   | 35.3   |
|    |           | Open 73286 COMPO    | 115  | 73300 ELYTAP   | 115  | 1 |       | NA    |          |          |        |        |
| 8  | 1496.1 L: | 73126 DEVON#2       | 115  | 73225 TRMB J B | 115  | 1 | 175.3 | 228.0 | 0.06762  | 0.06762  | 144.1  | 196.8  |
|    |           | C:LOSSBPT3          |      |                |      |   |       |       |          |          | 38     |        |
|    |           | Open 73648 BPTHBR#3 | 22.0 | 73700 PEQUONIC | 115  | 1 |       |       | -0.08339 | 0.00000  | -374.1 | -374.1 |
| 9  | 1499.0 L: | 73709 OLD TOWN      | 115  | 73711 HAWTH R  | 115  | 1 | 152.1 | 228.0 | 0.09684  | 0.04966  | 87.2   | 126.1  |
|    |           | C:113091001DCT      |      |                |      |   |       |       |          |          | 22     |        |
|    |           | Open 73701 CRRA JCT | 115  | 73702 CRRA XFO | 115  | 1 |       | NA    |          |          |        |        |
|    |           | Open 73700 PEQUONIC | 115  | 73701 CRRA JCT | 115  | 1 |       |       | 0.19281  | 0.15326  | 172.2  | 292.3  |
|    |           | Open 73701 CRRA JCT | 115  | 73703 ASHCREEK | 115  | 1 |       |       | -0.06787 | 0.00000  | -56.4  | -56.4  |
|    |           | Open 73286 COMPO    | 115  | 73700 PEQUONIC | 115  | 1 |       |       | -0.19880 | -0.08870 | -153.6 | -223.1 |
|    |           | Open 73267 DARIEN   | 115  | 73300 ELYTAP   | 115  | 1 |       |       | -0.07386 | 0.00000  | 35.3   | 35.3   |
|    |           | Open 73286 COMPO    | 115  | 73300 ELYTAP   | 115  | 1 |       | NA    |          |          |        |        |
| 10 | 1509.1 L: | 73237 ELYAVE        | 115  | 73171 NWLK HAR | 115  | 1 | -29.1 | 263.0 | 0.36589  | 0.25566  | -28.9  | 175.2  |
|    |           | C:1385LN+AUTO       |      |                |      |   |       |       |          |          | 5      |        |
|    |           | Open 75051 NRTHPT1  | 138  | 75053 NRTHPT P | 138  | 1 |       |       | 0.34965  | 0.31528  | -0.5   | 251.2  |
|    |           | Open 73166 NORHR138 | 138  | 75053 NRTHPT P | 138  | 1 |       | NA    |          |          |        |        |
|    |           | Open 73166 NORHR138 | 138  | 75053 NRTHPT P | 138  | 2 |       | NA    |          |          |        |        |
|    |           | Open 73166 NORHR138 | 138  | 75053 NRTHPT P | 138  | 3 |       | NA    |          |          |        |        |
|    |           | Open 73166 NORHR138 | 138  | 73171 NWLK HAR | 115  | 1 |       |       | -0.35092 | 0.00000  | 0.0    | 0.0    |
| 11 | 1509.1 L: | 73237 ELYAVE        | 115  | 73171 NWLK HAR | 115  | 1 | -29.1 | 263.0 | 0.36589  | 0.25566  | -28.9  | 175.2  |
|    |           | C:ONE1385           |      |                |      |   |       |       |          |          | 4      |        |
|    |           | Open 73166 NORHR138 | 138  | 75053 NRTHPT P | 138  | 1 |       |       | -0.34965 | -0.10509 | 0.2    | -83.7  |
|    |           | Open 73166 NORHR138 | 138  | 75053 NRTHPT P | 138  | 2 |       |       | -0.34965 | -0.10509 | 0.2    | -83.7  |
|    |           | Open 73166 NORHR138 | 138  | 75053 NRTHPT P | 138  | 3 |       |       | -0.34965 | -0.10509 | 0.2    | -83.7  |
