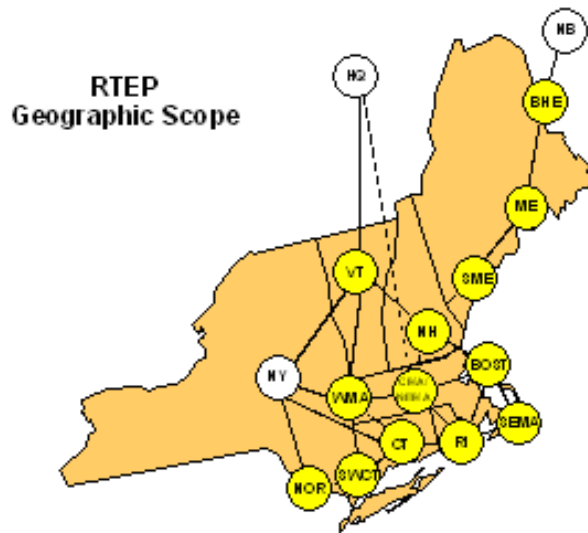


ISO New England Sub-area Forecast of Peak Load & Energy

A discussion of the ten-year forecast of ISO New England Sub-areas for the 2008 Regional System Plan (RSP08)

May 2008

The RSP Sub-areas cross both state and operating company boundaries. Therefore, the RSP Sub-area loads; associated weather, and economic/demographic factors are not directly observable. This makes directly forecasting their loads extremely difficult. However, by using operating company historical load data (which does respect state boundaries) in conjunction with the FERC 715 seasonal peaks supplied by operating companies, the state energy and peak forecasts can be disaggregated into the RSP Sub-areas. This can be done in a way that preserves both the differences between operating company growth rates, and the detailed bus relationships within operating companies. See the Regional System Plan for 2005 for a detailed discussion of the sub-area definitions.



Operating company historical load data is used to estimate 2007 weather normalized seasonal peaks in the same manner state 2007 weather normalized seasonal peaks are estimated. The operating company weather normalized seasonal peaks are then adjusted to agree with their respective state peaks.

FERC Form No. 715 is an Annual Transmission Planning and Evaluation Report submitted to FERC by the transmission companies each spring. It includes base case power flow data, with a summer and winter peak forecast by bus, for a near-term (2008) and midterm (2013) year. The bus loads within each operating company are reported on a consistent (additive) basis, but the loads between companies are not; this is because some are based on “normal” weather and others on “extreme” weather.

Operating company growth rates are developed by summing the busses within an operating company for both years and calculating the annualized growth rates (Col B-D). By using the FERC 715 annualized growth rates (see Col D) and the 2007 weather normal seasonal peaks (Col F), the initial long-term operating company forecasts are developed (Col G-I). These forecasts are now all based on consistent weather conditions, and therefore are additive. The forecasts for operating companies within a state are summed, and then calculated as percents of their total (Col K,L). Final operating company forecasts are calculated by applying the operating company percent of state total to the ISO New England state seasonal and monthly peak and energy forecasts (Col N-P).

Using FERC 715 Operating Company Summer Peak Load Growth to Calculate ISO-NE Operating Company Forecasts

AAPC is the annual average percent change. ISO-NE peaks are the 50/50 Reference Case.

