NON-CONFIDENTIAL

Request IR-1:

With respect to DE-3 & DE-4 Section 8.0 and the NSP 2011 Load Forecast:

(a) Please provide in electronic spreadsheet format all historic data used for the econometric models.

(b) Please provide historic load data by rate class since 1994 on a monthly basis.

(c) Please provide in electronic spreadsheet format full information for constructed data such as (but not limited to) AIDX and HDD. Also provide full data for all components used to construct such variables.

(d) Provide data sources and memos associated with developing the historic data including but not limited to assumptions such as electric space heat fractions.

Response IR-1:

a) Please refer to Attachment 1. These are the data files used to perform regression analysis using Forecast Pro.

b) Please refer to Attachment 2. The earliest monthly data available is since 1996.

c) Please refer to Attachment 3.

d) Please refer to Attachment 4. Data sources for electric space heat saturation in Nova Scotia include Statistics Canada, the NSPI online advisory panel, and other NSPI surveys performed by a research agency. Data from wiring inspections is used to determine the types of heating systems in new home construction.

Table: **Historic Data for Residential Econometric Model**

Variable >	Domestic Sector Energy Sales	Demand-side Mgt Programs - Binary	Customers-Heating Degree Days	Real Consumer Goods Sales	Real Electricity Price	Real Retail Sales	Consumer Price Index	Disposable Income	Appliance Efficiency Index	Domestic Sector Sales - Prior Year	NS GDP	NS Housing Starts	Oil Price Real	Recessions Binary
Mnemonic >	DomEng	DSM	CUSTHDD	RRCGOODS	RREP	RRRTS	CPI	RYDS	AIDX	DomEng1	RQTOS	RIHSS	OIL	Recession
1970	1006.6	0	0	4623	9.97	4540	0.2147	1,587.9	1.155	956.0	10366	6181	19.5	0
1971	1118.3	0	172	4974	9.64	4862	0.2189	1,773.9	1.148	1006.6	10485	6957	22.1	0
1972	1287.9	0	304	5252	9.07	4986	0.2294	2,067.7	1.201	1118.3	11089	6199	22.1	0
1973	1373.4	0	231	5586	8.44	5143	0.2477	2,380.6	1.281	1287.9	11778	9716	24.0	0
1974	1572.2	0	334	5946	7.28	5509	0.2721	2,854.3	1.344	1373.4	12323	7623	25.9	0
1975	1753.9	0	540	6025	9.11	5655	0.2996	3,324.1	1.417	1572.2	12732	7191	26.4	0
1976	1860.8	0	838	6130	9.24	5785	0.3248	3,721.8	1.483	1753.9	13081	8684	28.4	0
1977	1846.3	0	923	6189	12.46	5731	0.3498	4,179.3	1.496	1860.8	13436	7495	30.8	0
1978	1826.7	0	950	6528	12.95	6158	0.3768	4,713.3	1.506	1846.3	14146	4853	33.3	0
1979	1867.6	0	996	6785	13.50	6448	0.4103	5,278.4	1.548	1826.7	14379	4538	34.3	0
1980	1904.1	0	1100	6636	12.96	6072	0.4538	5,759.4	1.598	1867.6	14831	3895	37.3	0
1981	1951.8	0	912	6564	11.58	6273	0.5078	6,899.5	1.602	1904.1	15038	3715	48.1	0
1982	2035.2	0	1088	6432	10.80	6133	0.5556	7,714.3	1.623	1951.8	14964	3691	53.5	1
1983	2101.7	0	1040	6680	12.89	6602	0.5911	8,186.6	1.641	2035.2	15405	5697	56.6	1
1984	2308.0	0	1264	7225	12.42	7255	0.6173	8,916.2	1.690	2101.7	16274	4598	57.0	0
1985	2469.9	0	1670	7489	11.77	7866	0.6448	9,713.4	1.684	2308.0	16982	6923	59.4	0
1986	2657.0	0	2014	7596	11.30	7984	0.6653	10,147.9	1.730	2469.9	17495	7571	47.0	0
1987	2808.4	0	2317	7706	11.03	8409	0.6880	10,830.1	1.726	2657.0	17841	6460	41.2	0
1988	3066.8	0	2664	7919	10.26	8767	0.7118	11,678.3	1.781	2808.4	18320	5478	40.2	0
1989	3209.5	0	3043	7897	10.36	8631	0.7440	12,678.5	1.805	3066.8	18544	5359	37.8	0
1990	3357.8	0	2992	7830	10.27	8221	0.7818	13,286.7	1.826	3209.5	18778	5560	43.3	1
1991	3338.1	0	3220	7417	10.63	7313	0.8292	13,758.2	1.823	3357.8	18738	5173	47.1	1
1992	3499.3	0	3677	7451	10.80	7655	0.8347	14,107.5	1.825	3338.1	18820	4673	43.7	0
1993	3506.9	0	3709	7539	11.77	7933	0.8450	14,437.4	1.798	3499.3	18867	4282	43.2	0
1994	3498.3	0	3567	7556	11.90	8027	0.8545	14,492.5	1.784	3506.9	19069	4748	40.2	0
1995	3462.9	0	3587	7483	11.74	7845	0.8662	14,801.5	1.768	3498.3	19455	4168	39.0	0
1996	3564.6	0	3603	7552	12.02	8456	0.8816	14,807.8	1.751	3462.9	19490	4059	43.9	0
1997	3594.8	0	3735	7815	11.73	8625	0.8999	15,364.5	1.748	3564.6	20027	3813	47.8	0
1998	3524.4	0	3380	8061	11.72	8949	0.9055	16,040.2	1.728	3594.8	20772	3137	41.1	0
1999	3512.0	0	3253	8442	12.17	9354	0.9210	16,819.4	1.694	3610.9	21971	4250	41.6	0
2000	3672.1	0	3628	8647	11.68	9396	0.9532	17,520.9	1.676	3626.3	22729	4432	60.2	0
2001	3741.2	0	3739	8684	11.42	9556	0.9708	18,118.7	1.664	3738.8	23531	4092	56.1	0
2002	3828.9	0	4030	8916	11.11	9840	0.9999	18,671.0	1.647	3785.5	24509	4970	52.2	0
2003	4010.5	0	4239	9023	11.01	9685	1.0341	19,198.8	1.636	3858.4	24955	5096	62.2	0
2004	4113.5	0	4531	9148	10.78	9786	1.0527	20,083.1	1.613	3996.3	25250	4717	65.0	0
2005	4114.3	0	4268	9265	11.21	9731	1.0818	20,974.9	1.595	4060.1	25593	4775	77.3	0

Variable >	Domestic Sector Energy Sales	Demand-side Mgt Programs - Binary	Customers-Heating Degree Days	Real Consumer Goods Sales	Real Electricity Price	Real Retail Sales	Consumer Price Index	Disposable Income	Appliance Efficiency Index	Domestic Sector Sales - Prior Year	NS GDP	NS Housing Starts	Oil Price Real	Recessions Binary
Mnemonic >	DomEng	DSM	CUSTHDD	RRCGOODS	RREP	RRRTS	CPI	RYDS	AIDX	DomEng1	RQTOS	RIHSS	OIL	Recession
2006	3979.4	0	3791	9400	11.55	10089	1.1043	21,893.3	1.578	4133.5	25837	4896	79.6	0
2007	4218.2	0	4693	9579	10.98	10326	1.1249	22,805.7	1.556	4108.4	26231	4750	74.7	0
2008	4254.8	1	4640	9868	11.20	10435	1.1585	23,891.5	1.512	4175.3	26865	3982	91.8	1
2009	4318.2	1	4941	10014	12.42	10458	1.1573	24,501.6	1.514	4221.8	26741	3438	75.0	1
2010	4254.0	1	4295	10342	11.59	10778	1.1876	25,222.8	1.492	4282.0	27536	3769	72.8	1
2011		1	4986	10428	11.99	10753	1.2211	25,981.5	1.471	4394.0	28034	3308	73.1	0
2012		1	5112	10599	13.30	10887	1.2446	26,941.9	1.452	4418.9	28575	3186	74.7	0
2013		1	5223	10734	14.19	11025	1.2689	27,833.9	1.434	4486.8	29116	3105	80.7	0
2014		1	5317	10829	14.05	11122	1.2905	28,498.4	1.418	4546.1	29574	3025	80.9	0
2015		1	5405	10877	13.74	11171	1.3160	29,273.9	1.404	4606.5	29984	3076	83.5	0
2016		1	5498	10922	13.61	11227	1.3425	29,956.9	1.391	4682.2	30154	3061	84.9	0
2017		1	5595	10936	13.68	11249	1.3696	30,638.8	1.380	4739.4	30473	2986	86.2	0
2018		1	5692	10949	14.08	11267	1.3974	31,349.0	1.370	4792.8	30795	2865	87.3	0
2019		1	5786	10947	13.82	11256	1.4258	32,079.0	1.363	4849.3	31136	2734	88.0	0
2020		1	5880	10935	13.87	11231	1.4548	32,812.9	1.357	4897.4	31325	2605	88.9	0
2021		1	5976	10921	13.91	11203	1.4846	33,571.9	1.351	4930.3	31436	2500	90.3	0
2022		1	6073	10904	13.97	11172	1.5148	34,357.3	1.347	4958.5	31676	2322	91.1	0
2023		1	6171	10887	13.65	11139	1.5455	35,166.7	1.343	4991.9	31919	2112	91.9	0
2024		1	6271	10866	13.78	11101	1.5767	35,988.0	1.340	5025.0	32206	1973	92.5	0
2025		1	6371	10843	14.04	11058	1.6084	36,825.4	1.338	5058.5	32434	1677	93.2	0
2026		1	6470	10817	14.07	11188	1.6406	37,659.8	1.292	5092.1	32663	1379	93.9	0

Table: **Historic Data for Commercial Econometric Model**

Variable >	NS GDP	Domestic Sector Energy Sales	Average Commercial Electricity Price	Commercial Sector Energy Sales	Commercial Sector Sales Weather-adjusted	Commercial Sales Weather-adjusted, Prior Year	Consumers Goods Sales	Retail Sales	Consumers Goods Sales Real	Retail Sales Real	Disposable Income Real	Heating Degree-days	Commercial Sales, Prior Year	GDP Service Producing Industries	Investment in Non-Res, Non-energy, Business	Investment Non-Residential Construction	NS CPI	Real Federal Income Taxes Collected	Real Provincial Income Taxes Collected	Permanent Real PDI
Mnemonic >	RQTOS	DomEng	ePrice	ComEng	ComEngWA	ComEngWA1	RCGOODS	RRTS	RRCGOODS	RRetail	R_RYDS	HDD	ComEng1	RQSRS	RINNRGBS	RINRBGS	CPI	RRTPYFS	RRTPYPS	RYDPERMS
1979	14518	1867.6	12.99	1660.8	1660.8	*1650.8*	2758	2645	6717	6448	12520	4059	1633.0	10606.5	677.8	1600.5	0.41	1057	690	10,675.4
1980	14998	1904.1	12.80	1706.7	1706.7	1660.8	2989	2755	6610	6072	12346	4485	1660.8	10730.1	708.2	1652.4	0.45	1089	753	11,024.2
1981	15038	1951.8	12.17	1751.8	1757.5	1706.7	3333	3178	6564	6273	13627	3976	1706.7	11097.9	590.1	1651.7	0.51	1108	632	11,373.0
1982	14964	2035.2	11.14	1781.8	1784.2	1757.5	3574	3400	6432	6133	13886	4273	1751.8	11160.6	385.1	1900.6	0.56	1137	643	11,721.8
1983	15405	2101.7	10.83	1811.5	1836.1	1784.2	3948	3894	6680	6602	13860	3887	1781.8	11373.3	239.3	2355.8	0.59	1195	716	12,070.6
1984	16274	2308.0	13.15	1881.9	1890.5	1836.1	4460	4469	7225	7255	14449	4031	1811.5	11876.8	479.2	2198.1	0.62	1231	768	12,419.4
1985	16982	2469.9	12.67	1992.5	1988.6	1890.5	4829	5060	7489	7866	15073	4395	1921.9	12468.6	615.3	1973.2	0.64	1347	819	12,768.2
1986	17495	2657.0	12.25	2064.5	2049.6	1988.6	5053	5300	7596	7984	15255	4383	1972.5	12849.4	635.8	1627.0	0.67	1557	897	13,117.0
1987	17841	2808.4	11.79	2183.3	2179.1	2049.6	5302	5772	7706	8409	15744	4281	2044.5	13255.1	687.9	1367.6	0.69	1704	981	13,523.2
1988	18320	3066.8	11.18	2326.3	2322.9	2179.1	5637	6227	7919	8767	16,404	4292	2183.3	13719.5	762.5	1632.8	0.71	1733	1038	13,881.7
1989	18544	3209.5	11.13	2454.4	2453.0	2322.9	5877	6407	7897	8631	17,036	4400	2326.3	13914.1	858.0	1720.5	0.74	1779	997	14,346.4
1990	18778	3357.8	10.83	2541.2	2538.4	2453.0	6121	6412	7830	8221	16,991	3981	2454.4	14066.5	852.1	1732.1	0.78	1991	1206	14,652.0
1991	18738	3338.1	11.51	2543.9	2559.3	2538.4	6151	6064	7417	7313	16,583	4047	2541.2	14028.3	827.1	1583.2	0.83	1908	1159	14,852.5
1992	18820	3499.3	11.54	2617.9	2602.1	2559.3	6218	6389	7451	7655	16,892	4453	2543.9	14243.3	347.4	1315.3	0.83	1926	1107	14,856.4
1993	18867	3506.9	11.82	2638.3	2624.8	2602.1	6370	6704	7539	7933	17,077	4377	2617.9	14412.5	294.1	1196.1	0.85	1809	1042	14,934.6
1994	19069	3498.3	11.95	2660.2	2664.6	2624.8	6455	6859	7556	8027	16,959	4154	2638.3	14565.2	390.6	1068.1	0.85	1766	1114	14,994.2
1995	19455	3462.9	11.79	2676.0	2686.7	2664.6	6482	6795	7483	7845	17,085	4152	2660.2	14800.0	479.3	1167.6	0.87	1846	1081	15,109.3
1996	19490	3564.6	11.46	2712.9	2710.7	2686.7	6658	7455	7552	8456	16,796	4154	2676.0	14853.2	519.4	1041.3	0.88	1879	1139	15,086.4
1997	20027	3594.8	10.36	2725.3	2730.4	2710.7	7032	7762	7815	8625	17,070	4283	2712.9	15252.2	469.0	1069.3	0.90	1944	1134	15,136.4
1998	20772	3524.4	10.33	2702.4	2724.6	2730.4	7299	8103	8061	8949	17,707	3829	2725.3	15713.2	334.3	2134.2	0.91	2143	1227	15,383.7
1999	21971	3512.0	10.70	2766.8	2805.0	2724.6	7775	8615	8442	9354	18,250	3610	2724.9	16464.2	452.3	2721.4	0.92	2208	1329	15,812.7
2000	22729	3738.8	10.30	2829.4	2852.6	2805.0	8242	8956	8647	9396	18,374	3909	2796.5	16954.3	442.2	1740.7	0.95	2233	1372	16,326.3
2001	23531	3785.5	10.12	2959.3	2966.6	2852.6	8431	9278	8684	9556	18,652	3911	2846.7	17481.7	478.1	1962.5	0.97	2261	1365	16,732.4
2002	24509	3858.4	9.80	2996.5	3002.9	2966.6	8916	9840	8916	9840	18,668	4075	2970.8	18129.3	371.9	1791.3	1.00	2090	1413	17,085.1
2003	24955	3996.3	9.69	3090.6	3083.0	3002.9	9329	10015	9023	9685	18,562	4146	3004.1	18530.2	395.0	1804.6	1.03	2058	1376	17,338.0
2004	25250	4060.1	9.38	3187.8	3173.3	3083.0	9668	10297	9148	9786	19,074	4295	3087.8	18784.6	427.2	1796.3	1.05	2070	1364	17,723.5
2005	25593	4133.5	9.41	3225.1	3229.8	3173.3	10129	10620	9265	9731	19,385	3936	3177.1	19159.3	409.2	1550.1	1.08	2128	1425	18,163.2
2006	25837	4108.4	9.69	3210.8	3245.4	3229.8	10523	11290	9400	10089	19,833	3422	3239.5	19735.4	475.2	1582.4	1.10	2067	1450	18,711.9
2007	26231	4175.3	9.82	3342.9	3344.7	3245.4	10788	11744	9579	10326	20,376	4142	3244.2	20044.3	621.1	1365.6	1.12	2155	1551	19,276.6
2008	26865	4221.8	11.07	3346.9	3336.4	3344.7	11076	12298	9868	10435	20,663	3990	3331.8	20470.8	963.5	1828.5	1.16	2088	1471	19,865.4
2009	26741	4318.2	12.18	3299.0	3341.1	3336.4	11410	12842	10014	10458	21,187	4207	3327.3	20696.7	1068.4	2333.2	1.16	1933	1390	20,336.4
2010	27536	4258.3	12.18	3365.5	3353.0	3341.1	11682	13327	10342	10778	21,581	3616	3311.0	21248.3	1077.4	2358.0	1.18	1906	1356	20,942.3
2011	28034	4477.1	12.18		3429.5	3353.0	12014	13877	10428	10753	21,677	4010	3355.8	21660.5	1061.9	2303.3	1.21	2035	1410	21,365.6
2012	28575	4520.0	12.18		3483.9	3429.5	12375	14431	10599	10887	22,069	4010	3418.6	22021.5	1152.8	2277.9	1.23	2095	1451	21,795.5
2013	29116	4551.6	12.18		3528.1	3483.9	12717	14941	10734	11025	22,361	4010	3475.9	22424.3	1165.7	2233.5	1.26	2142	1488	22,167.7
2014	29574	4598.8	12.18		3571.4	3528.1	13033	15429	10829	11122	22,558	4010	3524.4	22788.3	1023.7	2196.2	1.28	2183	1519	22,476.3
2015	29984	4651.9	12.18		3615.4	3571.4	13337	15922	10877	11171	22,691	4010	3570.0	23151.7	977.1	2148.7	1.31	2213	1544	22,797.3
2016	30154	4703.8	12.18		3656.2	3615.4	13630	16419	10922	11227	22,763	4010	3613.8	23440.8	997.2	1915.7	1.34	2244	1567	23,120.4
2017	30473	4748.0	12.18		3691.9	3656.2	13929	16933	10936	11249	22,820	4010	3650.5	23682.6	1014.8	1915.9	1.37	2273	1589	23,370.2
2018	30795	4779.6	12.18		3722.1	3691.9	14248	17475	10949	11267	22,884	4010	3685.2	23929.8	1028.3	1915.6	1.39	2303	1611	23,555.2
2019	31136	4822.3	12.18		3752.9	3722.1	14577	18032	10947	11256	22,951	4010	3715.4	24136.5	1040.6	1914.9	1.42	2333	1632	23,709.4
2020	31325	4860.7	12.18		3783.1	3752.9	14921	18611	10935	11231	23,007	4010	3747.5	24365.8	1054.6	1933.6	1.45	2362	1652	23,848.9
2021	31436	4897.8	12.18		3813.2	3783.1	15285	19226	10921	11203	23,068	4010	3775.7	24610.8	1067.5	1938.8	1.48	2392	1673	23,980.4
2022	31676	4934.1	12.18		3841.8	3813.2	15659	19862	10904	11172	23,137	4010	3800.4	24814.3	1079.5	1946.7	1.51	2424	1695	24,108.2
2023	31919	4981.2	12.18		3873.7	3841.8	16040	20513	10887	11139	23,211	4010	3826.4	25023.7	1091.7	1956.4	1.54	2455	1717	24,237.0
2024	32206	5020.9	12.18		3905.4	3873.7	16432	21152	10866	11101	23,283	4010	3856.0	25270.9	1103.0	1960.1	1.57	2488	1740	24,367.7
2025	32434	5053.4	12.18		3937.1	3905.4	16815	21814	10843	11058	23,355	4010	3885.8	25494.3	1114.4	1964.9	1.60	2520	1762	24,497.6
2026	32663	5086.0	12.18		3968.8	3937.1	17202	22520	10817	11012	23,428	4010	3915.7	25723.3	1124.8	1970.3	1.64	2551	1783	24,620.6

Table: Historic Data for Industrial Econometric Model

Year	Small Industrial Sales SM_IND	Medium Industrial Sales MED_IND	Small + Medium Sales IND	NS GDP RQTOS	Migration from Medium to Large, binary MIGRATE	GDP Forestry GDPFOR	GDP Goods Producing Industry RQGDS	GDP Manufacturing Output RQMFS	Manufacturing Employment RLEMMFS	Investment Non-Residential Construction RRINRBS
1978	36.1	314.5	350.6	14,146	0	84	4,235	1839	30.1	895.0
1979	48.4	349.4	397.8	14,379	0	87	4,085	1892	30.1	996.9
1980	54.9	371.5	426.4	14,831	0	92	4,288	1904	30.1	1207.3
1981	74.0	355.7	429.7	15,038	0	85	4,280	1758	32.0	1139.8
1982	75.3	356.0	431.3	14,964	0	84	4,123	1519	34.0	1411.0
1983	84.4	371.9	456.3	15,405	0	71	4,405	1571	35.9	1892.4
1984	93.5	379.2	472.7	16,274	0	108	4,909	1856	37.9	1699.1
1985	100.8	371.0	471.8	16,982	0	127	5,090	1837	39.9	1488.0
1986	107.4	352.0	459.4	17,495	0	112	5,078	1849	41.8	1147.8
1987	122.7	365.0	487.7	17,841	0	124	4,971	1849	43.3	868.3
1988	129.3	399.9	529.2	18,320	0	151	5,007	1776	46.7	1000.6
1989	137.1	410.7	547.8	18,544	0	135	5,071	1825	47.2	1067.9
1990	142.1	399.3	541.4	18,778	1	124	5,133	1756	43.4	1151.3
1991	142.7	394.9	537.5	18,738	1	93	5,022	1916	42.5	1062.2
1992	140.9	388.0	528.9	18,820	1	93	5,036	1902	39.3	801.7
1993	136.5	381.3	517.8	18,867	1	78	4,852	1890	36.7	578.4
1994	139.3	389.0	528.3	19,069	1	82	4,890	1877	36.0	486.5
1995	147.5	382.1	529.6	19,455	1	100	4,966	2020	40.3	576.5
1996	153.0	377.9	530.9	19,490	1	73	4,851	2015	37.2	630.6
1997	168.4	400.8	569.2	20,027	0	72	4,778	2154	37.5	636.1
1998	192.5	414.1	606.6	20,772	0	48	5,084	2216	41.0	1811.8
1999	216.1	453.9	670.0	21,971	0	121	5,516	2412	43.9	2397.9
2000	213.9	489.6	703.5	22,729	0	129	5,745	2408	42.1	1429.5
2001	222.4	517.9	740.3	23,531	0	152	6,034	2421	42.1	1509.0
2002	235.4	531.4	766.8	24,509	0	164	6,379	2662	43.4	1379.3
2003	238.3	557.6	795.9	24,955	0	151	6,447	2629	45.0	1356.9
2004	239.2	567.4	806.6	25,250	0	140	6,545	2848	43.7	1298.0
2005	241.1	557.1	798.2	25,593	0	135	6,490	2856	40.3	1069.6
2006	239.9	567.3	807.2	25,837	0	96	6,194	2761	39.1	1049.2
2007	248.1	568.0	816.1	26,231	0	111	6,260	2883	41.3	914.3
2008	254.5	539.4	793.9	26,865	0	107	6,483	2861	39.1	1258.8
2009	252.6	492.0	744.6	26,741	0	91	6,231	2640	34.0	1664.2
2010	253.7	492.8	746.6	27,536	0	92	6,474	2714	33.6	1620.9
2011				28,034	0	96	6,560	2837	34.6	1582.1
2012				28,575	0	101	6,741	3135	34.9	1688.0
2013				29,116	0	106	6,878	3270	34.9	1654.6
2014				29,574	0	112	6,972	3337	34.6	1625.1
2015				29,984	0	117	7,019	3397	34.9	1586.4
2016				30,154	0	122	6,899	3458	34.3	1278.0
2017				30,473	0	125	6,978	3519	34.1	1277.4
2018				30,795	0	125	7,053	3596	34.0	1275.7
2019				31,136	0	125	7,189	3670	33.8	1274.3
2020				31,325	0	125	7,149	3743	33.8	1299.2
2021				31,436	0	126	7,014	3810	33.9	1306.8
2022				31,676	0	126	7,051	3881	33.8	1317.6
2023				31,919	0	127	7,085	3946	33.7	1331.1
2024				32,206	0	127	7,126	4033	33.6	1336.8
2025				32,434	0	127	7,130	4126	33.4	1344.1

Monthly Sales

Nova Scotia Power Inc.

Month	Residential	Res TOD	Small General	General Demand	Large General	Small Industrial	Medium Industrial	Large Industrial - Firm and Interruptible	Surplus Power Interruptible	Time of Day Industrial Expansion	RTP	Industrial Expansion Interruptible	Extra Large Industrial 2P-RTP	Gen. Replacement / Load Follow	Mersey Additional Energy	Mersey Basic Block	Municipal	Unmetered
Jan-96	374,570	0	9,091	198,889	32,822	13,559	32,287	125,856	0	0	0	0	0	18,654	0	55,925	26,349	7,485
Feb-96	404,507	0	10,150	206,076	29,964	13,271	33,927	120,641	0	0	0	0	0	14,696	0	51,005	23,754	7,335
Mar-96	365,267	0	9,006	188,443	28,143	13,152	31,232	110,104	0	0	0	0	0	16,292	0	53,542	22,648	7,938
Apr-96	341,532	0	8,390	180,870	30,438	11,773	30,560	106,810	0	0	0	0	0	17,253	0	51,975	22,794	7,192
May-96	311,487	0	7,599	168,775	28,227	12,940	31,511	130,235	0	0	0	0	0	18,063	0	49,660	16,999	7,335
Jun-96	263,266	0	6,663	159,351	25,859	12,022	31,662	122,760	0	0	0	0	0	16,787	0	50,288	15,689	7,670
Jul-96	222,470	0	6,569	151,649	31,964	12,376	30,867	111,558	0	0	0	0	0	17,820	0	55,194	18,891	7,817
Aug-96	208,148	0	6,641	160,760	30,535	15,011	30,915	111,870	0	0	0	0	0	17,042	0	53,693	17,587	7,576
Sep-96	208,805	0	6,651	155,879	29,078	11,651	28,865	115,111	0	0	0	0	0	18,947	0	50,058	18,528	7,548
Oct-96	219,496	0	6,217	154,989	28,482	13,718	31,933	110,397	0	0	0	0	0	17,569	0	52,665	20,569	7,614
Nov-96	256,705	0	6,522	166,657	26,854	11,221	32,223	127,173	0	0	0	0	0	16,231	0	52,756	21,481	7,475
Dec-96	292,233	0	7,296	167,606	30,710	12,295	31,963	101,939	0	0	0	0	0	16,732	0	46,143	24,363	7,468
Jan-97	364,662	0	8,683	198,762	32,202	14,956	33,440	122,290	0	0	0	0	0	17,039	0	49,727	26,688	7,449
Feb-97	400,939	0	9,182	200,593	28,463	13,771	34,923	106,816	0	0	0	0	0	13,936	0	46,409	23,803	7,515
Mar-97	359,575	0	8,856	184,959	31,395	15,277	30,981	111,194	0	0	0	0	0	19,485	0	52,835	26,114	7,213
Apr-97	365,124	0	8,621	191,699	29,019	12,925	32,926	105,701	0	0	0	0	0	16,244	0	54,927	20,829	7,680
May-97	331,977	0	7,529	176,983	27,873	15,460	31,089	131,839	0	0	0	0	0	19,249	0	53,631	18,175	7,677
Jun-97	265,739	0	6,658	155,582	29,384	10,265	33,169	115,395	16,517	0	0	0	0	19,291	0	53,441	17,996	7,349
Jul-97	226,659	0	6,436	154,214	32,913	14,315	38,101	106,340	2,106	452	0	0	0	25,000	0	54,534	18,471	7,609
Aug-97	210,470	0	6,735	156,773	28,792	13,006	34,683	104,711	489	709	0	0	0	22,808	0	52,525	17,269	7,149
Sep-97	202,636	0	6,683	156,671	31,216	14,610	31,026	112,473	11,214	635	0	0	0	28,306	0	46,715	19,410	8,065
Oct-97	219,432	0	6,720	161,738	28,320	13,833	33,958	112,154	18,483	639	0	0	0	23,313	0	50,851	20,752	7,833
Nov-97	253,008	0	7,791	157,549	26,914	14,997	33,256	105,213	17,579	743	0	0	0	18,480	0	52,617	21,042	7,438
Dec-97	295,321	0	7,636	166,386	32,423	14,947	33,284	102,387	11,778	790	0	0	0	18,830	0	47,986	27,342	7,445
Jan-98	372,498	23	9,577	206,858	31,626	17,254	35,233	109,357	18,174	799	0	0	0	18,222	33,972	15,833	26,027	6,666
Feb-98	375,938	102	8,458	185,322	28,630	15,843	34,283	108,958	8,788	642	0	0	0	16,501	34,788	15,833	22,859	8,242
Mar-98	352,371	138	8,743	195,523	30,797	16,094	32,929	108,736	20,873	668	0	0	0	29,804	33,892	15,833	25,093	7,369
Apr-98	352,345	76	8,234	191,497	29,187	15,763	35,185	114,116	20,056	0	0	0	0	20,977	31,292	15,833	20,316	8,032
May-98	299,349	55	7,508	163,747	26,597	15,898	35,354	148,338	24,564	0	0	0	0	21,390	35,910	15,833	15,730	7,650
Jun-98	248,389	108	6,067	147,706	28,168	14,908	33,097	108,053	21,802	0	0	44,413	0	24,609	37,247	15,833	20,327	7,531
Jul-98	221,571	26	6,324	165,784	27,438	16,432	35,027	109,740	8,666	0	0	48,036	0	23,854	35,767	15,833	20,588	7,392
Aug-98	216,645	46	6,810	171,705	32,718	16,407	34,303	107,113	5,095	0	0	55,524	0	23,247	36,488	15,833	17,938	7,495
Sep-98	210,676	40	6,962	153,442	27,879	16,658	36,837	107,443	22,540	0	0	52,802	0	27,066	32,881	15,833	18,375	7,036
Oct-98	216,156	71	6,454	156,006	19,349	14,343	32,018	46,468	19,806	0	0	136,683	0	30,637	36,502	15,833	14,915	7,576
Nov-98	261,793	107	6,869	163,152	27,537	17,287	35,975	107,954	8,688	0	0	60,877	0	29,554	37,171	15,833	14,733	7,406
Dec-98	306,123	157	8,005	173,781	26,870	15,517	35,056	98,400	17,844	0	0	52,118	0	22,072	28,440	15,833	16,412	8,185
Jan-99	368,694	347	9,487	207,462	29,244	19,928	37,309	107,219	8,600	0	0	67,831	0	23,654	34,903	15,833	18,038	7,730
Feb-99	387,056	274	9,983	190,760	25,927	16,293	34,797	98,300	22,719	0	0	59,437	0	22,029	31,158	15,833	15,144	7,854
Mar-99	353,726	379	9,782	193,358	28,412	18,883	36,067	103,673	8,654	0	0	69,595	0	29,060	34,277	15,833	16,479	7,497
Apr-99	363,781	333	9,492	193,985	26,255	18,304	39,423	97,687	4,590	0	0	70,603	0	29,327	33,306	15,833	13,410	7,307
May-99	292,069	279	7,959	168,495	27,324	18,265	36,445	101,327	23,695	0	0	77,738	0	30,851	37,863	15,833	11,806	7,468
Jun-99	255,302	204	7,107	159,998	28,478	15,499	35,773	104,098	18,565	0	0	79,033	0	32,670	5,839	15,833	11,133	7,594
Jul-99	214,712	78	7,484	177,424	30,496	20,300	38,550	100,755	22,530	0	0	71,049	0	33,564	36,259	15,833	11,984	7,762
Aug-99	226,001	179	8,116	173,273	31,141	17,138	43,009	112,329	3,021	0	0	64,087	0	31,600	33,449	15,833	11,329	7,725
Sep-99	218,709	179	8,279	175,953	30,964	20,224	38,198	105,381	19,330	0	0	73,269	0	30,050	12,760	15,833	12,199	8,014
Oct-99	225,711	210	7,298	166,901	26,923	16,455	38,283	105,134	20,413	0	0	74,640	0	40,374	35,023	15,833	12,947	7,523
Nov-99	258,228	339	8,695	172,765	27,401	18,362	38,715	102,244	22,131	0	0	73,531	0	40,187	36,403	15,833	15,383	8,049
Dec-99	280,932	435	8,200	165,313	35,788	16,492	37,292	114,499	13,184	0	0	66,966	0	35,816	0	15,833	16,087	7,554
Jan-00	368,542	947	10,364	209,327	30,096	20,589	39,949	132,869	1,900	0	0	81,453	0	28,250	0	15,833	17,736	7,952
Feb-00	426,063	1,007	11,526	199,797	28,830	18,525	39,279	126,989	1,926	0	0	80,051	0	23,839	0	15,833	16,688	7,782
Mar-00	369,323	1,185	10,888	204,257	29,620	19,497	39,455	128,897	19,587	0	0	84,911	0	30,078	0	15,833	15,384	8,020
Apr-00	344,936	701	9,446	185,641	26,824	16,880	41,212	133,163	12,104	0	0	88,494	0	28,520	0	15,833	13,094	7,789
May-00	309,333	938	9,034	175,572	28,395	17,423	39,390	136,509	1,385	0	0	86,636	0	37,348	0	15,833	12,531	8,170
Jun-00	283,230	590	8,317	168,601	28,888	16,162	42,880	132,278	0	0	0	71,708	0	39,426	0	15,833	11,406	7,792
Jul-00	237,230	472	8,497	177,617	30,716	18,669	43,331	130,686	0	0	0	88,920	0	30,245	0	15,833	11,888	7,742
Aug-00	235,108	370	8,990	169,916	32,191	16,770	41,174	142,504	0	0	0	90,274	0	30,718	0	15,833	12,423	7,900
Sep-00	217,640	304	8,462	174,332	29,243	18,542	42,760	136,362	0	0	0	90,583	0	27,715	0	15,833	12,080	8,095
Oct-00	237,248	461	8,562	166,667	28,941	15,895	38,589	138,192	0	0	0	88,217	0	33,139	0	15,833	13,761	6,905
Nov-00	254,454	708	8,353	179,695	28,136	18,505	42,806	133,095	0	0	0	82,812	0	29,772	0	15,833	14,665	9,097
Dec-00	314,951	1,103	9,207	179,963	29,296	16,434	38,775	127,451	0	0	0	84,834	0	29,081	0	15,833	17,777	7,434
Jan-01	390,469	1,885	10,860	229,434	30,867	20,841	43,057	122,728	0	0	7,634	99,777	0	32,160	0	15,833	18,227	8,407
Feb-01	406,775	2,303	10,099	214,361	27,786	16,728	41,968	121,911	0	0	0	84,023	0	24,683	0	15,833	16,848	7,671
Mar-01	416,180	2,881	10,183	221,159	30,135	20,119	40,181	129,447	0	0	0	97,501	0	31,872	0	15,833	16,819	8,297

