

Appendix B - Voltage & Reactive Schedules and Surveys

Contents

CONVEX	3
CONVEX Voltage & Reactive Schedules & Surveys – Appendix B, Generators	3
CONVEX Voltage & Reactive Schedules & Surveys for Transmission, Capacitors	8
CONVEX Voltage & Reactive Schedules & Surveys for Transmission, Reactors	10
CONVEX Voltage & Reactive Schedules & Surveys for Transmission, STATCOMs	11
CONVEX Voltage & Reactive Schedules & Surveys for Autotransformers with LTCs	12
Maine.....	13
Maine Voltage & Reactive Schedules & Surveys – Appendix B, Generators.....	13
Maine Voltage & Reactive Schedules & Surveys for Transmission, Capacitors	15
Maine Voltage & Reactive Schedules & Surveys for Transmission, Reactors	15
Maine Voltage & Reactive Schedules & Surveys for Transmission, Static VAR Compensator	16
Maine Voltage & Reactive Schedules & Surveys for Autotransformers with LTCs	16
New Hampshire	17
New Hampshire Voltage & Reactive Schedules & Surveys – Appendix B, Generators	17
New Hampshire Voltage & Reactive Schedules & Surveys for Transmission, Capacitors.....	18
New Hampshire Voltage & Reactive Schedules & Surveys for Transmission, Reactors.....	19
New Hampshire Voltage & Reactive Schedules & Surveys for Autotransformers with LTCs.....	20
NSTAR	21
NSTAR Voltage & Reactive Schedules & Surveys – Appendix B, Generators	21
NSTAR Voltage & Reactive Schedules & Surveys for Transmission, Capacitors.....	23
NSTAR Voltage & Reactive Schedules & Surveys for Transmission, Reactors.....	24
NSTAR Voltage & Reactive Schedules & Surveys for Autotransformers with LTCs.....	25
REMVEC	26
REMVEC Voltage & Reactive Schedules & Surveys – Appendix B, Generators	26
REMVEC Voltage & Reactive Schedules & Surveys for Transmission, Capacitors.....	28
REMVEC Voltage & Reactive Schedules & Surveys for Transmission, Reactors.....	29
REMVEC Voltage & Reactive Schedules & Surveys for Autotransformers with LTCs.....	30

VELCO 31

 VELCO Voltage & Reactive Schedules & Surveys – Appendix B, Generators 31

 VELCO Voltage & Reactive Schedules & Surveys for Transmission, Capacitors 32

 VELCO Voltage & Reactive Schedules & Surveys for Transmission, Reactors 33

 VELCO Voltage & Reactive Schedules & Surveys for Transmission, STATCOMs 34

 VELCO Voltage & Reactive Schedules & Surveys for Autotransformers with LTCs 34

OP 12 Appendix B Revision History 35

Endnotes 37

CONVEX***CONVEX Voltage & Reactive Schedules & Surveys – Appendix B, Generators***

Survey Date:	Survey Time:						Survey Load Period: Heavy/Light (circle one)				
Legend <i>Sched = Schedule</i> <i>Max = Maximum</i> <i>Min = Minimum</i> <i>MVARs Out = Gross Lagging</i> <i>MVARs In = Gross Leading</i>	Voltage Schedules Heavy Load Period ¹			Voltage Schedules Light Load Period ²			MVARs Out @ S-SCC ³	MVARs In @ Min Manual Load ³	Survey Results		
	kV Sched	kV Max	kV Min	kV Sched	kV Max	kV Min			Actual kV (Voltage)	MVARs	AVR Status (On/Off)
Units											
AES THAMES	117	121	110	117	121	110	96.5	-108			
A. L. PIERCE	118	121	116	117	121	116	28	-15			
ALTRESCO	119	121	109	119	121	109	108	-24			
BERKSHIRE POWER	117	121	108	117	121	105	163	-58			
BRIDGEPORT ENERGY	118	121	116	117	121	116	276	-95			
BRIDGEPORT HBR 2	118	121	116	117	121	116	106	0			
BRIDGEPORT HBR 3	118	121	116	117	121	116	218	-128.6			
BRIDGEPORT HBR 4	118	121	116	117	121	116	4	-3			
BRIDGEPORT RESCO	118	121	116	117	121	116	25	-15			
COS COB 10	119	121	109	119	121	109	4	0			
COS COB 11	119	121	109	119	121	109	3	0			
COS COB 12	119	121	109	119	121	109	4	0			
COS COB 13	119	121	109	119	121	109	0	0			
COS COB 14	119	121	109	119	121	109	1.5	-1.5			
CROSS SOUND CABLE	357	362	340	357	362	340	34.5*	-148.5*			
DEVON 10	118	121	116	117	121	116	1	0			
DEVON 11	118	121	116	117	121	116	20	-16			
DEVON 12	118	121	116	117	121	116	20	-17			
DEVON 13	118	121	116	117	121	116	15	-14			

CONVEX Voltage & Reactive Schedules & Surveys – Appendix B, Generators

Survey Date:	Survey Time:						Survey Load Period: Heavy/Light (circle one)					
Legend <i>Sched = Schedule</i> <i>Max = Maximum</i> <i>Min = Minimum</i> <i>MVARs Out = Gross Lagging</i> <i>MVARs In = Gross Leading</i>	Voltage Schedules Heavy Load Period ¹			Voltage Schedules Light Load Period ²			MVARs Out @ S-SCC ³	MVARs In @ Min Manual Load ³	Survey Results			
	kV Sched	kV Max	kV Min	kV Sched	kV Max	kV Min			Actual kV (Voltage)	MVARs	AVR Status (On/Off)	
Units												
DEVON 14	118	121	116	117	121	116	19	-14				
DEVON 15	118	121	116	117	121	116	7	-8				
DEVON 16	118	121	116	117	121	116	10	-8				
DEVON 17	118	121	116	117	121	116	9	-8				
DEVON 18	118	121	116	117	121	116	9	-8				
KLEEN ENERGY CT1	357	362	340	357	362	340	114	-120				
KLEEN ENERGY CT2	357	362	340	357	362	340	114	-120				
KLEEN ENERGY ST	357	362	340	357	362	340	118	-145				
LAKE ROAD 1	357	362	340	357	362	340	187	-81				
LAKE ROAD 2	357	362	340	357	362	340	184	-80				
LAKE ROAD 3	357	362	340	357	362	340	181	-78				
MASS POWER	119	121	111	119	121	111	97	-29				
MIDDLETOWN 2	118	121	112	116	121	112	53	-30				
MIDDLETOWN 3	118	121	112	116	121	112	75	-41				
MIDDLETOWN 4	357	362	340	357	362	340	204	-100				
MIDDLETOWN 10	118	121	112	116	121	112	0	-1.7				
MIDDLETOWN 12	118	121	112	116	121	112	10	-15				
MIDDLETOWN 13	118	121	112	116	121	112	10	-15				
MIDDLETOWN 14	118	121	112	116	121	112	10	-15				
MIDDLETOWN 15	118	121	112	116	121	112	10	-15				
MILFORD 1	118	121	116	117	121	116	158	-98				

