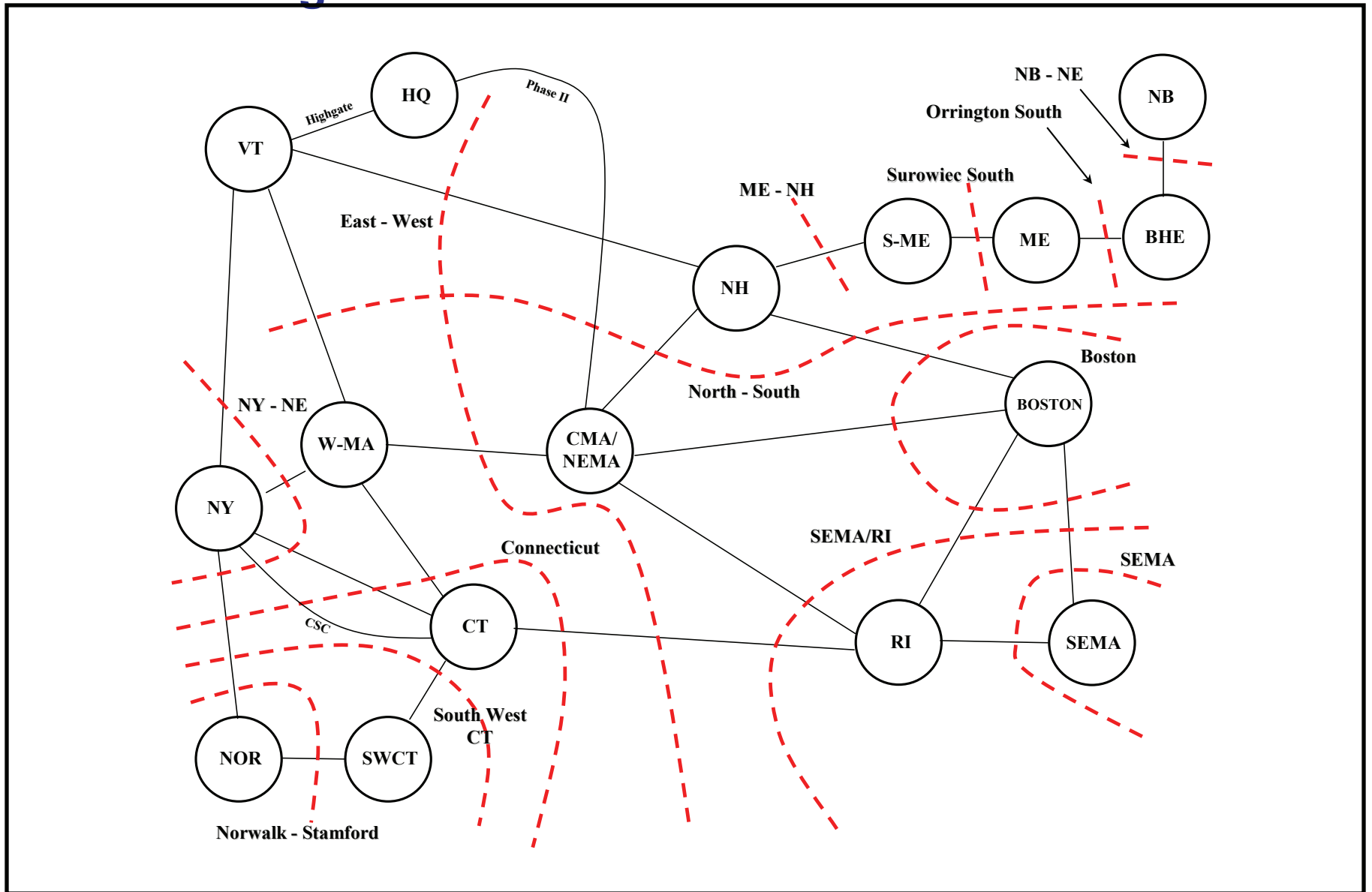


RSP07 Subarea Energy and Seasonal Peak Forecast Update

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New England Sub-Area Model Internal Interfaces



RSP07 Subarea Load Forecast

- Based on RSP07 ISO-NE and State Forecasts
- Uses 2006 NPCC Base Case Network Models
 - Detailed bus loads provided by Operating Co.
 - For 2007 and 2012 seasonal peaks
 - Use between and within company growth to allocate states to subareas
- For more forecast detail see ISO-NE website
 - http://www.iso-ne.com/trans/celt/fsct_detail/index.html