Month	Residential	Res TOD	Small General	General Demand	Large General	Small Industrial	Medium Industrial	Large Industrial - Firm and Interruptible	Surplus Power Interruptible	Time of Day Industrial Expansion	RTP	Industrial Expansion Interruptible	Extra Large Industrial 2P-RTP	Gen. Replacement / Load Follow	Mersey Additional Energy	Mersey Basic Block	Municipal	Unmetered
Apr-01	356,976	2,644	8,653	197,018	27,989	14,055	42,242	100,053	0	0	23,162	79,511	0	26,270	0	15,833	14,402	7,746
May-01	322,952	2,220	7,682	188,464	28,412	19,275	41,208	115,930	0	0	10,186	74,024	0	30,763	0	15,833	12,204	8,206
Jun-01	276,943	1,817	6,916	174,910	29,601	17,251	44,112	119,411	0	0	8,280	89,778	0	32,726	0	15,833	11,565	7,946
Jul-01	238,371	1,250	7,134	181,054	30,547	19,872	45,174	119,483	0	0	8,400	96,024	0	34,325	0	15,833	12,155	8,664
Aug-01	234,957	1,150	7,392	185,443	33,451	18,874	42,612	123,777	0	0	9,315	92,959	0	33,551	0	15,833	12,951	7,625
Sep-01	227,201	1,086	7,587	185,985	30,226	20,984	45,286	102,751	0	0	7,921	92,204	0	32,628	0	15,833	12,409	8,124
Oct-01	227,216	1,370	6,956	172,609	29,735	16,682	42,801	120,881	0	0	6,072	100,130	0	37,319	0	15,833	13,675	8,083
Nov-01	252,476	2,105	7,245	188,625	28,358	19,967	46,063	110,269	0	0	7,594	78,616	0	31,696	0	15,833	15,168	8,276
Dec-01	299,953	3,366	8,110	186,029	29,008	17,713	43,211	84,240	0	0	6,046	94,501	0	35,875	0	15,833	16,632	7,982
Jan-02	372,059	4,722	9,936	212,353	30,556	21,668	42,060	105,810	0	0	4,846	73,063	0	35,518	0	15,833	18,333	8,252
Feb-02	414,589	6,178	10,542	220,367	27,527	18,702	39,625	100,782	0	0	5,094	73,541	0	31,964	0	15,833	16,710	8,062
Mar-02	366,450	5,350	10,021	204,393	30,163	20,156	40,163	110,335	0	0	6,524	80,332	0	33,913	0	15,833	16,894	8,254
Apr-02	348,174	5,260	8,966	200,266	28,243	17,228	44,142	107,921	0	0	7,854	76,994	0	31,399	0	15,833	14,488	8,184
May-02	342,466	4,429	9,178	200,062	28,923	21,353	46,350	100,297	0	0	5,260	75,636	0	37,315	0	15,833	12,352	8,341
Jun-02	294,084	3,577	7,711	179,846	28,005	18,912	44,807	109,794	0	0	10,905	60,955	0	39,092	0	15,833	11,769	8,147
Jul-02	244,161	2,159	7,475	181,712	31,301	21,091	44,638	111,523	0	0	6,273	77,378	0	47,657	0	15,833	12,645	8,401
Aug-02	240,894	1,911	8,030	186,809	33,302	19,199	45,858	121,941	0	0	6,412	90,301	0	48,375	0	15,833	13,143	8,007
Sep-02	233,359	1,671	8,158	189,920	30,483	21,586	46,121	118,759	0	0	7,978	91,605	0	43,609	0	15,833	12,931	8,391
Oct-02	240,333	2,114	7,440	177,067	29,801	16,917	44,853	117,469	0	0	7,811	89,616	0	34,565	0	15,833	14,680	8,669
Nov-02	280,843	3,332	8,107	197,810	29,489	20,276	47,510	120,625	0	0	9,193	86,577	0	30,743	0	15,833	16,162	8,590
Dec-02	337,169	5,016	8,882	199,002	30,441	18,315	45,251	104,965	0	0	6,803	92,457	0	29,804	0	15,833	18,155	8,208
Jan-03	409,775	6,426	11,161	234,794	31,956	22,488	46,631	115,152	0	0	5,866	67,931	0	31,530	0	15,833	20,107	8,386
Feb-03	452,400	7,802	11,743	237,397	29,146	19,833	48,407	106,663	0	0	8,050	84,840	0	23,709	0	15,833	17,963	8,309
Mar-03	416,453	7,505	11,597	225,657	31,340	20,972	44,928	125,160	0	0	827	96,891	0	26,143	0	15,833	18,297	8,629
Apr-03	380,582	6,694	10,196	207,898	29,404	18,072	45,225	122,219	0	0	1,212	98,633	0	25,526	0	15,833	15,393	8,397
May-03	360,923	5,251	9,538	200,561	29,693	21,085	45,887	128,261	0	0	983	105,580	0	29,048	0	15,833	13,433	8,658
Jun-03	318,290	4,121	7,850	184,841	30,221	18,492	46,524	116,433	0	0	1,228	87,002	0	36,496	0	15,833	10,434	8,426
Jul-03	257,179	2,515	7,885	189,427	34,039	23,297	46,514	130,951	0	0	2,809	98,531	0	41,501	0	15,833	13,274	8,526
Aug-03	254,478	2,145	8,121	195,570	33,495	19,227	45,331	131,786	0	0	242	107,174	0	40,363	0	15,833	13,491	8,515
Sep-03	247,551	1,912	7,999	190,444	31,069	20,799	49,609	127,629	0	0	1,077	100,707	0	33,970	0	15,833	13,150	8,670
Oct-03	251,592	2,476	7,368	185,365	31,166	17,256	46,474	126,602	0	0	1,489	107,504	0	34,790	0	15,833	14,649	8,430
Nov-03	269,751	3,330	7,498	176,457	31,051	19,683	48,191	128,765	0	0	1,709	105,832	0	31,136	0	15,833	15,857	8,697
Dec-03	314,007	5,072	8,100	188,817	32,164	17,135	43,865	116,958	0	0	172	97,512	0	30,649	0	15,833	18,084	8,461
Jan-04	406,026	7,122	13,151	237,546	34,314	23,291	48,593	106,236	0	0	3,513	123,659	0	15,455	0	15,833	21,344	8,642
Feb-04	458,802	8,899	17,294	230,683	31,121	18,961	45,082	95,721	0	0	6,642	130,231	0	14,176	0	15,833	18,599	8,399
Mar-04	424,285	8,388	17,328	227,889	35,747	22,080	45,295	84,839	0	0	1,636	166,231	0	16,578	0	15,833	18,470	8,785
Apr-04	400,716	7,657	15,603	217,800	31,533	18,886	46,560	83,190	0	0	828	161,041	0	17,411	0	15,833	15,243	8,490
May-04	367,483	5,850	14,072	193,735	31,000	20,175	45,591	84,381	0	0	2,763	168,067	0	30,260	0	15,833	13,474	9,752
Jun-04	309,386	4,485	11,401	176,281	27,876	17,512	45,661	83,181	0	0	2,135	144,754	0	24,009	0	15,833	12,395	8,546
Jul-04	266,519	3,006	12,262	190,268	34,171	22,333	49,437	88,221	0	0	2,113	171,758	0	16,322	0	15,833	13,414	8,945
Aug-04	262,028	2,525	12,407	188,657	41,479	18,144	48,003	92,496	0	0	2,200	161,704	0	18,026	0	15,833	13,868	8,478
Sep-04	257,544	2,394	12,771	192,605	33,448	21,813	50,514	89,059	0	0	1,758	158,020	0	16,834	0	15,833	13,377	8,995
Oct-04	262,593	2,840	11,657	182,326	33,730	17,557	48,238	89,226	0	0	8,180	168,545	0	24,297	0	15,833	14,676	8,587
Nov-04	280,367	4,110	12,838	186,018	32,890	19,711	47,391	81,454	0	0	8,675	160,413	0	16,478	0	15,833	16,445	8,919
Dec-04	331,992	6,218	13,895	202,544	34,139	18,714	47,036	81,300	0	0	8,183	155,405	0	12,693	0	15,833	18,646	8,522
Jan-05	422,956	8,144	21,414	231,246	35,429	23,459	47,469	81,931	0	0	18,183	138,652	0	554	15,145	15,833	20,397	9,204
Feb-05	456,282	10,712	23,873	223,119	31,639	19,515	43,760	77,019	0	0	16,904	154,333	0	374	12,174	15,833	17,523	8,577
Mar-05	408,518	8,880	23,693	210,653	34,514	21,730	42,969	84,027	0	0	20,642	162,684	0	425	15,145	15,833	18,056	9,282
Apr-05	394,451	8,711	21,603	214,118	32,716	19,023	45,947	79,284	0	0	10,061	163,959	0	2,556	14,407	15,833	14,583	8,797
May-05	372,779	6,858	19,689	187,361	32,757	20,006	45,848	83,437	0	0	32,531	148,491	0	775	15,415	15,833	13,707	9,134
Jun-05	331,020	5,574	17,310	188,386	33,454	19,171	46,761	84,525	0	0	20,296	147,609	0	59	14,407	15,833	12,341	8,750
Jul-05	279,550	3,725	17,920	187,468	36,679	22,940	47,716	82,225	0	0	20,498	155,687	0	732	15,415	15,833	13,106	9,075
Aug-05	258,232	2,876	17,189	187,126	37,810	18,448	45,866	92,778	0	0	17,294	149,606	0	1,608	15,415	15,833	17,923	9,022
Sep-05	257,806	2,735	17,941	194,008	35,840	22,287	50,970	85,543	0	0	20,753	145,078	0	1,361	14,407	15,833	13,640	9,191
Oct-05	259,104	3,058	16,272	181,299	34,652	17,321	46,633	86,986	0	0	19,246	156,141	0	2,221	15,415	15,833	14,856	8,944
Nov-05	268,377	4,527	16,927	183,182	33,274	19,333	45,420	82,631	0	0	20,348	153,597	0	2,330	14,407	15,833	15,744	9,308
Dec-05	317,670	6,718	18,371	193,307	33,998	17,876	47,711	76,290	0	0	16,941	115,323	0	(153)	15,498	15,750	18,555	8,907
Jan-06	399,960	9,713	23,776	220,577	35,303	23,191	46,621	80,944	0	0	9,834	0	27,302	(306)	15,498	15,750	18,846	9,137
Feb-06	418,662	10,754	22,301	214,369	32,364	19,058	44,554	80,940	0	0	8,168	0	19,297	461	12,474	15,750	17,980	8,888
Mar-06	402,451	10,846	24,579	214,908	35,515	21,320	45,621	88,770	0	0	9,762	0	20,701	655	15,498	15,750	18,165	9,274
Apr-06	372,592	9,897	20,774	202,164	32,564	18,375	45,261	81,872	0	0	10,999	0	20,213	966	14,490	15,750	14,948	9,070
May-06	374,179	7,088	20,245	199,915	32,157	21,128	48,021	91,859	0	0	10,798	0	21,858	4,761	15,498	15,750	14,005	9,215
Jun-06	315,045	6,090	17,166	186,965	34,581	18,905	48,735	86,825	0	0	12,604	0	19,523	637	15,498	15,750	13,037	9,039
Jul-06	269,493	4,124	17,828	193,872	38,541	23,186	48,897	87,507	0	0	10,759	0	21,282	1,171	15,498	15,750	13,947	9,404
Aug-06	261,603	3,507	17,868	193,839	37,519	20,007	49,113	95,670	0	0	12,298	0	21,105	2,299	15,498	15,750	13,630	8,980
Sep-06	255,535	3,556	17,424	188,490	34,907	21,638	48,779	89,078	0	0	11,137	0	15,390	1,915	14,490	15,750	13,788	9,394
Oct-06	259,061	4,070	16,643	182,552	34,449	17,348	47,756	82,666	0	0	12,071	0	94,015	1,749	15,498	15,750	15,149	8,985

Month	Residential	Res TOD	Small General	General Demand	Large General	Small Industrial	Medium Industrial	Large Industrial - Firm and Interruptible	Surplus Power Interruptible	Time of Day Industrial Expansion	RTP	Industrial Expansion Interruptible	Extra Large Industrial 2P-RTP	Gen. Replacement / Load Follow	Mersey Additional Energy	Mersey Basic Block	Municipal	Unmetered
Nov-06	272,662	5,776	17,084	187,394	33,697	19,714	48,161	79,820	0	0	11,981	0	113,953	2,102	14,490	15,750	15,855	9,344
Dec-06	307,836	7,791	17,762	191,305	33,982	17,923	47,417	74,709	0	0	0	0	159,336	(196)	15,498	15,750	18,625	9,016
Jan-07	396,079	11,417	23,804	223,504	34,014	23,975	47,651	81,202	0	0	0	0	170,404	136	15,498	15,750	20,474	9,585
Feb-07	461,188	14,334	26,308	239,996	35,966	20,903	48,356	76,183	0	0	0	0	131,250	998	12,474	15,750	19,344	9,059
Mar-07	447,698	14,993	27,121	228,755	31,335	21,848	44,088	80,121	0	0	0	0	177,023	2,327	15,456	15,750	18,153	9,484
Apr-07	409,400	13,327	22,698	217,071	37,606	19,146	45,829	75,227	0	0	0	0	175,364	2,932	14,490	15,750	16,358	9,353
May-07	362,623	10,672	20,953	198,802	33,997	20,909	46,727	75,097	0	0	0	0	178,461	7,909	15,498	15,750	14,259	9,642
Jun-07	309,497	8,062	17,819	193,748	33,624	19,016	46,957	81,779	0	0	0	0	156,239	(19)	14,490	15,750	13,115	9,040
Jul-07	266,265	5,448	17,854	191,361	37,995	22,497	47,104	83,339	0	0	0	0	177,205	1,145	15,498	15,750	14,329	9,614
Aug-07	251,805	4,289	17,952	195,282	38,151	19,756	49,298	91,212	0	0	0	0	176,995	312	15,498	15,750	14,324	9,032
Sep-07	250,701	4,189	17,473	190,876	34,294	22,305	49,005	87,109	0	0	0	0	168,326	(90)	14,490	15,750	13,844	9,486
Oct-07	248,307	4,642	16,634	186,388	35,568	17,826	45,322	87,546	0	0	0	0	173,580	765	15,498	15,750	15,093	8,965
Nov-07	284,909	7,239	17,649	199,166	33,195	21,117	49,583	86,892	0	0	0	0	172,903	2,045	14,532	15,750	17,093	9,568
Dec-07	344,482	10,789	19,898	205,978	34,509	18,809	48,061	78,329	0	0	0	0	145,716	1,083	15,498	15,750	20,731	9,100
Jan-08	428,927	15,427	25,171	233,461	36,256	23,822	46,457	83,976	0	0	0	0	164,946	356	15,498	15,750	20,773	9,375
Feb-08	460,070	17,131	25,307	238,354	35,408	21,501	47,334	80,207	0	0	0	0	161,296	(193)	13,482	15,750	19,213	8,704
Mar-08	430,579	16,308	25,137	218,189	33,046	22,705	45,181	81,855	0	0	0	0	180,623	650	15,456	15,750	19,770	9,654
Apr-08	395,263	15,152	22,151	216,736	33,024	19,708	45,239	80,715	0	0	0	0	165,979	136	14,490	15,750	15,754	9,165
May-08	365,846	12,181	20,631	199,814	33,713	21,912	45,640	84,563	0	0	0	0	153,443	1,249	15,498	15,750	14,386	9,645
Jun-08	304,424	9,055	17,887	187,982	33,962	19,342	46,187	85,091	0	0	0	0	165,640	(477)	14,490	15,750	13,048	9,163
Jul-08	252,974	5,940	16,118	175,541	39,994	19,192	41,242	86,069	0	0	0	0	171,263	2,469	15,498	15,750	14,993	9,344
Aug-08	266,208	5,313	19,588	219,965	37,648	25,017	50,298	91,573	0	0	0	0	174,382	541	15,498	15,750	14,319	9,525
Sep-08	256,322	5,000	16,793	192,249	34,830	22,790	44,911	87,871	0	0	0	0	166,507	2,659	15,498	15,750	14,092	9,583
Oct-08	255,902	5,848	15,796	184,668	34,250	18,172	43,291	86,728	0	0	0	0	175,663	841	14,490	15,750	15,455	9,245
Nov-08	281,803	8,605	16,765	192,103	33,344	20,573	42,877	81,218	0	0	0	0	165,973	1,055	14,532	15,750	16,835	9,652
Dec-08	329,580	12,045	17,803	203,503	33,619	19,718	40,776	66,165	0	0	0	0	130,526	1,318	14,532	16,716	18,823	9,265
Jan-09	443,493	18,499	25,031	241,450	37,196	25,665	44,974	80,788	0	0	0	0	102,743	204	8,233	7,100	22,529	9,615
Feb-09	484,523	21,853	24,950	239,906	32,137	20,792	40,662	70,317	0	0	0	0	137,644	1,467	9,408	18,816	18,864	9,118
Mar-09	443,924	20,803	25,342	221,779	35,925	22,700	37,762	73,353	0	0	0	0	109,876	(35)	15,456	10,964	19,542	8,909
Apr-09	397,983	17,978	21,555	218,982	32,876	20,317	40,788	69,235	0	0	0	0	105,069	(182)	14,490	9,397	15,620	9,351
May-09	354,769	13,667	19,784	191,356	32,463	21,187	40,729	73,519	0	0	0	0	178,837	(82)	10,417	20,831	13,878	9,466
Jun-09	290,493	10,251	16,580	183,269	34,361	19,060	39,811	71,685	0	0	0	0	135,353	3,126	6,316	6,171	13,157	9,240
Jul-09	263,052	7,243	17,216	193,601	37,684	23,752	42,376	75,247	0	0	0	0	141,524	(407)	10,416	11,988	14,206	9,673
Aug-09	263,626	6,466	17,623	198,234	39,020	20,240	40,263	79,657	0	0	0	0	165,462	182	10,416	20,774	14,617	9,238
Sep-09	257,192	6,048	17,362	188,687	34,476	21,307	40,554	78,419	0	0	0	0	124,911	(9)	5,472	5,456	13,748	9,541
Oct-09	260,805	7,371	16,320	187,639	33,651	17,607	41,091	79,580	0	0	0	0	169,639	1,663	10,416	18,463	16,310	9,175
Nov-09	298,659	11,208	17,391	195,039	32,876	20,610	42,009	79,684	0	0	0	0	164,442	171	10,094	20,114	15,736	9,395
Dec-09	329,985	14,408	17,928	198,510	34,002	19,373	41,017	69,116	0	0	0	0	159,362	200	10,416	19,570	19,912	9,243
Jan-10	430,243	20,481	24,446	238,997	35,384	25,631	42,029	75,148	0	0	0	0	166,131	990	15,498	15,750	20,848	9,639
Feb-10	463,413	23,798	24,461	225,795	32,479	20,561	39,439	67,806	0	0	0	0	146,349	1,221	12,474	15,750	18,950	9,318
Mar-10	421,738	21,303	24,151	222,094	35,045	23,002	39,595	76,858	0	0	0	0	157,914	70	15,456	15,750	18,459	9,605
Apr-10	383,636	18,927	21,063	222,177	32,100	20,846	39,933	75,977	0	0	0	0	144,613	1,462	10,080	13,944	13,291	9,383
May-10	338,469	14,292	19,109	186,755	32,389	21,651	39,180	79,177	0	0	0	0	145,880	3,019	10,416	15,356	13,891	9,617
Jun-10	283,136	11,006	16,567	185,374	33,923	19,531	40,758	73,366	0	0	0	0	150,585	577	12,290	17,945	13,117	9,189
Jul-10	265,959	8,059	17,602	194,813	39,030	23,240	44,631	78,429	0	0	0	0	174,491	1,591	15,498	15,750	14,512	9,583
Aug-10	258,485	7,045	17,874	197,501	38,507	20,067	42,378	87,326	0	0	0	0	168,673	2,834	15,498	15,750	14,292	9,223
Sep-10	258,161	6,635	17,546	194,396	35,795	21,934	42,940	80,983	0	0	0	0	159,664	6,689	14,490	15,750	13,950	9,586
Oct-10	257,657	7,650	16,485	187,976	34,087	18,174	40,552	82,531	0	0	0	0	155,357	1,467	15,498	15,750	15,079	9,311
Nov-10	285,636	11,267	16,814	186,761	33,680	19,741	40,365	78,403	0	0	0	0	129,947	1,310	14,532	15,750	17,317	9,550
Dec-10	331,421	15,742	18,849	204,431	33,700	20,005	43,075	73,018	0	0	0	0	157,474	(859)	15,498	15,750	19,470	9,289