|    |           | Open 75051 NRTHPT1  | 138  | 75053 NRTHPT P | 138  | 1 |       |       | -0.00127 | 0.00000  | 0.0    | 0.0    |
| 12 | 1524.9 L: | 73701 CRRA JCT      | 115  | 73703 ASHCREEK | 115  | 1 | 297.1 | 439.0 | 0.17277  | 0.15326  | 228.7  | 354.5  |
|    |           | C:1710-1730DCT      |      |                |      |   |       |       |          |          | 29     |        |
|    |           | Open 73225 TRMB J B | 115  | 73709 OLD TOWN | 115  | 1 |       |       | 0.31421  | 0.04966  | 188.0  | 228.8  |
|    |           | Open 73225 TRMB J B | 115  | 73126 DEVON#2  | 115  | 1 |       |       | 0.08604  | -0.06762 | -144.1 | -199.7 |
|    |           | Open 73225 TRMB J B | 115  | 73700 PEQUONIC | 115  | 2 |       |       | 0.23298  | 0.00000  | 1.7    | 1.7    |
|    |           | Open 73709 OLD TOWN | 115  | 73768 OLDTWN1  | 13.8 | 1 |       |       | -0.08123 | 0.00000  | 34.5   | 34.5   |
|    |           | Open 73224 TRMB J A | 115  | 73700 PEQUONIC | 115  | 1 |       |       | -0.31421 | 0.02233  | 2.3    | 20.6   |
|    |           | Open 73224 TRMB J A | 115  | 73126 DEVON#2  | 115  | 1 |       |       | -0.22816 | -0.07339 | -109.9 | -170.1 |

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|    |        |      |                |      |                |      |   |        |        |          |          |          |        |        |
|----|--------|------|----------------|------|----------------|------|---|--------|--------|----------|----------|----------|--------|--------|
|    |        | Open | 73158 WESTON   | 115  | 73224 TRMB J A | 115  | 1 |        |        |          | -0.08123 | 0.00000  | 2.1    | 2.1    |
| 13 | 1534.4 | L:   | 73695 BAIRD B  | 115  | 73693 BARNUM B | 115  | 1 | -147.8 | -264.0 | -0.13913 |          | -0.10083 | -106.6 | -190.8 |
|    |        |      | C:1710-1730DCT |      |                |      |   |        |        |          |          |          |        | 29     |
|    |        | Open | 73225 TRMB J B | 115  | 73709 OLD TOWN | 115  | 1 |        |        |          | 0.21237  | 0.04966  | 188.0  | 229.5  |
|    |        | Open | 73225 TRMB J B | 115  | 73126 DEVON#2  | 115  | 1 |        |        |          | 0.42332  | -0.06762 | -144.1 | -200.6 |
|    |        | Open | 73225 TRMB J B | 115  | 73700 PEQUONIC | 115  | 2 |        |        |          | 0.29570  | 0.00000  | 1.7    | 1.7    |
|    |        | Open | 73709 OLD TOWN | 115  | 73768 OLDTWN1  | 13.8 | 1 |        |        |          | 0.08333  | 0.00000  | 34.5   | 34.5   |
|    |        | Open | 73224 TRMB J A | 115  | 73700 PEQUONIC | 115  | 1 |        |        |          | -0.21237 | 0.02233  | 2.3    | 20.9   |
|    |        | Open | 73224 TRMB J A | 115  | 73126 DEVON#2  | 115  | 1 |        |        |          | 0.21094  | -0.07339 | -109.9 | -171.2 |
|    |        | Open | 73158 WESTON   | 115  | 73224 TRMB J A | 115  | 1 |        |        |          | 0.08333  | 0.00000  | 2.1    | 2.1    |
| 14 | 1535.1 | L:   | 73694 BAIRD A  | 115  | 73692 BARNUM A | 115  | 1 | -147.7 | -264.0 | -0.13914 |          | -0.10083 | -106.5 | -190.8 |
|    |        |      | C:1710-1730DCT |      |                |      |   |        |        |          |          |          |        | 29     |