Summary of RSP07 Subarea Energy and Seasonal Peak Forecast and Comparison to RSP06

RSP07 Subarea Energy and Seasonal Peak Summary

	2006	2007	2008	% Change 2006-07	% Change 2007-08	2016	CAGR 2007-16
Energy (GWh)							
ISO-NE	132435	132615	133980	0.1	1.0	147190	1.2
BHE	1800	1790	1800	-0.6	0.6	1990	1.2
ME	6270	6250	6310	-0.3	1.0	7085	1.4
SME	3715	3700	3720	-0.4	0.5	4120	1.2
NH	9740	9820	10000	0.8	1.8	11565	1.8
VT	7180	7190	7250	0.1	0.8	7990	1.2
Boston	26110	26180	26410	0.3	0.9	28625	1.0
CMA/NEM,	8520	8550	8610	0.4	0.7	9280	0.9
WMA	10610	10640	10740	0.3	0.9	11695	1.1
SEMA	13600	13640	13770	0.3	1.0	15005	1.1
RI	11210	11240	11360	0.3	1.1	12450	1.1
CT	16570	16550	16730	-0.1	1.1	18400	1.2
SWCT	11210	11185	11340	-0.2	1.4	12560	1.3
NOR	5910	5900	5945	-0.2	0.8	6445	1.0

RSP07 Subarea Energy and Seasonal Peak Summary

	2006	2007	2008	% Change 2006-07	% Change 2007-08	2016	CAGR 2007-16
50/50 Summer Peak (MW)							
ISO-NE	26940	27360	27885	1.6	1.9	31885	1.7
BHE	305	305	310	0.0	1.6	350	1.5
ME	1050	1060	1080	1.0	1.9	1260	1.9
SME	655	660	670	0.8	1.5	780	1.9
NH	1930	1980	2050	2.6	3.5	2525	2.7
VT	1225	1245	1270	1.6	2.0	1460	1.8
Boston	5405	5490	5585	1.6	1.7	6255	1.5
CMA/NEM,	1830	1865	1890	1.9	1.3	2105	1.4
WMA	2060	2095	2140	1.7	2.1	2455	1.8
SEMA	2875	2930	2980	1.9	1.7	3380	1.6
RI	2470	2510	2560	1.6	2.0	2950	1.8
CT	3500	3540	3610	1.1	2.0	4140	1.8
SWCT	2375	2400	2445	1.1	1.9	2765	1.6
NOR	1275	1290	1310	1.2	1.6	1470	1.5

RSP07 Subarea Energy and Seasonal Peak Summary

	2006	2007	2008	% Change 2006-07	% Change 2007-08	2016	CAGR 2007-16
90/10 Summer Peak (MW)							
ISO-NE	28675	29160	29750	1.7	2.0	34170	1.8
BHE	320	320	325	0.0	1.6	370	1.6
ME	1100	1110	1135	0.9	2.3	1330	2.0
SME	685	690	705	0.7	2.2	820	1.9
NH	2100	2155	2230	2.6	3.5	2775	2.8
VT	1305	1325	1355	1.5	2.3	1565	1.9
Boston	5735	5835	5940	1.7	1.8	6680	1.5
CMA/NEM	1950	1990	2020	2.1	1.5	2255	1.4
WMA	2190	2230	2280	1.8	2.2	2625	1.8
SEMA	3055	3115	3170	2.0	1.8	3610	1.7
RI	2635	2680	2740	1.7	2.2	3170	1.9
CT	3725	3780	3850	1.5	1.9	4435	1.8
SWCT	2530	2560	2610	1.2	2.0	2965	1.6
NOR	1360	1380	1400	1.5	1.4	1580	1.5