Title: Table of AIDX Calculation

	PerUnitized		SAU * SATURATION / 10000								NS Appliance Saturation (%)								Appliance System Average Use (SAU) (weighted by vintage efficiency)									
	1967=1.00 (AIDX2)	All-appliance Composite	DISH WASHERS	ELEC RANGES	CLOTHES WASHERS	CLOTHES DRYERS	FREEZERS	REFIGER.	ALL TVs	Elec Water Heater	DISH WASHERS	ELEC RANGES	CLOTHES WASHERS	CLOTHES DRYERS	FREEZERS	REFIGER.	ALL TVs	Electric Water Heater	DISH WASHERS	ELEC RANGES	CLOTHES WASHERS	CLOTHES DRYERS	FREEZERS	REFIGER.	ALL TVs	Electric Water Heater	Combined Index	Per-unitized 1967=1
1967	**1.0000**	38.883	0.200	3.812	2.513	1.904	1.772	8.421	2.315	17.945	1.7	45.6	16.7	17.2	16.1	93.9	105.0	49.6	1200	837	1507	1106	1100	897	220	3618	10485.3	1.0000
1968	**1.0268**	39.924	0.259	3.800	2.852	2.271	2.022	8.971	2.383	17.366	2.2	45.4	18.9	20.5	18.4	95.1	106.0	48.0	1200	837	1507	1106	1100	943	225	3618	10535.8	1.0048
1969	**1.1001**	42.775	0.257	4.206	3.848	2.720	2.235	9.797	2.526	17.185	2.1	50.3	25.5	24.6	20.3	97.3	108.6	47.5	1200	837	1507	1106	1100	1007	233	3618	10607.2	1.0116
1970	**1.1546**	44.892	0.380	4.471	4.147	3.218	2.619	10.335	2.753	16.968	3.2	53.4	27.5	29.1	23.8	97.4	112.2	46.9	1200	837	1507	1106	1100	1062	245	3618	10675.0	1.0181
1971	**1.1475**	44.619	0.444	4.560	3.749	2.926	2.911	10.804	2.945	16.281	3.7	54.5	24.9	26.5	26.5	96.8	111.1	45.0	1200	837	1507	1106	1100	1116	265	3618	10748.8	1.0251
1972	**1.2014**	46.714	0.522	4.769	4.515	3.312	3.029	11.604	3.044	15.919	4.4	57.0	30.0	30.0	27.5	97.6	112.0	44.0	1200	837	1507	1106	1100	1189	272	3618	10828.8	1.0328
1973	**1.2813**	49.821	0.617	5.083	5.261	4.073	3.467	12.294	3.505	15.521	5.1	60.8	35.1	36.9	31.8	98.1	117.3	42.9	1200	837	1501	1103	1091	1253	299	3618	10901.6	1.0397
1974	**1.3442**	52.266	0.767	5.425	5.726	3.976	3.746	12.898	3.809	15.919	6.4	64.8	38.4	36.1	34.7	98.6	119.6	44.0	1200	837	1493	1102	1080	1308	319	3618	10955.5	1.0448
1975	**1.4166**	55.081	0.973	5.691	6.331	4.496	4.025	13.338	3.945	16.281	8.1	68.0	42.8	41.0	37.8	98.7	120.5	45.0	1200	837	1480	1097	1064	1352	327	3618	10974.2	1.0466
1976	**1.4834**	57.680	1.101	5.972	6.533	4.903	4.358	13.895	4.166	16.751	9.3	71.4	44.5	44.9	41.9	99.6	127.4	46.3	1191	837	1468	1091	1041	1396	327	3618	10969.0	1.0461
1977	**1.4958**	58.161	1.259	6.015	6.803	5.354	4.347	14.115	4.168	16.100	10.6	71.9	46.8	49.4	42.1	99.2	127.2	44.5	1183	836	1453	1085	1032	1424	328	3618	10958.8	1.0452
1978	**1.5065**	58.575	1.417	6.276	6.981	5.511	4.325	14.346	4.162	15.557	12.0	75.1	48.6	51.0	42.3	99.2	127.8	43.0	1178	836	1438	1080	1022	1447	326	3618	10943.2	1.0437
1979	**1.5480**	60.189	1.608	6.328	7.107	5.633	4.821	14.767	4.186	15.738	13.7	75.8	50.0	52.4	49.2	100.7	130.7	43.5	1173	835	1421	1075	980	1467	320	3618	10888.7	1.0385
1980	**1.5977**	62.121	1.803	6.261	7.724	6.196	4.863	15.106	4.249	15.919	15.4	75.1	55.3	58.1	50.2	102.2	134.4	44.0	1169	834	1396	1066	969	1478	316	3618	10845.8	1.0344
1981	**1.6024**	62.307	1.854	6.440	7.816	6.115	4.919	15.289	4.135	15.738	16.0	77.4	56.8	57.6	51.8	103.8	134.2	43.5	1162	832	1376	1062	951	1473	308	3618	10781.7	1.0283
1982	**1.6234**	63.123	2.144	6.504	7.815	6.151	5.167	15.536	4.176	15.630	18.6	78.3	57.4	58.2	55.5	105.3	138.4	43.2	1151	830	1361	1057	931	1475	302	3618	10725.6	1.0229
1983	**1.6413**	63.816	2.249	6.657	7.962	6.233	5.081	15.480	4.162	15.992	19.6	80.4	59.3	59.3	54.8	105.2	141.9	44.2	1146	828	1344	1052	927	1472	293	3618	10679.4	1.0185
1984	**1.6897**	65.698	2.494	6.734	8.386	6.545	5.236	15.645	4.196	16.462	21.9	81.5	63.4	62.7	57.5	106.9	146.2	45.5	1138	826	1324	1044	910	1464	287	3618	10611.0	1.0120
1985	**1.6845**	65.497	2.344	6.728	8.134	6.513	5.251	15.344	4.160	17.022	20.7	81.7	62.0	62.7	58.3	105.3	147.0	47.1	1134	824	1312	1039	900	1457	283	3616	10565.1	1.0076
1986	**1.7304**	67.283	2.560	6.974	8.423	6.616	5.282	15.489	4.143	17.797	22.9	85.0	65.0	64.1	59.5	107.2	149.0	49.3	1119	821	1295	1033	888	1445	278	3612	10490.4	1.0005
1987	**1.7259**	67.107	2.609	6.980	8.232	6.783	5.341	15.128	4.105	17.928	23.6	85.3	64.2	66.1	61.0	105.5	149.2	49.7	1106	818	1282	1026	876	1434	275	3607	10424.2	0.9942
1988	**1.7812**	69.260	3.025	7.043	8.580	6.758	5.261	15.108	4.223	19.260	27.8	86.4	67.6	66.3	61.2	106.3	154.4	53.5	1088	815	1269	1019	860	1421	274	3598	10344.3	0.9866
1989	**1.8050**	70.182	3.036	7.031	8.727	6.888	5.366	15.015	4.192	19.927	28.4	86.6	69.4	67.9	62.9	106.6	153.8	55.5	1071	812	1258	1015	854	1409	273	3589	10280.0	0.9804
1990	**1.8262**	71.008	3.061	7.017	8.869	7.008	5.410	14.885	4.188	20.571	28.9	86.7	71.1	69.5	64.5	106.9	153.1	57.5	1059	809	1247	1008	839	1392	274	3580	10208.7	0.9736
1991	**1.8227**	70.873	3.257	7.146	8.773	7.011	5.314	14.801	4.253	20.318	31.3	88.7	70.9	69.9	64.0	107.7	155.2	56.9	1040	806	1237	1003	830	1374	274	3571	10136.4	0.9667
1992	**1.8253**	70.972	3.281	7.196	8.928	7.179	5.257	14.393	4.333	20.405	32.0	89.7	73.0	72.0	64.1	106.1	157.5	57.3	1025	802	1223	997	820	1357	275	3562	10061.7	0.9596
1993	**1.7984**	69.928	3.319	7.167	8.874	7.192	5.166	14.181	4.380	19.648	33.0	89.7	73.5	72.5	64.3	107.5	158.3	55.3	1006	799	1207	992	804	1319	277	3556	9959.8	0.9499
1994	**1.7837**	69.355	3.272	7.143	8.833	7.283	5.097	13.813	4.405	19.510	33.1	89.8	74.4	73.8	65.1	108.1	159.0	55.0	989	795	1187	987	783	1278	277	3545	9840.8	0.9385
1995	**1.7675**	68.726	3.204	7.222	8.857	7.239	4.934	13.546	4.371	19.352	33.0	91.3	76.2	73.7	64.0	110.0	157.8	54.8	971	791	1162	982	771	1231	277	3533	9719.3	0.9269
1996	**1.7508**	68.076	3.292	7.266	8.862	7.206	4.824	13.231	4.407	18.988	35.0	92.4	78.0	73.7	64.1	111.2	159.1	53.9	940	786	1136	978	753	1190	277	3522	9581.9	0.9138
1997	**1.7482**	67.975	3.440	7.276	8.867	7.337	4.679	12.828	4.717	18.831	38.7	92.9	80.0	75.9	64.2	111.5	170.2	53.7	889	783	1108	967	729	1151	277	3507	9411.1	0.8976
1998	**1.7277**	67.176	3.408	7.216	8.741	7.323	4.551	12.455	5.043	18.438	39.6	92.5	80.7	76.4	64.5	111.7	182.0	52.8	861	780	1083	959	706	1115	277	3494	9274.2	0.8845
1999	**1.6938**	65.861	3.388	7.314	8.536	7.211	4.407	12.060	5.018	17.926	40.8	94.3	80.8	75.7	65.0	112.2	181.4	51.5	830	776	1056	953	678	1075	277	3479	9123.8	0.8701
2000	**1.6758**	65.160	3.339	7.190	8.341	7.194	4.297	11.699	5.198	17.901	41.5	93.1	81.0	76.0	66.0	112.5	188.2	51.7	805	772	1030	947	651	1040	276	3460	8981.0	0.8565
2001	**1.6640**	64.702	3.321	7.314	8.149	7.344	4.167	11.357	5.167	17.885	42.7	95.3	81.2	78.1	66.2	112.7	187.4	52.0	778	767	1004	940	629	1008	276	3442	8843.3	0.8434
2002	**1.6470**	64.040	3.269	7.190	7.954	7.321	4.027	10.979	5.336	17.965	43.5	94.2	81.5	78.3	66.8	113.0	194.0	52.5	751	763	976	935	603	972	275	3420	8695.0	0.8293
2003	**1.6357**	63.599	3.263	7.254	7.787	7.302	3.904	10.653	5.406	18.031	44.9	95.7	81.8	78.5	67.2	113.2	197.0	53.0	727	758	952	930	581	941	274	3400	8563.4	0.8167
2004	**1.6127**	62.706	3.158	7.139	7.439	7.354	3.787	10.263	5.486	18.080	45.6	95.4	82.0	79.4	67.6	113.6	200.4	53.5	693	748	907	926	560	903	274	3381	8392.7	0.8004
2005	**1.5945**	61.999	3.046	7.050	7.074	7.381	3.674	9.889	5.580	18.304	46.0	95.7	82.3	80.0	68.0	114.0	204.4	54.5	662	737	860	923	540	867	273	3361	8223.2	0.7843
2006	**1.5779**	61.354	2.956	6.986	6.670	7.375	3.559	9.523	5.740	18.545	47.2	97.0	82.5	80.2	68.2	114.2	210.9	55.5	626	720	808	920	522	834	272	3343	8045.1	0.7673
2007	**1.5559**	60.499	2.842	6.797	6.319	7.391	3.454	9.171	5.763	18.762	48.1	96.3	83.4	80.6	68.5	114.5	212.4	56.4	591	706	758	917	504	801	271	3325	7872.4	0.7508
2008	**1.5123**	58.800	2.728	6.645	5.834	7.404	3.367	8.092	5.740	18.991	49.1	96.3	83.6	80.9	69.0	115.0	212.2	57.4	556	690	698	915	488	704	270	3308	7628.4	0.7275
2009	**1.5137**	58.857	2.608	6.540	5.432	7.594	3.272	8.541	5.756	19.113	49.7	97.1	85.5	83.1	69.1	115.1	213.6	58.1	525	673	635	914	474	742	269	3292	7525.1	0.7177
2010	**1.4924**	58.030	2.491	6.400	5.011	7.631	3.181	8.252	5.770	19.293	50.2	97.3	86.1	83.6	69.2	115.4	214.9	58.9	496	658	582	913	460	715	268	3277	7369.5	0.7028
2011	**1.4710**	57.196	2.381	6.264	4.622	7.670	3.095	7.985	5.781	19.398	50.7	97.5	86.6	84.0	69.2	115.7	216.2	59.5	470	642	534	913	447	690	267	3262	7225.1	0.6891
2012	**1.4521**	56.460	2.275	6.128	4.266	7.709	3.015	7.738	5.790	19.539	51.2	97.7	87.1	84.5	69.3	115.9	217.4	60.2	445	627	490	912	435	667	266	3247	7089.9	0.6762
2013	**1.4343**	55.771	2.175	5.995	3.943	7.748	2.941	7.510	5.798	19.660	51.6	97.9	87.5	84.9	69.4	116.2	218.6	60.8	421	612	451	912	424	646	265	3232	6964.3	0.6642
2014	**1.4184**	55.151	2.082	5.865	3.657	7.787	2.872	7.300	5.804	19.784	52.0	98.0	88.0	85.3	69.4	116.5	219.8	61.5	400	598	416	913	414	627	264	3217	6847.9	0.6531
2015	**1.4040**	54.591	1.996	5.739	3.408	7.825	2.809	7.108	5.808	19.898	52.4	98.2	88.4	85.7	69.5	116.7	220.9	62.2	381	584	386	913	404	609	263	3201	6741.1	0.6429
2016	**1.3911**	54.090	1.920	5.616	3.195	7.861	2.752	6.933	5.811	20.000	52.8	98.3	88.8	86.1	69.5	116.9	221.9	62.8	364	571	360	913	396	593	262	3186	6644.0	0.6336
2017	**1.3801**	53.661	1.855	5.498	3.020	7.897	2.701	6.775	5.813	20.102	53.1	98.5	89.2	86.5	69.6	117.2	223.0	63.4	349	558	339	913	388	578	261	3170	6556.4	0.6253
2018	**1.3709**	53.303	1.802	5.386	2.878	7.930	2.656	6.631	5.813	20.205	53.4	98.6	89.5	86.8	69.6	117.4	224.0	64.1	337	546	321	913	382	565	260	3154	6478.1	0.6178
2019	**1.3633**	53.009	1.760	5.280	2.767	7.963	2.618	6.502	5.813	20.307	53.7	98.7	89.9	87.2	69.6	117.6	224.9	64.7	328	535	308	914	376	553	258	3138	6408.8	0.6112
2020	**1.3571**	52.767	1.728	5.180	2.683	7.993	2.586	6.387	5.811	20.399	54.0	98.8	90.2	87.5	69.7	117.9	225.9	65.3	320	524	297	914	371	542	257	3122	6347.7	0.6054
2021	**1.3518**	52.563	1.706	5.086	2.621	8.022	2.559	6.285	5.808	20.476	54.2	98.9	90.6	87.8	69.7	118.1	226.8	65.9	315	514	289	914	367	532	256	3106	6293.9	0.6003

Title: Table of CHDD Calculation

Year	Customer-HDD CHDD	NSP All Electric # Customers	Annual HDD 18°C	CUST x HDD	estimated Efficiency Improvement	Avg Use New Units	estimated System Avg Use	estimated new SH cust percent improve
1970	-	0	4356.8	0.0	0.000000			
1971	**172.3**	4,075	4228.0	172.3	0.000000			
1972	**304.1**	6,657	4568.9	304.1	0.000000			
1973	**231.1**	5,592	4133.3	231.1	0.000000			
1974	**334.3**	7,581	4409.5	334.3	0.000000			
1975	**539.6**	12,600	4282.6	539.6	0.000000			
1976	**837.8**	20,169	4154.1	837.8	0.000000			
1977	**922.7**	22,253	4146.3	922.7	0.000000			
1978	**949.9**	21,363	4446.6	949.9	0.000000			
1979	**995.6**	24,528	4059.0	995.6	0.000000			
1980	**1,100.1**	24,528	4485.1	1100.1	0.000000			
1981	**911.9**	22,934	3976.2	911.9	0.000000			
1982	**1,088.0**	25,464	4272.7	1088.0	0.000000			
1983	**1,039.9**	26,754	3886.8	1039.9	0.000000			
1984	**1,263.6**	31,351	4030.6	1263.6	0.000000			
1985	**1,670.1**	38,005	4394.6	1670.1	0.000000			
1986	**2,014.3**	45,961	4382.5	2014.3	0.000000			
1987	**2,316.6**	54,111	4281.1	2316.6	0.000000			
1988	**2,664.4**	62,076	4292.1	2664.4	0.000000			
1989	**3,043.2**	69,171	4399.6	3043.2	0.000000			
1990	**2,992.1**	75,157	3981.1	2992.1	0.000000			
1991	**3,219.6**	79,559	4046.8	3219.6	0.000000			
1992	**3,677.5**	82,580	4453.2	3677.5	0.000000			
1993	**3,709.2**	84,745	4376.9	3709.2	0.000000	10,000.0	10,200.0	0.100
1994	**3,567.5**	85,906	4153.9	3568.5	-0.000278	9,990.0	10,197.2	0.100
1995	**3,586.9**	86,402	4151.9	3587.3	-0.000122	9,980.0	10,195.9	0.100
1996	**3,603.2**	86,754	4153.7	3603.5	-0.000090	9,970.0	10,195.0	0.100
1997	**3,734.7**	87,210	4283.0	3735.2	-0.000120	9,960.1	10,193.8	0.100
1998	**3,356.8**	87,687	3828.7	3357.3	-0.000130	9,950.1	10,192.4	0.100
1999	**3,229.2**	89,587	3606.5	3230.9	-0.000525	9,940.1	10,187.1	0.100
2000	**3,562.0**	91,159	3909.1	3563.5	-0.000435	9,930.2	10,182.7	0.100
2001	**3,671.4**	93,950	3910.8	3674.2	-0.000765	9,920.3	10,174.9	0.100
2002	**3,980.2**	97,761	4075.5	3984.2	-0.001013	9,910.4	10,164.6	0.100
2003	**4,162.8**	100,485	4145.6	4165.7	-0.000704	9,900.4	10,157.4	0.100
2004	**4,416.1**	102,871	4295.4	4418.8	-0.000609	9,890.5	10,151.2	0.100
2005	**4,158.6**	105,735	3935.9	4161.6	-0.000722	9,880.7	10,143.9	0.100
2006	**3,719.2**	108,784	3421.5	3722.0	-0.000755	9,870.8	10,136.2	0.100
2007	**4,630.1**	111,863	4142.2	4633.6	-0.000748	9,860.9	10,128.6	0.100

Year	Customer-HDD CHDD	NSP All Electric # Customers	Annual HDD 18°C	CUST x HDD	estimated Efficiency Improvement	Avg Use New Units	estimated System Avg Use	estimated new SH cust percent improve
2008	**4,569.7**	114,605	3990.0	4572.7	-0.000656	9,851.0	10,122.0	0.100
2009	**4,920.8**	117,522	4190.0	4924.2	-0.000689	9,841.2	10,115.0	0.100
2010	**4,286.8**	120,919	3548.0	4290.2	-0.000788	9,831.4	10,107.1	0.100
2011	**4,968.1**	123,978	4010.1	4971.6	-0.000697	9,821.5	10,100.0	0.100
2012	**5,085.9**	126,913	4010.1	5089.3	-0.000660	9,811.7	10,093.4	0.100
2013	**5,188.9**	129,470	4010.1	5191.8	-0.000570	9,801.9	10,087.6	0.100
2014	**5,273.0**	131,556	4010.1	5275.5	-0.000464	9,792.1	10,082.9	0.100
2015	**5,351.3**	133,505	4010.1	5353.6	-0.000435	9,782.3	10,078.5	0.100
2016	**5,435.3**	135,604	4010.1	5437.8	-0.000470	9,772.5	10,073.8	0.100
2017	**5,524.0**	137,821	4010.1	5526.7	-0.000497	9,762.7	10,068.8	0.100
2018	**5,613.0**	140,044	4010.1	5615.8	-0.000498	9,753.0	10,063.8	0.100
2019	**5,698.7**	142,177	4010.1	5701.4	-0.000478	9,743.2	10,059.0	0.100
2020	**5,785.5**	144,345	4010.1	5788.3	-0.000486	9,733.5	10,054.1	0.100
2021	**5,873.9**	146,553	4010.1	5876.9	-0.000495	9,723.7	10,049.1	0.100

Statistics Canada - NS
Principal Heating Fuel - Electricity

Year	StatsCan Sat	Corporate Research Assoc. Survey for NSPI Electric Heating	NSPI Online Advisory Panel Electric Heat
1982	9.1%		
1983	10.0%		
1984	11.0%		
1985	12.7%		
1986	15.0%		
1987	17.6%		
1988	20.0%		
1989	21.0%		
1990	23.3%		
1991	25.5%		
1992	25.5%		
1993	24.1%		
1994	22.3%		
1995	24.6%		
1996	25.2%		
1997	23.6%		
1998	24.8%		
1999	25.9%		
2000	24.5%		
2001	25.3%	23.1%	
2002	25.9%	21.8%	
2003	27.1%	25.8%	
2004	25.9%	26.6%	
2005	23.1%	25.3%	
2006	25.2%	27.2%	
2007	25.9%	29.0%	
2008	23.5%	29.0%	
2009		27.0%	37%
2010		29.3%	
2011			
2012			

New Home Construction
Electric Market Share Five Year Trend

New Home Construction				
Residential - Space Heat Market Share				
	Oil	Nat Gas	Other	Total Electric
2006	30%	1%	3%	66%
2007	19%	3%	3%	75%
2008	13%	2%	3%	81%
2009	9%	3%	4%	84%
2010	9%	4%	4%	84%

NSPI
Online Advisory Panel - Energy Usage Study **November 2009**

TABLE A1:
What is the main energy source or fuel used to heat your home?

		Age			Gender		Income			Region			
	OVERALL	19-34	35-54	55+	Male	Female	< $50K	$50K - < $75K	$75K or more	HRM	Northeastern	Western	Cape Breton
Oil	45	44	44	47	44	46	46	45	47	48	44	36	54
Electricity	37	39	38	36	40	35	32	40	39	39	35	33	31
Wood	11	9	11	12	10	12	14	10	7	5	17	24	12
Wood Pellets	2	2	2	1	2	2	1	1	3	2	1	4	1
Natural Gas	2	1	2	2	2	1	2	1	2	2	1	0	1
Propane	1	0	1	1	1	0	1	0	1	1	0	1	1
Solar	0	0	0	0	0	0	0	0	0	0	0	1	0
Other	1	2	1	1	1	1	1	1	1	1	2	1	0
Don't Know	1	3	1	0	1	2	3	1	0	2	0	0	1
SAMPLE SIZE #	1905	362	869	674	897	1008	645	420	504	1062	225	313	180

NON-CONFIDENTIAL

Request IR-2:

With respect to DE-3 & DE-4 Section 8.0 and the NSP 2011 Load Forecast:

(a) What were the reasons for choosing the particular form of the electric space heat model? How has the model been calibrated? How is the Real Price Ratio (Oil/Elec) calculated? What units and relative efficiencies are used?

(b) What space heat saturation information is available for new home construction. What information is available regarding electrical load for newer homes compared to previous ones, or for heat pump versus on-demand, or for ToD vs. on-demand?

(c) Provide information regarding the mix of space heating practices and their frequency. For example the use of wood to supplement electric resistance heat, and vice versa.

Response IR-2:

(a) Home heating in Nova Scotia is generally a choice between oil or electric heating.

There is some wood heating, but it tends to vary greatly from year to year and there is little data available to track and predict that trend. Natural gas and propane continue to be small fractions of the market.

The remaining factor is that consumers may choose to change the type of heating system when faced with the decision to purchase a new heating system either when their existing system expires or they construct a new home.

Among the factors that affect that decision is the price of fuel; either heating oil or electricity. Since these prices have a history and some level of predictability they were chosen as the basis for a consumer choice model. Please refer to Attachment 1.

The model has been calibrated such that the conversion of existing homes and the addition of new homes to electric space heating match the current percent estimate of space heat saturation. The current estimate of space heating is based on Statistics Canada data, plus input from other NSPI surveys and information.

The real price ratio is the comparison of oil to electricity price, in constant dollars ($/GJ), taxes in. The oil price with tax is divided by its heat content, 38.68 MJ /L. Electricity is 3.6 MJ /kWh. The electricity price to customers includes taxes and monthly base charge. It is calculated as annual total residential revenue plus taxes, divided by annual kWh sales.

The calculations are shown on this worksheet and result in a unitless ratio of prices per GJ. No changes are assumed for oil burner efficiencies and thus are not included in the calculation.

(b) Using data collected from new home wiring inspections regarding the types of home heating systems, NSPI is able to estimate the saturation of electric space heating in the new construction market. Please refer to Attachment 2 for an example of this data.

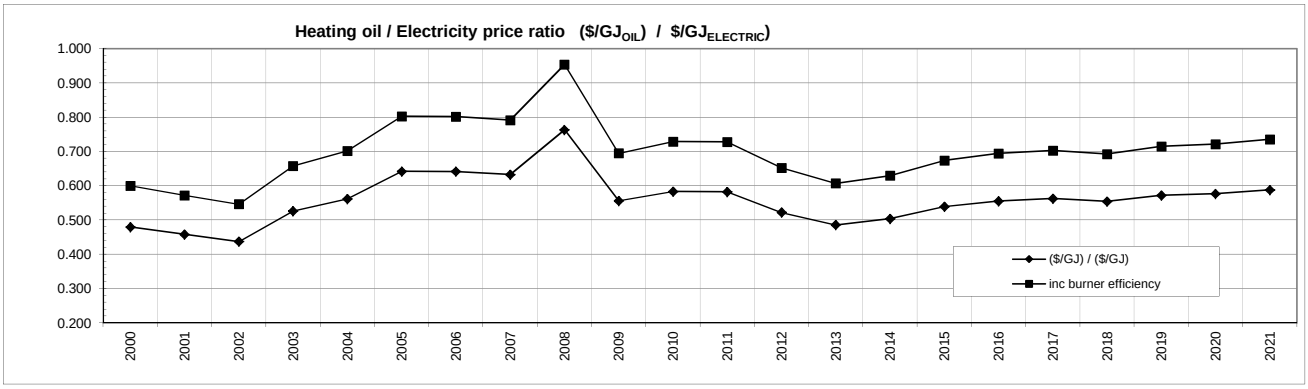
While there is data available on the type of heating system and water heating systems in newly constructed homes, this information does not exist for the large stock of existing homes. Currently, there is no method for tracking the electric load of newer homes compared to older homes.

(c) Statistics Canada Table 203-0019: Survey of Household Spending, dwelling characteristics; Nova Scotia indicates the principal heating fuel for Nova Scotia households and suggests that 11.9 percent of Nova Scotia households used wood as the primary heat source. The NSPI new home construction data suggests that 1.4 percent of new homes (2010) use wood as the primary heat source. A survey of the NSPI online advisory panel in 2009 indicated that wood and wood pellets accounted for 13 percent of home heating sources. This data is included in Attachment 3.

38.680 MJ / L #2 oil
3.600 MJ / kWh electric

Oil Burner Eff.
80%

Year	RPCPIS NS CPI 02=1.00	NS furnace oil price current ¢ / l	NS furnace oil price current$ / GJ	NS furnace oil price 2002$ / GJ	Electricity Avg. price ¢ / kWh	Real Electric Avg. price 2002$ / kWh	Electricity Avg. price 2002$ / GJ	Oil / Electric price ratio ($/GJ) / ($/GJ)	Oil / Electric price ratio inc. Burner eff.
									0.600
2000	0.953	57.4	14.8	15.56	11.13	0.1168	32.44	0.480	0.572
2001	0.971	54.5	14.1	14.51	11.08	0.1142	31.71	0.458	0.546
2002	1.000	52.2	13.5	13.49	11.11	0.1111	30.86	0.437	0.658
2003	1.034	64.3	16.6	16.09	11.38	0.1101	30.57	0.526	0.702
2004	1.053	68.5	17.7	16.81	11.35	0.1078	29.95	0.561	0.802
2005	1.082	83.6	21.6	19.99	12.13	0.1121	31.14	0.642	0.802
2006	1.104	87.9	22.7	20.58	12.76	0.1155	32.09	0.641	0.791
2007	1.125	84.0	21.7	19.31	12.36	0.1098	30.51	0.633	0.954
2008	1.159	106.3	27.5	23.73	12.97	0.1120	31.10	0.763	0.695
2009	1.157	85.8	22.2	19.17	14.37	0.1242	34.50	0.556	0.729
2010	1.182	85.8	22.2	18.77	13.70	0.1159	32.20	0.583	0.728
2011	1.208	90.6	23.4	19.39	14.48	0.1199	33.31	0.582	0.652
2012	1.234	92.0	23.8	19.28	16.41	0.1330	36.95	0.522	0.607
2013	1.258	93.2	24.1	19.14	17.86	0.1419	39.43	0.486	0.629
2014	1.283	97.6	25.2	19.65	18.04	0.1405	39.04	0.503	0.674
2015	1.312	104.5	27.0	20.58	18.04	0.1374	38.18	0.539	0.694
2016	1.339	108.7	28.1	21.00	18.23	0.1361	37.82	0.555	0.703
2017	1.366	112.9	29.2	21.37	18.69	0.1368	38.00	0.562	0.692
2018	1.394	116.8	30.2	21.67	19.63	0.1408	39.12	0.554	0.714
2019	1.422	120.7	31.2	21.94	19.65	0.1382	38.39	0.572	0.721
2020	1.451	124.7	32.2	22.22	20.13	0.1387	38.53	0.577	0.735
2021	1.481	130.2	33.7	22.73	20.60	0.1391	38.65	0.588	



NEW HOME CONSTRUCTION MARKET SHARE REPORT
SPACE HEATING
2010

	TOTAL NUMBER CODED	PERCENT OF CODED	PERCENT OF SPACE FUEL	ON DEMAND HEATING SYSTEM PERCENT
ELECTRIC BASED EQUIPMENT				
Baseboard	1420	47.2%	56.5%	80.5%
Forced Warm Air	7	0.2%	0.3%	0.4%
In-Floor Radiant	336	11.2%	13.4%	19.0%
Ceiling Radiant	1	0.0%	0.0%	0.1%
Heat Pump	400	13.3%	15.9%	
SUBTOTAL ELECTRIC	**2164**	**71.9%**	**86.1%**	**1764**
TOD ELECTRIC BASED EQUIPMENT				
TOD Baseboard	7	0.2%	0.3%	
TOD Forced Warm Air	10	0.3%	0.4%	
TOD In-Floor Radiant	245	8.1%	9.7%	
TOD Ceiling Radiant	0	0.0%	0.0%	
TOD Heat Pump	6	0.2%	0.2%	
TOD ETS Room Unit	82	2.7%	3.3%	
SUBTOTAL TOD ELECTRIC	**350**	**11.6%**	**13.9%**	
TOTAL ELECTRIC	**2514**	**83.6%**	**100.0%**	
OIL BASED EQUIPMENT				
Baseboard	167	5.6%	59.6%	
Forced Warm Air	71	2.4%	25.4%	
In-Floor Radiant	41	1.4%	14.6%	
Ceiling Radiant	1	0.0%	0.4%	
Heat Pump	0	0.0%	0.0%	
TOTAL OIL	**280**	**9.3%**	**100.0%**	
OTHER FUEL				
Propane	20	0.7%	9.3%	
Natural Gas	106	3.5%	49.5%	
Wood	42	1.4%	1.4%	
Other	46	1.5%	21.5%	
TOTAL OTHER FUEL	**214**	**7.1%**	**81.8%**	
TOTALS	3008	100.0%		
TOTAL NEW HOMES CODED	**3008**			
NOT CODED	**967**	**24.3%**		
TOTAL NEW FAMILY HOMES	**3975**			

WATER HEATING
2010

WATER HEATING	TOTAL NUMBER CODED	PERCENT OF CODED
Electric	2649	89.2%
Oil	179	6.0%
Propane	24	0.8%
Natural Gas	98	3.3%
Other	20	0.7%
TOTAL NEW HOMES CODED	**2970**	95.9%
NOT CODED	**1006**	**25.3%**
TOTAL NEW FAMILY HOMES	**3976**	

Table 203-0019
Survey of household spending (SHS), dwelling characteristics at the time of interview, by province, territory and selected metropolitan areas, annual
Statistics Canada
Geography=Nova Scotia
Statistics=Percent of households reporting

Dwelling characteristics	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Single-detached dwelling	69.4	68.3	67.7	66.2	66.8	67.2	67.5	66.7	66.8	65.5	68.3	66.6	65.6
Single-attached dwelling	5	5.7	4.1	6.5	6.8	4.9	5.5	6.1	4.9	6.3	6.7	7.4	8.3
Apartment	21.9	21.6	23.8	23	21.6	23.1	23.8	22	23.5	22.9	21.3	22.6	22.4
Principal heating equipment, steam or hot water furnace	31	29.7	25.9	29.5	29.5	30.7	30.2	32.3	35.4	35.6	33.9	33.2	35
Principal heating equipment, hot air furnace	34.4	35	39.4	36	36.2	34.8	34.1	34	32.8	31.7	32.8	33.6	31.9
Principal heating equipment, other hot air furnace	1.9	F	F	F	F	F	F						
Principal heating equipment, heating stove (including wood stove)	8.8	8.7	7.8	8.6	8.3	8.3	8.3	8.5	9	8.5	8.6	10.8	8.9
Principal heating equipment, electric heating (including electric baseboard heaters)	23.3	25.4	25.1	23.7	24.3	24.7	26.3	25.1	22.4	23.9	24.6	21.9	24
Principal heating equipment, other heating equipment	F	F	F	F	F	F	F	F	F	F	F	F	F
Age of principal heating equipment, 5 years old and under	27	25.4	24.8	22.8	22.1	26.8	22.8	21.4	26.1	26.7	27.5	27.5	25.8
Age of principal heating equipment, 6 to 10 years old	20.6	19.4	21.9	22.1	23.1	20.9	21.3	21.3	22.9	20.2	18.7	20.9	19
Age of principal heating equipment, over 10 years old	52.4	55.2	53.3	55.1	54.9	52.3	55.9	57.3	51.1	53.1	53.8	51.6	55.3
Principal heating fuel, oil or other liquid fuel	59.2	58.7	59.3	61.9	59.4	60	59.4	60.3	62.7	59.9	60	58.9	58.8
Principal heating fuel, piped gas (natural gas)	F	F	F	F	F	F	F	F	F	F	F	F	F
Principal heating fuel, bottled gas (propane)	F	F	F	F	F	F	F	F	F	F	F	F	F
Principal heating fuel, electricity	23.8	26.5	26.6	24.5	25.3	25.9	27.1	25.9	23.1	25.2	25.9	23.5	26.5
Principal heating fuel, wood	**14.5**	**12.6**	**12.1**	**12.4**	**13.7**	**12**	**11.8**	**11.9**	**13.1**	**12.8**	**12.9**	**14.9**	**11.9**
Principal heating fuel, other heating fuel	F	F	F	F	F	F	F	F	F	F	F	F	F
Principal heating fuel for hot water, oil or other liquid fuel	40.1	40.2	38.9	46.1	43	43.9	46.1	43.7	47.7	45.9	44.4	45.6	43.5
Principal heating fuel for hot water, piped gas (natural gas)	F	F	F	F	F	F	F	F	F	F	F	F	F
Principal heating fuel for hot water, electricity	55.4	54.8	57.2	50.7	53.7	51.9	51.3	52.9	49	51.7	52.7	50.8	52.6
Principal heating fuel for hot water, other heating fuel or no running hot water	4.5	5	3.9	3.2	3.2	4.3	2.5	3.3	3.4	2.4	2.9	F	F
Principal cooking fuel, piped gas (natural gas)	F	F	F	F	F	F	F	F	F	F	F	F	F
Principal cooking fuel, electricity	93.3	92.5	94.3	93.1	95.3	94.4	95.7	95.4	95.7	97	96.3	95.3	95.4
Principal cooking fuel, other cooking fuel	6.7	7.5	5.7	6.9	4.7	5.6	4.3	4.6	4.3	3	3.7	4.3	4.6

Symbol legend:
Series is Terminated
F -Too unreliable to be published

NEW HOME CONSTRUCTION MARKET SHARE REPORT

SPACE HEATING

2010

	TOTAL NUMBER CODED	PERCENT OF CODED	PERCENT OF SPACE FUEL
ELECTRIC BASED EQUIPMENT			
Baseboard	1420	47.2%	56.5%
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TOTAL ELECTRIC	**2514**	**83.6%**	**100.0%**
OIL BASED EQUIPMENT			
Baseboard	167	5.6%	59.6%
Forced Warm Air	71	2.4%	25.4%
In-Floor Radiant	41	1.4%	14.6%
Ceiling Radiant	1	0.0%	0.4%
Heat Pump	0	0.0%	0.0%
TOTAL OIL	**280**	**9.3%**	**100.0%**
OTHER FUEL			
Propane	20	0.7%	9.3%
Natural Gas	106	3.5%	49.5%
Wood	42	1.4%	1.4%
Other	46	1.5%	21.5%
TOTAL OTHER FUEL	**214**	**7.1%**	**81.8%**
TOTALS	3008	100.0%	
TOTAL NEW HOMES CODED	**3008**		
NOT CODED	**967**	**24.3%**	
TOTAL NEW FAMILY HOMES	**3975**		

NSPI
~ Online Advisory Panel - Energy Usage Study ~

TABLE A1:
What is the main energy source or fuel used to heat your home?