CONVEX Voltage & Reactive Schedules & Surveys – Appendix B, Generators

Survey Date:		Survey Time:					Survey Load Period: Heavy/Light (circle one)					
Legend <i>Sched = Schedule</i> <i>Max = Maximum</i> <i>Min = Minimum</i> <i>MVARs Out = Gross Lagging</i> <i>MVARs In = Gross Leading</i>		Voltage Schedules Heavy Load Period ¹			Voltage Schedules Light Load Period ²			MVARs Out @ S-SCC ³	MVARs In @ Min Manual Load ³	Survey Results		
		kV Sched	kV Max	kV Min	kV Sched	kV Max	kV Min			Actual kV (Voltage)	MVARs	AVR Status (On/Off)
Units												
MILFORD 2		118	121	116	117	121	116	131	-86			
MILLSTONE 2		357	362	345	357	362	345	350	0			
MILLSTONE 3		357	362	345	357	362	345	395	0			
MONTVILLE 5		117	121	110	117	121	110	28	-7			
MONTVILLE 6		117	121	110	117	121	110	190	-111			
MOUNT TOM		117	121	111	117	121	109	25	-38			
NEW HAVEN HBR		119	121	116	117	121	116	181	-50			
NEW HAVEN HBR 2		119	121	116	117	121	116	30	-25			
NEW HAVEN HBR 3		119	121	116	117	121	116	30	-25			
NEW HAVEN HBR 4		119	121	116	117	121	116	30	-25			
NORTHFIELD G1		359	362	344	351	362	344	95	-53			
NORTHFIELD G2		359	362	344	351	362	344	93	-45			
NORTHFIELD G3		359	362	344	351	362	344	90	-56			
NORTHFIELD G4		359	362	344	351	362	344	92	-64			
NORTHFIELD P1		359	362	344	351	362	344	80	-58			
NORTHFIELD P2		359	362	344	351	362	344	80	-58			
NORTHFIELD P3		359	362	344	351	362	344	80	-70			
NORTHFIELD P4		359	362	344	351	362	344	80	-58			
NORWALK HBR 1		119	121	114	119	121	113	41	-25			
NORWALK HBR 2		119	121	114	119	121	113	34	-25			
NORWALK HBR 3		119	121	114	119	121	113	1	0			

CONVEX Voltage & Reactive Schedules & Surveys – Appendix B, Generators

Survey Date:	Survey Time:						Survey Load Period: Heavy/Light (circle one)					
Legend <i>Sched = Schedule</i> <i>Max = Maximum</i> <i>Min = Minimum</i> <i>MVARs Out = Gross Lagging</i> <i>MVARs In = Gross Leading</i>	Voltage Schedules Heavy Load Period ¹			Voltage Schedules Light Load Period ²			MVARs Out @ S-SCC ³	MVARs In @ Min Manual Load ³	Survey Results			
	kV Sched	kV Max	kV Min	kV Sched	kV Max	kV Min			Actual kV (Voltage)	MVARs	AVR Status (On/Off)	
ROCKY RIVER	117	121	105	116	121	105	5	-8				
SHEPAUG	117	121	109	116	121	109	16	-10				
SOUTH MEADOW 5	116	121	104	116	121	104	30	-23				
SOUTH MEADOW 6	116	121	104	116	121	104	22	-20				
SOUTH MEADOW 11	116	121	104	116	121	104	15	0				
SOUTH MEADOW 12	116	121	104	116	121	104	15	0				
SOUTH MEADOW 13	116	121	104	116	121	104	0	-5.6				
SOUTH MEADOW 14	116	121	104	116	121	104	15	-1.6				
STEVENSON 1	116	121	112	116	121	112	10	-7				
STONY BROOK 1A	358	362	335	351	362	335	71	-34				
STONY BROOK 2A	358	362	335	351	362	335	37	-21				
STONY BROOK 1B	358	362	335	351	362	335	64	-31				
STONY BROOK 2B	358	362	335	351	362	335	36	-17				
STONY BROOK 1C	358	362	335	351	362	335	71	-33				
TUNNEL	71	72	66	71	72	66	9.9	0				
WALLINGFORD ENERGY 1	118	121	116	117	121	116	29	-12				
WALLINGFORD ENERGY 2	118	121	116	117	121	116	28	-10				
WALLINGFORD ENERGY 3	118	121	116	117	121	116	23	-10				
WALLINGFORD ENERGY 4	118	121	116	117	121	116	26	-10				
WALLINGFORD ENERGY 5	118	121	116	117	121	116	24	-10				
WALLINGFORD REFUSE	118	121	116	117	121	116	0	0				

CONVEX Voltage & Reactive Schedules & Surveys – Appendix B, Generators

Survey Date:	Survey Time:						Survey Load Period: Heavy/Light (circle one)				
Legend <i>Sched = Schedule</i> <i>Max = Maximum</i> <i>Min = Minimum</i> <i>MVARs Out = Gross Lagging</i> <i>MVARs In = Gross Leading</i>	Voltage Schedules Heavy Load Period ¹			Voltage Schedules Light Load Period ²			MVARs Out @ S-SCC ³	MVARs In @ Min Manual Load ³	Survey Results		
	kV Sched	kV Max	kV Min	kV Sched	kV Max	kV Min			Actual kV (Voltage)	MVARs	AVR Status (On/Off)
WATERBURY	118	121	109	118	121	109	95	-14			
WATERSIDE	119	121	107	119	121	107	25	-10			
WEST SPRINGFIELD 1	117	121	108	117	121	105	26	-17			
WEST SPRINGFIELD 2	117	121	108	117	121	105	26	-14			
WEST SPRINGFIELD 3	117	121	108	117	121	105	50	-47			

Note: Units not listed will follow local voltage schedules in accordance with Local Control Center requirements or Interconnection Agreements.