|    |        | Open | 73225 TRMB J B | 115  | 73709 OLD TOWN | 115  | 1 |        |        |          | 0.21237  | 0.04966  | 188.0  | 229.5  |
|    |        | Open | 73225 TRMB J B | 115  | 73126 DEVON#2  | 115  | 1 |        |        |          | 0.42332  | -0.06762 | -144.1 | -200.7 |
|    |        | Open | 73225 TRMB J B | 115  | 73700 PEQUONIC | 115  | 2 |        |        |          | 0.29570  | 0.00000  | 1.7    | 1.7    |
|    |        | Open | 73709 OLD TOWN | 115  | 73768 OLDTWN1  | 13.8 | 1 |        |        |          | 0.08333  | 0.00000  | 34.5   | 34.5   |
|    |        | Open | 73224 TRMB J A | 115  | 73700 PEQUONIC | 115  | 1 |        |        |          | -0.21237 | 0.02233  | 2.3    | 20.9   |
|    |        | Open | 73224 TRMB J A | 115  | 73126 DEVON#2  | 115  | 1 |        |        |          | 0.21094  | -0.07339 | -109.9 | -171.2 |
|    |        | Open | 73158 WESTON   | 115  | 73224 TRMB J A | 115  | 1 |        |        |          | 0.08333  | 0.00000  | 2.1    | 2.1    |
| 15 | 1536.1 | L:   | 73695 BAIRD B  | 115  | 73693 BARNUM B | 115  | 1 | -179.5 | -264.0 | -0.10083 |          | -0.10083 | -106.6 | -191.1 |
|    |        |      | C:LOSSBPT3     |      |                |      |   |        |        |          |          |          |        | 38     |
|    |        | Open | 73648 BPTHBR#3 | 22.0 | 73700 PEQUONIC | 115  | 1 |        |        |          | 0.19493  | 0.00000  | -374.1 | -374.1 |
| 16 | 1537.0 | L:   | 73694 BAIRD A  | 115  | 73692 BARNUM A | 115  | 1 | -179.4 | -264.0 | -0.10083 |          | -0.10083 | -106.5 | -191.1 |
|    |        |      | C:LOSSBPT3     |      |                |      |   |        |        |          |          |          |        | 38     |
|    |        | Open | 73648 BPTHBR#3 | 22.0 | 73700 PEQUONIC | 115  | 1 |        |        |          | 0.19493  | 0.00000  | -374.1 | -374.1 |
| 17 | 1565.1 | L:   | 73701 CRRA JCT | 115  | 73703 ASHCREEK | 115  | 1 | 265.5  | 439.0  | 0.19713  |          | 0.15326  | 228.7  | 363.5  |
|    |        |      | C:1416-1880DCT |      |                |      |   |        |        |          |          |          |        | 25     |
|    |        | Open | 73169 RYTN J A | 115  | 73172 NORWALK  | 115  | 1 |        |        |          | -0.08423 | -0.14148 | 40.3   | -84.3  |
|    |        | Open | 73168 GLNBROOK | 115  | 73169 RYTN J A | 115  | 1 |        |        |          | 0.05035  | 0.07464  | -101.0 | -35.3  |
|    |        | Open | 73169 RYTN J A | 115  | 73171 NWLK HAR | 115  | 1 |        |        |          | -0.14738 | 0.00000  | 0.4    | 0.4    |
|    |        | Open | 73286 COMPO    | 115  | 73700 PEQUONIC | 115  | 1 |        |        |          | -0.31787 | -0.08870 | -153.6 | -231.7 |
|    |        | Open | 73267 DARIEN   | 115  | 73300 ELYTAP   | 115  | 1 |        |        |          | -0.09704 | 0.00000  | 35.3   | 35.3   |
|    |        | Open | 73286 COMPO    | 115  | 73300 ELYTAP   | 115  | 1 | NA     |        |          |          |          |        |        |
| 18 | 1567.3 | *L:  | 73701 CRRA JCT | 115  | 73703 ASHCREEK | 115  | 1 | 278.3  | 439.0  | 0.18194  |          | 0.15326  | 228.7  | 364.0  |
|    |        |      | C:1130LINE     |      |                |      |   |        |        |          |          |          |        | 1      |