	OVERALL	Age			Gender		Income			Region			
	%	19-34	35-54	55+	Male	Female	< $50K	$50K - < $75K	$75K or more	HRM	Northeastern	Western	Cape Breton
Oil	45	44	44	47	44	46	46	45	47	48	44	36	54
Electricity	37	39	38	36	40	35	32	40	39	39	35	33	31
Wood	11	9	11	12	10	12	14	10	7	5	17	24	12
Wood Pellets	2	2	2	1	2	2	1	1	3	2	1	4	1
Natural Gas	2	1	2	2	2	1	2	1	2	2	1	0	1
Propane	1	0	1	1	1	0	1	0	1	1	0	1	1
Solar	0	0	0	0	0	0	0	0	0	0	0	1	0
Other	1	2	1	1	1	1	1	1	1	1	2	1	0
Don't Know	1	3	1	0	1	2	3	1	0	2	0	0	1
SAMPLE SIZE #	1905	362	869	674	897	1008	645	420	504	1062	225	313	180

NON-CONFIDENTIAL

Request IR-3:

With respect to DE-3 & DE-4 Section 8.0 and the NSP 2011 Load Forecast:

(a) Provide complete data sources and documentation for all model drivers such as population, household size, consumer goods, etc. as listed in Appendix C.

(b) Provide the data sources and derivations for historic and future values of appliance saturation, usage and lifespans.

Response IR-3:

(a) Please refer to Attachment 1.

(b) Please refer to Attachment 2. Annual average usage estimates are based on Natural Resources Canada Office of Energy Efficiency data for major appliances. The current edition of that publication is: Energy Consumption of Major Household Appliances Shipped in Canada, Summary Report – Trends for 1990–2007. Annual usage for missing or unavailable years is interpolated and the system average use for the stock of appliances is then estimated using a rolling vintage model. Lifespan estimates are also based on information from Natural Resources Canada.

Year	RPCPIS Consumer Price Index, Nova Scotia 2002=1.00	RRCGOODS Consumer Expenditures, Goods (Millions $ 2002)	RQTOS Gross Domestic Product at Basic Prices, Nova Scotia (Millions $ 2002)	RRYDS Personal Disposable Income (Millions $ 2002)	RRINRBS Business Non-Residential Investment Spending (Millions $ 2002)	RQMFS Gross Domestic Product Manufacturing Nova Scotia (Millions $ 2002)	RLEMMFS Employment, Nova Scotia, Manufacturing (Thousands)	RIHSS Total Dwelling starts	RHS Population Nova Scotia (Thousands)	HDD Heating Degree-Days HDD (18°C)	Home Heating Oil Price ¢2002 / L	Residential Customers
1970	0.215	4,604.8	10366.4	7294.0	0.0	1115.5	0.0	6181	781.500	4356.8	19.5	185176
1971	0.219	4,952.6	10485.2	8100.1	734.1	1157.3	0.0	6957	792.275	4228.0	22.1	192351
1972	0.229	5,227.6	11089.5	8884.9	824.3	1363.1	0.0	6199	802.157	4568.9	22.1	198647
1973	0.248	5,554.7	11778.2	9399.2	901.7	1586.6	0.0	9716	811.262	4133.3	24.0	205876
1974	0.272	5,915.4	12323.1	10254.6	847.2	1654.9	0.0	7623	818.261	4409.5	25.9	212980
1975	0.300	5,994.4	12731.7	10801.0	908.6	1618.2	0.0	7191	826.194	4282.6	26.4	220585
1976	0.325	6,129.8	13080.7	11193.6	981.4	1651.9	0.0	8684	834.813	4154.1	28.4	229386
1977	0.350	6,162.1	13436.1	11807.9	973.1	1649.5	0.0	7495	839.945	4146.3	30.8	238859
1978	0.377	6,492.4	14145.8	12489.8	895.0	1838.6	0.0	4853	844.466	4446.6	33.3	247572
1979	0.410	6,748.1	14378.9	12520.0	996.9	1891.6	0.0	4538	848.879	4059.0	34.3	255408
1980	0.454	6,610.1	14998.3	12345.5	1207.3	1904.3	0.0	3895	852.126	4485.1	37.3	263223
1981	0.508	6,564.3	15037.8	13626.8	1139.8	1757.9	0.0	3715	854.902	3976.2	48.1	271481
1982	0.556	6,432.3	14963.7	13885.5	1411.0	1519.5	0.0	3691	859.089	4272.7	53.5	274691
1983	0.591	6,679.7	15405.1	13859.9	1892.4	1571.1	0.0	5697	867.586	3886.8	56.6	279727
1984	0.617	7,224.9	16274.1	14448.8	1699.1	1855.9	0.0	4598	877.198	4030.6	57.0	285899
1985	0.645	7,489.4	16982.1	15073.3	1488.0	1836.8	0.0	6923	885.198	4394.6	59.4	292098
1986	0.665	7,595.9	17494.7	15255.2	1147.8	1848.9	0.0	7571	888.939	4382.5	47.0	299739
1987	0.688	7,706.3	17840.9	15743.8	868.3	1848.8	43.3	6460	892.881	4281.1	41.2	306466
1988	0.712	7,919.1	18319.8	16403.6	1000.6	1775.6	46.7	5478	896.729	4292.1	40.2	313829
1989	0.744	7,897.1	18544.5	17036.3	1067.9	1825.5	47.2	5359	903.024	4399.6	37.8	320601
1990	0.782	7,830.1	18778.5	16990.7	1151.3	1756.1	43.4	5560	909.510	3981.1	43.3	327156
1991	0.829	7,417.1	18738.4	16583.3	1062.2	1915.6	42.5	5173	914.387	4046.8	47.1	332112
1992	0.835	7,451.3	18820.0	16891.5	801.7	1902.0	39.3	4673	918.982	4453.2	43.7	336421
1993	0.845	7,538.9	18867.2	17076.7	578.4	1890.2	36.7	4282	923.593	4376.9	43.2	341660
1994	0.854	7,555.6	19069.3	16958.7	486.5	1877.1	36.0	4748	926.653	4153.9	40.2	346297
1995	0.866	7,483.1	19455.4	17085.2	576.5	2019.7	40.3	4168	928.296	4151.9	39.0	350499
1996	0.882	7,552.1	19490.0	16795.6	630.6	2015.4	37.2	4059	930.827	4153.7	43.9	355026
1997	0.900	7,814.8	20026.8	17070.5	636.1	2153.8	37.5	3813	932.330	4283.0	47.8	359526
1998	0.906	8,061.1	20771.9	17707.0	1811.8	2216.3	41.0	3137	932.290	3828.7	41.1	362096
1999	0.921	8,442.0	21970.7	18250.4	2397.9	2412.0	43.9	4250	933.497	3606.5	41.6	368464
2000	0.953	8,647.1	22729.3	18373.7	1429.5	2407.6	42.1	4432	934.291	3909.1	60.2	372078
2001	0.971	8,684.4	23530.7	18651.6	1509.0	2420.7	42.1	4092	933.057	3910.8	56.1	374303
2002	1.000	8,916.1	24509.2	18668.4	1379.3	2662.4	43.4	4970	934.711	4075.5	52.2	381879
2003	1.034	9,022.9	24954.7	18561.5	1356.9	2629.3	45.0	5096	936.764	4145.6	62.2	385612
2004	1.053	9,147.8	25250.2	19074.4	1298.0	2848.0	43.7	4717	939.109	4295.4	65.0	389243
2005	1.082	9,265.3	25592.5	19385.1	1069.6	2855.8	40.3	4775	938.447	3935.9	77.3	393067
2006	1.104	9,399.7	25837.1	19832.9	1049.2	2760.9	39.1	4896	937.771	3421.5	79.6	397022
2007	1.125	9,579.0	26231.4	20375.7	914.3	2883.2	41.3	4750	936.031	4142.2	74.7	400943
2008	1.159	9,867.7	26864.9	20662.6	1258.8	2860.8	39.1	3982	936.864	3990.0	91.8	404963
2009	1.157	10,014.4	26740.5	21186.6	1664.2	2640.4	34.0	3438	939.328	4190.0	74.2	408061
2010	1.182	10,342.2	27535.6	21580.7	1620.9	2714.1	33.6	4382	942.217	3548.0	72.6	412259
2011	1.208	10,428.2	28033.7	21677.0	1582.1	2837.0	34.6	3472	944.167	4010.1	75.0	415779
2012	1.234	10,598.6	28575.4	22069.1	1688.0	3134.7	34.9	3328	946.202	4010.1	74.6	419158
2013	1.258	10,733.9	29115.5	22361.0	1654.6	3269.8	34.9	3145	947.736	4010.1	74.0	422402
2014	1.283	10,829.0	29573.8	22557.8	1625.1	3336.7	34.6	2951	948.895	4010.1	76.0	425516
2015	1.312	10,877.5	29984.0	22691.2	1586.4	3396.9	34.9	2818	949.890	4010.1	79.6	428506
2016	1.339	10,921.6	30153.6	22763.1	1278.0	3457.6	34.3	2804	950.652	4010.1	81.2	431376
2017	1.366	10,936.4	30473.5	22820.4	1277.4	3519.5	34.1	2735	951.265	4010.1	82.7	434160
2018	1.394	10,949.3	30794.6	22884.0	1275.7	3596.2	34.0	2625	951.694	4010.1	83.8	436860

	RPCPIS	RRCGOODS	RQTOS	RRYDS	RRINRBS	RQMFS	RLEMMFS	RIHSS	RHS	HDD		
Year	Consumer Price Index, Nova Scotia 2002=1.00	Consumer Expenditures, Goods (Millions $ 2002)	Gross Domestic Product at Basic Prices, Nova Scotia (Millions $ 2002)	Personal Disposable Income (Millions $ 2002)	Business Non-Residential Investment Spending (Millions $ 2002)	Gross Domestic Product Manufacturing Nova Scotia (Millions $ 2002)	Employment, Nova Scotia, Manufacturing (Thousands)	Total Dwelling starts	Population Nova Scotia (Thousands)	Heating Degree-Days HDD (18°C)	Home Heating Oil Price ¢2002 / L	Residential Customers
2019	1.422	10,947.3	31136.0	22950.6	1274.3	3669.8	33.8	2505	951.929	4010.1	84.9	439479
2020	1.451	10,934.8	31324.9	23007.2	1299.2	3742.5	33.8	2387	952.023	4010.1	86.0	442072
2021	1.481	10,921.1	31436.1	23067.9	1306.8	3810.3	33.9	2290	951.945	4010.1	87.9	444639

Title: Appliance Saturation and System Average Use

ELECTRIC CLOTHES DRYERS : UNIT MATURITIES AND SYSTEM AVERAGE USE MODEL
USING NORMAL DISTRIBUTION FOR MATURITIES

mean=	12
std dev=	4

YEAR	NSPI YEAR ROUND	%ELEC SATURATION	NUMBER of Electric Units	Units Maturing	New Units	ANNUAL KWH for New Units	EFFICIENCY IMPROVEMENT FACTOR (%)	SYSTEM AVG USE PER UNIT
1980	280,032	58.1	162,699	5,831	24,981	1,027	0.7	1,066
1981	291,679	57.6	167,978	6,554	11,833	1,020	0.7	1,062
1982	295,412	58.2	171,841	7,321	11,184	1,015	0.5	1,057
1983	300,985	59.3	178,364	8,137	14,659	1,010	0.5	1,052
1984	307,671	62.7	192,817	8,999	23,452	1,005	0.5	1,044
1985	314,098	62.7	196,845	9,904	13,932	1,000	0.5	1,039
1986	322,421	64.1	206,511	10,828	20,493	995	0.5	1,033
1987	329,591	66.1	217,860	11,755	23,104	990	0.5	1,026
1988	337,364	68.8	232,106	12,652	26,899	985	0.5	1,019
1989	344,368	67.9	233,826	13,490	15,209	980	0.5	1,015
1990	351,358	69.5	244,194	14,233	24,601	975	0.5	1,008
1991	356,922	69.9	249,488	14,882	20,177	970	0.5	1,003
1992	361,565	72.0	260,327	15,436	26,274	966	0.5	997
1993	367,154	72.5	266,187	15,927	21,787	961	0.5	992
1994	371,934	73.8	274,487	16,386	24,687	956	0.5	987
1995	376,437	73.7	277,434	16,857	19,804	951	0.5	982
1996	381,028	73.7	280,818	17,364	20,748	946	0.5	978
1997	385,692	75.9	292,740	17,925	29,847	887	0.5	967
1998	388,353	76.4	296,702	18,539	22,501	887	0.0	959
1999	394,734	75.7	298,814	19,179	21,291	908	0.0	953
2000	398,368	76.0	302,760	19,816	23,762	908	0.0	947
2001	400,779	78.1	313,008	20,424	30,672	908	0.0	940
2002	408,823	78.3	320,108	20,981	28,081	908	0.0	935
2003	412,699	78.5	323,969	21,472	25,332	908	0.0	930
2004	416,465	79.4	330,673	21,895	28,600	912	0.0	926
2005	420,462	80.0	336,370	22,265	27,961	912	0.0	923
2006	424,685	81.0	343,995	22,595	30,220	913	0.0	920
2007	428,798	84.0	360,190	22,909	39,104	913	0.0	917
2008	432,982	93.0	402,673	23,236	65,719	914	0.0	915
2009	436,210	83.1	362,429	23,617	(16,627)	914	0.0	914
2010	440,428	83.6	368,082	24,004	29,658	914	0.0	913
2011	444,104	84.0	373,233	24,480	29,630	914	0.0	913
2012	447,641	84.5	378,214	25,024	30,005	914	0.0	912
2013	451,043	84.9	383,030	25,636	30,452	914	0.0	912
2014	454,317	85.3	387,685	26,299	30,954	914	0.0	913
2015	457,468	85.7	392,185	26,984	31,484	914	0.0	913
2016	460,500	86.1	396,532	27,651	31,999	914	0.0	913
2017	463,447	86.5	400,757	28,251	32,476	914	0.0	913
2018	466,311	86.8	404,862	28,737	32,842	914	0.0	913
2019	469,095	87.2	408,850	29,078	33,066	914	0.0	914
2020	471,854	87.5	412,770	29,266	33,187	914	0.0	914
2021	474,588	87.8	416,624	29,327	33,181	914	0.0	914
2022	477,298	88.1	420,413	29,315	33,104	914	0.0	914
2023	479,983	88.4	424,137	29,298	33,022	914	0.0	914
2024	482,643	88.6	427,800	29,341	33,004	914	0.0	914
2025	485,280	88.9	431,401	29,491	33,092	914	0.0	914

ELECTRIC AUTOMATIC CLOTHES WASHERS : UNIT MATURITIES AND SYSTEM AVERAGE USE MODE
USING NORMAL DISTRIBUTION FOR MATURITIES

mean=	10
std dev=	4

YEAR	NSPI YR-RND	%ELEC SAT'N	NUM of Elec Units	Units Maturing	New Units	ANNUAL KWH for New Units	EFFIC IMP FACTOR (%)	SYSTEM AVG USE PER UNIT
1980	280,032	55.3	154,970	7,746	25,794	1,287	2.0	1,396
1981	291,679	56.8	165,703	8,702	19,435	1,261	2.0	1,376
1982	295,412	57.4	169,596	9,664	13,557	1,255	0.5	1,361
1983	300,985	59.3	178,364	10,625	19,393	1,249	0.5	1,344
1984	307,671	63.4	194,940	11,603	28,180	1,243	0.5	1,324
1985	314,098	62.0	194,741	12,593	12,393	1,236	0.5	1,312
1986	322,421	65.0	209,670	13,494	28,424	1,230	0.5	1,295
1987	329,591	66.0	217,530	14,423	22,282	1,224	0.5	1,282
1988	337,364	68.1	229,745	15,280	27,495	1,218	0.5	1,269
1989	344,368	69.4	238,819	16,123	25,198	1,212	0.5	1,258
1990	351,358	71.1	249,816	16,926	27,922	1,200	1.0	1,247
1991	356,922	70.9	253,058	17,718	20,960	1,176	2.0	1,237
1992	361,565	73.0	263,942	18,470	29,355	1,141	3.0	1,223
1993	367,154	73.5	269,858	19,248	25,164	1,095	4.0	1,207
1994	371,934	74.4	276,719	20,006	26,867	1,040	5.0	1,187
1995	376,437	76.2	286,845	20,775	30,901	999	4.0	1,162
1996	381,028	78.0	297,202	21,555	31,911	969	3.0	1,136
1997	385,692	80.0	308,554	22,330	33,681	940	3.0	1,108
1998	388,353	80.7	313,401	23,099	27,946	912	3.0	1,083
1999	394,734	80.8	318,945	23,827	29,372	884	3.0	1,056
2000	398,368	81.0	322,678	24,536	28,269	858	3.0	1,030
2001	400,779	81.2	325,433	25,211	27,965	840	2.0	1,004
2002	408,823	81.5	333,191	25,855	33,614	832	1.0	976
2003	412,699	81.8	337,588	26,494	30,891	828	0.5	952
2004	416,465	82.0	341,501	27,096	31,010	573	0.5	907
2005	420,462	82.3	346,040	27,669	32,208	520	0.5	860
2006	424,685	82.5	350,365	28,203	32,528	450	0.5	808
2007	428,798	83.4	357,618	28,684	35,936	448	0.5	758
2008	432,982	83.6	361,973	29,118	33,473	284	0.5	698
2009	436,210	85.5	373,171	29,490	40,688	283	0.5	635
2010	440,428	86.1	379,095	29,855	35,779	281	0.5	582
2011	444,104	86.6	384,494	30,195	35,593	280	0.5	534
2012	447,641	87.1	389,710	30,558	35,774	278	0.5	490
2013	451,043	87.5	394,749	30,965	36,004	277	0.5	451
2014	454,317	88.0	399,616	31,428	36,295	276	0.5	416
2015	457,468	88.4	404,316	31,949	36,648	274	0.5	386
2016	460,500	88.8	408,852	32,515	37,052	273	0.5	360
2017	463,447	89.2	413,257	33,107	37,512	271	0.5	339
2018	466,311	89.5	417,532	33,697	37,973	270	0.5	321
2019	469,095	89.9	421,682	34,260	38,409	269	0.5	308
2020	471,854	90.2	425,756	34,773	38,847	267	0.5	297
2021	474,588	90.6	429,758	35,224	39,225	266	0.5	289
2022	477,298	90.9	433,688	35,612	39,542	265	0.5	284
2023	479,983	91.2	437,548	35,947	39,807	263	0.5	279
2024	482,643	91.4	441,340	36,245	40,037	262	0.5	276
2025	485,280	91.7	445,066	36,525	40,250	261	0.5	273

ELECTRIC MANUAL DEFROST REFRIGERATORS : UNIT MATURITIES AND SYSTEM AVERAGE USE MODEL
USING NORMAL DISTRIBUTION FOR MATURITIES

mean=	20
std dev=	8

YEAR	NSPI TR-RND custs	NEW manual PENTN RATE	NEW manual ADDNS	% maturing manuals rep with autos	# man rep w auto	%ELEC SAT'N manual	manual units instlld this yr	ANNUAL KWH for installs this yr	%ELEC SAT'N auto defrst	TOTAL REF SAT'N	units maturing this year	NUM of NSPI man UNITS	num of auto units	EFFIC IMP FACTOR (%)	SYSTEM AVE USE Per Unit
1980	280,032	60.00	3,714	50	3,605	51.8	7,319	944	50.4	102.2	7,210	145,040	141,153	6.0	997
1981	291,679	60.00	6,988	50	3,564	50.9	10,552	866	52.9	103.8	7,127	148,464	154,298	9.0	999
1982	295,412	60.00	2,240	50	3,520	49.8	5,759	849	55.5	105.3	7,039	147,185	163,884	2.0	1,004
1983	300,985	60.00	3,344	50	3,453	48.9	6,796	832	56.3	105.2	6,905	147,076	169,560	2.0	1,005
1984	307,671	60.00	4,012	50	3,394	48.0	7,405	816	58.9	106.9	6,788	147,694	181,207	2.0	1,003
1985	314,098	50.00	3,214	50	3,338	47.0	6,551	800	58.3	105.3	6,675	147,570	183,176	2.0	1,001
1986	322,421	50.00	4,162	50	3,284	46.0	7,446	796	61.1	107.2	6,569	148,447	197,157	0.5	995
1987	329,591	50.00	3,585	50	3,244	45.1	6,829	792	62.2	107.3	6,489	148,787	204,864	0.5	989
1988	337,364	50.00	3,887	50	3,211	44.3	7,097	788	63.1	107.4	6,421	149,463	212,866	0.5	982
1989	344,368	50.00	3,502	50	3,190	43.5	6,692	784	63.1	106.6	6,380	149,775	217,321	0.5	974
1990	351,358	50.00	3,495	50	3,179	42.7	6,674	780	64.2	106.9	6,358	150,091	225,510	0.5	964
1991	356,922	50.00	2,782	50	3,184	41.9	5,966	776	65.8	107.7	6,368	149,689	234,716	0.5	955
1992	361,565	50.00	2,322	50	3,197	41.2	5,518	772	64.9	106.1	6,393	148,814	234,806	0.5	945
1993	367,154	50.00	2,795	50	3,170	40.4	5,965	695	67.1	107.5	6,341	148,438	246,252	10.0	931
1994	371,934	50.00	2,390	50	3,240	39.7	5,630	591	68.4	108.1	6,481	147,588	254,473	15.0	913
1995	376,437	50.00	2,252	50	3,283	38.9	5,535	591	71.1	110.0	6,566	146,556	267,524	0.0	895
1996	381,028	50.00	2,296	50	3,330	38.2	5,626	591	73.0	111.2	6,660	145,522	278,181	0.0	877
1997	385,692	50.00	2,332	50	3,374	37.5	5,706	591	74.0	111.5	6,748	144,480	285,567	0.0	858
1998	388,353	50.00	1,331	50	3,414	36.7	4,744	591	75.0	111.7	6,827	142,397	291,394	0.0	841
1999	394,734	50.00	3,191	50	3,444	36.0	6,634	591	76.2	112.2	6,888	142,143	300,748	0.0	821
2000	398,368	50.00	1,817	50	3,473	35.3	5,290	591	77.2	112.5	6,946	140,487	307,677	0.0	804
2001	400,779	50.00	1,206	50	3,487	34.5	4,693	591	78.2	112.7	6,974	138,206	313,472	0.0	788
2002	408,823	50.00	4,022	50	3,493	33.9	7,515	591	79.1	113.0	6,987	138,734	323,236	0.0	769
2003	412,699	50.00	1,938	50	3,499	33.2	5,437	591	80.0	113.2	6,997	137,174	330,002	0.0	753
2004	416,465	50.00	1,883	50	3,486	32.6	5,369	591	81.0	113.6	6,972	135,571	337,534	0.0	738
2005	420,462	50.00	1,999	50	3,469	31.9	5,467	591	82.1	114.0	6,938	134,100	345,226	0.0	723
2006	424,685	50.00	2,112	50	3,445	31.3	5,556	591	82.9	114.2	6,890	132,767	352,223	0.0	709
2007	428,798	50.00	2,057	50	3,409	30.6	5,466	591	83.9	114.5	6,819	131,414	359,560	0.0	693
2008	432,982	50.00	2,092	50	3,376	30.1	5,468	591	84.9	115.0	6,752	130,130	367,799	0.0	681
2009	436,210	50.00	1,614	50	3,338	29.4	4,952	591	85.7	115.1	6,676	128,406	373,766	0.0	670
2010	440,428	50.00	2,109	50	3,296	28.9	5,405	591	86.5	115.4	6,592	127,219	381,047	0.0	659
2011	444,104	50.00	1,838	50	3,254	28.3	5,092	591	87.3	115.7	6,507	125,804	387,923	0.0	650
2012	447,641	50.00	1,768	50	3,209	27.8	4,977	591	88.2	115.9	6,418	124,363	394,652	0.0	642
2013	451,043	50.00	1,701	50	3,164	27.2	4,866	591	89.0	116.2	6,329	122,900	401,236	0.0	634
2014	454,317	50.00	1,637	50	3,121	26.7	4,758	591	89.7	116.5	6,241	121,416	407,680	0.0	627
2015	457,468	50.00	1,575	50	3,078	26.2	4,654	591	90.5	116.7	6,157	119,913	413,987	0.0	621
2016	460,500	50.00	1,516	50	3,037	25.7	4,553	591	91.2	116.9	6,075	118,392	420,160	0.0	616
2017	463,447	50.00	1,474	50	2,999	25.2	4,472	591	92.0	117.2	5,997	116,867	426,225	0.0	611
2018	466,311	50.00	1,432	50	2,962	24.7	4,394	591	92.7	117.4	5,923	115,337	432,182	0.0	607
2019	469,095	50.00	1,392	50	2,927	24.3	4,319	591	93.4	117.6	5,853	113,803	438,037	0.0	604
2020	471,854	50.00	1,379	50	2,893	23.8	4,273	591	94.1	117.9	5,787	112,289	443,827	0.0	601
2021	474,588	50.00	1,367	50	2,862	23.3	4,229	591	94.7	118.1	5,723	110,794	449,554	0.0	598
2022	477,298	50.00	1,355	50	2,831	22.9	4,186	591	95.4	118.3	5,662	109,318	455,221	0.0	596
2023	479,983	50.00	1,342	50	2,802	22.5	4,144	591	96.0	118.5	5,603	107,858	460,826	0.0	594
2024	482,643	50.00	1,330	50	2,772	22.0	4,103	591	96.6	118.7	5,545	106,417	466,372	0.0	593
2025	485,280	50.00	1,318	50	2,743	21.6	4,062	591	97.2	118.9	5,486	104,992	471,858	0.0	592

AUTO DEFROST REFRIGERATORS : UNIT MATURITIES AND SYSTEM AVERAGE USE MODEL
USING NORMAL DISTRIBUTION FOR MATURITIES

MEAN=	20
STDDEV=	8

YEAR	NSPI YR-RND custs	NEW AUTO DEFST addns	PERCNT AUTDF SAT'N	NUM of NSPI AUTODF UNITS	AUTODF maturing this year	AUTODF UNITS instlld this yr	ANNUAL KWH for installs this yr	EFFIC IMP FACTOR (%)	SYSTEM AVE USE PER AUTODF	number of MANUAL DF REF	MANUAL SAU	REF SAU
1980	280,032	10,340	50.4	141,219	2,333	12,673	1681	6.0	1972	145,040	997	1,478
1981	291,679	13,155	52.9	154,374	2,677	15,832	1542	9.0	1930	148,464	999	1,473
1982	295,412	9,604	55.5	163,978	3,065	12,669	1512	2.0	1898	147,185	1,004	1,475
1983	300,985	5,687	56.4	169,665	3,448	9,135	1483	2.0	1876	147,076	1,005	1,472
1984	307,671	11,647	58.9	181,312	3,841	15,488	1454	2.0	1840	147,694	1,003	1,464
1985	314,098	1,958	58.3	183,271	4,291	6,249	1425	2.0	1824	147,570	1,001	1,457
1986	322,421	13,980	61.2	197,251	4,686	18,666	1418	0.5	1783	148,447	995	1,445
1987	329,591	7,755	62.2	205,006	5,179	12,934	1411	0.5	1757	148,787	989	1,434
1988	337,364	8,208	63.2	213,214	5,610	13,818	1404	0.5	1729	149,463	982	1,421
1989	344,368	4,107	63.1	217,321	6,066	10,173	1397	0.5	1708	149,775	974	1,409
1990	351,358	8,189	64.2	225,510	6,501	14,690	1327	5.0	1677	150,091	964	1,392
1991	356,922	9,205	65.8	234,716	6,967	16,172	1261	5.0	1642	149,689	955	1,374
1992	361,565	91	64.9	234,806	7,421	7,512	1134	10.0	1617	148,814	945	1,357
1993	367,154	11,446	67.1	246,252	7,821	19,267	908	20.0	1553	148,438	931	1,319
1994	371,934	8,221	68.4	254,473	8,297	16,517	726	20.0	1489	147,588	913	1,278
1995	376,437	13,052	71.1	267,524	8,713	21,764	726	0.0	1416	146,556	895	1,231
1996	381,028	10,657	73.0	278,181	9,155	19,812	726	0.0	1354	145,522	877	1,190
1997	385,692	7,386	74.0	285,567	9,562	16,948	664	0.0	1298	144,480	858	1,151
1998	388,353	5,827	75.0	291,394	9,952	15,778	664	0.0	1249	142,397	841	1,115
1999	394,734	9,355	76.2	300,748	10,334	19,689	664	0.0	1195	142,143	821	1,075
2000	398,368	6,928	77.2	307,677	10,729	17,657	664	0.0	1148	140,487	804	1,040
2001	400,779	5,796	78.2	313,472	11,091	16,887	664	0.0	1104	138,206	788	1,008
2002	408,823	9,763	79.1	323,236	11,447	21,211	664	0.0	1059	138,734	769	972
2003	412,699	6,766	80.0	330,002	11,819	18,585	664	0.0	1019	137,174	753	941
2004	416,465	7,532	81.0	337,534	12,158	19,690	465	0.0	970	135,571	738	903
2005	420,462	7,693	82.1	345,226	12,507	20,199	465	0.0	924	134,100	723	867
2006	424,685	6,997	82.9	352,223	12,851	19,848	465	0.0	881	132,767	709	834
2007	428,798	7,336	83.9	359,560	13,191	20,527	465	0.0	840	131,414	693	801
2008	432,982	138,370	115.0	497,929	13,535	151,905	451	0.0	710	130,130	681	704
2009	436,210	(124,163)	85.7	373,766	14,558	(109,605)	451	0.0	767	128,406	670	742
2010	440,428	7,281	86.5	381,047	13,890	21,171	451	0.0	734	127,219	659	715
2011	444,104	6,876	87.3	387,923	14,695	21,571	451	0.0	703	125,804	650	690
2012	447,641	6,729	88.2	394,652	15,080	21,809	451	0.0	676	124,363	642	667
2013	451,043	6,585	89.0	401,236	15,472	22,056	451	0.0	650	122,900	634	646
2014	454,317	6,444	89.7	407,680	15,869	22,313	451	0.0	627	121,416	627	627
2015	457,468	6,307	90.5	413,987	16,270	22,577	451	0.0	606	119,913	621	609
2016	460,500	6,174	91.2	420,160	16,672	22,846	451	0.0	586	118,392	616	593
2017	463,447	6,064	92.0	426,225	17,072	23,136	451	0.0	569	116,867	611	578
2018	466,311	5,958	92.7	432,182	17,466	23,424	451	0.0	553	115,337	607	565
2019	469,095	5,855	93.4	438,037	17,851	23,705	451	0.0	540	113,803	604	553
2020	471,854	5,790	94.1	443,827	18,222	24,012	451	0.0	527	112,289	601	542

YEAR	NSPI YR-RND custs	NEW AUTO DEFST addns	PERCNT AUTDF SAT'N	NUM of NSPI AUTODF UNITS	AUTODF maturing this year	AUTODF UNITS instlld this yr	ANNUAL KWH for installs this yr	EFFIC IMP FACTOR (%)	SYSTEM AVE USE PER AUTODF	number of MANUAL DF REF	MANUAL SAU	REF SAU
2021	474,588	5,727	94.7	449,554	18,576	24,303	451	0.0	516	110,794	598	532
2022	477,298	5,666	95.4	455,221	18,910	24,576	451	0.0	506	109,318	596	524
2023	479,983	5,606	96.0	460,826	19,222	24,827	451	0.0	498	107,858	594	516
2024	482,643	5,546	96.6	466,372	19,509	25,055	451	0.0	490	106,417	593	509
2025	485,280	5,486	97.2	471,858	19,773	25,259	451	0.0	484	104,992	592	503