*Zero Power -150 MVAR, Half Load 113/-113 MVAR, Three-quarter Load 95/-95, and Full Load 35 MVAR

<i>CONVEX Voltage & Reactive Schedules & Surveys for Transmission, Capacitors</i>				
Survey Date:		Survey Time:		Survey Load Period: Heavy/Light (circle one)
Substation Location	Available MVAR	Nominal Voltage (kV)	Actual Voltage (kV)	Closed/ Open
AGAWAM 11K; 12K	2 @ 50.4	115		
BERLIN 11K; 12K	2 @ 37.8	115		
BERLIN 13K	1 @ 50.4	115		
BRANFORD 10K	1 @ 37.8	115		
CANTON 11K; 12K	2 @ 25.2	115		
DARIEN10K	1 @ 37.8	115		
EAST SHORE 1K; 2K	2 @ 42.0	115		
FRANKLIN DRIVE10K	1 @ 37.8	115		
FROST BRIDGE 11K; 12K; 13K	3 @ 50.4	115		
FROST BRIDGE 21K; 22K	2 @ 50.4	115		
GLENBROOK 11K; 12K	2 @ 36.0	115		
GLENBROOK 13K; 14K	2 @ 50.4	115		
GLENBROOK 21K; 22K	2 @ 36.0	115		
GLENBROOK 23k	1 @ 37.8	115		
GLENBROOK 24k	1 @ 50.4	115		
HADDAM 10K	1 @ 37.8	115		
MANCHESTER 11K; 12K; 13K	3 @ 50.4	115		
MANCHESTER 21K; 22K; 23K	3 @ 50.4	115		
MONTVILLE 11K; 12K	2 @ 50.4	115		
MYSTIC 21K; 22K	2 @ 25.2	115		
NORTH BLOOMFIELD 11K; 12K	2 @ 50.4	115		
NORTH BLOOMFIELD 20K	1 @ 50.4	115		
NORTH HAVEN 1K	1 @ 42.0	115		
PLEASANT 11K; 12K	2 @ 14.4	115		
PLUMTREE 11K	1 @ 37.8	115		
PLUMTREE 12K	1 @ 50.4	115		
ROCKY RIVER 10K	1 @ 25.2	115		
SACKETT 1K*	1 @ 42.0	115		
SOUTHINGTON 11K; 12K; 13K	3 @ 50.4	115		
SOUTHINGTON 21K; 22K;23K	3 @ 50.4	115		
STONY HILL 10K	1 @ 25.2	115		
STONY HILL 21K; 22K	2 @ 37.8	115		

<i>CONVEX Voltage & Reactive Schedules & Surveys for Transmission, Capacitors</i>					
Survey Date:		Survey Time:		Survey Load Period: Heavy/Light (circle one)	
Substation Location		Available MVAR	Nominal Voltage (kV)	Actual Voltage (kV)	Closed/ Open
WATERSIDE 10K		1 @ 37.8	115		
WOODLAND 21K; 22K		2 @ 14.4	115		

* Sackett 1K capacitor will be out of service in 2012

<i>CONVEX Voltage & Reactive Schedules & Surveys for Transmission, Reactors</i>					
Survey Date:		Survey Time:		Survey Load Period: Heavy/Light (circle one)	
Substation Location		Available MVAR	Nominal Voltage (kV)	Actual Voltage (kV)	Closed/ Open
NORWALK R1; R2		2 @ -50 Fixed; -50 Variable	345		
NORWALK JUNCTION F1; F2		2 @ -75 Fixed; -75 Variable	345		
PLUMTREE 345-F1		1 @ -75 Fixed; -75 Variable	345		
Singer R1; R2; R3; R4		4 @ -50 Fixed; -50 Variable	345		

CONVEX Voltage & Reactive Schedules & Surveys for Transmission, STATCOMs

Survey Date:	Survey Time:						Survey Load Period: Heavy/Light (circle one)			
Legend <i>Sched = Schedule</i> <i>Max = Maximum</i> <i>Min = Minimum</i>	Voltage Schedules Heavy Load Period ¹			Voltage Schedules Light Load Period ²			Available MVAR	Nominal Voltage	Actual Voltage (kV)	Closed/Open
	kV Sched	kV Max	kV Min	kV Sched	kV Max	kV Min				
Location										
GLENBROOK STATCOM	119	121	114	119	121	114	2 @ -75 / +75	115		

<i>CONVEX Voltage & Reactive Schedules & Surveys for Autotransformers with LTCs</i>									
Survey Date:		Survey Time:				Survey Load Period: Heavy/Light (circle one)			
Legend <i>Sched = Schedule</i> <i>Max = Maximum</i> <i>Min = Minimum</i> <i>Auto = Automatic</i>		High Side kV/ Low Side kV	LTC Setting (Auto/Manual)	Scheduled Voltage (kV)	Max LTC Tap	Min LTC Tap	Voltage Control Bandwid h (kV)	Survey Results	
Substation Name								Surveyed Actual Voltage (kV)	Surveyed LTC Setting (Auto/Manual)
BARBOUR HILL 1X		345/115	A	118			109-121		
BERKSHIRE 1X; 2X		345/115	A	119			109-121		
CARD 5X		345/115	A	115			109-121		
EAST DEVON 2X		345/115	A	118			109-121		
EAST SHORE 8X; 9X		345/115	M	119			116-121		
FROST BRIDGE 1X		345/115	A	118			110-121		
HADDAM 6X		345/115	A	118			109-121		
KILLINGLY 2X		345/115	A	117			112-119		
LUDLOW1X; 3X		345/115	A	119			108-121		
MANCHESTER4X; 5X; 6X		345/115	A	118			107-121		
MONTVILLE18X; 19X		345/115	A	117			110-121		
NORTH BLOOMFIELD 5X		345/115	A	118			108-121		
NORWALK 8X; 9X		345/115	A	119			109-121		
PLUMTREE 1X; 2X		345/115	A	119			111-121		
SINGER 1X*, 2X		345/115	M	118			116-121		
SOUTHINGTON BUS 1X; 4X		345/115	A	118			110-120		
SOUTHINGTON BUS 2X; 3X		345/115	A	118			110-120		

* *Singer 1X is a GSU with tap changing options. It is LTC capable but is normally operated in manual.*

Maine***Maine Voltage & Reactive Schedules & Surveys – Appendix B, Generators***

Survey Date:	Survey Time:						Survey Load Period: Heavy/Light (circle one)					
Legend <i>Sched = Schedule</i> <i>Max = Maximum</i> <i>Min = Minimum</i> <i>MVARs Out = Gross Lagging</i> <i>MVARs In = Gross Leading</i>	Voltage Schedules Heavy Load Period ¹			Voltage Schedules Light Load Period ²			MVARs Out @ S-SCC ³	MVARs In @ Min Manual Load ³	Survey Results			
	kV Sched	kV Max	kV Min	kV Sched	kV Max	kV Min			Actual kV (Voltage)	MVARs	AVR Status (On/Off)	
Units												
AEI LIVERMORE	120	121	113	120	121	113	19.5	-17				
BUCKSPORT G4	120	121	113	120	121	113	115	-97				
CAPE GT 4	120	121	113	120	121	113	9	-10				
CAPE GT 5	120	121	113	120	121	113	9	-11				
HARRIS HYDRO G1	120	121	113	120	121	113	26	-3				
HARRIS HYDRO G2	120	121	113	120	121	113	11	-7.8				
HARRIS HYDRO G3	120	121	113	120	121	113	12	-7.6				
KIBBY WIND	120	121	113	120	121	113	27	-38				
MAINE INDEPENDENCE GT1	121	123	114	121	123	114	110	-50				
MAINE INDEPENDENCE GT2	121	123	114	121	123	114	110	-50				
MAINE INDEPENDENCE ST	121	123	114	121	123	114	114	-55				
RUMFORD POWER GT & ST	120	121	113	120	121	113	140	-90				
STRATTON ENERGY	120	121	113	120	121	113	30	-30				
VERSO (ANDROSCOGGIN) AEC #1	120	121	113	120	121	113	33	-9				
VERSO (ANDROSCOGGIN) AEC #2	120	121	113	120	121	113	33	-10				
VERSO (ANDROSCOGGIN) AEC #3	120	121	113	120	121	113	33	-7.5				
WESTBROOK 1A	120	121	113	120	121	113	154	-90				
WESTBROOK 2B	120	121	113	120	121	113	154	-89				
WYMAN HYDRO 1	120	121	113	120	121	113	11	-7				
WYMAN HYDRO 2	120	121	113	120	121	113	12	-1.20				