	B	C	D	F	G	H	I	K	L	N	O	P
	FERC 715 OpCo Loads			ISO-NE Historical	Initial ISO-NE Loads			Percent of State Total		Final ISO-NE Loads		
	2008	2013	AAPC	2007	2008	2017	AAPC	2008	2017	2008	2017	AAPC
State of CT	8097	8845	1.8	7335	7466	8754	1.9			7455	8335	1.3
CMEEC	407	448	2.0	380	387	460	2.1	0.052	0.053	387	438	1.5
UI	1590	1742	1.9	1380	1406	1658	2.0	0.188	0.189	1404	1579	1.4
CLP	6100	6655	1.8	5575	5673	6636	1.9	0.760	0.758	5665	6319	1.3
State of ME	2601	2822	1.7	2075	2109	2440	1.7			2105	2350	1.3
BHE	306	325	1.2	295	299	332	1.3	0.142	0.136	298	320	0.8
CMP	2294	2497	1.8	1780	1810	2108	1.8	0.858	0.864	1807	2030	1.4
State of MA	13546	14850	1.9	12680	12915	15244	2.0			12910	14245	1.1
BECO	3793	4082	1.5	3519	3571	4076	1.6	0.277	0.267	3569	3808	0.7
COMEL	1460	1617	2.1	1414	1444	1734	2.2	0.112	0.114	1443	1620	1.4
MA-NGRID	5423	5973	2.0	5138	5238	6234	2.1	0.406	0.409	5236	5825	1.2
WMECO	957	1057	2.1	850	867	1036	2.2	0.067	0.068	866	968	1.3
MUNI:BOST	576	647	2.5	540	553	683	2.6	0.043	0.045	552	638	1.7
MUNI:CNEMA	272	309	2.8	260	267	336	2.9	0.021	0.022	267	314	2.0
MUNI:W-MA	461	512	2.2	390	398	481	2.3	0.031	0.032	398	449	1.4
MUNI:SEMA	483	522	1.6	455	462	531	1.7	0.036	0.035	462	496	0.8
MUNI:RI	121	131	1.6	115	117	135	1.7	0.009	0.009	117	126	0.9
State of NH	2631	3095	3.5	2465	2548	3441	3.9			2530	3030	2.2
PSNH	1936	2323	4.0	1950	2022	2808	4.3	0.794	0.816	2008	2473	2.6
GSE	264	283	1.4	215	218	246	1.4	0.086	0.072	216	217	0.0
UNTIL	431	489	2.7	300	308	386	2.8	0.121	0.112	306	340	1.3
State of RI	1993	2157	1.6	1855	1884	2172	1.7			1890	2110	1.3
RI-NGRID	1993	2157	1.6	1855	1884	2172	1.7	1.000	1.000	1890	2110	1.3
State of VT	1088	1191	1.9	1060	1079	1270	2.0			1085	1205	1.2
VELCO	1088	1191	1.9	1060	1079	1270	2.0	1.000	1.000	1085	1205	1.2

The FERC 715 detailed bus load data is used to allocate the operating company seasonal and monthly peak load forecasts back to the busses within that operating company. RSP Sub-area forecasts are developed by summing the busses that fall within the Sub-areas. The Forecast Data section of the ISO-NE Documentation website details the proportion of each operating company's load in each RSP Sub-area. The following table summarizes that process by showing the proportion of each state's load in each RSP sub-area.

Proportions of State in Each Subarea (2008 Summer Peak)

	Connecticut	Maine	Massachusetts	New Hampshire	Rhode Island	Vermont	ISO-NE
BHE		0.154					0.012
ME		0.521		0.017			0.041
SME		0.302					0.023
NH		0.023		0.777		0.067	0.075
VT				0.144		0.862	0.046
BOSTON			0.431	0.031			0.202
CMA/NEMA			0.134	0.031			0.065
WMA	0.010		0.153			0.070	0.076
SEMA			0.219		0.080		0.106
RI			0.063		0.920		0.091
CT	0.490						0.130
SWCT	0.326						0.087
NOR	0.174						0.046

RSP Sub-area hourly load forecasts are calculated in the same way as the ISO-NE Control Area and state forecasts.

The following table summarizes the RSP Sub-area peak and energy forecast.

	Net Energy for Load (GWh)			Summer Peak Loads (MW)					Winter Peak Loads (MW)				
	2008	2017	CAGR	50/50		90/10			50/50		90/10		
				2008	2017	2008	2017	CAGR	2008/09	2017/18	2008/09	2017/18	CAGR
New England	135000	145275	0.8	27970	31250	29895	33595	1.2	23030	24950	24175	26310	0.9
BHE	1920	2060	0.8	325	350	345	370	0.8	325	365	340	385	1.3
ME	6600	7055	0.7	1140	1275	1215	1365	1.3	1125	1205	1175	1265	0.8
SME	3445	3720	0.9	635	720	675	770	1.4	545	585	570	615	0.8
NH	10030	11560	1.6	2085	2535	2280	2790	2.2	1770	2025	1865	2145	1.5
VT	7380	7975	0.9	1300	1455	1380	1560	1.3	1260	1370	1320	1435	0.9
Boston	27115	28280	0.5	5645	6010	6030	6450	0.7	4565	4875	4795	5150	0.7
CMA/NEMA	8625	9510	1.1	1810	2095	1930	2245	1.6	1495	1645	1575	1735	1.1
WMA	10845	11620	0.8	2130	2405	2270	2575	1.4	1900	2015	1995	2130	0.7
SEMA	13900	14935	0.8	2975	3300	3175	3540	1.2	2360	2565	2475	2705	0.9
RI	11460	12340	0.8	2545	2865	2715	3065	1.3	1860	2005	1945	2100	0.8
CT	16615	17740	0.7	3650	4060	3895	4365	1.2	2860	3060	3010	3230	0.8
SWCT	11235	12190	0.9	2430	2725	2595	2930	1.3	1955	2145	2055	2265	1.0
NOR	5835	6290	0.8	1300	1460	1390	1570	1.3	1005	1085	1055	1145	0.9