ELECTRIC DISHWASHERS : UNIT MATURITIES AND SYSTEM AVERAGE USE MODEL
USING NORMAL DISTRIBUTION FOR MATURITIES

mean=	12
std dev=	3

YEAR	NSPI YR-RND custs	%ELEC SAT'N	NUM of NSPI ELEC Units	Elunits maturing this	ELEC UNITS instlld this yr	ANNUAL KWH for installs this	EFFIC IMP FACTOR (%)	SYSTEM AVE USE PER
1980	280,032	15.4	43,125	620	6,228	1150	0.0	1,169
1981	291,679	16.0	46,669	748	4,292	1100	-4.3	1,162
1982	295,412	18.6	54,947	964	9,242	1100	0.0	1,151
1983	300,985	19.6	58,993	1,270	5,317	1100	0.0	1,146
1984	307,671	21.9	67,380	1,658	10,045	1100	0.0	1,138
1985	314,098	22.0	69,102	2,109	3,831	1100	0.0	1,134
1986	322,421	22.9	73,834	2,605	7,338	1000	-9.1	1,119
1987	329,591	23.6	77,783	3,121	7,070	1000	0.0	1,106
1988	337,364	25.5	86,028	3,637	11,881	1000	0.0	1,088
1989	344,368	28.4	97,628	4,133	15,733	1000	0.0	1,071
1990	351,358	28.9	101,542	4,597	8,511	980	2.0	1,059
1991	356,922	31.3	111,717	5,025	15,199	951	3.0	1,040
1992	361,565	32.0	115,701	5,417	9,402	913	4.0	1,025
1993	367,154	33.0	121,161	5,780	11,240	867	5.0	1,006
1994	371,934	33.1	123,110	6,121	8,070	828	4.5	989
1995	376,437	33.0	124,224	6,452	7,566	795	4.0	971
1996	381,028	35.0	133,360	6,796	15,932	767	3.5	940
1997	385,692	38.7	149,263	7,185	23,088	649	3.0	889
1998	388,353	39.6	153,788	7,650	12,175	633	2.5	861
1999	394,734	40.8	161,051	8,211	15,474	640	2.0	830
2000	398,368	41.5	165,323	8,849	13,121	630	1.5	805
2001	400,779	42.7	171,133	9,511	15,321	624	1.0	778
2002	408,823	43.5	177,838	10,120	16,826	621	0.5	751
2003	412,699	44.9	185,302	10,614	18,078	618	0.5	727
2004	416,465	45.6	189,908	10,980	15,586	457	0.5	693
2005	420,462	46.0	193,413	11,266	14,770	455	0.5	662
2006	424,685	47.2	200,451	11,560	18,599	400	0.5	626
2007	428,798	48.1	206,252	11,950	17,750	350	0.5	591
2008	432,982	49.1	212,594	12,474	18,816	319	0.5	556
2009	436,210	49.7	216,584	13,102	17,092	317	0.5	525
2010	440,428	50.2	221,065	13,757	18,238	316	0.5	496
2011	444,104	50.7	225,163	14,353	18,451	314	0.5	470
2012	447,641	51.2	229,078	14,844	18,759	313	0.5	445
2013	451,043	51.6	232,818	15,230	18,969	311	0.5	421
2014	454,317	52.0	236,387	15,546	19,116	310	0.5	400
2015	457,468	52.4	239,793	15,835	19,241	308	0.5	381
2016	460,500	52.8	243,040	16,124	19,371	306	0.5	364
2017	463,447	53.1	246,151	16,421	19,532	305	0.5	349
2018	466,311	53.4	249,131	16,725	19,704	303	0.5	337
2019	469,095	53.7	251,984	17,029	19,883	302	0.5	328
2020	471,854	54.0	254,745	17,326	20,087	300	0.5	320
2021	474,588	54.2	257,419	17,607	20,280	299	0.5	315
2022	477,298	54.5	260,008	17,867	20,457	297	0.5	310
2023	479,983	54.7	262,518	18,107	20,617	296	0.5	307
2024	482,643	54.9	264,953	18,330	20,764	294	0.5	305
2025	485,280	55.1	267,315	18,541	20,904	293	0.5	303

ELECTRIC RANGE : UNIT MATURITIES AND SYSTEM AVERAGE USE MODEL
USING NORMAL DISTRIBUTION FOR MATURITIES

mean=	15
std dev=	6

YEAR	NSPI YR-RND custs	NEW ELEC ADDNS	%ELEC SAT'N	NUM of NSPI ELEC Units	Elunits maturing this	ELEC UNITS instlld this yr	ANNUAL KWH for	EFFIC IMP FACTOR (%)	SYSTEM AVE USE PER
1980	280,032	7,592	75.1	210,304	7,502	15,095	820	0.5	834
1981	291,679	15,543	77.4	225,847	8,082	23,625	816	0.5	832
1982	295,412	5,549	78.3	231,396	8,746	14,295	812	0.5	830
1983	300,985	10,505	80.4	241,902	9,388	19,894	808	0.5	828
1984	307,671	8,881	81.5	250,783	10,106	18,987	804	0.5	826
1985	314,098	8,976	82.7	259,759	10,826	19,802	800	0.5	824
1986	322,421	14,299	85.0	274,058	11,559	25,857	796	0.5	821
1987	329,591	7,083	85.3	281,141	12,314	19,398	792	0.5	818
1988	337,364	10,341	86.4	291,482	13,015	23,356	788	0.5	815
1989	344,368	6,568	86.6	298,051	13,726	20,294	784	0.5	812
1990	351,358	6,577	86.7	304,627	14,384	20,961	780	0.5	809
1991	356,922	11,962	88.7	316,590	15,018	26,980	776	0.5	806
1992	361,565	7,734	89.7	324,324	15,641	23,375	772	0.5	802
1993	367,154	5,013	89.7	329,337	16,201	21,214	769	0.5	799
1994	371,934	4,660	89.8	333,997	16,729	21,388	761	1.0	795
1995	376,437	9,690	91.3	343,687	17,233	26,923	753	1.0	791
1996	381,028	8,383	92.4	352,070	17,740	26,122	746	1.0	786
1997	385,692	6,238	92.9	358,308	18,214	24,452	759	1.0	783
1998	388,353	919	92.5	359,227	18,672	19,591	751	1.0	780
1999	394,734	13,008	94.3	372,234	19,102	32,109	744	1.0	776
2000	398,368	(1,354)	93.1	370,881	19,590	18,237	736	1.0	772
2001	400,779	11,062	95.3	381,942	19,980	31,042	729	1.0	767
2002	408,823	3,169	94.2	385,111	20,451	23,620	722	1.0	763
2003	412,699	9,842	95.7	394,953	20,849	30,691	715	1.0	758
2004	416,465	2,355	95.4	397,308	21,285	23,640	622	1.0	748
2005	420,462	5,075	95.7	402,382	21,662	26,736	600	1.0	737
2006	424,685	9,562	97.0	411,944	22,053	31,616	550	1.0	720
2007	428,798	988	96.3	412,932	22,446	23,435	520	1.0	706
2008	432,982	4,029	96.3	416,962	22,779	26,808	513	1.0	690
2009	436,210	6,702	97.1	423,663	23,132	29,833	508	1.0	673
2010	440,428	5,039	97.3	428,702	23,478	28,517	503	1.0	658
2011	444,104	4,459	97.5	433,161	23,802	28,260	498	1.0	642
2012	447,641	4,271	97.7	437,432	24,119	28,391	493	1.0	627
2013	451,043	4,092	97.9	441,524	24,431	28,524	488	1.0	612
2014	454,317	3,920	98.0	445,445	24,737	28,657	483	1.0	598
2015	457,468	3,757	98.2	449,202	25,037	28,794	478	1.0	584
2016	460,500	3,599	98.3	452,801	25,331	28,930	473	1.0	571
2017	463,447	3,477	98.5	456,278	25,619	29,096	469	1.0	558
2018	466,311	3,360	98.6	459,638	25,899	29,259	464	1.0	546
2019	469,095	3,247	98.7	462,885	26,172	29,419	459	1.0	535
2020	471,854	3,191	98.8	466,075	26,436	29,627	455	1.0	524
2021	474,588	3,136	98.9	469,211	26,691	29,827	450	1.0	514
2022	477,298	3,085	99.0	472,296	26,935	30,020	446	1.0	505
2023	479,983	3,034	99.0	475,330	27,169	30,203	441	1.0	497
2024	482,643	2,986	99.1	478,316	27,392	30,378	437	1.0	489
2025	485,280	2,940	99.2	481,256	27,605	30,545	432	1.0	481

TVs : UNIT MATURITIES AND SYSTEM AVERAGE USE MODEL
USING NORMAL DISTRIBUTION FOR MATURITIES

mean=	11
std dev=	4

YEAR	NSPI YR-RND custs	NEW ELEC ADDNS	%ELEC SAT'N	NUM ofNSPI ELEC Units	Elunits maturing this	ELEC UNITS instlld this yr	ANNUAL KWH for installs this	EFFIC IMP FACTOR (%)	SYSTEM AVE USE PER
1980	280,032	(1,807)	59.3	166,031	16,063	14,256	205	0.5	212
1981	291,679	8,743	59.9	174,774	15,823	24,566	204	0.5	210
1982	295,412	(658)	58.9	174,116	15,445	14,787	203	0.5	209
1983	300,985	7,589	60.4	181,705	14,932	22,521	202	0.5	208
1984	307,671	1,637	59.6	183,341	14,373	16,009	201	0.5	207
1985	314,098	(8,483)	55.7	174,858	13,815	5,333	200	0.5	206
1986	322,421	1,119	54.6	175,977	13,328	14,447	199	0.5	205
1987	329,591	(6,238)	51.5	169,739	13,005	6,767	198	0.5	205
1988	337,364	(5,443)	48.7	164,296	12,860	7,417	197	0.5	204
1989	344,368	(5,887)	46.0	158,409	12,914	7,027	196	0.5	203
1990	351,358	(13,650)	41.2	144,759	13,131	(519)	195	0.5	203
1991	356,922	(8,058)	38.3	136,701	13,425	5,366	194	0.5	202
1992	361,565	(10,515)	34.9	126,186	13,716	3,202	193	0.5	201
1993	367,154	(13,837)	30.6	112,349	13,886	49	192	0.5	201
1994	371,934	(7,092)	28.3	105,257	13,841	6,749	191	0.5	200
1995	376,437	(6,370)	26.3	98,887	13,536	7,165	190	0.5	199
1996	381,028	(5,976)	24.4	92,911	12,946	6,970	189	0.5	198
1997	385,692	(5,611)	22.6	87,299	12,105	6,494	188	0.5	196
1998	388,353	(5,705)	21.0	81,594	11,077	5,372	187	0.5	195
1999	394,734	(4,611)	19.5	76,983	9,951	5,341	186	0.5	194
2000	398,368	(4,866)	18.1	72,117	8,823	3,956	186	0.5	193
2001	400,779	(4,770)	16.8	67,347	7,776	3,006	185	0.5	192
2002	408,823	(3,578)	15.6	63,769	6,877	3,299	184	0.5	191
2003	412,699	(4,015)	14.5	59,755	6,168	2,153	183	0.5	190
2004	416,465	(3,782)	13.4	55,973	5,656	1,874	182	0.5	189
2005	420,462	(3,518)	12.5	52,455	5,324	1,806	181	0.5	188
2006	424,685	(3,275)	11.6	49,180	5,132	1,857	180	0.5	188
2007	428,798	(3,087)	10.7	46,093	5,025	1,938	179	0.5	186
2008	432,982	(2,890)	10.0	43,203	4,948	2,058	178	0.5	185
2009	436,210	(2,801)	9.3	40,402	4,852	2,050	177	0.5	184
2010	440,428	(2,537)	8.6	37,865	4,703	2,166	176	0.5	184
2011	444,104	(2,424)	8.0	35,442	4,488	2,064	176	0.5	182
2012	447,641	(2,281)	7.4	33,160	4,210	1,929	175	0.5	181
2013	451,043	(2,146)	6.9	31,015	3,888	1,743	174	0.5	180
2014	454,317	(2,017)	6.4	28,998	3,547	1,531	173	0.5	179
2015	457,468	(1,894)	5.9	27,104	3,213	1,319	172	0.5	178
2016	460,500	(1,778)	5.5	25,326	2,907	1,129	171	0.5	177
2017	463,447	(1,667)	5.1	23,659	2,644	977	170	0.5	177
2018	466,311	(1,562)	4.7	22,097	2,429	867	170	0.5	176
2019	469,095	(1,463)	4.4	20,634	2,260	797	169	0.5	175
2020	471,854	(1,368)	4.1	19,266	2,128	760	168	0.5	174
2021	474,588	(1,279)	3.8	17,987	2,022	743	167	0.5	173
2022	477,298	(1,195)	3.5	16,792	1,931	736	166	0.5	173
2023	479,983	(1,117)	3.3	15,674	1,843	726	165	0.5	172
2024	482,643	(1,044)	3.0	14,630	1,752	707	164	0.5	171
2025	485,280	(976)	2.8	13,655	1,652	677	164	0.5	170
2026	487,894	(912)	2.6	12,743	1,545	633	163	0.5	169

New Type TVs : UNIT MATURITIES AND SYSTEM AVERAGE USE MODEL
USING NORMAL DISTRIBUTION FOR MATURITIES

MEAN=	10
STDDEV=	3

YEAR	NSPI YR-RND custs	NEW TV addns	PERCENT New SAT'N	Old Sat'n	ALL TV SAT'N	UNITS instlld this yr	ANNUAL KWH for installs this	NUM of NSPI TV UNITS	New units maturing this
1980	280,032	4951	75.1	59.29	134	10,756	300	210,332	5,806
1981	291,679	6327	74.3	59.92	134	14,362	300	216,659	8,035
1982	295,412	18075	79.5	58.94	138	28,714	300	234,734	10,639
1983	300,985	10659	81.5	60.37	142	24,137	300	245,393	13,478
1984	307,671	21081	86.6	59.59	146	37,408	300	266,474	16,327
1985	314,098	20392	91.3	55.67	147	39,305	300	286,866	18,913
1986	322,421	17564	94.4	54.58	149	38,547	299	304,430	20,983
1987	329,591	17580	97.7	51.50	149	39,957	297	322,010	22,377
1988	337,364	26487	103.3	48.70	152	49,580	296	348,497	23,094
1989	344,368	22560	107.8	46.00	154	45,875	294	371,057	23,315
1990	351,358	22113	111.9	41.20	153	45,483	293	393,170	23,370
1991	356,922	24108	116.9	38.30	155	47,750	291	417,278	23,642
1992	361,565	26001	122.6	34.90	158	50,465	290	443,279	24,464
1993	367,154	25698	127.7	30.60	158	51,706	288	468,977	26,008

YEAR	NSPI YR-RND custs	NEW TV addns	PERCENT New SAT'N	Old Sat'n	ALL TV SAT'N	UNITS instlld this yr	ANNUAL KWH for installs this	NUM of NSPI TV UNITS	New units maturing this
1994	371,934	17290	130.7	28.30	159	45,538	287	486,267	28,249
1995	376,437	8864	131.5	26.27	158	39,854	285	495,130	30,991
1996	381,028	18174	134.7	24.38	159	52,129	284	513,305	33,954
1997	385,692	55844	147.6	22.63	170	92,714	282	569,148	36,870
1998	388,353	56060	161.0	21.01	182	95,606	281	625,208	39,546
1999	394,734	13856	161.9	19.50	181	55,740	280	639,064	41,885
2000	398,368	38547	170.1	18.10	188	82,414	278	677,611	43,867
2001	400,779	6101	170.6	16.80	187	51,662	277	683,712	45,560
2002	408,823	45635	178.4	15.60	194	92,758	275	729,347	47,124
2003	412,699	23915	182.5	14.48	197	72,692	274	753,262	48,777
2004	416,465	25361	187.0	13.44	200	76,150	273	778,623	50,789
2005	420,462	28346	191.9	12.48	204	81,709	271	806,969	53,363
2006	424,685	39511	199.3	11.58	211	96,071	270	846,481	56,560
2007	428,798	18193	201.7	10.75	212	78,407	269	864,674	60,214
2008	432,982	11045	202.3	9.98	212	75,011	267	875,719	63,965
2009	436,210	15599	204.3	9.26	214	82,996	266	891,319	67,397
2010	440,428	17352	206.3	8.60	215	87,577	265	908,671	70,225
2011	444,104	15984	208.2	7.98	216	88,389	263	924,655	72,405
2012	447,641	15440	210.0	7.41	217	89,542	262	940,095	74,101
2013	451,043	14912	211.7	6.88	219	90,469	261	955,007	75,557
2014	454,317	14397	213.4	6.38	220	91,352	259	969,405	76,955
2015	457,468	13899	214.9	5.92	221	92,247	258	983,304	78,348
2016	460,500	13413	216.4	5.50	222	93,107	257	996,717	79,694
2017	463,447	13006	217.9	5.11	223	93,933	256	1,009,723	80,927
2018	466,311	12609	219.2	4.74	224	94,646	254	1,022,332	82,037
2019	469,095	12224	220.5	4.40	225	95,302	253	1,034,556	83,078
2020	471,854	11966	221.8	4.08	226	96,108	252	1,046,522	84,142
2021	474,588	11716	223.0	3.79	227	97,010	250	1,058,238	85,294
2022	477,298	11476	224.1	3.52	228	98,018	249	1,069,714	86,542
2023	479,983	11239	225.2	3.27	228	99,079	248	1,080,953	87,839
2024	482,643	11012	226.2	3.03	229	100,127	247	1,091,966	89,114
2025	485,280	10791	227.2	2.81	230	101,101	245	1,102,757	90,310
2026	487,894	10579	228.2	2.61	231	101,979	244	1,113,336	91,400

ELECTRIC FREEZERS : UNIT MATURITIES AND SYSTEM AVERAGE USE MODEL
USING NORMAL DISTRIBUTION FOR MATURITIES

mean=	25
std dev=	5

YEAR	NSPI YR-RND custs	NEW ELEC ADDNs	%ELEC SAT'N	NUM of NSPI ELEC UNITS	Elunits maturing this year	ELEC UNITS instlld this yr	ANNUAL KWH for installs this yr	EFFIC IMP FACTOR (%)	SYSTEM AVE USE PER UNIT
1980	280,032	5,873	50.2	140,576	572	6,445	745	4	969
1981	291,679	10,368	51.8	150,944	723	11,091	730	2	951
1982	295,412	13,039	55.5	163,983	897	13,937	727	0.5	931
1983	300,985	987	54.8	164,970	1,097	2,084	723	0.5	927
1984	307,671	12,033	57.5	177,003	1,323	13,356	719	0.5	910
1985	314,098	6,210	58.3	183,213	1,577	7,787	716	0.5	900
1986	322,421	8,627	59.5	191,840	1,860	10,487	712	0.5	888
1987	329,591	9,210	61.0	201,051	2,173	11,383	709	0.5	876
1988	337,364	14,525	63.9	215,576	2,518	17,043	705	0.5	860
1989	344,368	860	62.9	216,435	2,895	3,755	702	0.5	854
1990	351,358	10,191	64.5	226,626	3,304	13,495	658	0.5	839
1991	356,922	1,804	64.0	228,430	3,744	5,549	655	0.5	830
1992	361,565	3,333	64.1	231,763	4,214	7,547	651	0.5	820
1993	367,154	4,133	64.3	235,896	4,708	8,841	521	20.0	804
1994	371,934	6,233	65.1	242,129	5,223	11,455	469	10.0	783
1995	376,437	(1,209)	64.0	240,920	5,751	4,541	469	0.0	771
1996	381,028	3,319	64.1	244,239	6,284	9,603	469	0.0	753
1997	385,692	3,375	64.2	247,614	6,814	10,189	342	0.0	729
1998	388,353	2,873	64.5	250,488	7,330	10,204	342	0.0	706
1999	394,734	6,089	65.0	256,577	7,823	13,912	342	0.0	678
2000	398,368	6,346	66.0	262,923	8,281	14,627	342	0.0	651
2001	400,779	2,393	66.2	265,316	8,698	11,090	342	0.0	629
2002	408,823	7,778	66.8	273,094	9,064	16,842	342	0.0	603
2003	412,699	4,240	67.2	277,334	9,375	13,615	342	0.0	581
2004	416,465	4,197	67.6	281,530	9,629	13,826	344	0.0	560
2005	420,462	4,384	68.0	285,914	9,827	14,211	344	0.0	540
2006	424,685	3,721	68.2	289,635	9,970	13,691	344	0.0	522
2007	428,798	4,091	68.5	293,727	10,065	14,156	344	0.0	504
2008	432,982	5,031	69.0	298,758	10,117	15,147	360	0.0	488
2009	436,210	2,622	69.1	301,379	10,132	12,754	360	0.0	474
2010	440,428	3,259	69.2	304,638	10,117	13,376	360	0.0	460
2011	444,104	2,860	69.2	307,498	10,079	12,939	360	0.0	447
2012	447,641	2,741	69.3	310,240	10,021	12,763	360	0.0	435
2013	451,043	2,628	69.4	312,868	9,951	12,579	360	0.0	424
2014	454,317	2,519	69.4	315,387	9,875	12,394	360	0.0	414
2015	457,468	2,416	69.5	317,803	9,803	12,219	360	0.0	404
2016	460,500	2,317	69.5	320,120	9,747	12,064	360	0.0	396
2017	463,447	2,242	69.6	322,362	9,721	11,963	360	0.0	388
2018	466,311	2,170	69.6	324,532	9,737	11,908	360	0.0	382
2019	469,095	2,101	69.6	326,633	9,810	11,911	360	0.0	376
2020	471,854	2,072	69.7	328,705	9,948	12,019	360	0.0	371
2021	474,588	2,043	69.7	330,748	10,154	12,197	360	0.0	367
2022	477,298	2,016	69.7	332,764	10,427	12,442	360	0.0	364
2023	479,983	1,989	69.7	334,752	10,756	12,744	360	0.0	362
2024	482,643	1,963	69.8	336,715	11,126	13,089	360	0.0	360
2025	485,280	1,938	69.8	338,653	11,518	13,457	360	0.0	359

ELECTRIC WATER HEATER : UNIT MATURITIES AND SYSTEM AVERAGE USE MODEL
USING NORMAL DISTRIBUTION FOR MATURITIES

mean=	12
std dev=	4

YEAR	NSPI YR-RND	NEW ELEC ADDNS	%ELEC SAT"N	NUM of NSPI ELEC UNITS	Elunits maturing this	ELEC UNITS instlld this yr	ANNUAL KWH for installs this	EFFIC IMP FACTOR (%)	SYSTEM AVE USE PER Unit
1980	280,032	4,093	44.00	123,214	7,533	11,626	3,618	0.0	3,618
1981	291,679	3,667	43.50	126,880	7,582	11,248	3,618	0.0	3,618
1982	295,412	738	43.20	127,619	7,659	8,397	3,618	0.0	3,618
1983	300,985	4,502	43.90	132,121	7,792	12,294	3,618	0.0	3,618
1984	307,671	6,089	44.92	138,210	8,005	14,094	3,618	0.0	3,618
1985	314,098	6,817	46.17	145,026	8,298	15,114	3,600	0.5	3,616
1986	322,421	10,876	48.35	155,902	8,656	19,532	3,582	0.5	3,612
1987	329,591	5,309	48.91	161,212	9,055	14,365	3,564	0.5	3,607
1988	337,364	15,934	52.51	177,146	9,462	25,396	3,546	0.5	3,598
1989	344,368	11,129	54.67	188,275	9,864	20,993	3,529	0.5	3,589
1990	351,358	10,092	56.46	198,367	10,247	20,339	3,511	0.5	3,580
1991	356,922	4,698	56.89	203,065	10,625	15,323	3,493	0.5	3,571
1992	361,565	4,052	57.28	207,116	11,017	15,069	3,476	0.5	3,562
1993	367,154	(4,234)	55.26	202,883	11,458	7,225	3,458	0.5	3,556
1994	371,934	1,808	55.03	204,691	11,968	13,776	3,441	0.5	3,545
1995	376,437	1,483	54.77	206,174	12,569	14,052	3,424	0.5	3,533
1996	381,028	(739)	53.92	205,435	13,251	12,512	3,407	0.5	3,522
1997	385,692	1,636	53.69	207,071	13,984	15,621	3,390	0.5	3,507
1998	388,353	(2,138)	52.77	204,933	14,721	12,583	3,373	0.5	3,494
1999	394,734	(1,551)	51.52	203,383	15,391	13,840	3,356	0.5	3,479
2000	398,368	2,690	51.73	206,073	15,930	18,620	3,339	0.5	3,460
2001	400,779	2,201	51.97	208,274	16,284	18,485	3,323	0.5	3,442
2002	408,823	6,486	52.53	214,760	16,423	22,909	3,306	0.5	3,420
2003	412,699	4,089	53.03	218,849	16,355	20,444	3,289	0.5	3,400
2004	416,465	3,856	53.48	222,705	16,116	19,972	3,273	0.5	3,381
2005	420,462	6,252	54.45	228,957	15,779	22,031	3,257	0.5	3,361
2006	424,685	6,655	55.48	235,612	15,429	22,084	3,240	0.5	3,343
2007	428,798	6,380	56.44	241,992	15,149	21,529	3,224	0.5	3,325
2008	432,982	6,595	57.41	248,587	15,008	21,603	3,208	0.5	3,308
2009	436,210	4,634	58.05	253,221	15,050	19,684	3,192	0.5	3,292
2010	440,428	6,087	58.88	259,307	15,289	21,376	3,176	0.5	3,277
2011	444,104	4,778	59.46	264,086	15,716	20,494	3,160	0.5	3,262
2012	447,641	5,273	60.17	269,359	16,294	21,568	3,144	0.5	3,247
2013	451,043	5,010	60.83	274,369	16,977	21,987	3,129	0.5	3,232
2014	454,317	5,056	61.50	279,425	17,707	22,763	3,113	0.5	3,217
2015	457,468	4,927	62.16	284,352	18,430	23,358	3,097	0.5	3,201
2016	460,500	4,771	62.78	289,123	19,101	23,872	3,082	0.5	3,186
2017	463,447	4,798	63.42	293,921	19,686	24,484	3,066	0.5	3,170
2018	466,311	4,845	64.07	298,766	20,170	25,015	3,051	0.5	3,154
2019	469,095	4,832	64.72	303,598	20,553	25,385	3,036	0.5	3,138
2020	471,854	4,735	65.34	308,333	20,850	25,585	3,021	0.5	3,122
2021	474,588	4,542	65.93	312,875	21,087	25,630	3,006	0.5	3,106
2022	477,298	4,434	66.48	317,309	21,294	25,728	2,991	0.5	3,090
2023	479,983	4,284	67.00	321,593	21,501	25,784	2,976	0.5	3,075
2024	482,643	4,173	67.50	325,766	21,731	25,904	2,961	0.5	3,060
2025	485,280	4,046	67.96	329,812	22,000	26,046	2,946	0.5	3,045

NON-CONFIDENTIAL

Request IR-4:

With respect to DE-3 & DE-4 Section 8.0 and the NSP 2011 Load Forecast:

(a) Please provide full results of the regression analyses used to develop the econometric forecasts.

(b) Provide full results of any alternative econometric models that were investigated. In particular have any commercial models been considered that do not explicitly use the residential consumption variable (DomEng). If no alternative models were investigated please explain why they were not.

Response IR-4:

(a) Residential regression model statistics:

```
Forecast Report for DomEng

Model Details

  Dynamic regression
  Regression(5 regressors, 0 lagged errors)

 Term          Coefficient  Std. Error  t-Statistic  Percentile
  AIDX          302.4       51.28       5.897        1.000
  CUSTHDD       0.2540      0.02916     8.711        1.000
  RRCGOODS      0.1095      0.01211     9.040        1.000
  RREP          -28.25      12.02      -2.351        0.9709
  DomEng1       0.4458      0.05200     8.572        1.000


Within-Sample Statistics

  Sample size  25             No. parameters  5
  Mean  3644.89              Std. deviation  446.59
  Adj. R-square  0.99         Durbin-Watson  2.93
  Ljung-Box(15)  24.3 P=0.94  Forecast error  34.55
  BIC  42.64                 MAPE  0.66%
  MAD  23.63

Variable specification test battery

 Term           Test Value    Percentile
  AIDX[-1]        0.916       0.661
  CUSTHDD[-1]     1.871       0.829
  RRCGOODS[-1]    0.430       0.488
  RREP[-1]        0.660       0.583
  DomEng1[-1]     2.955       0.914
  _CONST          0.109       0.259
  _TREND          2.294       0.870

 Dynamics tests successful.
```

Commercial regression model statistics:

```
Forecast Report for ComEng

Model Details

  Dynamic regression
  Regression(4 regressors, 0 lagged errors)

 Term      Coefficient  Std. Error  t-Statistic  Percentile
  RQTOS        0.01906     0.005582     3.414     0.9979
  ComEngWA1    0.4245      0.08265      5.136     1.000
  DomEng       0.2685      0.04757      5.644     1.000
  R_RYDS       0.01362     0.004529     3.009     0.9942


Within-Sample Statistics

  Sample size  30             No. parameters  4
  Mean  2656.21              Std. deviation  502.23
  Adj. R-square  1.00         Durbin-Watson  2.03
  Ljung-Box(18)  13.7 P=0.25  Forecast error  29.91
  BIC  34.94                  MAPE  0.76%
  MAD  20.48

Variable specification test battery

 Term            Test Value    Percentile
  RQTOS[-1]        0.584       0.555
  ComEngWA1[-1]    0.324       0.431
  DomEng[-1]       0.136       0.288
  R_RYDS[-1]       0.303       0.418
  _CONST           1.572       0.790
  _TREND           2.683       0.899

 Dynamics tests successful.


Dynamics test battery

 Term          Test Value  Percentile
  ComEng[-1]    0.001      0.024
  ComEng[-2]    0.239      0.375
  _AUTO[-1]     0.405      0.475
  _AUTO[-2]     1.371      0.758

 Variable specification tests successful.
```

Small General regression model statistics:

```
Forecast Report for SM_IND

Model Details

  Dynamic regression
  Regression(3 regressors, 0 lagged errors)

 Term        Coefficient  Std. Error  t-Statistic  Percentile
  RQMFS        0.01236      0.004425   2.794      0.9894
  SM_IND[-1]  0.8173        0.05357    15.26      1.000
  RRINRBS     0.00997      0.002970   3.356      0.9971


Within-Sample Statistics

  Sample size  25             No. parameters  3
  Mean  188.58                Std. deviation  51.46
  Adj. R-square  0.99         Durbin-Watson  1.21
  Ljung-Box(17)  11.5 P=0.17  Forecast error  5.79
  BIC  6.59                   MAPE  2.67%
  MAD  4.52

Variable specification test battery

 Term           Test Value   Percentile
  RQMFS[-1]      3.221        0.927
  RRINRBS[-1]    6.543        0.989 *
  _CONST         4.843        0.972 *
  _TREND         8.377        0.996 **

 Try adding _TREND to model.

Dynamics test battery

 Term           Test Value  Percentile
  SM_IND[-2]     0.155       0.306
  _AUTO[-1]      4.659       0.969 *
  _AUTO[-2]      0.812       0.632

 Variable specification tests successful.
```

Medium Industrial regression model statistics:

```
Forecast Report for MED_IND

Model Details

  Dynamic regression
  Regression(3 regressors, 0 lagged errors)

 Term         Coefficient  Std. Error  t-Statistic  Percentile
  RQMFS          0.06218     0.02548     2.441        0.9768
  MED_IND[-1]    0.5911      0.1372      4.309        0.9997
  RLEMMFS        1.168       0.4372      2.673        0.9861


Within-Sample Statistics

  Sample size  25              No. parameters  3
  Mean  455.58                 Std. deviation  76.49
  Adj. R-square  0.95          Durbin-Watson  1.00
  Ljung-Box(17)  25.9 P=0.92   Forecast error  17.40
  BIC  19.81                   MAPE  3.00%
  MAD  13.49

Variable specification test battery

 Term           Test Value  Percentile
  RQMFS[-1]       0.317      0.426
  RLEMMFS[-1]     1.626      0.798
  _CONST          6.905      0.991 **
  _TREND          3.220      0.927

 Try adding _CONST to model.

Dynamics test battery

 Term            Test Value  Percentile
  MED_IND[-2]     7.071       0.992 **
  _AUTO[-1]       5.335       0.979 *
  _AUTO[-2]       0.942       0.668

 Try adding MED_IND[-2] to model.
```

The new version of the forecasting software does not appear to have retained the logging feature which keeps past modeling trials in a data file. The software does make it easy to step through

various trial model structures and a few trials are shown below as examples. As demonstrated by these trial models, the model chosen for the forecast was the best solution available.