Maine Voltage & Reactive Schedules & Surveys – Appendix B, Generators

Survey Date:	Survey Time:						Survey Load Period: Heavy/Light (circle one)				
Legend <i>Sched = Schedule</i> <i>Max = Maximum</i> <i>Min = Minimum</i> <i>MVARs Out = Gross Lagging</i> <i>MVARs In = Gross Leading</i>	Voltage Schedules Heavy Load Period ¹			Voltage Schedules Light Load Period ²			MVARs Out @ S-SCC ³	MVARs In @ Min Manual Load ³	Survey Results		
	kV Sched	kV Max	kV Min	kV Sched	kV Max	kV Min			Actual kV (Voltage)	MVARs	AVR Status (On/Off)
WYMAN HYDRO 3	120	121	113	120	121	113	12	-5			
YARMOUTH 1	120	121	113	120	121	113	18	-17			
YARMOUTH 2	120	121	113	120	121	113	18	-20			
YARMOUTH 3	120	121	113	120	121	113	43	-25			
YARMOUTH 4	355	362	349	355	362	349	213	-100			

Units not listed will follow local voltage schedules in accordance with Local Control Center requirements or Interconnection Agreements.

Maine Voltage & Reactive Schedules & Surveys for Transmission, Capacitors

Survey Date:		Survey Time:		Survey Load Period: Heavy/Light (circle one)	
Substation Location	Available MVAR	Nominal Voltage (kV)	Actual Voltage (kV)	Closed/ Open	
CROWLEYS KC2	1 @ 50	115			
GULF ISLAND KC1	1 @ 30	115			
HEYWOOD KC1	1 @ 20	115			
KEENE RD	1 @ 15	115			
KIMBALL ROAD KC1; KC2	2 @ 30	115			
MAGUIRE ROAD KC1	1 @ 50	115			
MASON KC2; KC3	2 @ 50	115			
MAXCY'S KC1; KC2	2 @ 50	115			
ORRINGTON KC1; KC2; KC3	3 @ 67	115			
RILEY KC1	1 @ 30	115			
RUMFORD IP KC1	1 @ 25	115			
SANFORD KC1	1 @ 30.6	115			
SOUTH GORHAM KC1; KC2	2 @ 50	115			
SUROWIEC KC1; KC2; KC3	3 @ 50	115			
WYMAN HYDRO KC1; KC2	2 @ 17.5	115			

Maine Voltage & Reactive Schedules & Surveys for Transmission, Reactors

Survey Date:		Survey Time:		Survey Load Period: Heavy/Light (circle one)	
Substation Location	Available MVAR	Nominal Voltage (kV)	Actual Voltage (kV)	Closed/ Open	
ORRINGTON KR1; KR2	2 @ -40	115			
SUROWIEC KR1; KR2	2 @ -40	115			

Maine Voltage & Reactive Schedules & Surveys for Transmission, Static VAR Compensator											
Survey Date:		Survey Time:					Survey Load Period: Heavy/Light (circle one)				
Legend <i>Sched = Schedule</i> <i>Max = Maximum</i> <i>Min = Minimum</i>		Voltage Schedules Heavy Load Period ¹			Voltage Schedules Light Load Period ²			Available MVAR	Nominal Voltage (kV)	Actual Voltage (kV)	Closed/ Open
		kV Sched	kV Max	kV Min	kV Sched	kV Max	kV Min				
Location											
CHESTER SVC *		NA	358	348	NA	358	348	-125 / +442	345		

* See M/LCC 9 and M/LCC 9 Attachment B for a detailed description of the voltage / reactive scheduling for the Chester SVC.

Maine Voltage & Reactive Schedules & Surveys for Autotransformers with LTCs									
Survey Date:		Survey Time:				Survey Load Period: Heavy/Light (circle one)			
Legend <i>Sched = Schedule</i> <i>Max = Maximum</i> <i>Min = Minimum</i> <i>Auto = Automatic</i>		High Side kV/ Low Side kV	LTC Setting (Auto/Manual)	Scheduled Voltage (kV)	Max LTC Tap	Min LTC Tap	Voltage Control Bandwidth (kV)	Survey Results	
								Surveyed Actual Voltage (kV)	Surveyed LTC Setting (Auto/Manual)
Substation Name									
KEENE ROAD		345/115	M	118	16	-16	117-120		
MASON T9		345/115	A	119	16	-16	118-120		
MAXCY'S T3		345/115	A	119	16	-16	118-120		
ORRINGTON T1		345/115	M	121**	16	-16	120-122		
ORRINGTON T2		345/115	M	121**	16	-16	120-122		
SOUTH GORHAM T1		345/115	A***	119	16	-16	118-120		
SOUTH GORHAM T2		345/115	A***	119	16	-16	118-120		
SUROWIEC T1		345/115	A	119	16	-16	118-120		

** - When being operated in manual the Orrington scheduled voltage is ~1kV less than Graham bus voltage.

*** - This transformer LTC is run in manual when WEC is online.

New Hampshire

New Hampshire Voltage & Reactive Schedules & Surveys – Appendix B, Generators

Survey Date:		Survey Time:					Survey Load Period: Heavy/Light (circle one)					
Legend <i>Sched = Schedule</i> <i>Max = Maximum</i> <i>Min = Minimum</i> <i>MVARs Out = Gross Lagging</i> <i>MVARs In = Gross Leading</i>		Voltage Schedules Heavy Load Period ¹			Voltage Schedules Light Load Period ²			MVARs Out @ S-SCC ³	MVARs In @ Min Manual Load ³	Survey Results		
		kV Sched	kV Max	kV Min	kV Sched	kV Max	kV Min			Actual kV (Voltage)	MVARs	AVR Status (On/Off)
Units												
AES GRANITE RIDGE ST 1*		119	121	109	119	121	109	190	-101			
MERRIMACK 1		119	121	109	119	121	109	49	-17			
MERRIMACK 2		119	121	109	119	121	109	124	-43			
MERRIMACK CT1		119	121	109	119	121	109	13	-11			
MERRIMACK CT2		119	121	109	119	121	109	13	-11			
NEWINGTON		357	362	339	357	362	339	188	-57			
CONED NEWINGTON ENERGY 1		357	362	339	357	362	339	115	-58			
CONED NEWINGTON ENERGY 2		357	362	339	357	362	339	115	-58			
CONED NEWINGTON ENERGY 3		357	362	339	357	362	339	139	-55			
SCHILLER 4		119	121	109	119	121	109	25	-22			
SCHILLER 5		119	121	109	119	121	109	25	-12			
SCHILLER 6		119	121	109	119	121	109	25	-24			
SEABROOK		357	362	345	357	362	345	447	-36			
TAMWORTH		117.5	121	109	117.5	121	109	14	0			

Note: Units not listed will follow local voltage schedules in accordance with Local Control Center requirements or Interconnection Agreements.