RSP07 Subarea Energy and Seasonal Peak Summary

	2006	2007	2008	% Change 2006-07	% Change 2007-08	2016	CAGR 2007-16
50/50 Winter Peak (MW)							
ISO-NE	22850	23070	23375	1.0	1.3	25620	1.2
BHE	295	295	300	0.0	1.7	335	1.4
ME	1075	1085	1100	0.9	1.4	1230	1.4
SME	600	600	610	0.0	1.7	670	1.2
NH	1725	1745	1770	1.2	1.4	2000	1.5
VT	1210	1220	1235	0.8	1.2	1360	1.2
Boston	4460	4500	4550	0.9	1.1	4970	1.1
CMA/NEM	1500	1510	1525	0.7	1.0	1660	1.1
WMA	1850	1865	1880	0.8	0.8	2025	0.9
SEMA	2360	2380	2410	0.8	1.3	2620	1.1
RI	1880	1900	1920	1.1	1.1	2080	1.0
CT	2935	2965	3010	1.0	1.5	3285	1.1
SWCT	1950	1985	2030	1.8	2.3	2260	1.5
NOR	1025	1030	1045	0.5	1.5	1135	1.1

Energy Forecast Comparison (GWh)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Average MW Change 2006-15	Average % Change 2006-15
ISO-NE												
RSP07	132435	132615	133980	135725	137235	139130	140865	142485	144060	145625	1466	1.1
RSP06	135000	133975	135775	138020	140330	142790	145160	147225	149185	151085	1787	1.3
Differ	-2565	-1360	-1795	-2295	-3095	-3660	-4295	-4740	-5125	-5460		
BHE												
RSP07	1799	1786	1802	1829	1851	1881	1909	1931	1950	1972	19	1
RSP06	1785	1780	1790	1805	1810	1820	1830	1840	1850	1855	8	0.4
Differ	14	6	12	24	41	61	79	91	100	117		
ME												
RSP07	6270	6247	6309	6411	6494	6603	6709	6807	6899	6996	81	1.2
RSP06	6425	6475	6600	6735	6855	6970	7090	7220	7345	7445	113	1.7
Differ	-155	-228	-291	-324	-361	-367	-381	-413	-446	-449		
SME												
RSP07	3714	3697	3721	3769	3805	3856	3905	3961	4013	4068	39	1
RSP06	3820	3850	3925	4005	4080	4145	4215	4290	4365	4420	67	1.6
Differ	-106	-153	-204	-236	-275	-289	-310	-329	-352	-352		
NH												
RSP07	9739	9817	9999	10190	10376	10589	10819	11008	11190	11368	181	1.7
RSP06	9710	9790	10000	10270	10560	10850	11090	11345	11590	11825	235	2.2
Differ	29	27	-1	-80	-184	-261	-271	-337	-400	-457		
VT												
RSP07	7179	7188	7251	7348	7435	7530	7631	7717	7815	7903	81	1.1
RSP06	7010	7015	7100	7205	7280	7375	7460	7560	7655	7735	81	1.1
Differ	169	173	151	143	155	155	171	157	160	168		
BOSTON												
RSP07	26108	26177	26407	26671	26877	27181	27468	27754	28044	28334	247	0.9
RSP06	26775	26300	26620	27020	27410	27865	28310	28690	29050	29420	294	1.1
Differ	-667	-123	-213	-349	-533	-684	-842	-936	-1006	-1086		

Energy Forecast Comparison (GWh)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Average MW Change 2006-15	Average % Change 2006-15
CMA/NEMA												
RSP07	8517	8551	8607	8672	8717	8792	8861	8964	9069	9173	73	0.8
RSP06	8505	8355	8455	8575	8700	8840	8975	9095	9205	9320	91	1
Differ	12	196	152	97	17	-48	-114	-131	-136	-147		
WMA												
RSP07	10611	10637	10740	10860	10957	11093	11221	11338	11457	11576	107	1
RSP06	10940	10760	10895	11060	11220	11410	11575	11710	11840	11970	114	1
Differ	-329	-123	-155	-200	-263	-317	-354	-372	-383	-394		
SEMA												
RSP07	13599	13641	13771	13920	14038	14208	14368	14527	14685	14845	138	1
RSP06	14170	13960	14150	14380	14615	14880	15150	15380	15600	15825	184	1.2
Differ	-571	-319	-379	-460	-577	-672	-782	-853	-915	-980		
RI												
RSP07	11212	11239	11360	11509	11621	11788	11935	12078	12200	12328	124	1.1
RSP06	11455	11410	11515	11660	11860	12045	12260	12420	12555	12715	140	1.2
Differ	-243	-171	-155	-151	-239	-257	-325	-342	-355	-387		
CT												
RSP07	16569	16550	16729	16985	17232	17493	17697	17883	18057	18224	184	1.1
RSP06	17170	17105	17320	17600	17915	18235	18565	18825	19075	19310	238	1.3
Differ	-601	-555	-591	-615	-683	-742	-868	-942	-1018	-1086		
SWCT												
RSP07	11210	11184	11339	11546	11749	11962	12137	12250	12354	12454	138	1.2
RSP06	11345	11340	11520	11750	12005	12260	12440	12570	12695	12810	163	1.4
Differ	-135	-156	-181	-204	-256	-298	-303	-320	-341	-356		
NOR												
RSP07	5909	5901	5944	6015	6082	6153	6204	6268	6327	6384	53	0.9
RSP06	5905	5850	5895	5960	6035	6110	6210	6290	6370	6440	59	1
Differ	4	51	49	55	47	43	-6	-22	-43	-56		