(b)

DomEng replaced with HDD (heating degree-days)

```
Dynamic regression
Regression(4 regressors, 0 lagged errors)


Term      Coefficient  Std. Error  t-Statistic  Percentile
RQTOS       0.01528      0.008831   1.730        0.9045
ComEngWA1   0.8816       0.06034    14.61        1.000
HDD         0.03342      0.02280    1.466        0.8453
R_RYDS      -0.005537    0.01632    -0.3392      0.2628

Marked regressors are insignificant.

Within-Sample Statistics

Sample size     30              No. parameters   4
Mean        2656.21             Std. deviation   502.23
Adj. R-square  0.99             Durbin-Watson    1.37
Ljung-Box(18)  38.9 P=1.00      Forecast error   42.89
BIC         50.09                MAPE   1.33%
MAD         33.21
```

Forecast period reduced to 25 years from 30.

```
Dynamic regression
Regression(4 regressors, 0 lagged errors)

Term       Coefficient  Std. Error  t-Statistic  Percentile
  RQTOS      0.02404     0.008091    2.971        0.9927
  ComEngWA1  0.7673      0.06232     12.31        1.000
  HDD        0.05337     0.02051     2.602        0.9834
  R_RYDS     -0.002779   0.01410     -0.1971      0.1544

  Marked regressors are insignificant.

Within-Sample Statistics

  Sample size  25              No. parameters  4
  Mean  2818.68               Std. deviation 371.86
  Adj. R-square  0.99         Durbin-Watson   1.94
  Ljung-Box(16)  12.8 P=0.31  Forecast error  36.83
  BIC  43.67                  MAPE  0.99%
  MAD  27.29
```

Forecast period reduced to 20 years.

```
Dynamic regression
 Regression(4 regressors, 0 lagged errors)

 Term    Coefficient    Std. Error  t-Statistic  Percentile
  RQTOS      0.03723     0.009938    3.746        0.9982
  ComEngWA1  0.6816      0.1358      5.018        0.9999
  HDD        0.07985     0.02191     3.644        0.9978
  R_RYDS    -0.01146     0.01632     -0.7022      0.5073

  Marked regressors are insignificant.

Within-Sample Statistics

  Sample size  20             No. parameters  4
  Mean  2944.86              Std. deviation  287.97
  Adj. R-square  0.99        Durbin-Watson   2.48
  Ljung-Box(11)  11.5 P=0.60 Forecast error  32.30
  BIC  38.98                 MAPE  0.77%
  MAD  23.01
```

Model with Disposable Income replaced with Consumer Goods Sales (RRCGOODS)

```
Dynamic regression
Regression(4 regressors, 0 lagged errors)

 Term       Coefficient  Std. Error  t-Statistic  Percentile
  RQTOS      0.03193      0.01384     2.308        0.9687
  ComEngWA1  0.7426       0.06105     12.16        1.000
  HDD        0.06308      0.02090     3.018        0.9934
  RRCGOODS   -0.02306     0.03194     -0.7220      0.5217

  Marked regressors are insignificant.

Within-Sample Statistics

  Sample size  25             No. parameters  4
  Mean  2818.68              Std. deviation  371.86
  Adj. R-square  0.99         Durbin-Watson   1.96
  Ljung-Box(16)  13.9 P=0.40  Forecast error  36.42
  BIC  43.18                  MAPE  0.98%
  MAD  26.96
```

Model with Disposable Income replaced with Electricity Price (ePrice)

```
Dynamic regression
Regression(4 regressors, 0 lagged errors)

 Term         Coefficient  Std. Error  t-Statistic  Percentile
  RQTOS        0.02122      0.006062    3.501        0.9979
  ComEngWA1    0.7802       0.05178     15.07        1.000
  HDD          0.08572      0.02007     4.271        0.9997
  ePrice       -14.38       7.124       -2.019       0.9435

  Marked regressors are insignificant.

Within-Sample Statistics

  Sample size  25             No. parameters  4
  Mean  2818.68              Std. deviation  371.86
  Adj. R-square  0.99         Durbin-Watson   2.20
  Ljung-Box(16)  21.5 P=0.84  Forecast error  33.74
  BIC  40.00                  MAPE  0.92%
  MAD  25.41
```

Model with Disposable Income replaced with Private & Public Investment, Non-Residential Construction (RINRBGS)

```
Dynamic regression
Regression(4 regressors, 0 lagged errors)

 Term       Coefficient  Std. Error  t-Statistic  Percentile
  RQTOS       0.02714     0.007364    3.686        0.9986
  ComEngWA1   0.7403      0.05760     12.85        1.000
  HDD         0.05176     0.01008     5.134        1.000
  RINRBGS     -0.02247    0.02057     -1.093       0.7130

  Marked regressors are insignificant.

Within-Sample Statistics

  Sample size  25             No. parameters  4
  Mean  2818.68               Std. deviation  371.86
  Adj. R-square  0.99         Durbin-Watson   2.00
  Ljung-Box(16)  13.6 P=0.37  Forecast error  35.86
  BIC  42.52                  MAPE  1.00%
  MAD  27.39
```

Model with Disposable Income removed, and no substitute. No errors, all variables significant and statistics are strong, however 76 percent of the forecast is due to the prior years' load. Little predictive capacity remaining for the other two independent variables.

```
Dynamic regression
Regression(3 regressors, 0 lagged errors)

 Term       Coefficient  Std. Error  t-Statistic  Percentile
  RQTOS       0.02310     0.006395    3.612        0.9985
  ComEngWA1   0.7617      0.05441     14.00        1.000
  HDD         0.04986     0.00998     4.999        0.9999


Within-Sample Statistics

  Sample size  25             No. parameters  3
  Mean  2818.68               Std. deviation  371.86
  Adj. R-square  0.99         Durbin-Watson   1.92
  Ljung-Box(17)  12.5 P=0.23  Forecast error  36.02
  BIC  40.99                  MAPE  0.99%
  MAD  27.24
```

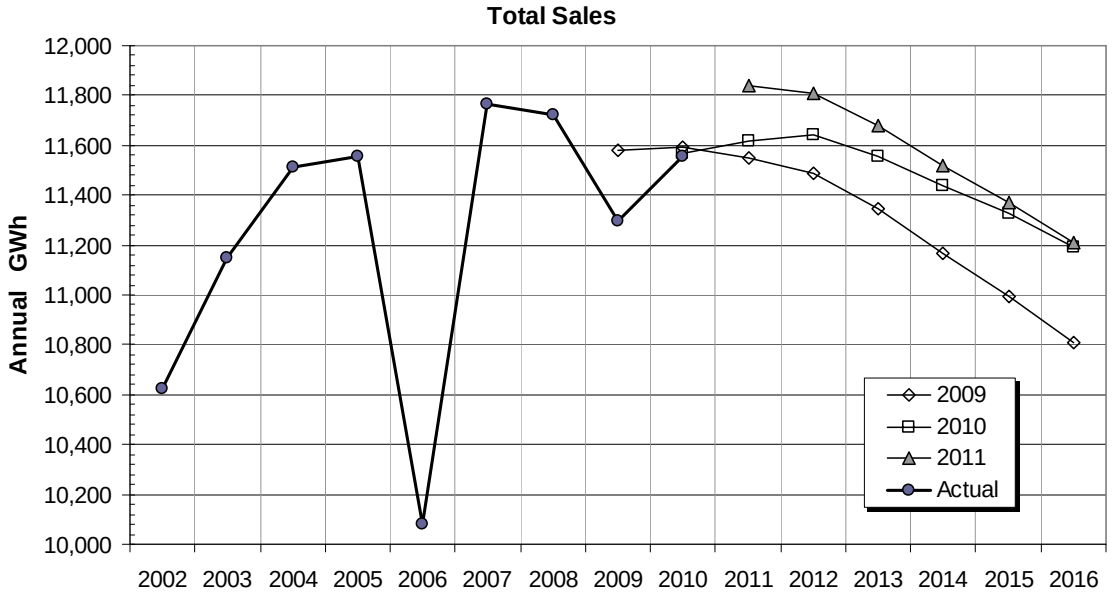
Request IR-5:

With respect to DE-3 & DE-4 Section 8.0 and the NSP 2011 Load Forecast:

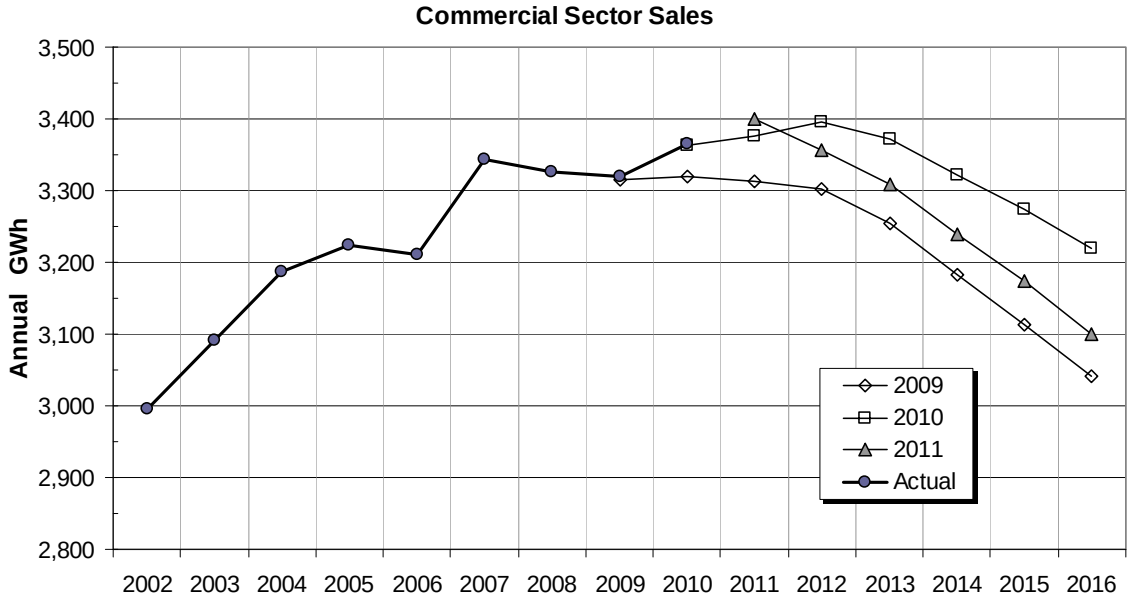
(a) Please provide any analyses you've done comparing the 2011 to the 2010 and 2009 forecasts and why the current energy forecast (Figure B6) is higher even though the GDP (Figure B1) is lower.

Response IR-5:

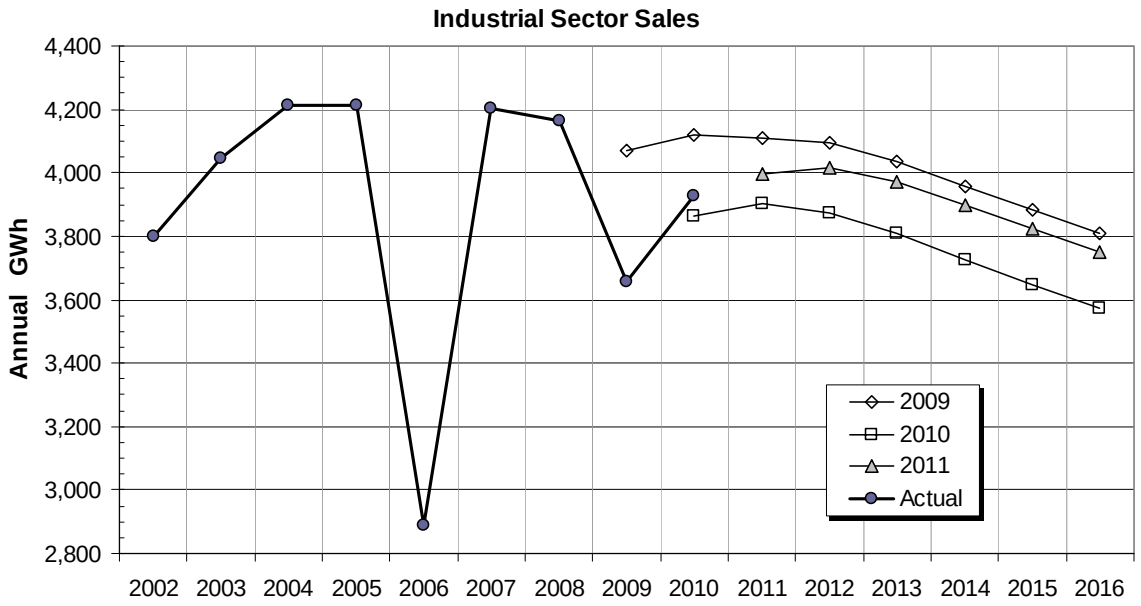
(a) Figure B6 shows that the 2011 Load forecast projection is higher than 2009, but close to 2010's forecast by 2016. The chart is replicated below on a different scale to provide more detail.



GDP is only a direct factor in the commercial model. The GDP figures for the 2011 forecast and 2009 forecast are similar. The 2010 GDP trend is higher. Accordingly, the 2010 load forecast for the commercial sector is higher than for the 2009 or 2011.



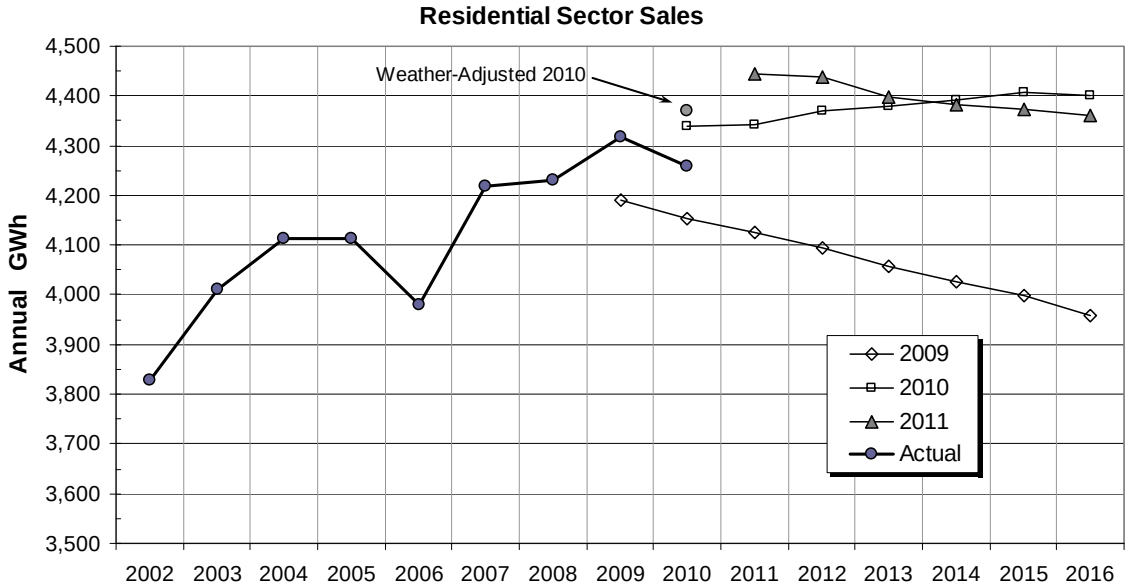
The graphs above and below illustrate that neither the commercial nor industrial sectors are the main driver for the overall increase in load projection from 2009 to 2011, although it can be seen that the 2011 industrial load forecast is higher than 2010's.



An increase in the residential sector projection is the main reason for the increase in the load forecast. The residential projection is illustrated in the chart below. Warmer weather reduces heating load and reduces actual sales from forecast levels. When weather normalized, the 2010 load is approximately 115 GWh higher and is the launch point for the 2011 forecast. In addition, 2010 sales were also higher than 2009.

NON-CONFIDENTIAL

1



2

NON-CONFIDENTIAL

Request IR-6:

With respect to DE-3 & DE-4 Section 8.0 and the NSP 2011 Load Forecast:

(a) Please provide other information such as memos, presentations and discussion papers associated with the development of this forecast.

Response IR-6:

Please refer to Attachment 1.

2012 Load Forecast

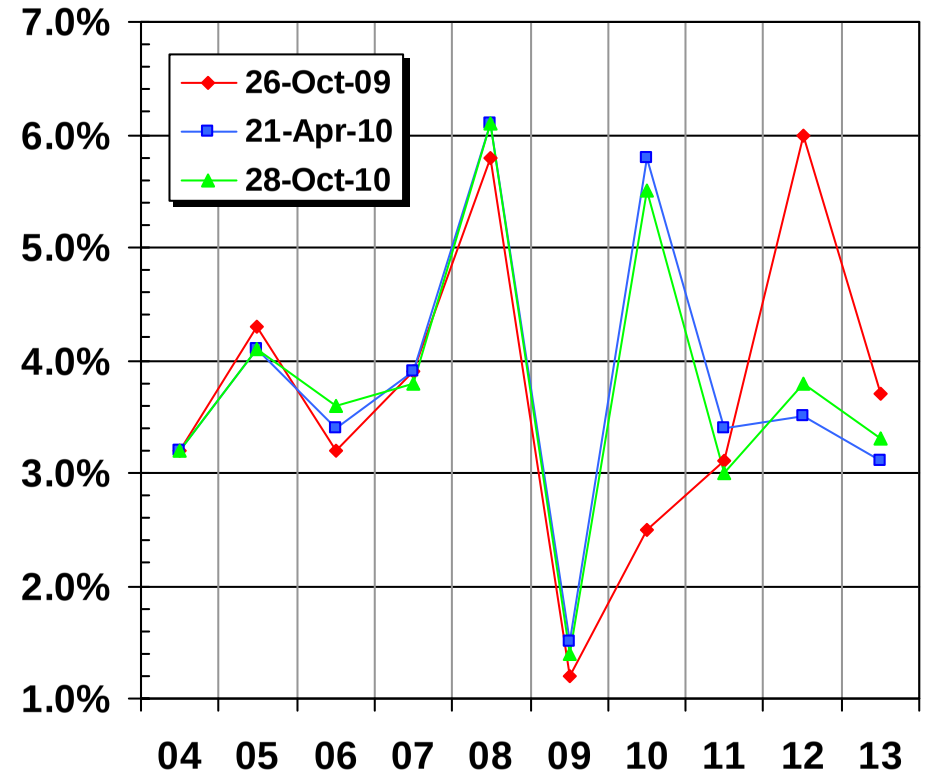
Rel: 4-Jan-2011

NOVA SCOTIA POWER
An Emera Company

Economic Indicators

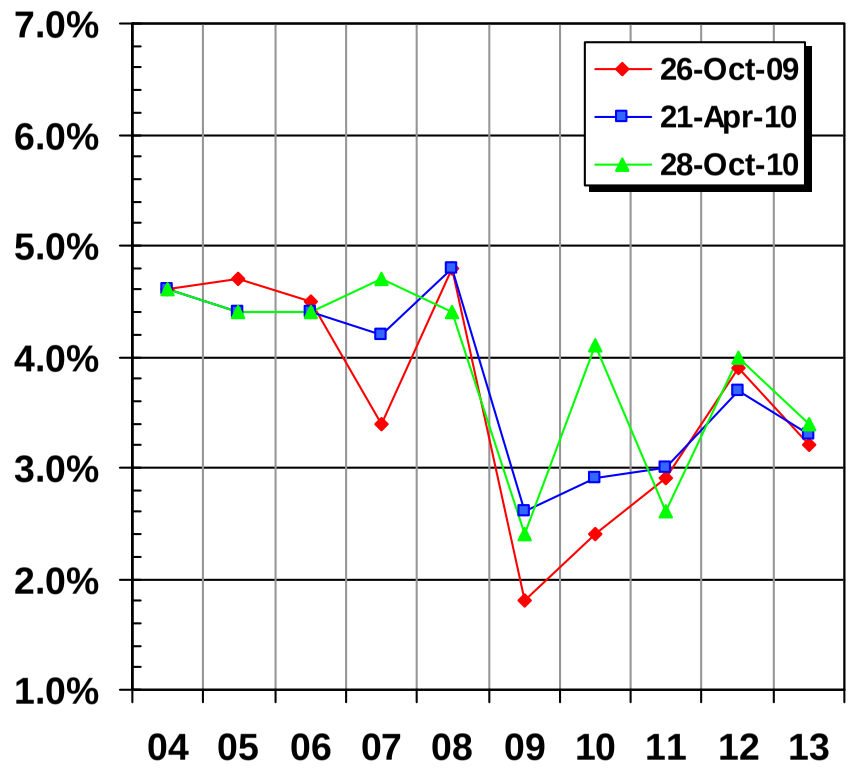
CBoC releases: 28-Oct-10, 21-Apr-10, 26-Oct-09
Load Forecasts: 2012GRA, 2011FAM, 2011OATT

Consumer Goods Sales



Forecast	2008	2009	2010	2011	2012	2013
26-Oct-09	5.8%	1.2%	2.5%	3.1%	6.0%	3.7%
21-Apr-10	6.1%	1.5%	5.8%	3.4%	3.5%	3.1%
28-Oct-10	6.1%	1.4%	5.5%	3.0%	3.8%	3.3%

Disposable Income



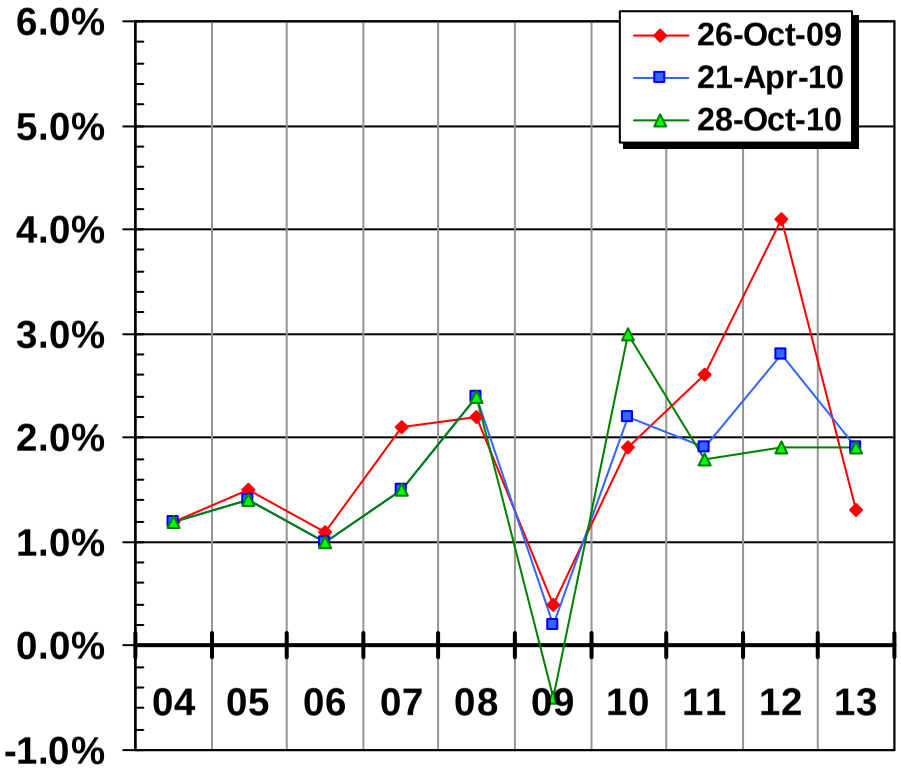
Forecast	2008	2009	2010	2011	2012	2013
26-Oct-09	4.8%	1.8%	2.4%	2.9%	3.9%	3.2%
21-Apr-10	4.8%	2.6%	2.9%	3.0%	3.7%	3.3%
28-Oct-10	4.4%	2.4%	4.1%	2.6%	4.0%	3.4%

Economic Indicators

CBoC releases: 28-Oct-10, 21-Apr-10, 26-Oct-09
Load Forecasts: 2012GRA, 2011FAM, 2011OATT

Growth

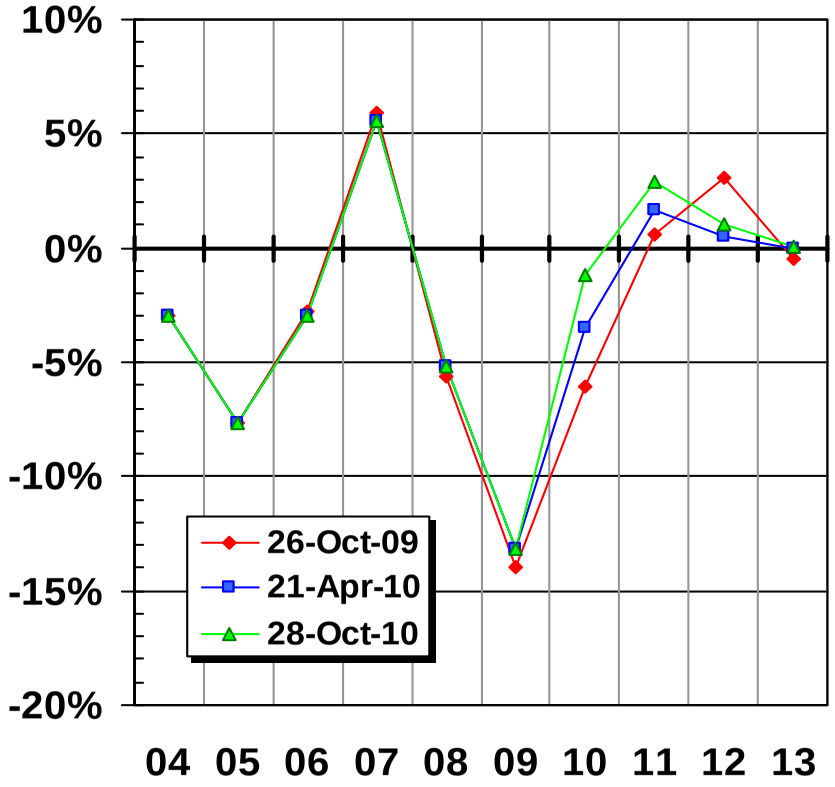
NS GDP



Forecast	2008	2009	2010	2011	2012	2013
26-Oct-09	2.2%	0.4%	1.9%	2.6%	4.1%	1.3%
21-Apr-10	2.4%	0.2%	2.2%	1.9%	2.8%	1.9%
28-Oct-10	2.4%	-0.5%	3.0%	1.8%	1.9%	1.9%

Growth

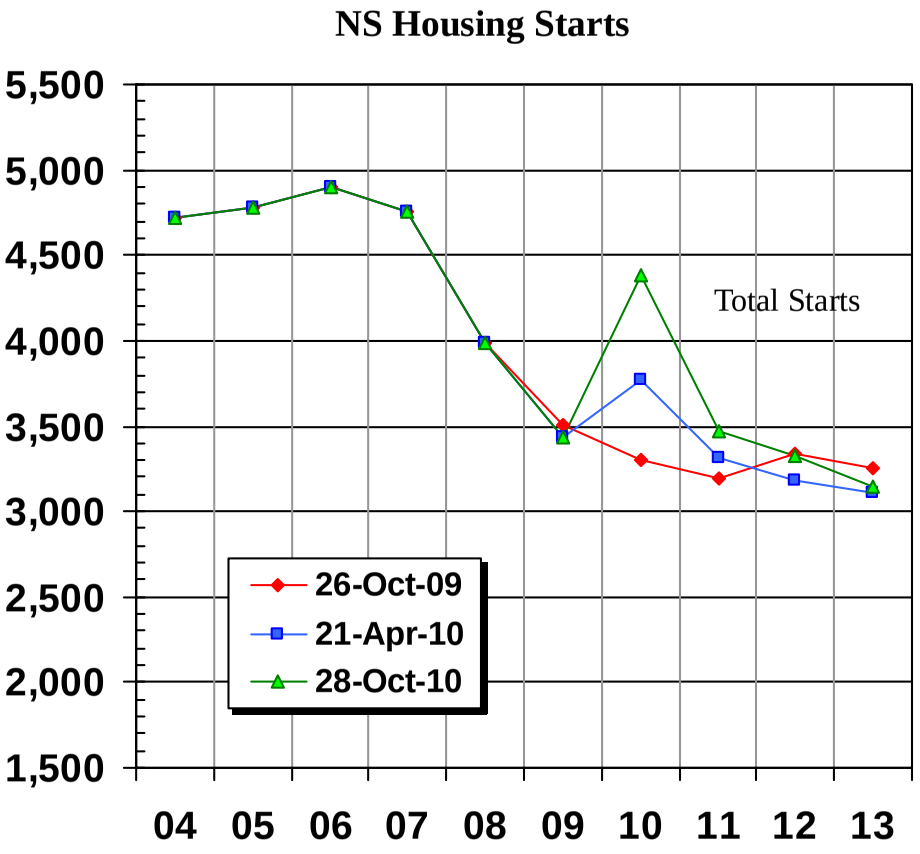
NS Employment - Manufacturing

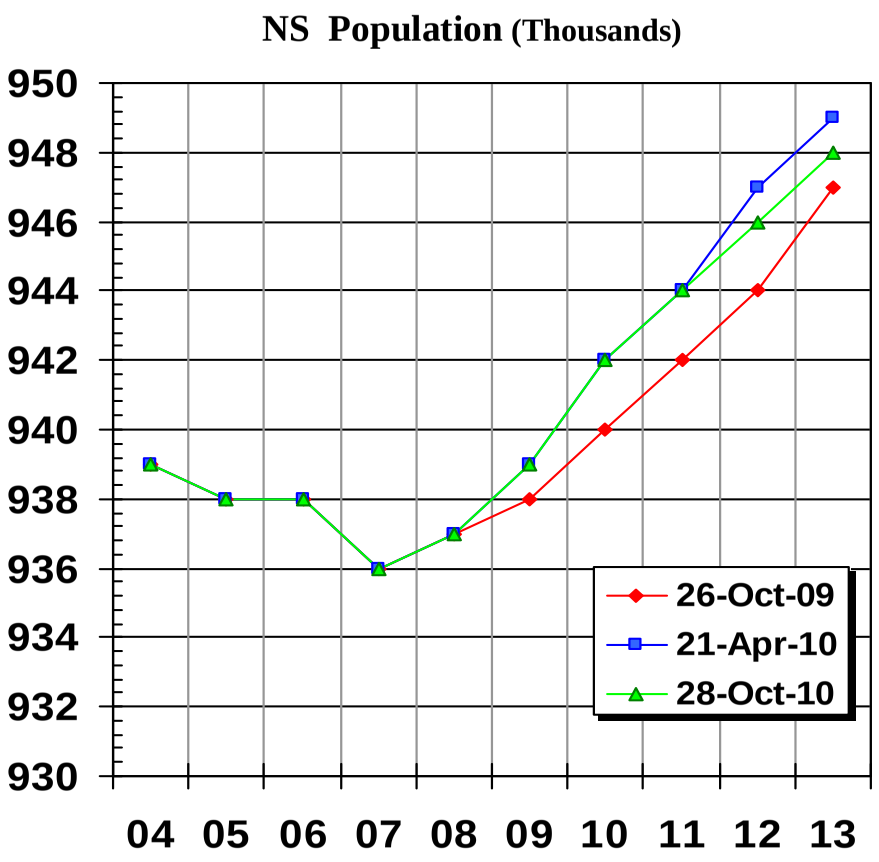


Forecast	2008	2009	2010	2011	2012	2013
26-Oct-09	-5.6%	-14.0%	-6.1%	0.6%	3.1%	-0.5%
21-Apr-10	-5.2%	-13.2%	-3.5%	1.7%	0.5%	0.0%
28-Oct-10	-5.2%	-13.2%	-1.2%	2.9%	1.0%	0.1%