*Granite units CT1 & CT2 are located in the REMVEC Section

New Hampshire Voltage & Reactive Schedules & Surveys for Transmission, Capacitors

Survey Date:	Survey Time:	Survey Load Period: Heavy/Light (circle one)		
Substation Location	Available MVAR	Nominal Voltage (kV)	Actual Voltage (kV)	Closed/Open
BEEBE J1153; J1164; J1165	3 @ 13.3	115		
CHESTNUT HILL J1156; J1157	2 @ 12.2	115		
CHESTNUT HILL J1158	1 @ 24.4	115		
JACKMAN J1168; J1169	2 @ 13.3	115		
MADBURY J1162; J1163	2 @ 26.7	115		
MERRIMACK J1151; 1152	2 @ 36.7	115		
OAK HILL J1179; J1180	2 @ 13.3	115		
OCEAN RD. J1154; J1155	2 @ 24.4	115		
THREE RIVERS J1159	1 @ 12.2	115		
THREE RIVERS J1160; J1161	2 @ 24.4	115		
WHITE LAKE J1166	1 @ 13.3	115		
WHITE LAKE J1167	1 @ 6.6	115		

<i>New Hampshire Voltage & Reactive Schedules & Surveys for Transmission, Reactors</i>					
Survey Date:		Survey Time:		Survey Load Period: Heavy/Light (circle one)	
Substation Location		Available MVAR	Nominal Voltage (kV)	Actual Voltage (kV)	Closed/Open
SCOBIE POND R31; R32		2 @ -40.0	115		

New Hampshire Voltage & Reactive Schedules & Surveys for Autotransformers with LTCs

Survey Date:		Survey Time:				Survey Load Period: Heavy/Light (circle one)			
Legend <i>Sched = Schedule</i> <i>Max = Maximum</i> <i>Min = Minimum</i> <i>Auto = Automatic</i>	High Side kV/ Low Side kV	LTC Setting (Auto/Manual)	Scheduled Voltage (kV)	Max LTC Tap	Min LTC Tap	Voltage Control Bandwidth (kV)	Survey Results		
							Substation Name	Surveyed Actual Voltage (kV)	Surveyed LTC Setting (Auto/Manual)
	DEERFIELD TB14	345/115	A	119.3	33	1	117.9-120.8		
	DEERFIELD TB28	345/115	A	119.3	16	-16	117.9-120.8		
	FITZWILLIAM TB34	345/115	A	119.51	16	-16	118-121.1		
	LITTLETON TB41	230/115	A	116.5	33	1	115-118.8		
	MERRIMACK A253*	230/115	M	119.0	16	-16	117.5-120.5		
	SACO-VALLEY PS1	115/115	M	117	10	-10	115-119		
	SCOBIE TB30	345/115	A	119.5	33	1	118.0-121.1		
	SCOBIE TB90	345/115	A	119.5	16	-16	118.0-121.1		
	SCOBIE TB120	345/115	A	119.5	16	-16	118.0-121.1		

* This transformer LTC is run in manual when Merrimack units are on line

NSTAR

NSTAR Voltage & Reactive Schedules & Surveys – Appendix B, Generators

Survey Date:	Survey Time:						Survey Load Period: Heavy/Light (circle one)					
Legend <i>Sched = Schedule</i> <i>Max = Maximum</i> <i>Min = Minimum</i> <i>MVARs Out = Gross Lagging</i> <i>MVARs In = Gross Leading</i>	Voltage Schedules Heavy Load Period ¹			Voltage Schedules Light Load Period ²			MVARs Out @ S-SCC ³	MVARs In @ Min Manual Load ³	Survey Results			
	kV Sched	kV Max	kV Min	kV Sched	kV Max	kV Min			Actual kV (Voltage)	MVARs	AVR Status (On/Off)	
Units												
ANP BLACKSTONE 1	358	362	335	356	362	335	160	-95				
ANP BLACKSTONE 2	358	362	335	356	362	335	104	-94				
CANAL 1	358	362	327	355	362	327	248	-100				
CANAL 2	358	362	327	355	362	327	121	-100				
DARTMOUTH POWER	115	121	109	115	121	109	33	-24				
DARTMOUTH 3	115	121	109	115	121	109	14	-10				
FORE RIVER GT 1	118	121	110	116	121	110	160	-110				
FORE RIVER GT 2	118	121	110	116	121	110	160	-110				
FORE RIVER ST 1	118	121	110	116	121	110	160	-125				
KENDALL G4	119	121	110	117	121	110	125	-66				
MEDWAY J1	238	241	219	235	241	219	20	-10				
MEDWAY J2	238	241	219	235	241	219	20	-10				
MEDWAY J3	115	121	109	115	121	109	20	-20				
MYSTIC 7	358	362	335	356	362	335	324	-175				
MYSTIC 8 GT1	358	362	335	356	362	335	160	-101				
MYSTIC 8 GT2	358	362	335	356	362	335	160	-101				
MYSTIC 8 ST	358	362	335	356	362	335	160	-125				
MYSTIC 9 GT1	119	121	109	117	121	109	160	-105				
MYSTIC 9 GT2	119	121	109	117	121	109	160	-105				
MYSTIC 9 ST	119	121	109	117	121	109	160	-91				

NSTAR Voltage & Reactive Schedules & Surveys – Appendix B, Generators

Survey Date:	Survey Time:						Survey Load Period: Heavy/Light (circle one)					
Legend <i>Sched = Schedule</i> <i>Max = Maximum</i> <i>Min = Minimum</i> <i>MVARs Out = Gross Lagging</i> <i>MVARs In = Gross Leading</i>	Voltage Schedules Heavy Load Period ¹			Voltage Schedules Light Load Period ²			MVARs Out @ S-SCC ³	MVARs In @ Min Manual Load ³	Survey Results			
	kV Sched	kV Max	kV Min	kV Sched	kV Max	kV Min			Actual kV (Voltage)	MVARs	AVR Status (On/Off)	
NEA BELLINGHAM (1-3)	358	362	328	356	362	328	87	-120				
PILGRIM	358	362	342	356	362	342	299	-100				
POTTER 2	118	121	110	116	121	110	21	-24				
SEMASS G1	116	121	109	118	121	109	15	-5				
SEMASS G2	116	121	109	118	121	109	10	-2				
THOMAS A. WATSON 1	118	121	110	116	121	110	35	-17				
THOMAS A. WATSON 2	118	121	110	116	121	110	35	-17				

Units not listed will follow local voltage schedules in accordance with Local Control Center requirements or Interconnection Agreements.