50/50 Summer Peak Forecast Comparison (MW)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Average MW Change 2006-15	Average % Change 2006-15
ISO-NE												
RSP07	26940	27360	27885	28495	29035	29635	30175	30660	31100	31510	508	1.8
RSP06	27025	27355	27901	28538	29183	29883	30512	31016	31476	31893	541	1.9
Differ	-85	5	-16	-43	-148	-248	-337	-356	-376	-383		
BHE												
RSP07	302	304	309	315	321	328	334	338	343	347	5	1.5
RSP06	310	310	315	320	320	325	330	330	335	335	3	0.9
Differ	-8	-6	-6	-5	1	3	4	8	8	12		
ME												
RSP07	1046	1057	1078	1104	1126	1153	1178	1200	1222	1241	22	1.9
RSP06	1045	1075	1100	1130	1160	1185	1215	1240	1260	1280	26	2.3
Differ	1	-18	-22	-26	-34	-32	-37	-40	-38	-39		
SME												
RSP07	653	659	671	687	699	716	730	744	757	768	13	1.8
RSP06	665	685	700	720	735	750	770	785	800	810	16	2.2
Differ	-12	-26	-29	-33	-36	-34	-40	-41	-43	-42		
NH												
RSP07	1931	1978	2046	2115	2181	2253	2328	2380	2431	2477	61	2.8
RSP06	1910	1970	2030	2105	2185	2265	2335	2400	2460	2510	67	3.1
Differ	21	8	16	10	-4	-12	-7	-20	-29	-33		
VT												
RSP07	1225	1245	1268	1297	1322	1348	1375	1396	1421	1441	24	1.8
RSP06	1210	1235	1260	1290	1310	1340	1365	1390	1410	1420	23	1.8
Differ	15	10	8	7	12	8	10	6	11	21		
BOSTON												
RSP07	5404	5487	5582	5682	5767	5867	5957	6042	6119	6190	87	1.5
RSP06	5470	5495	5595	5715	5830	5960	6070	6160	6245	6325	95	1.6
Differ	-66	-8	-13	-33	-63	-93	-113	-118	-126	-135		

50/50 Summer Peak Forecast Comparison (MW)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Average MW Change 2006-15	Average % Change 2006-15
CMA/NEMA												
RSP07	1831	1866	1890	1915	1934	1958	1977	2012	2045	2075	27	1.4
RSP06	1750	1755	1785	1825	1860	1900	1940	1970	1995	2020	30	1.6
Differ	81	111	105	90	74	58	37	42	50	55		
WMA												
RSP07	2058	2094	2138	2185	2227	2274	2318	2356	2391	2423	41	1.8
RSP06	2075	2085	2120	2170	2210	2260	2300	2330	2360	2380	34	1.5
Differ	-17	9	18	15	17	14	18	26	31	43		
SEMA												
RSP07	2876	2927	2979	3035	3083	3139	3189	3242	3290	3336	51	1.7
RSP06	2960	2985	3045	3115	3180	3260	3330	3390	3450	3500	60	1.9
Differ	-84	-58	-66	-80	-97	-121	-141	-148	-160	-164		
RI												
RSP07	2468	2512	2562	2625	2677	2737	2791	2838	2878	2917	50	1.9
RSP06	2465	2505	2540	2585	2640	2700	2755	2795	2830	2870	45	1.7
Differ	3	7	22	40	37	37	36	43	48	47		
CT												
RSP07	3497	3542	3610	3697	3781	3866	3934	3994	4046	4092	66	1.8
RSP06	3580	3630	3695	3780	3865	3955	4050	4115	4175	4230	72	1.9
Differ	-83	-88	-85	-83	-84	-89	-116	-121	-129	-138		
SWCT												
RSP07	2374	2398	2443	2501	2556	2612	2657	2690	2718	2742	41	1.6
RSP06	2340	2380	2430	2490	2555	2625	2675	2710	2740	2770	48	1.9
Differ	34	18	13	11	1	-13	-18	-20	-22	-28		
NOR												
RSP07	1276	1291	1310	1336	1360	1384	1402	1422	1440	1455	20	1.5
RSP06	1260	1270	1290	1315	1340	1365	1395	1415	1435	1455	22	1.6
Differ	16	21	20	21	20	19	7	7	5	0		