|    |        | Open | 73286 COMPO    | 115  | 73700 PEQUONIC | 115  | 1 |        |        |          | -0.32331 | -0.08870 | -153.6 | -232.0 |
| 19 | 1570.6 | *L:  | 73126 DEVON#2  | 115  | 73225 TRMB J B | 115  | 1 | 144.1  | 228.0  | 0.09451  |          | 0.06762  | 144.1  | 204.2  |
|    |        |      | C:1385LN+AUTO  |      |                |      |   |        |        |          |          |          |        | 5      |
|    |        | Open | 75051 NRTHPRT1 | 138  | 75053 NRTHPT P | 138  | 1 |        |        |          | 0.08527  | 0.31528  | -0.5   | 279.5  |
|    |        | Open | 73166 NORHR138 | 138  | 75053 NRTHPT P | 138  | 1 | NA     |        |          |          |          |        |        |

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|    |           |                |          |          |       |          |          |      |   |        |       |         |          |          |        |        |  |  |
|----|-----------|----------------|----------|----------|-------|----------|----------|------|---|--------|-------|---------|----------|----------|--------|--------|--|--|
|    |           | Open           | 73166    | NORHR138 | 138   | 75053    | NRTHPT P | 138  | 2 | NA     |       |         |          |          |        |        |  |  |
|    |           | Open           | 73166    | NORHR138 | 138   | 75053    | NRTHPT P | 138  | 3 | NA     |       |         |          |          |        |        |  |  |
|    |           | Open           | 73166    | NORHR138 | 138   | 73171    | NWLK HAR | 115  | 1 |        |       |         | -0.08600 | 0.00000  | 0.0    | 0.0    |  |  |
| 22 | 1576.2*L: | 73237          | ELYAVE   | 115      | 73171 | NWLK HAR | 115      | 1    |   | -105.2 | 263.0 | 0.41081 |          | 0.25566  | -28.9  | 200.2  |  |  |
|    |           | C:1389-1880DCT |          |          |       |          |          |      |   |        |       |         |          |          |        |        |  |  |
|    |           | Open           | 73172    | NORWALK  | 115   | 73207    | FLAX HIL | 115  | 1 |        |       |         | 0.35006  | 0.14175  | -18.8  | 108.2  |  |  |
|    |           | Open           | 73169    | RYTN J A | 115   | 73172    | NORWALK  | 115  | 1 |        |       |         | -0.48423 | -0.14148 | 40.3   | -86.5  |  |  |
|    |           | Open           | 73168    | GLNBROOK | 115   | 73169    | RYTN J A | 115  | 1 |        |       |         | 0.49599  | 0.07464  | -101.0 | -34.1  |  |  |
|    |           | Open           | 73169    | RYTN J A | 115   | 73171    | NWLK HAR | 115  | 1 |        |       |         | -0.33857 | 0.00000  | 0.4    | 0.4    |  |  |
| 25 | 1584.8 L: | 73226          | DEVON#2  | 115      | 73224 | TRMB J A | 115      | 1    |   | 144.0  | 228.0 | 0.09247 |          | 0.07339  | 109.9  | 176.6  |  |  |
|    |           | C:1710+LOAD    |          |          |       |          |          |      |   |        |       |         |          |          |        |        |  |  |
|    |           | Open           | 73225    | TRMB J B | 115   | 73126    | DEVON#2  | 115  | 1 |        |       |         | -0.26957 | -0.06762 | -144.1 | -205.6 |  |  |