Economic Indicators

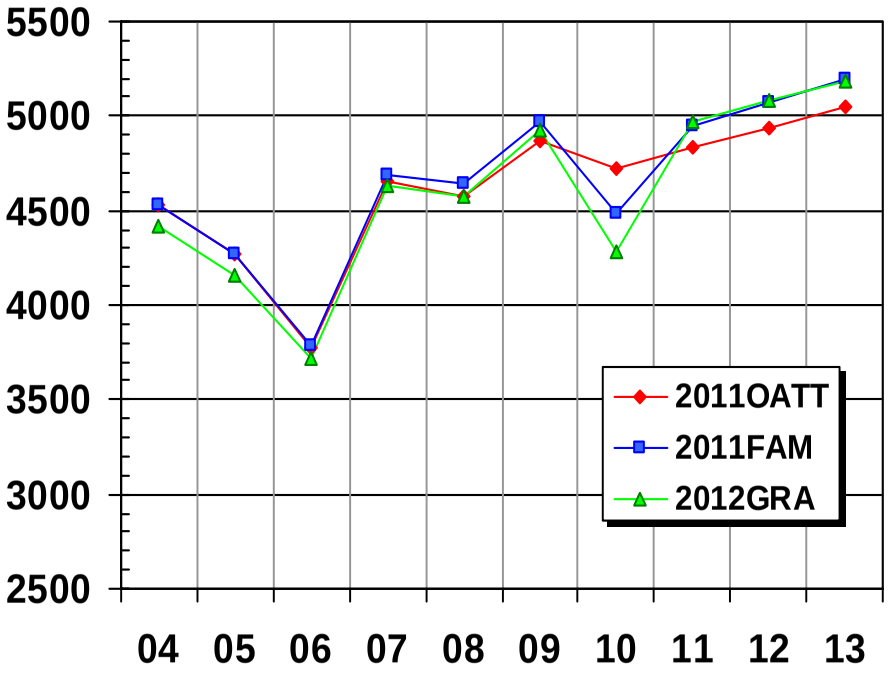
CBoC releases: 28-Oct-10, 21-Apr-10, 26-Oct-09
Load Forecasts: 2012GRA, 2011FAM, 2011OATT



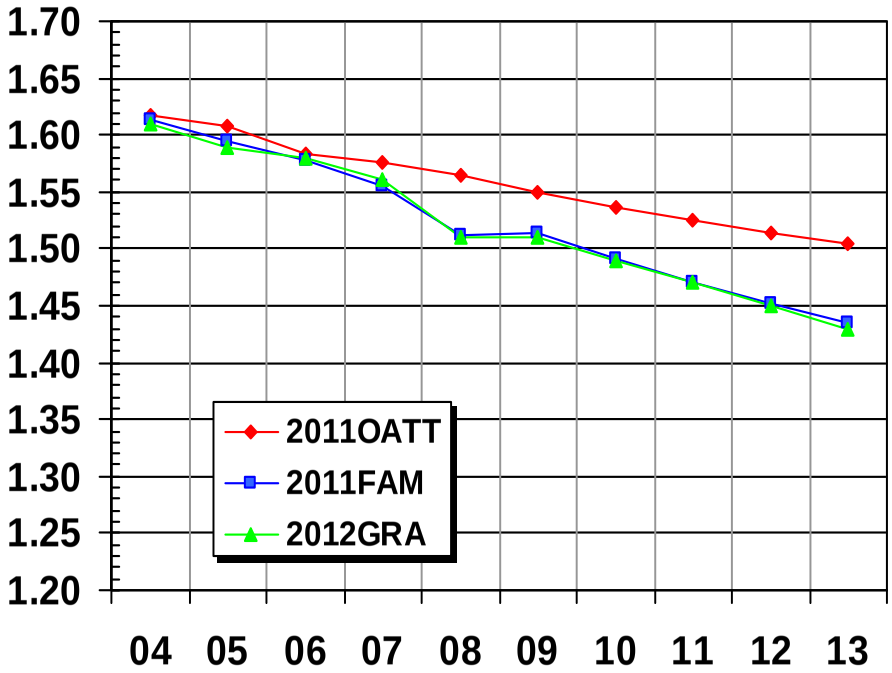


Forecast Variables
in Residential Econometric Model

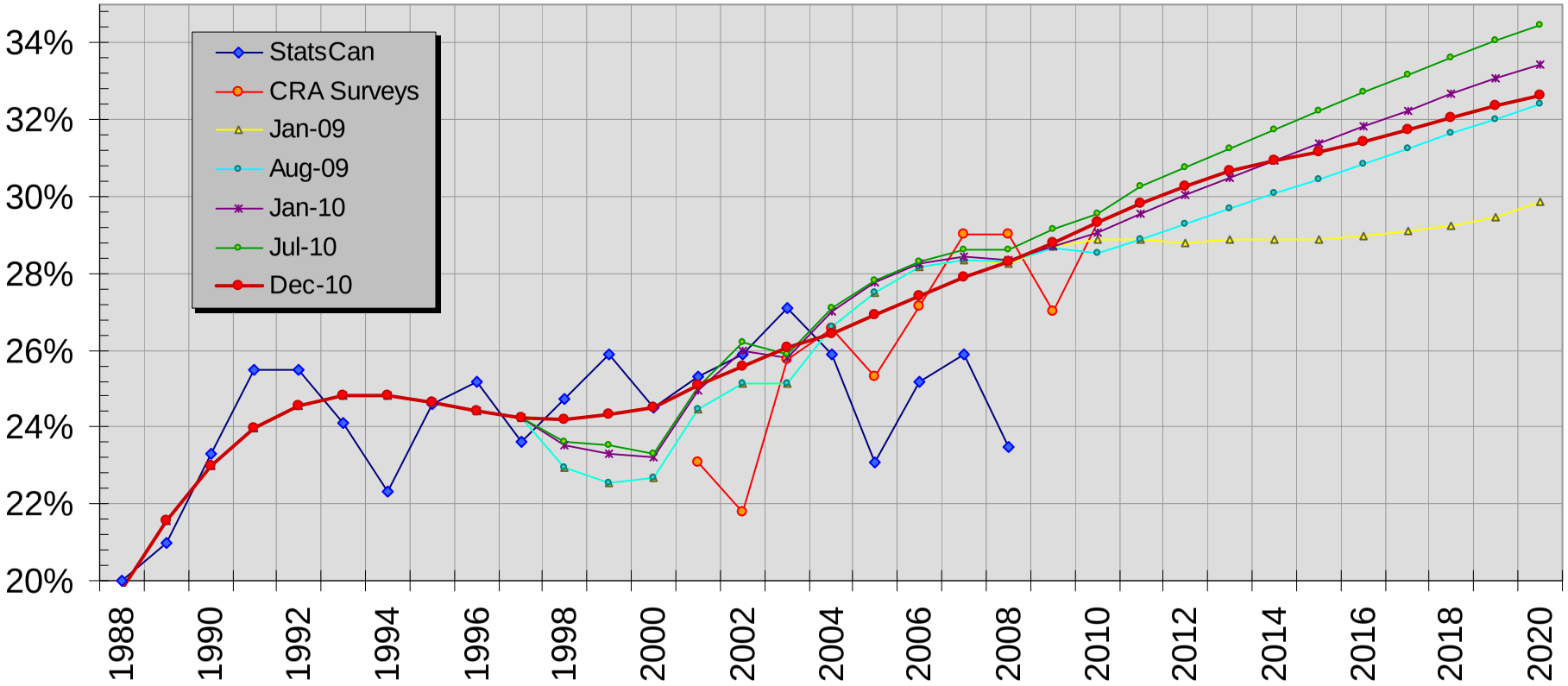
CHDD Variable (HDD x Elec Heat Custs)



Appliance Efficiency Index



Electric Space Heat Saturation



2012 Forecast															
Year >	'06	'07	'08	'09	'10	'11	**'12**	'13	'14	'15	'16	'17	'18	'19	'20
% Sat Electric	27.4%	27.9%	28.3%	28.8%	29.3%	29.8%	**30.3%**	30.7%	30.9%	31.2%	31.4%	31.7%	32.1%	32.4%	32.7%
Elec. Customers	108,784	111,863	114,605	117,522	120,919	123,978	126,913	129,470	131,556	133,505	135,604	137,821	140,044	142,177	144,345

Price Assumptions

Consumer pricing, including taxes & fees

Year	Electricity ¢ per kWh	Growth		Oil ¢ per litre	Growth
2004	11.3 ¢			68.5 ¢	
2005	12.1 ¢	6.9%		83.6 ¢	22.2%
2006	12.8 ¢	5.2%		87.9 ¢	5.1%
2007	12.4 ¢	-3.1%		84.0 ¢	-4.4%
2008	13.0 ¢	5.0%		106.3 ¢	26.6%
2009	14.4 ¢	10.8%		85.8 ¢	-19.3%
2010	13.7 ¢	-4.7%		85.8 ¢	0.0%
2011	14.5 ¢	5.7%		90.6 ¢	5.5%
2012	16.4 ¢	13.3%		92.0 ¢	1.6%
2013	17.9 ¢	8.8%		93.2 ¢	1.3%

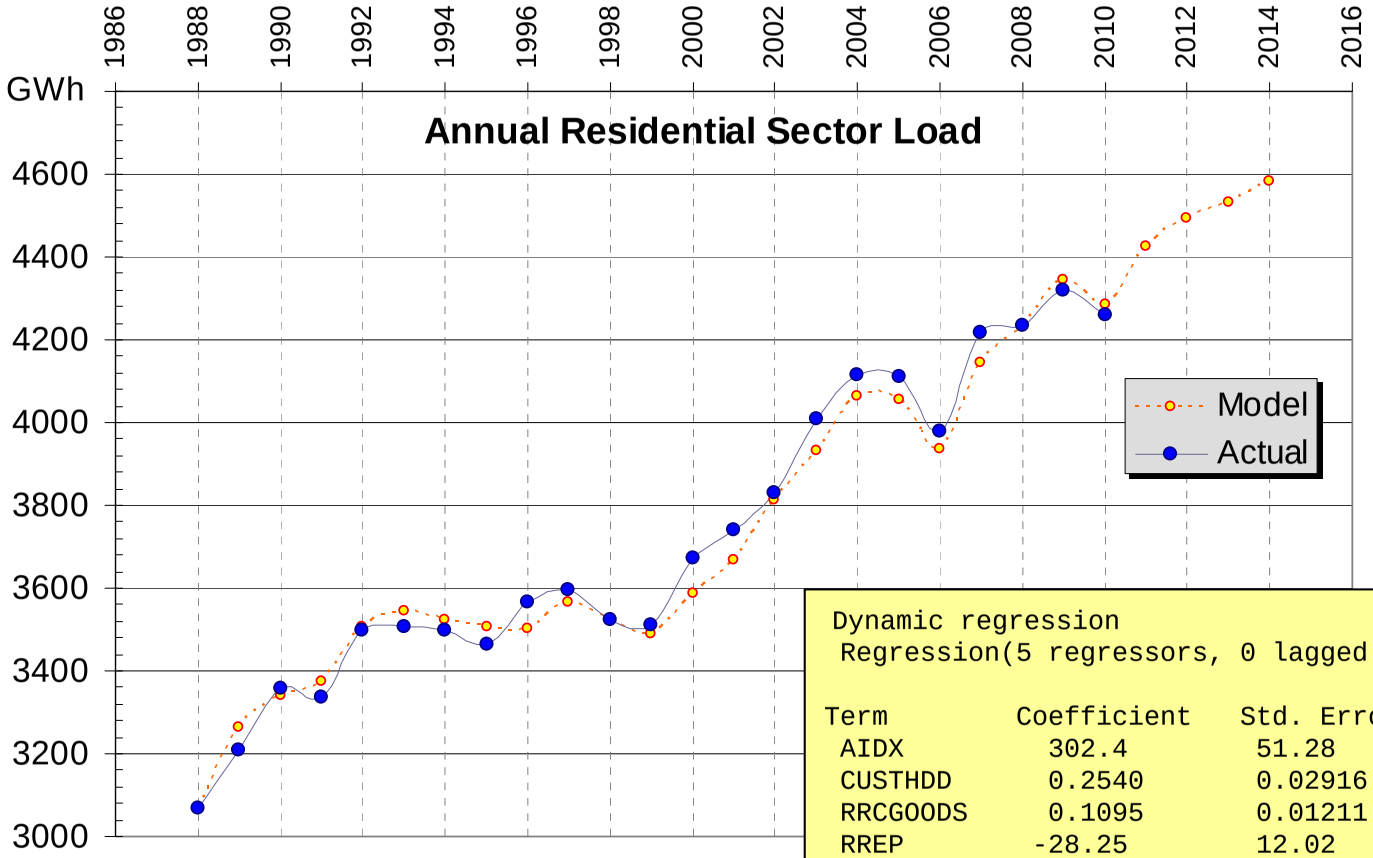
- Oil prices based on Dec.8th NYMEX strip & PIRA

- Electricity prices based on total residential cost + taxes
- 2011 has FAM/DSM Increase 5.7%
- 2012 deferred FAM Increase 3% and assumes 10% price increase

- FX based on bank forecast early December.

Residential Sector

Econometric Model



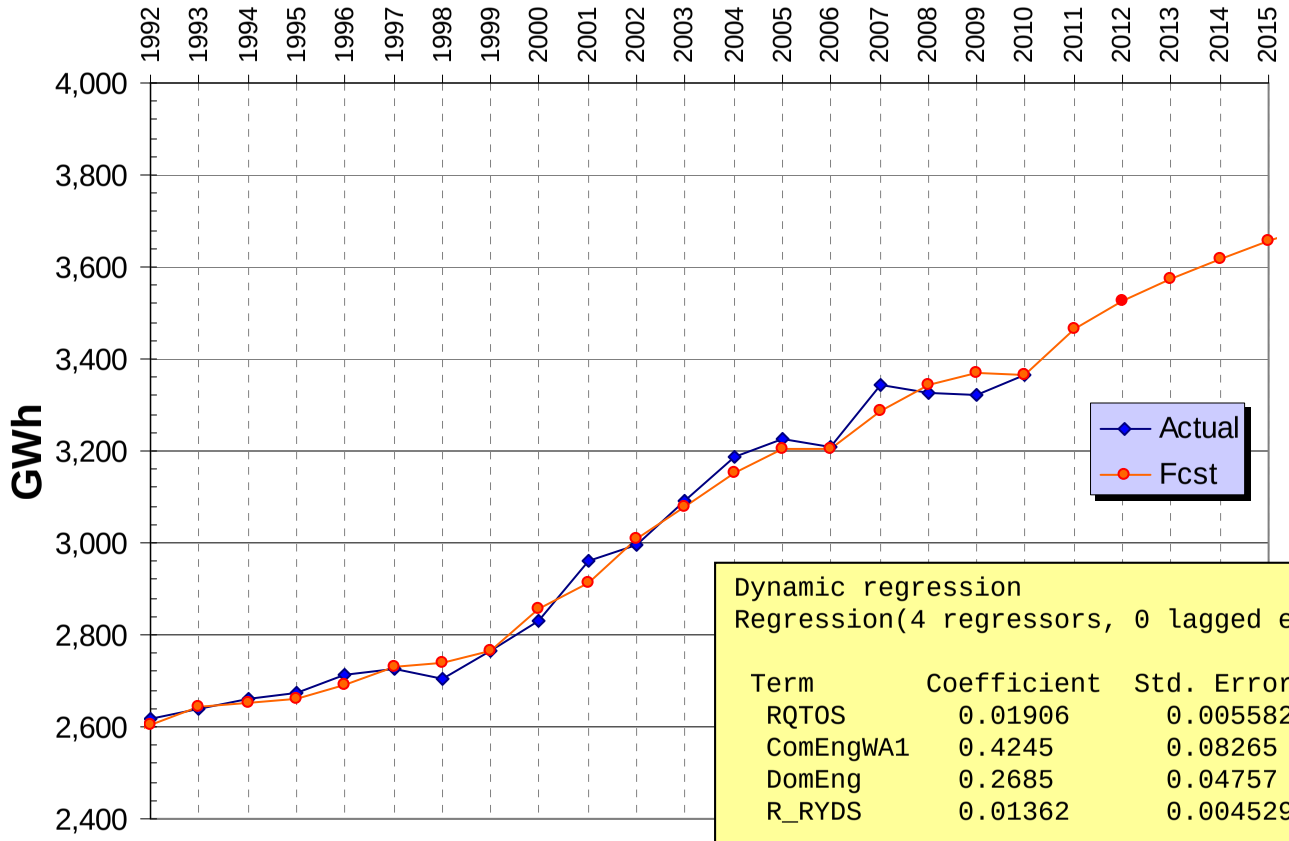
Dynamic regression
Regression(5 regressors, 0 lagged errors)

Term	Coefficient	Std. Error	t-Statistic	Percentile
AIDX	302.4	51.28	5.897	1.000
CUSTHDD	0.2540	0.02916	8.711	1.000
RRCGOODS	0.1095	0.01211	9.040	1.000
RREP	-28.25	12.02	-2.351	0.9709
DomEng1	0.4458	0.05200	8.572	1.000

Sample size	25	No. parameters	5
Mean	3644.89	Std. deviation	446.59
Adj. R-square	0.99	Durbin-Watson	2.93
Ljung-Box(15)	24.3 P=0.94	Forecast error	34.55
BIC	42.64	MAPE	0.66%
MAD	23.63		

Commercial Sector

Econometric Model




```
Dynamic regression
Regression(4 regressors, 0 lagged errors)

 Term       Coefficient  Std. Error  t-Statistic  Percentile
  RQTOS       0.01906     0.005582     3.414       0.9979
  ComEngWA1   0.4245      0.08265      5.136       1.000
  DomEng      0.2685      0.04757      5.644       1.000
  R_RYDS      0.01362     0.004529     3.009       0.9942

Within-Sample Statistics

  Sample size  30              No. parameters  4
  Mean  2656.21                Std. deviation  502.23
  Adj. R-square  1.00          Durbin-Watson  2.03
  Ljung-Box(18)  13.7 P=0.25   Forecast error  29.91
  BIC  34.94                   MAPE  0.76%
  MAD  20.48
```

NPB

Forecast

BoWater	84.248	MW CBL
NewPage	174.50	MW CBL

2012	Days	BoWater	NewPage	
Jan	31	62,680,512	129,828,000	
Feb	29	58,636,608	121,452,000	
Mar	31	62,680,512	129,828,000	
Apr	30	60,658,560	125,640,000	
May	31	62,680,512	129,828,000	
Jun	30	60,658,560	125,640,000	
Jul	31	62,680,512	129,828,000	
Aug	31	62,680,512	129,828,000	
Sep	30	60,658,560	125,640,000	
Oct	31	62,680,512	129,828,000	
Nov	30	60,658,560	125,640,000	
Dec	31	62,680,512	129,828,000	
	366	740,034,432	1,532,808,000	kWh

DSM Program Effects
for 2012 Load Forecast

Forecast Energy Savings :
= 50% of current year program
+ 50% of prior year program

Year	DSM Program Committed Energy Savings (MWh)	Energy Savings for the Load Forecast (MWh)	Cumulative Savings in 2012 Forecast (MWh)
2008	16,058	4,015	
2009	50,263	37,175	
2010*	81,132	72,755	
2011**	158,492	119,811	**119,811**
2012***	204,861	181,677	**301,488**
2013***	305,321	255,091	**556,579**
2014***	275,796	290,558	**847,138**
2015***	275,796	275,796	**1,122,933**
2016***	275,796	275,796	**1,398,729**
2017***	268,355	272,075	**1,670,804**
2018***	261,419	264,887	**1,935,691**
2019***	254,957	258,188	**2,193,879**
2020***	248,942	251,949	**2,445,828**
2021***	243,349	246,145	**2,691,973**
2022***	238,154	240,751	**2,932,725**
2023***	233,336	235,745	**3,168,469**
2024***	228,873	231,104	**3,399,574**
2025***	224,748	226,811	**3,626,384**
2026***	220,942	222,845	**3,849,229**
2027***	217,438	219,190	**4,068,419**
2028***	214,221	215,830	**4,284,248**
2029***	211,277	212,749	**4,496,997**
2030***	208,592	209,935	**4,706,932**
2031***	206,154	207,373	**4,914,305**
2032***	203,950	205,052	**5,119,358**

DSM Program Effects
for 2012 Load Forecast

Rate Class Allocation:	2011 MW	2011 GWh	2011 MW	2011 GWh
Residential	6.250	33.089	28.6%	27.6%
Small General	1.641	9.584	7.5%	8.0%
General	9.109	50.286	41.7%	42.0%
Large General	1.784	9.879	8.2%	8.2%
Small Industrial	0.287	1.571	1.3%	1.3%
Medium Industrial	1.071	5.927	4.9%	4.9%
Large Industrial	1.179	6.526	5.4%	5.4%
Municipal	0.537	2.948	2.5%	2.5%
Unmetered	0.000	0.000	0.0%	0.0%
Total	**21.857**	**119.811**	100%	100%

	for 2012 Forecast		
	2011	2012	Total
Rate Class Allocation:	GWh	GWh	GWh
Residential	29.57	44.85	74.42
Small General	8.93	13.55	22.48
General	46.87	71.07	117.94
Large General	9.21	13.96	23.17
Small Industrial	1.50	2.27	3.76
Medium Industrial	5.64	8.56	14.20
Large Industrial	6.21	9.42	15.63
Municipal	2.81	4.26	7.06
Unmetered	0.00	0.00	0.00
Sales :	110.740	167.921	278.661
Losses :	9.071	13.755	22.827
Total :	119.811	181.677	**301.488**

LED Street Lighting Program
for 2012 Load Forecast

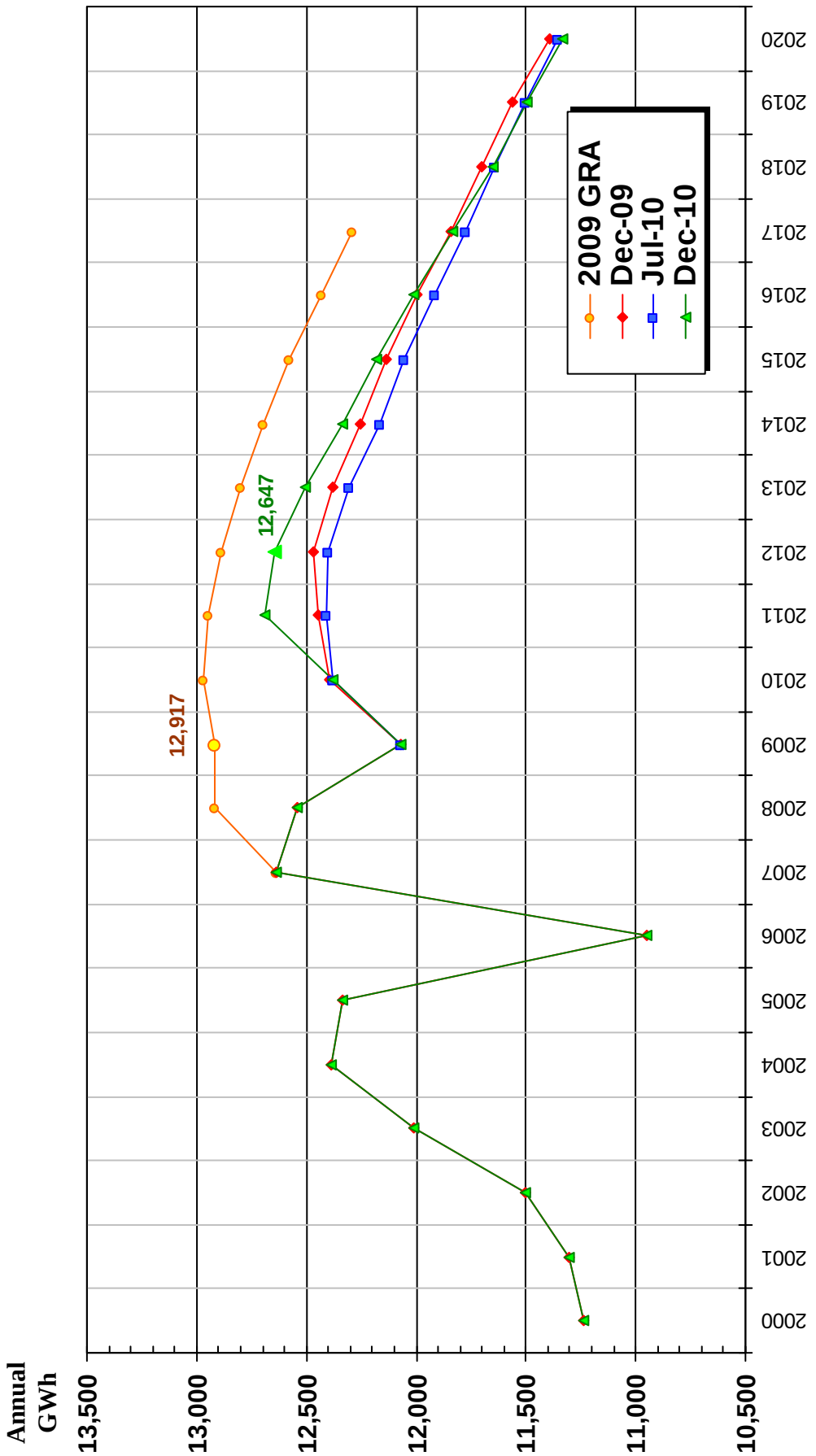
- Conversion to LED street lighting estimated to save 44.5 GWh annually
- Since fixtures will be installed throughout the calendar year, assume 50% of the energy savings in the first year of installation

Estimated Annual Savings :	44,500	MWh
5-Year Installation :	20%	per year
First year savings, assume :	50%	

	Year	installation MWh	Effect on Load MWh	Cumulative Effect MWh
1	2012	8,900	4,450	4,450
2	2013	8,900	8,900	13,350
3	2014	8,900	8,900	22,250
4	2015	8,900	8,900	31,150
5	2016	8,900	8,900	40,050
6	2017		4,450	44,500