FERC 715 Summer 2007: Proportions of Operating Company (down) in Each RSP Sub-area (across)

	BHE	ME	SME	NH	VT	BOSTON	CMA/NEMA	WMA	SEMA	RI	CT	SWCT	NOR
CMEEC											0.699	0.222	0.079
UI											0.029	0.806	0.165
CLP								0.015			0.581	0.217	0.187
BHE	1.000												
CMP	0.008	0.584	0.378	0.031									
BECO						0.914			0.057	0.028			
COMEL						0.271			0.729				
MECO						0.257	0.280	0.137	0.215	0.112			
WMECO								1.000					
Muni:BOSTON						1.000							
Muni:CMA/NEMA							1.000						
Muni:WMA								1.000					
Muni:SEMA									1.000				
Muni:RI										1.000			
NH+		0.021		0.796	0.118		0.066						
GSE				0.085	0.451	0.363	0.102						
UNTIL				1.000									
NECO+									0.080	0.920			
VT				0.068	0.861			0.071					

Summer Peak Comparison: 90/10 ISO RSP07, NPCC 2006 Base Case Library, and NPCC 2005 Base Case Library

	NPCC 2006 Base Case (RSP07)			NPCC 2005 Base Case (RSP06)			
	Actual 2006	2007	2012	Average Percent Change	2006	2011	Average Percent Change
CONNECTICUT							
CMEEC		405	447	2.1	371	400	1.5
UI		1451	1575	1.7	1399	1458	0.8
CLP		5840	6526	2.3	5683	6160	1.7
Sum Company		7291	8101	2.2	7082	7618	1.5
ISO-CT	7641	7810	8655	2.2			
MAINE							
BHE		290	296	0.4	296	301	0.3
CMP		1668	1741	0.9	1636	1771	1.6
Sum Company		1958	2037	0.8	1932	2072	1.4
ISO-ME	2136	2130	2375	2.3			
MASSACHUSETTS							
COMEL		1382	1538	2.3	1369	1530	2.4
BECO		3472	3837	2.1	3423	3734	1.8
MUNI6		551	597	1.7	488	514	1.1
MUNI7		332	378	2.8	305	335	1.9
MUNI8		377	422	2.4	417	443	1.3
MUNI9		492	559	2.7	464	514	2.2
NGRID		5336	5983	2.4	5135	5586	1.8
MUN10		116	126	1.7	111	119	1.4
WMECO		1060	1184	2.3	905	974	1.5
Sum Company		13118	14624	2.3	12617	13749	1.8
ISO-MA	13343	13430	14770	2.0			

Summer Peak Comparison: 90/10 ISO RSP07, NPCC 2006 Base Case Library, and NPCC 2005 Base Case Library

	NPCC 2006 Base Case (RSP07)				NPCC 2005 Base Case (RSP06)		
	Actual 2006	2007	2012	Average Percent Change	2006	2011	Average Percent Change
NEW HAMPSHIRE							
UNTIL		229	238	0.8	229	265	3.1
GSE		237	266	2.5	218	215	-0.3
PSNH+		2195	2716	4.8	2115	2721	5.7
Sum Company		2661	3220		2562	3201	5.0
ISO-NH	2477	2665	3040	2.8			
RHODE ISLAND							
NGRID		1960	2177	2.2	1897	2046	1.6
ISO-RI	1993	2005	2215	2.1			
VERMONT							
VELCO		984	1116	2.7	1042	1121	1.5
ISO-VT	1090	1130	1240	1.9			
Total							
Sum Company		28294	31640	2.4			
ISO-NE	28680	29160	32290	2.1			