|    |           | Open           | 73225    | TRMB J B | 115   | 73700    | PEQUONIC | 115  | 2 |        |       |         | 0.04753  | 0.01797  | -45.6  | -29.2  |  |  |
|    |           | Open           | 73225    | TRMB J B | 115   | 73709    | OLD TOWN | 115  | 1 |        |       |         | -0.07158 | 0.00000  | 1.7    | 1.7    |  |  |
|    |           | Open           | 73709    | OLD TOWN | 115   | 73768    | OLDTWN1  | 13.8 | 1 |        |       |         | -0.07158 | 0.00000  | 34.5   | 34.5   |  |  |
| 26 | 1594.0 L: | 73709          | OLD TOWN | 115      | 73711 | HAWTH R  | 115      | 1    |   | 138.7  | 228.0 | 0.09684 |          | 0.04966  | 87.2   | 133.0  |  |  |
|    |           | C:1130-1430DCT |          |          |       |          |          |      |   |        |       |         |          |          |        |        |  |  |
|    |           | Open           | 73286    | COMPO    | 115   | 73700    | PEQUONIC | 115  | 1 |        |       |         | -0.19880 | -0.08870 | -153.6 | -235.4 |  |  |
|    |           | Open           | 73267    | DARIEN   | 115   | 73300    | ELYTAP   | 115  | 1 |        |       |         | -0.07386 | 0.00000  | 35.3   | 35.3   |  |  |
|    |           | Open           | 73286    | COMPO    | 115   | 73300    | ELYTAP   | 115  | 1 |        |       |         | NA       |          |        |        |  |  |
|    |           | Open           | 73173    | SASCO CR | 115   | 73714    | ASHCREAC | 115  | 1 |        |       |         | -0.19281 | -0.15326 | -122.4 | -263.7 |  |  |
|    |           | Open           | 73703    | ASHCREEK | 115   | 73714    | ASHCREAC | 115  | 1 |        |       |         | 0.00000  | 0.15275  | 122.0  | 262.8  |  |  |
|    |           | Open           | 73703    | ASHCREEK | 115   | 73714    | ASHCREAC | 115  | 2 |        |       |         | 0.12494  | 0.00000  | -0.0   | -0.0   |  |  |
| 35 | 1637.2*L: | 73709          | OLD TOWN | 115      | 73711 | HAWTH R  | 115      | 1    |   | 133.6  | 228.0 | 0.09577 |          | 0.04966  | 87.2   | 136.1  |  |  |
|    |           | C:1416-1890DCT |          |          |       |          |          |      |   |        |       |         |          |          |        |        |  |  |
|    |           | Open           | 73173    | SASCO CR | 115   | 73237    | ELYAVE   | 115  | 1 |        |       |         | 0.19107  | 0.15326  | 91.1   | 242.2  |  |  |
|    |           | Open           | 73168    | GLNBROOK | 115   | 73237    | ELYAVE   | 115  | 1 |        |       |         | -0.00885 | 0.10239  | -119.3 | -18.4  |  |  |
|    |           | Open           | 73171    | NWLK HAR | 115   | 73237    | ELYAVE   | 115  | 1 |        |       |         | -0.06647 | 0.00000  | 0.7    | 0.7    |  |  |
|    |           | Open           | 73286    | COMPO    | 115   | 73700    | PEQUONIC | 115  | 1 |        |       |         | -0.19992 | -0.08870 | -153.6 | -241.0 |  |  |
|    |           | Open           | 73267    | DARIEN   | 115   | 73300    | ELYTAP   | 115  | 1 |        |       |         | -0.07532 | 0.00000  | 35.3   | 35.3   |  |  |
|    |           | Open           | 73286    | COMPO    | 115   | 73300    | ELYTAP   | 115  | 1 |        |       |         | NA       |          |        |        |  |  |