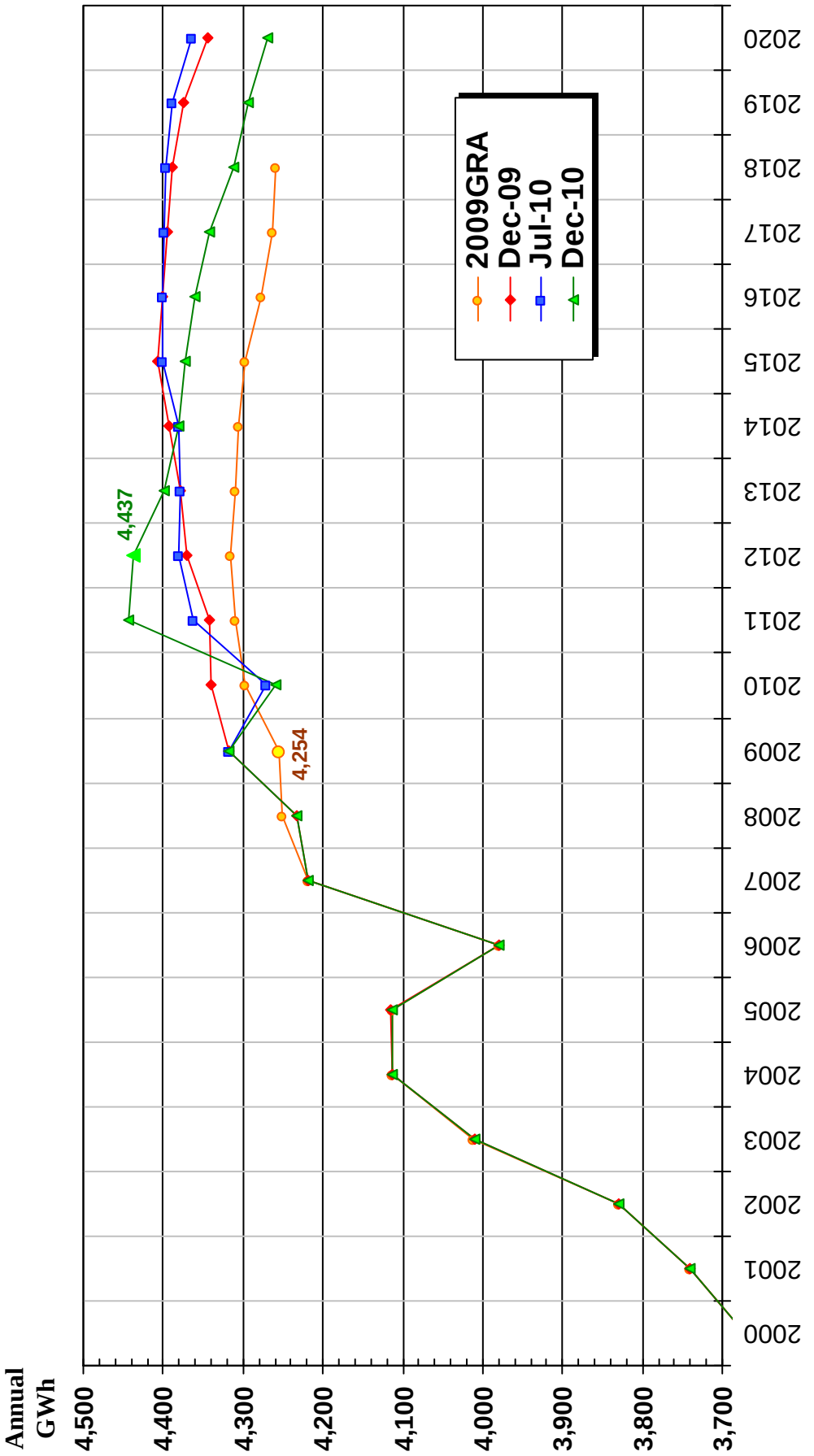
Net System Requirement

Recent Forecasts



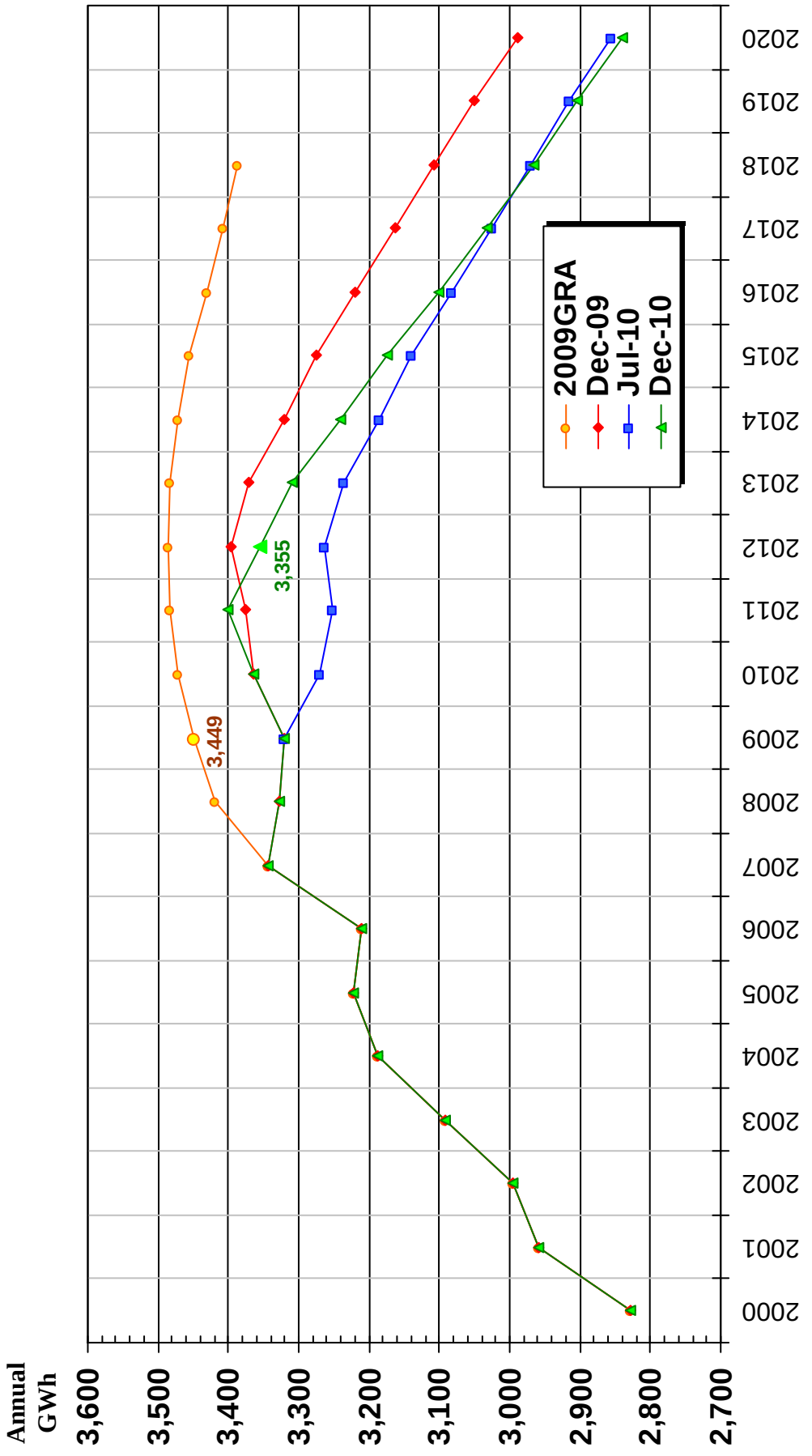
Residential Sector

Recent Forecasts



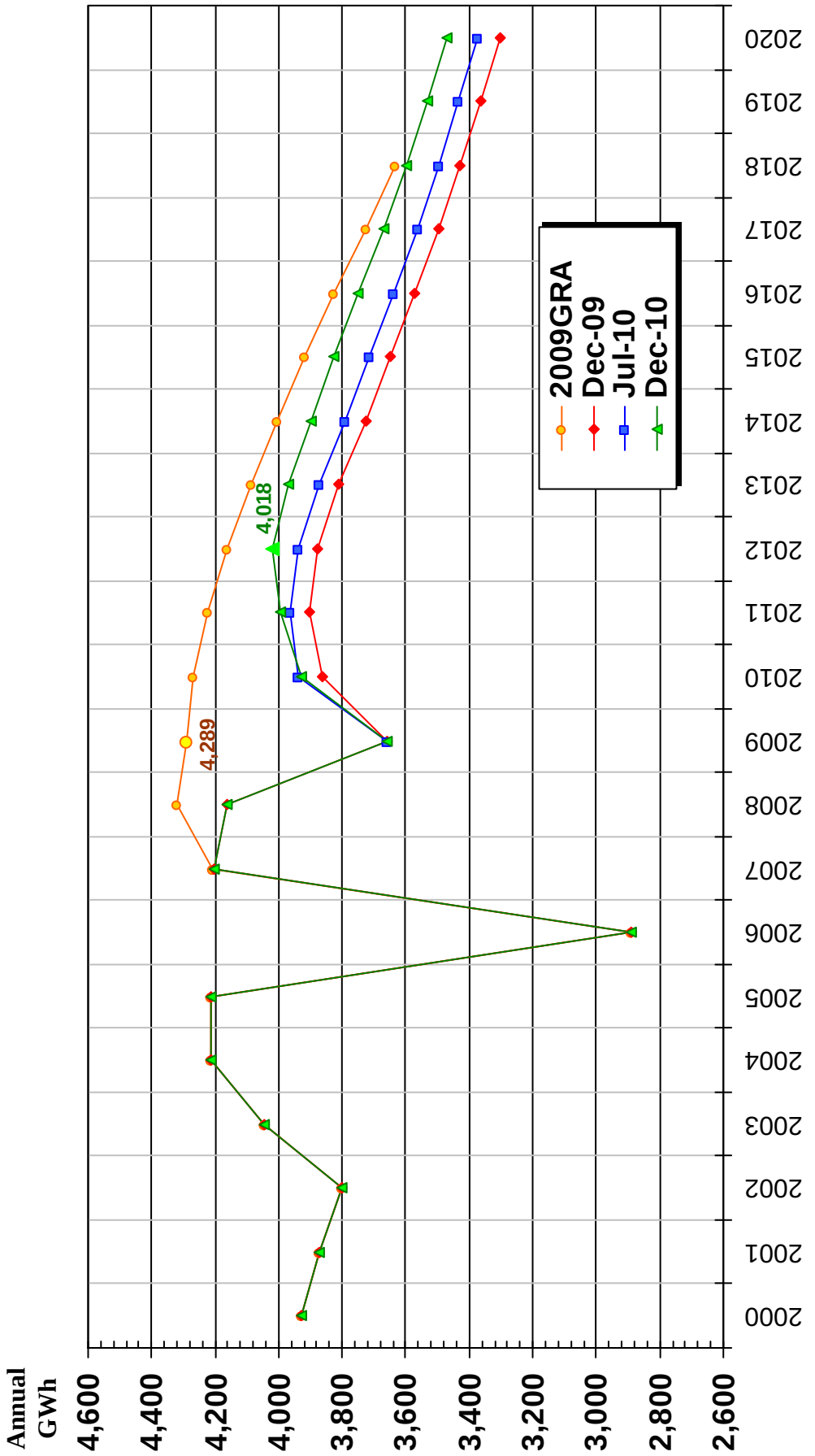
Commercial Sector

Recent Forecasts



Industrial Sector

Recent Forecasts



2012 Forecast Includes DSM

Forecast Sector Sales (Billed)

Year	Residential	% Growth	Commercial	% Growth	Industrial	% Growth	Losses	Total	% Growth
2000	3,672.1		2,829.4		3,930.0		808.7	11,240.1	
2001	3,741.2	1.9%	2,959.3	4.6%	3,872.5	-1.5%	730.2	11,303.2	0.6%
2002	3,828.9	2.3%	2,996.5	1.3%	3,798.6	-1.9%	877.0	11,501.0	1.8%
2003	4,010.5	4.7%	3,090.6	3.1%	4,045.9	6.5%	862.1	12,009.1	4.4%
2004	4,113.5	2.6%	3,187.8	3.1%	4,212.1	4.1%	874.3	12,387.7	3.2%
2005	4,114.3	0.0%	3,223.2	1.1%	4,215.1	0.1%	785.6	12,338.2	-0.4%
2006	3,979.4	-3.3%	3,210.8	-0.4%	2,887.7	-31.5%	868.3	10,946.2	-11.3%
2007	4,218.2	6.0%	3,342.9	4.1%	4,205.4	45.6%	872.4	12,638.9	15.5%
2008	4,231.9	0.3%	3,326.9	-0.5%	4,161.5	-1.0%	817.9	12,538.3	-0.8%
2009	4,318.2	2.0%	3,320.4	-0.2%	3,658.1	-12.1%	776.5	12,073.1	-3.7%
2010	4,258.3	-1.4%	3,365.5	1.4%	3,929.1	7.4%	823.7	12,376.6	2.5%
2011	4,444.1	4.4%	3,400.8	1.0%	3,994.9	1.7%	848.1	12,687.8	2.5%
2012	**4,437.4**	**-0.2%**	**3,355.5**	**-1.3%**	**4,018.4**	**0.6%**	**835.9**	**12,647.1**	**-0.3%**
2013	4,399.3	-0.9%	3,309.1	-1.4%	3,970.6	-1.2%	827.9	12,507.0	-1.1%
2014	4,381.4	-0.4%	3,239.6	-2.1%	3,897.5	-1.8%	820.5	12,339.0	-1.3%
2015	4,371.9	-0.2%	3,173.4	-2.0%	3,825.7	-1.8%	808.9	12,179.8	-1.3%
2016	4,361.1	-0.2%	3,100.6	-2.3%	3,747.8	-2.0%	798.8	12,008.3	-1.4%
2017	4,342.8	-0.4%	3,031.4	-2.2%	3,669.9	-2.1%	788.0	11,832.1	-1.5%
2018	4,312.1	-0.7%	2,965.0	-2.2%	3,598.5	-1.9%	775.3	11,650.9	-1.5%
2019	4,292.6	-0.5%	2,902.7	-2.1%	3,531.9	-1.9%	764.9	11,492.0	-1.4%
2020	4,268.6	-0.6%	2,839.1	-2.2%	3,471.0	-1.7%	754.1	11,332.7	-1.4%
2021	4,243.0	-0.6%	2,774.4	-2.3%	3,412.1	-1.7%	743.0	11,172.6	-1.4%
2022	4,216.3	-0.6%	2,712.8	-2.2%	3,358.0	-1.6%	732.1	11,019.2	-1.4%
2023	4,200.1	-0.4%	2,656.6	-2.1%	3,307.0	-1.5%	721.7	10,885.5	-1.2%
2024	4,175.9	-0.6%	2,602.6	-2.0%	3,260.7	-1.4%	711.5	10,750.7	-1.2%
2025	4,144.2	-0.8%	2,547.5	-2.1%	3,218.8	-1.3%	700.8	10,611.3	-1.3%

2012 Forecast Includes DSM

- Adjusted for Weather Effects

Forecast Sector Sales (Billed)

Year	Residential	% Growth	Commercial	% Growth	Industrial	% Growth	Losses	Total	% Growth
2000	3,738.8		2,846.7		3,930.0		808.7	11,324.2	
2001	3,785.5	1.2%	2,970.8	4.4%	3,872.5	-1.5%	730.2	11,359.0	0.3%
2002	3,858.4	1.9%	3,004.1	1.1%	3,798.6	-1.9%	877.0	11,538.2	1.6%
2003	3,996.3	3.6%	3,087.8	2.8%	4,045.9	6.5%	862.1	11,992.0	3.9%
2004	4,060.1	1.6%	3,177.1	2.9%	4,212.1	4.1%	874.3	12,323.6	2.8%
2005	4,135.4	1.9%	3,237.6	1.9%	4,215.1	0.1%	785.6	12,373.6	0.4%
2006	4,108.4	-0.7%	3,244.2	0.2%	2,887.7	-31.5%	868.3	11,108.7	-10.2%
2007	4,175.3	1.6%	3,331.8	2.7%	4,205.4	45.6%	872.4	12,584.8	13.3%
2008	4,233.3	1.4%	3,327.3	-0.1%	4,161.5	-1.0%	817.9	12,540.1	-0.4%
2009	4,282.0	1.1%	3,311.0	-0.5%	3,658.1	-12.1%	776.5	12,027.5	-4.1%
2010	4,398.3	2.7%	3,388.3	2.3%	3,929.1	7.4%	823.7	12,539.4	4.3%
2011	4,444.1	1.0%	3,400.8	0.4%	3,994.9	1.7%	848.1	12,687.8	1.2%
2012	**4,437.4**	**-0.2%**	**3,355.5**	**-1.3%**	**4,018.4**	**0.6%**	**835.9**	**12,647.1**	**-0.3%**
2013	4,399.3	-0.9%	3,309.1	-1.4%	3,970.6	-1.2%	827.9	12,507.0	-1.1%
2014	4,381.4	-0.4%	3,239.6	-2.1%	3,897.5	-1.8%	820.5	12,339.0	-1.3%
2015	4,371.9	-0.2%	3,173.4	-2.0%	3,825.7	-1.8%	808.9	12,179.8	-1.3%
2016	4,361.1	-0.2%	3,100.6	-2.3%	3,747.8	-2.0%	798.8	12,008.3	-1.4%
2017	4,342.8	-0.4%	3,031.4	-2.2%	3,669.9	-2.1%	788.0	11,832.1	-1.5%
2018	4,312.1	-0.7%	2,965.0	-2.2%	3,598.5	-1.9%	775.3	11,650.9	-1.5%
2019	4,292.6	-0.5%	2,902.7	-2.1%	3,531.9	-1.9%	764.9	11,492.0	-1.4%
2020	4,268.6	-0.6%	2,839.1	-2.2%	3,471.0	-1.7%	754.1	11,332.7	-1.4%
2021	4,243.0	-0.6%	2,774.4	-2.3%	3,412.1	-1.7%	743.0	11,172.6	-1.4%
2022	4,216.3	-0.6%	2,712.8	-2.2%	3,358.0	-1.6%	732.1	11,019.2	-1.4%
2023	4,200.1	-0.4%	2,656.6	-2.1%	3,307.0	-1.5%	721.7	10,885.5	-1.2%
2024	4,175.9	-0.6%	2,602.6	-2.0%	3,260.7	-1.4%	711.5	10,750.7	-1.2%
2025	4,144.2	-0.8%	2,547.5	-2.1%	3,218.8	-1.3%	700.8	10,611.3	-1.3%

2012 Forecast with DSM Effects

compared to 2010FAM (Jul-2010) Forecast

Forecast Sector Sales (Billed)

2012 GRA (Dec-2010)

Year	Residential	% Growth	Commercial	% Growth	Industrial	% Growth	Losses	Total	% Growth
2009	4,318.2	2.0%	3,320.4	-0.2%	3,658.1	-12.1%	776.5	12,073.1	-3.7%
2010	4,258.3	-1.4%	3,365.5	1.4%	3,929.1	7.4%	823.7	12,376.6	2.5%
2011	4,444.1	4.4%	3,400.8	1.0%	3,994.9	1.7%	848.1	12,687.8	2.5%
2012	**4,437.4**	**-0.2%**	**3,355.5**	**-1.3%**	**4,018.4**	**0.6%**	**835.9**	**12,647.1**	**-0.3%**
2013	4,399.3	-0.9%	3,309.1	-1.4%	3,970.6	-1.2%	827.9	12,507.0	-1.1%
2014	4,381.4	-0.4%	3,239.6	-2.1%	3,897.5	-1.8%	820.5	12,339.0	-1.3%

2011 FAM (Jul-2010)

Year	Residential	% Growth	Commercial	% Growth	Industrial	% Growth	Losses	Total	% Growth
2009	4,318.2	2.0%	3,320.4	-0.2%	3,658.1	-12.1%	776.5	12,073.1	-3.7%
2010	4,271.4	-1.1%	3,270.4	-1.5%	3,939.1	7.7%	827.6	12,308.4	1.9%
2011	**4,362.8**	**2.1%**	**3,252.9**	**-0.5%**	**3,966.4**	**0.7%**	**829.6**	**12,411.7**	**0.8%**
2012	4,379.5	0.4%	3,262.7	0.3%	3,937.5	-0.7%	824.5	12,404.2	-0.1%
2013	4,378.3	0.0%	3,236.1	-0.8%	3,870.4	-1.7%	822.2	12,307.0	-0.8%
2014	4,380.5	0.0%	3,185.2	-1.6%	3,788.4	-2.1%	811.9	12,166.0	-1.1%

Difference

Year	Residential	% Growth	Commercial	% Growth	Industrial	% Growth	Losses	Total	% Growth
2009	0.0		0.0		0.0		0.0	0.0	
2010	-13.1		95.1		-10.0		-3.9	68.2	
2011	81.3		147.9		28.5		18.4	276.1	
2012	**57.8**		**92.8**		**80.9**		**11.4**	**242.9**	
2013	21.0		73.0		100.2		5.7	199.9	
2014	1.0		54.4		109.1		8.6	173.0	

2012 Forecast Includes DSM

compared to Previous GRA (Dec-2007) Forecast

Forecast Sector Sales (Billed)

2012 GRA (Dec-2010)

Year	Residential	% Growth	Commercial	% Growth	Industrial	% Growth	Losses	Total	% Growth
2009	4,318.2	2.0%	3,320.4	-0.2%	3,658.1	-12.1%	776.5	12,073.1	-3.7%
2010	4,258.3	-1.4%	3,365.5	1.4%	3,929.1	7.4%	823.7	12,376.6	2.5%
2011	4,444.1	4.4%	3,400.8	1.0%	3,994.9	1.7%	848.1	12,687.8	2.5%
2012	**4,437.4**	**-0.2%**	**3,355.5**	**-1.3%**	**4,018.4**	**0.6%**	**835.9**	**12,647.1**	**-0.3%**
2013	4,399.3	-0.9%	3,309.1	-1.4%	3,970.6	-1.2%	827.9	12,507.0	-1.1%
2014	4,381.4	-0.4%	3,239.6	-2.1%	3,897.5	-1.8%	820.5	12,339.0	-1.3%

2009 GRA (Dec-2007)

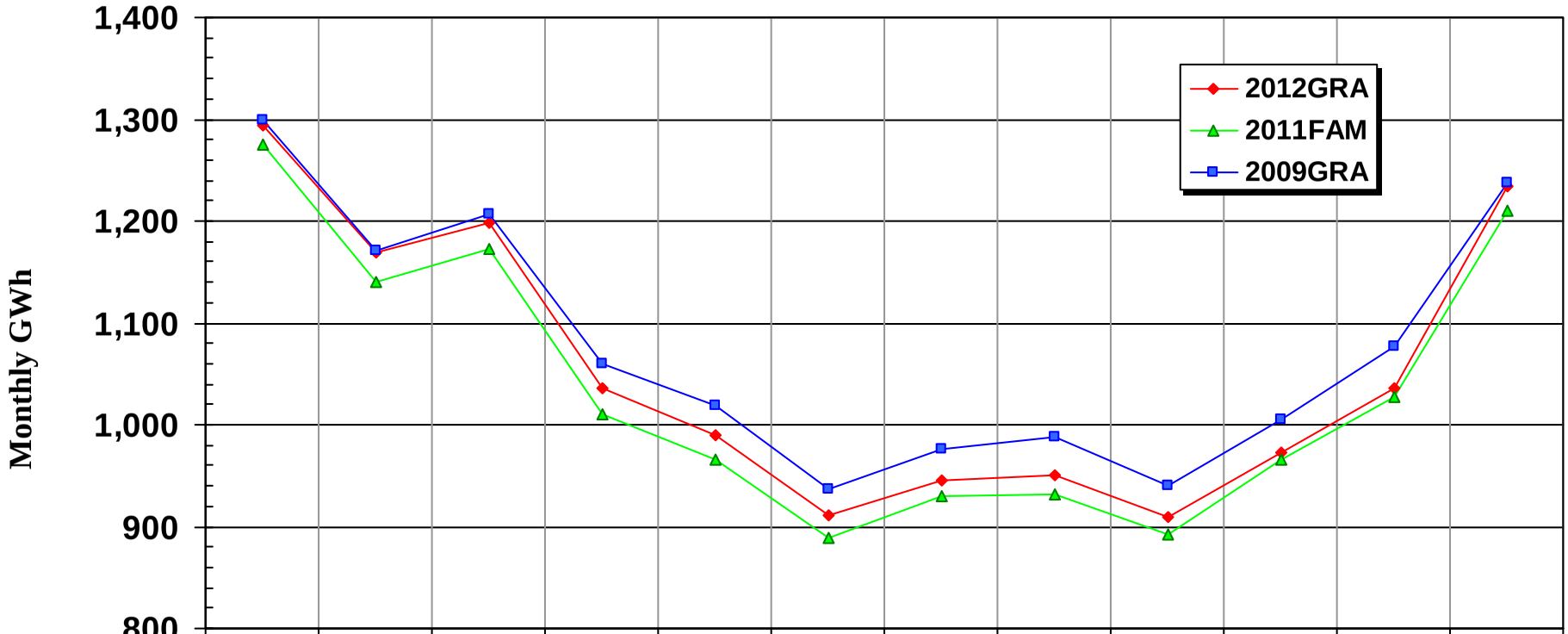
Year	Residential	% Growth	Commercial	% Growth	Industrial	% Growth	Losses	Total	% Growth
2009	**4,253.9**		**3,449.5**		**4,289.4**		**924.2**	**12,917.0**	
2010	4,296.7	1.0%	3,472.2	0.7%	4,270.5	-0.4%	929.4	12,968.8	0.4%
2011	4,308.9	0.3%	3,482.4	0.3%	4,223.4	-1.1%	929.1	12,943.8	-0.2%
2012	4,315.3	0.1%	3,486.6	0.1%	4,160.1	-1.5%	926.6	12,888.6	-0.4%
2013	4,310.2	-0.1%	3,482.6	-0.1%	4,087.1	-1.8%	921.7	12,801.6	-0.7%
2014	4,305.5	-0.1%	3,471.8	-0.3%	4,007.0	-2.0%	915.8	12,700.0	-0.8%

Difference

Year	Residential	% Growth	Commercial	% Growth	Industrial	% Growth	Losses	Total	% Growth
2009	64.3		-129.1		-631.3		-147.7	-843.9	
2010	-38.3		-106.8		-341.4		-105.7	-592.2	
2011	135.2		-81.6		-228.6		-81.0	-256.0	
2012	**122.1**		**-131.1**		**-141.8**		**-90.7**	**-241.5**	
2013	89.1		-173.5		-116.5		-93.9	-294.7	
2014	76.0		-232.2		-109.5		-95.3	-361.0	

2012 Forecast Includes DSM

compared to Previous GRA (Dec-2007) Forecast and 2011FAM Forecast

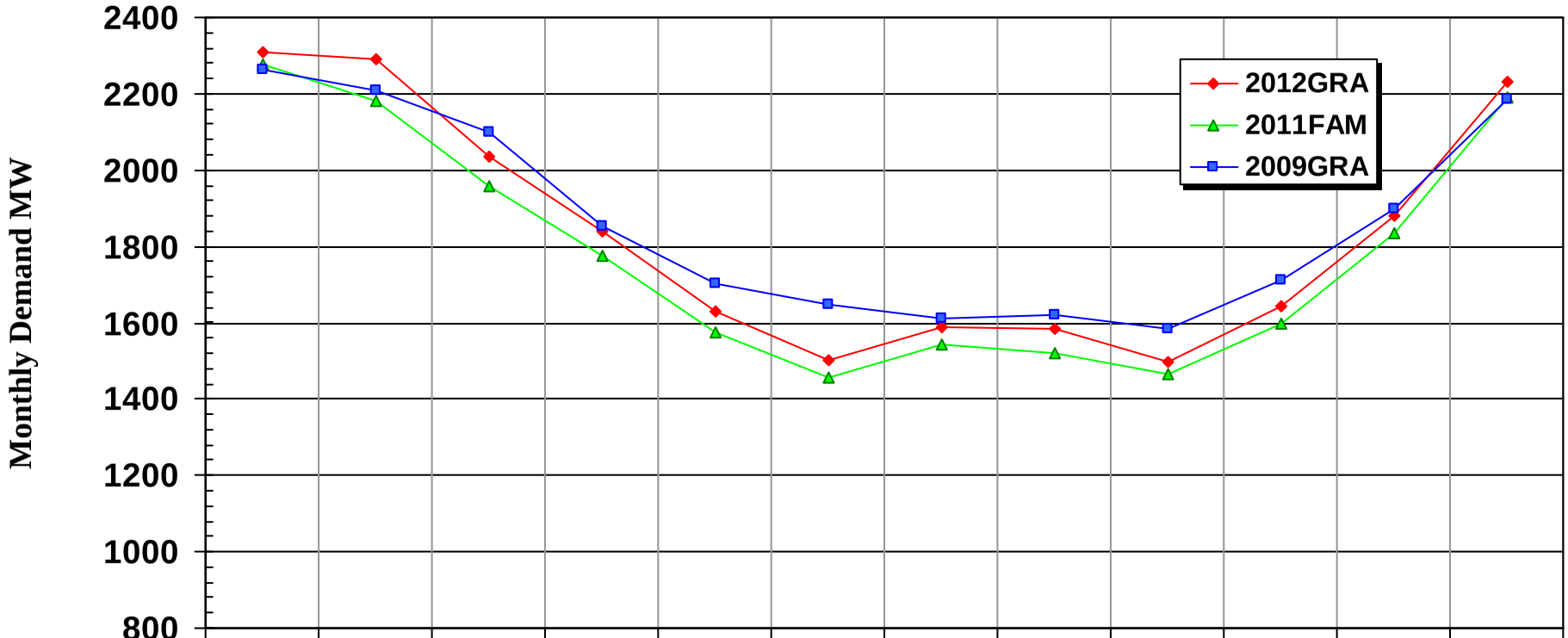


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2012GRA	1,294	1,169	1,198	1,036	989	911	946	951	910	973	1,036	1,234
2011FAM	1,275	1,141	1,172	1,011	966	889	930	931	893	966	1,027	1,211
2009GRA	1,299	1,170	1,207	1,060	1,020	938	976	988	941	1,005	1,077	1,237

2012GRA	12,647.1	GWh
2011FAM	12,411.7	GWh
2009GRA	12,917.0	GWh

2012 Forecast Peaks Includes DSM

compared to Previous GRA (Dec-2007) Forecast and 2011FAM Forecast



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2012GRA	2308	2291	2033	1840	1630	1502	1591	1585	1498	1645	1881	2232
2011FAM	2276	2182	1956	1777	1577	1457	1545	1518	1465	1599	1834	2191
2009GRA	2261	2208	2097	1854	1704	1648	1614	1622	1585	1710	1898	2186

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Request IR-7:

With respect to DE-3 & DE-4 Section 8.0 and the 2012 load forecast:

(a) Have any calculations been carried out regarding the likely uncertainty of the 2012 energy and load forecasts in the spirit of the load forecast accuracy as shown in Figure 8.1?

(b) If none have been done explain why not. If such calculations have been done provide the details of those calculations and the all assumptions that were used, including but not limited to the probability distributions of the key drivers.

(c) Have any calculations been carried out of the operational and financial implications of the 2012 loads differing from the forecast. If so please provide the results and details of those calculations.

Response IR-7:

(a) There have not been any specific calculations carried out regarding uncertainty.

(b) In the context of forecast accuracy, the reasons for the largest identifiable variances are weather effects and changes to industrial load. Weather is effectively a random variable and so we use an average of recent ten years. Industrial load, given that the major portion of manufacturing output is exported, is influenced by many factors external to the Nova Scotia economy and therefore difficult to assess.

In order to assess high and low limits on the load forecast, the following scenarios have been developed for the forecast. Because this analysis considers a coincidence of several

positive and negative effects, the high and low scenarios are extreme and highly unlikely. Probability analysis has not been conducted.

High and Low Forecast Scenarios

Low Forecast Scenario Assumptions	
1	Major Paper Mill Closure (- 1,700 GWh /yr from 2012 onward)
2	Economic Growth Diminishes (Base case growth rate decreases by 50%)
3	50% reduction in home heating oil price in 2012
4	Electricity Price Increase (10% above base case)
5	Residential customer additions (base case reduced by 250/yr)
6	DSM program effect 50% greater than forecast

High Forecast Scenario Assumptions	
1	New industrial base load added, +500 GWh/year, beginning in 2012
2	Economic Growth Improves (Base case growth rate increases 50%)
3	50% increase in home heating oil price in 2012
4	Electricity Price decrease (10% below base case)
5	Residential customer additions (base case +250/yr)
6	DSM program effect 50% less than forecast

Year	**Low**		**Base**		**High**	
	NSR GWh	Peak MW	NSR GWh	Peak MW	NSR GWh	Peak MW
2012	10,626	2,084	12,647	2,308	13,430	2,422
2013	10,252	2,005	12,507	2,277	13,517	2,436
2014	9,824	1,917	12,339	2,242	13,592	2,449
2015	9,415	1,833	12,180	2,208	13,661	2,461
2016	8,996	1,747	12,008	2,173	13,711	2,470
2017	8,578	1,661	11,832	2,135	13,745	2,475
2018	8,162	1,572	11,651	2,096	13,764	2,476
2019	7,775	1,490	11,492	2,061	13,798	2,481
2020	7,393	1,409	11,333	2,026	13,826	2,484
2021	7,015	1,329	11,173	1,991	13,847	2,486

(c) No calculations relating to historical load uncertainty results have been completed. At the request of NewPage Bowater (NPB), NS Power has provided NPB with an analysis of the revenue requirement in a scenario where the NPB load is absent from the system. NS Power understands that NPB will be filing that analysis in support of its requested Load Retention Tariff.

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Request IR-8:

With respect to DE-3 & DE-4 Section 8.0 the NSP 2011 Load Forecast:

(a) Provide information about any naturally occurring EE effects and how changes in those assumptions might affect the forecast.

(b) How might such naturally occurring effects influence the explicit future DSM values as shown in Appendix A of the forecast?

Response IR-8:

(a) It is assumed that naturally occurring energy efficiency (EE) in this context refers to conservation effects in the market that are not attributed to specific conservation or energy efficiency initiatives such as those by the DSM administrator, NSPI or changes to codes and standards.

It is assumed that naturally occurring energy efficiency effects of recent years will be captured to some extent in the regression models. No other assumptions have been made regarding naturally occurring energy efficiency.

(b) For the future years, it is assumed that the naturally occurring efficiency trends captured in the model will continue.