<i>NSTAR Voltage & Reactive Schedules & Surveys for Transmission, Capacitors</i>				
Survey Date:		Survey Time:		Survey Load Period: Heavy/Light (circle one)
Substation Location	Available MVAR	Nominal Voltage (kV)	Actual Voltage (kV)	Closed/Open
BAKER STREET C1; C2	2 @ 53.6	115		
BARNSTABLE C1	1 @ 35.3	115		
CHELSEA C1	1 @ 36.7	115		
DOVER C1	1 @ 53.6	115		
FALMOUTH TAP C1	1 @ 35.3	115		
FRAMINGHAM C1	1 @ 53.6	115		
HARWICH C1	1 @ 21.2	115		
HYANNIS JCT. C1	1 @ 39.6	115		
K-STREET C1; C2	2 @ 53.6	115		
LEXINGTON C1	1 @ 53.6	115		
MASHPEE C1	1 @ 35.3	115		
MYSTIC C1	1 @ 53.6	115		
ORLEANS C1	1 @ 13.6	115		
SUDBURY C1	1 @ 49.5	115		
WING LANE STATION C1	1 @ 35.3	115		
W.FRAMINGHAM	1 @ 54.4	115		

<i>NSTAR Voltage & Reactive Schedules & Surveys for Transmission, Reactors</i>					
Survey Date:		Survey Time:	Survey Load Period: Heavy/Light (circle one)		
Substation Location	Available MVAR	Nominal Voltage (kV)	Actual Voltage (kV)	Closed/Open	
EDGAR	2 @ -40	115			
K-STREET	1 @ -80	115			
K-STREET	2 @ -70 Fixed; -90 Variable	345			
LEXINGTON	1 @ -70 Fixed; -90 Variable	345			
MYSTIC	1 @ -80	115			
MYSTIC	1 @ -70 Fixed; -90 Variable	345			
NORTH CAMBRIDGE	2 @ -80	115			
NORTH CAMBRIDGE	1 @ -70 Fixed; -90 Variable	345			
STOUGHTON	4 @ -70 Fixed; -90 Variable	345			
WEST WALPOLE	1 @ -70 Fixed; -90 Variable	345			
WOBURN	3 @ -80	115			

<i>NSTAR Voltage & Reactive Schedules & Surveys for Autotransformers with LTCs</i>									
Survey Date:		Survey Time:				Survey Load Period: Heavy/Light (circle one)			
Legend <i>Sched = Schedule Max = Maximum Min = Minimum Auto = Automatic</i>		High Side kV/ Low Side kV	LTC Setting (Auto/Manual)	Scheduled Voltage (kV)	Max LTC Tap	Min LTC Tap	Voltage Control Bandwidth (kV)	Survey Results	
Substation Name								Surveyed Actual Voltage (kV)	Surveyed LTC Setting (Auto/Manual)
KINGSTON 345A		345/115	M	119	10	-10	103.4-126.6		
KINGSTON 345B		345/115	M	119	10	-10	103.4-126.6		
WOBURN 345		345/115	M	118	33	1	103.96-126.45		

<i>NSTAR Voltage & Reactive Schedules & Surveys for Transmission, Static VAR Compensator</i>											
Survey Date:		Survey Time:					Survey Load Period: Heavy/Light (circle one)				
Legend <i>Sched = Schedule Max = Maximum Min = Minimum</i>		Voltage Schedules Heavy Load Period ¹			Voltage Schedules Light Load Period ²			Available MVAR	Nominal Voltage (kV)	Actual Voltage (kV)	Closed/ Open
Location		kV Sched	kV Max	kV Min	kV Sched	kV Max	kV Min				
BARNSTABLE SVC*		NA	120	109	NA	120	109	1 @ 0/ 125*	115		

* Under normal operational conditions, the SVC will be operating with a zero (0) MVAR output, ready to respond to faults in the network. During the first 2 seconds, the maximum MVAR output is 225 MVAR. After that, the MVAR output is rapidly reduced to a maximum of 125 MVAR, which can be sustained for up to 30 minutes.

REMVEC

REMVEC Voltage & Reactive Schedules & Surveys – Appendix B, Generators

Survey Date:	Survey Time:						Survey Load Period: Heavy/Light (circle one)					
Legend <i>Sched = Schedule</i> <i>Max = Maximum</i> <i>Min = Minimum</i> <i>MVARs Out = Gross Lagging</i> <i>MVARs In = Gross Leading</i>	Voltage Schedules Heavy Load Period ¹			Voltage Schedules Light Load Period ²			MVARs Out @ S-SCC ³	MVARs In @ Min Manual Load ³	Survey Results			
	kV Sched	kV Max	kV Min	kV Sched	kV Max	kV Min			Actual kV (Voltage)	MVARs	AVR Status (On/Off)	
Units												
AES GRANITE RIDGE CT1*	238	241.5	219	238	241.5	219	161	-110				
AES GRANITE RIDGE CT2*	238	241.5	219	238	241.5	219	161	-143				
ANP BELLINGHAM 1	358	362	335	356	362	335	142	-78				
ANP BELLINGHAM 2	358	362	335	356	362	335	142	-78				
BEAR SWAMP 1 GEN	240	241	219	225	241	219	84	-70				
BEAR SWAMP 1 PUMP	240	241	219	225	241	219	120	0				
BEAR SWAMP 2 GEN	240	241	219	225	241	219	100	-70				
BEAR SWAMP 2 PUMP	240	241	219	225	241	219	120	0				
BRAYTON 1	118	121	110	116	121	110	115	-96				
BRAYTON 2	118	121	110	116	121	110	118	-96				
BRAYTON 3	358	362	335	355	362	335	260	-284				
BRAYTON 4	358	362	328	355	362	328	230	-153				
CLEARY CC	118	121	110	116	121	110	71	-45				
CLEARY 8	118	121	110	116	121	110	14	-5				
COMERFORD	240	241	219	238	241	219	68	-58				
DIGHTON POWER 1	118	121	110	116	121	110	94	-21				
FPL RISE GT 1	119	121	110	117	121	110	50	-40				
FPL RISE GT 2	119	121	110	117	121	110	50	-40				
FPL RISE ST 1	119	121	110	117	121	110	76	-57				
L'ENERGIA	118	121	110	116	121	110	55	-26				

REMVEC Voltage & Reactive Schedules & Surveys – Appendix B, Generators

Survey Date:		Survey Time:					Survey Load Period: Heavy/Light (circle one)					
Legend <i>Sched = Schedule</i> <i>Max = Maximum</i> <i>Min = Minimum</i> <i>MVARs Out = Gross Lagging</i> <i>MVARs In = Gross Leading</i>		Voltage Schedules Heavy Load Period ¹			Voltage Schedules Light Load Period ²			MVARs Out @ S-SCC ³	MVARs In @ Min Manual Load ³	Survey Results		
		kV Sched	kV Max	kV Min	kV Sched	kV Max	kV Min			Actual kV (Voltage)	MVARs	AVR Status (On/Off)
Units												
MANCHESTER ST 9/9A		119	121	110	117	121	110	101	-50			
MANCHESTER ST 10/10A		119	121	110	117	121	110	65	-45			
MANCHESTER ST 11/11A		119	121	110	117	121	110	98	-45			
MILFORD POWER (1-2)		118	121	110	117	121	110	119	-57			
MILLENIUM GT & ST		117	121	112	115	121	110	155	-96			
MOORE (1-4)		240	241	219	238	241	219	74	-62			
OCEAN STATE 1 (GT1/GT2/ST1)		358	362	335	356	362	335	122	-98			
OCEAN STATE 2 (GT3/GT4/ST2)		358	362	335	356	362	335	109	-103			
RESCO SAUGUS		117	121	112	116	121	112	33	-18			
SALEM HARBOR 1		119	121	109	117	121	109	27	-39			
SALEM HARBOR 2		119	121	109	117	121	109	33	-29			
SALEM HARBOR 3		119	121	109	117	121	109	61	-60			
SALEM HARBOR 4		119	121	109	117	121	109	275	-210			
SOMERSET JET2		118	121	110	116	121	110	13	0			
TIVERTON (GT, ST)		118	121	109	116	121	109	180	-50			
WATERS RIVER JET2		119	121	109	117	121	109	3	0			
WMI MILLBURY		118	121	109	116	121	109	15	-6			

Units not listed will follow local voltage schedules in accordance with Local Control Center requirements or Interconnection Agreements.

* The Granite Ridge ST unit is located in New Hampshire Section

REMVEC Voltage & Reactive Schedules & Surveys for Transmission, Capacitors					
Survey Date:		Survey Time:		Survey Load Period: Heavy/Light (circle one)	
Substation Location		Available MVAR	Nominal Voltage (kV)	Actual Voltage (kV)	Closed/ Open
COMERFORD C11; C12		2 @ 31.5	230		
COMERFORD C21; C22		2 @ 31.5	230		
COMERFORD C31		1 @ 63	230		
FRANKLIN SQUARE C2		1 @ 63	115		
KENT COUNTY C2		1 @ 63	115		
KENT COUNTY C5; C6		2@72	115		
MILBURY C1; C3		2 @ 63	115		
NORTHBORO RD. C6		1 @ 54	115		
NORTHBORO RD. C3; C4		2 @ 36	69		
PRATTS JCT A4		1 @ 63	115		
REVERE C1		1 @ 30	115		
SALEM HARBOR C1; C2		2 @ 63	115		
SANDY POND C11; C21		2 @ 93	345		
SANDY POND C12; C22		2 @ 186	345		
SANDY POND F11; F21		2 @ 175	345		
SANDY POND F12; F22		2 @ 85	345		
SANDY POND F13; F23		2 @ 178	345		
TEWKSBURY C1; C2		2 @ 63	115		

<i>REMVEC Voltage & Reactive Schedules & Surveys for Transmission, Reactors</i>					
Survey Date:		Survey Time:		Survey Load Period: Heavy/Light (circle one)	
Substation Location		Available MVAR	Nominal Voltage (kV)	Actual Voltage (kV)	Closed/ Open
COMERFORD R21 - 24; R31 - R34		8 @ -20.2	14.3		
SANDY POND		3 @ -160	345		

<i>REMVEC Voltage & Reactive Schedules & Surveys for Autotransformers with LTCs</i>								
Survey Date:			Survey Time:			Survey Load Period: Heavy/Light (circle one)		
Legend <i>Sched = Schedule</i> <i>Max = Maximum</i> <i>Min = Minimum</i> <i>Auto = Automatic</i>	High Side kV/ Low Side kV	LTC Setting (Auto/ Manual)	Scheduled Voltage (kV)	Max LTC Tap	Min LTC Tap	Voltage Control Bandwidth (kV)	Survey Results	
							Surveyed Actual Voltage (kV)	Surveyed LTC Setting (Auto/ Manual)
Substation Name								

VELCO

VELCO Voltage & Reactive Schedules & Surveys – Appendix B, Generators

Survey Date:	Survey Time:						Survey Load Period: Heavy/Light (circle one)				
Legend <i>Sched = Schedule</i> <i>Max = Maximum</i> <i>Min = Minimum</i> <i>MVARs Out = Gross Lagging</i> <i>MVARs In = Gross Leading</i>	Voltage Schedules Heavy Load Period ¹			Voltage Schedules Light Load Period ²			MVARs Out @ S-SCC ³	MVARs In @ Min Manual Load ³	Survey Results		
	kV Sched	kV Max	kV Min	kV Sched	kV Max	kV Min			Actual kV (Voltage)	MVARs	AVR Status (On/Off)
Units											
GRANITE SYNC COND	117.0	118.5	115.0	117.0	118.5	115.0	4 @ 25	4 @ -12.5			
VERMONT YANKEE	358	362	342	354	362	342	210	-50			

Units not listed will follow local voltage schedules in accordance with Local Control Center requirements or Interconnection Agreements.

<i>VELCO Voltage & Reactive Schedules & Surveys for Transmission, Capacitors</i>				
Survey Date:		Survey Time:		Survey Load Period: Heavy/Light (circle one)
Substation Location	Available MVAR	Nominal Voltage (kV)	Actual kV (Voltage)	Closed/ Open
BERLIN C87	1 @ 24.8	115		
COOLIDGE C91; C92	2 @ 25	115		
ESSEX #1 C34	1 @ 24.3	115		
ESSEX C35; C36; C37; C38; C39	5 @ 24.8	115		
GEORGIA C80	1 @ 24.8	115		
HARTFORD C40	1 @ 25.0	115		
HIGHGATE CONVERTER TERMINAL	6 @ 20 2 @ 10	115		
GRANITE C61; C62; C64; C66	4 @ 25	115		
LYNDONVILLE C21; C23	2 @ 12.50	115		
MIDDLEBURY VB72	1 @ 22.9	115		
NORTH RUTLAND C71	1 @ 24.8	115		
SANDBAR C82	1 @ 24.8	115		
VERMONT YANKEE C50; C51	2 @ 15	115		
VERMONT YANKEE C52	1 @ 30	115		
WEST RUTLAND C45; C46	2 @ 25.0	115		
WILLISTON C83	1 @ 25.2	115		

<i>VELCO Voltage & Reactive Schedules & Surveys for Transmission, Reactors</i>					
Survey Date:		Survey Time:		Survey Load Period: Heavy/Light (circle one)	
Substation Location		Available MVAR	Nominal Voltage (kV)	Actual Voltage (kV)	Closed/ Open
NEW HAVEN		1 @ -60	345		

VELCO Voltage & Reactive Schedules & Surveys for Transmission, STATCOMs										
Survey Date:	Survey Time:						Survey Load Period: Heavy/Light (circle one)			
Legend <i>Sched = Schedule</i> <i>Max = Maximum</i> <i>Min = Minimum</i>	Voltage Schedules Heavy Load Period ¹			Voltage Schedules Light Load Period ²			Available MVAR	Nominal Voltage (kV)	Actual Voltage (kV)	Closed/ Open
	kV Sched	kV Max	kV Min	kV Sched	kV Max	kV Min				
Location										
ESSEX STATCOM	117	119	112	117	119	112	-65 / +85	115		

VELCO Voltage & Reactive Schedules & Surveys for Autotransformers with LTCs									
Survey Date:	Survey Time:					Survey Load Period: Heavy/Light (circle one)			
Legend <i>Sched = Schedule</i> <i>Max = Maximum</i> <i>Min = Minimum</i> <i>Auto = Automatic</i>	High Side kV/ Low Side kV	LTC Setting (Auto/Manual)	Scheduled Voltage (kV)	Max LTC Tap	Min LTC Tap	Voltage Control Bandwidth (kV)	Survey Results		
							Surveyed Actual Voltage (kV)	Surveyed LTC Setting (Auto/Manual)	
Substation Name									
COOLIDGE XF	345/115	M	117	33	1	N/A			
GRANITE T1	230/115	A	234	16	-16	237-230			
GRANITE T2	230/115	A	234	16	-16	237-230			
WEST RUTLAND (1) *	345/115	A	116.4	16	-16	118.7-114.1			
WEST RUTLAND (2) *	345/115	A	116.4	16	-16	118.7-114.1			
NEW HAVEN (1) *	345/115	A	116.4	16	-16	118.7-114.1			
NEW HAVEN (2) *	345/115	A	116.4	16	-16	118.7-114.1			

*New Haven and West Rutland transformers operated in tandem

OP 12 Appendix B Revision History

Document History (This Document History documents action taken on the equivalent NEPOOL Procedure prior to the RTO Operations Date as well revisions made to the ISO New England Procedure subsequent to the RTO Operations Date.)

Rev. No.	Date	Reason
Rev 1	05/23/03	
Rev 2	08/05/03	
Rev 3	07/25/04	
Rev 4	11/09/04	
Rev 5	02/01/05	Updated to conform to RTO terminology
Rev 6	05/06/05	Update for initiation of VELCO Local Control Center
Rev 7	06/02/05	Update information resulting from VTF review
Rev 8	09/07/06	Updated information resulting from VTF review
Rev 9	10/26/06	Corrected MVAR value for Rumford
Rev 10	09/17/07	Updated information resulting from ISO Operations Support Services review
Rev 11	03/04/08	Revised for NSTAR LCC status
Rev 12	05/22/08	Completely reformatted to allow better use and ease making future revisions. Updated information resulting from VTF review.
Rev 13	06/26/08	Updated information resulting from VTF review.
Rev 14	09/16/08	Updated information resulting from VTF review and new test results.
Rev 15	04/21/09	Updated information resulting from VTF review and new test results.
Rev 16	06/05/09	Updated information resulting from VTF review and new test results.
Rev 17	09/24/09	Updated information resulting from VTF review and new test results.
Rev 18	10/30/09	Updated information resulting from VTF review and new test results.
Rev 19	12/15/09	Updated information resulting from VTF review and new test results.
Rev 20	2/26/10	Updated information resulting from VTF review and new test results.
Rev 21	5/24/10	Minor reformatting of tables to make sure date is displayed consistently; Updated information resulting from VTF review and new test results.
Rev 22	08/17/10	Updated information resulting from VTF review and new test results.
Rev 23	5/25/11	Replaced page numbers with Page X of Y format; Updated information resulting from VTF review.
Rev 24	07/21/11	CONVEX Generators added Kleen Energy station units CT1, CT2 & ST data rows; New Hampshire Capacitors added Oak Hill capacitors (J1179; J1180) data row; NSTAR Capacitors added Chelsea capacitor C1 data row; REMVEC Comerford Capacitors corrected capacitor data (was C15, now C31) REMVEC Comerford Reactors added unit designations for reactors (R21-24 & R31-34); REMVEC Comerford Reactors corrected reactor data MVAR (now 20.2) and Nominal Voltage (now 14.3)

<p>Rev 25</p>	<p>draft</p>	<p>Biennial review by procedure owner; CONVEX – Generators: Added data row for the following: A. L. Pierce Bridgeport HBR 4 Bridgeport RESCO Cos Cob 10, 11, 12, 13, 14 Devon 10, 11, 12, 13, 14, 15, 16, 17, 18 Middletown 10, 12, 13, 14, 15 New Haven HBR 2, 3, 4 Norwalk HBR 3 South Meadow 11, 12, 13, 14 Tunnel Wallingford REFUSE Waterbury Waterside Modified the MVARs OUT for New Haven HBR Modified the MVARs IN min value for Northfield P1, P2, P3, P4 CONVEX – Capacitors, Added an asterisk (*) to Sackett 1K & added a foot note CONVEX – Autotransformers with LTCs, Modified: Barbour Hill 1X Schedule voltage and voltage control bandwidth Manchester 4X, 5X, 6X Scheduled voltage North Bloomfield 5X Scheduled voltage Maine – Generators, added new data rows for Cape GT 4 & Cape GT 5 Maine Static Var Compensator- reattributed note with asterisk Maine – Autotransformers with LTCs, Modified the LTC setting (Auto/Manual) and modified asterisks for this column for: Keene Road Orrington T1, T2 New Hampshire – Generators, Added new data row for : Merrimack CT1, CT2 Tamworth New Hampshire – Autotransformers with LTCs, Added data row for Deerfield TB28 Fitzwilliam added “TB34” to station name; Littleton TB41 modified scheduled voltage and Voltage Control Bandwidth; Saco-Valley added “PS1” to station name NSTAR – Generators, Added new data row for: Dartmouth 3 REMVEC – Generators, Added new data row for: Cleary 8 RESCO Saugus Somerset Jet2 Waters River Jet2 WMI Millbury Modified the MVARs Out and In for L’ENERGIA REMVEC – Capacitors, Added data row for Kent County C5, C6 VELCO – Generators, Modified MVARs out for Vermont Yankee VELCO – Capacitors, Added new data row for: Lyndonville C21, C23 West Rutland C45, C46</p>

Endnotes

¹ Heavy 07:00-22:00 hours Monday through Saturday except Holidays.

² Light all other hours.

³ Data from NX-12D, pt. 19 (MVAR lagging), pt. 15 (MVAR leading) of the Normal Reactive Capability portion of the table/curve.