

Regional Load Growth Factors

NYISO Load Forecasting Task Force

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Economic Indicators

Concepts Used

Employment

FET.NYP06

Output

FGDP\$.NYP06

Household

FHHOLDQ.NYP06

Population

FPOPQ.NYP06

Income

FYP\$.NYP06

Central Hudson

	1998	1999	2000	2001	2002	2003	2004	Correlation of W/N Peak and	
Employment	186.58	194.31	198.66	203.92	206.06	209.02	210.76	Employment	0.7789
Output	10.74	11.21	11.47	11.62	12.21	12.61	13.04	Output	0.9057
Households	179.39	182.68	185.75	187.32	189.11	190.51	191.86	Households	0.7880
Population	497.35	502.74	507.46	511.73	516.77	520.58	523.6	Population	0.8532
Income	12602	12901	13593	14060	14163	14417	14816	Income	0.7567

Growth									
Employment		1.0414	1.0224	1.0265	1.0105	1.0144	1.0083		
Output		1.0438	1.0232	1.0131	1.0508	1.0328	1.0341		
Households		1.0183	1.0168	1.0085	1.0096	1.0074	1.0071		
Population		1.0108	1.0094	1.0084	1.0098	1.0074	1.0058		
Income		1.0237	1.0536	1.0344	1.0073	1.0179	1.0277		

W/N Peaks	952	970	968	985	1020	1118			
W/N Peak Growth		1.019	0.998	1.018	1.036	1.096			

Peak Growth divided by:

Employment Growth	0.978	0.976	0.991	1.025	1.081				
Output Growth	0.976	0.975	1.004	0.985	1.061				
Households Growth	1.001	0.981	1.009	1.026	1.088				
Population Growth	1.008	0.989	1.009	1.025	1.088				
Income Growth	0.995	0.947	0.984	1.028	1.077				

Composite indicator

	1.0266	1.0277	1.0179	1.0238	1.0197	1.0226			
Peak Growth/CI	0.9925	0.9711	0.9997	1.0114	1.0749				

Peak Growth Rate Range	1.0149					1.0343			
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Consolidated Edison

	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>
Employment	3928.77	4031.22	4143.77	4115.29	3997.1	3952.59	3984.43
Output	437.5	459.62	505.04	513.39	514.91	525.23	541.77
Households	3282.81	3322.9	3365.8	3383.47	3392.05	3399.09	3410.28
Population	8782.28	8876.62	8951.11	8997.68	9024.33	9044.35	9062.46
Income	299118	309500	329432	332995	326997	325229	333650

Correlation of W/N Peak and:

Employment	-0.0245
Output	0.9096
Households	0.9322
Population	0.9515
Income	0.7436

	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>
Growth							
Employment		1.0261	1.0279	0.9931	0.9713	0.9889	1.0081
Output		1.0506	1.0988	1.0165	1.0030	1.0200	1.0315
Households		1.0122	1.0129	1.0052	1.0025	1.0021	1.0033
Population		1.0107	1.0084	1.0052	1.0030	1.0022	1.0020
Income		1.0347	1.0644	1.0108	0.9820	0.9946	1.0259

W/N Peaks	11450	11650	11825	12225	12400	12600
W/N Peak Growth		1.0175	1.0150	1.0338	1.0143	1.0161

Peak Growth divided by:

Employment Growth	0.9916	0.9875	1.0410	1.0443	1.0276
Output Growth	0.9685	0.9237	1.0170	1.0113	0.9962
Households Growth	1.0052	1.0021	1.0284	1.0117	1.0140
Population Growth	1.0067	1.0066	1.0285	1.0113	1.0139
Income Growth	0.9833	0.9536	1.0228	1.0329	1.0217

Composite indicator

	1.0315	1.0560	1.0108	0.9970	1.0063	1.0191
Peak Growth/CI	0.9864	0.9612	1.0228	1.0174	1.0098	

Peak Growth Rate Range	1.0053	1.0368
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Rochester Gas and Electric

	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	2004	Correlation of W/N Peak and:	
Employment	539.51	548.12	553.23	549.78	534.07	525.18	527.26	Employment	-0.5915
Output	33.15	33.2	33.84	32.99	33.71	34.01	34.72	Output	0.4327
Households	414.75	417.78	420.32	420.76	421.87	423.35	425.62	Households	0.8445
Population	1096.2	1096.73	1098.87	1100	1103.17	1106.94	1110.31	Population	0.8846
Income	28755	28975	29528	29983	29451	29465	30091	Income	0.6661

Growth								
Employment		1.0160	1.0093	0.9938	0.9714	0.9834	1.0040	
Output		1.0015	1.0193	0.9749	1.0218	1.0089	1.0209	
Households		1.0073	1.0061	1.0010	1.0026	1.0035	1.0054	
Population		1.0005	1.0020	1.0010	1.0029	1.0034	1.0030	
Income		1.0077	1.0191	1.0154	0.9823	1.0005	1.0212	

W/N Peaks	1403	1392	1430	1512	1556	1541
W/N Peak Growth		0.9926	1.0270	1.0575	1.0291	0.9904

Peak Growth divided by:

Employment Growth	0.9770	1.0175	1.0641	1.0594	1.0071
Output Growth	0.9911	1.0076	1.0847	1.0071	0.9816
Households Growth	0.9854	1.0208	1.0564	1.0264	0.9869
Population Growth	0.9921	1.0250	1.0564	1.0261	0.9870
Income Growth	0.9850	1.0078	1.0414	1.0477	0.9899

	<u>Composite indicator</u>					
Peak Growth/CI	1.0031	1.0115	1.0002	1.0001	1.0036	1.0130
Peak Growth Rate Range	0.9895	1.0153	1.0573	1.0290	0.9868	

Orange and Rockland

	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	Correlation of W/N Peak and:	
Employment	99.62	104.54	106.12	105.77	105.67	105.53	106.52	Employment	0.6856
Output	6.99	7.16	7.18	7.07	7.25	7.42	7.6	Output	0.8251
Households	89.92	91.49	92.98	93.66	94.31	94.52	94.89	Households	0.9552
Population	282.47	285.55	287.75	289.79	291.87	292.49	293.15	Population	0.9830
Income	9600	9879	10260	10091	10265	10306	10566	Income	0.8697

Growth									
Employment		1.0494	1.0151	0.9967	0.9991	0.9987	1.0094		
Output		1.0243	1.0028	0.9847	1.0255	1.0234	1.0243		
Households		1.0175	1.0163	1.0073	1.0069	1.0022	1.0039		
Population		1.0109	1.0077	1.0071	1.0072	1.0021	1.0023		
Income		1.0290	1.0385	0.9836	1.0172	1.0040	1.0252		

W/N Peaks	1250	1280	1325	1355	1410	1435	
W/N Peak Growth		1.0240	1.0352	1.0226	1.0406	1.0177	

Peak Growth divided by:

Employment Growth	0.9758	1.0197	1.0260	1.0416	1.0191	
Output Growth	0.9997	1.0323	1.0386	1.0148	0.9944	
Households Growth	1.0064	1.0186	1.0152	1.0334	1.0155	
Population Growth	1.0130	1.0272	1.0154	1.0332	1.0156	
Income Growth	0.9951	0.9967	1.0397	1.0230	1.0136	

	<u>Composite indicator</u>					
	1.0209	1.0162	0.9925	1.0161	1.0093	1.0165
Peak Growth/CI	1.0030	1.0186	1.0303	1.0241	1.0083	
Peak Growth Rate Range				1.0410	1.0250	

New York State Electric and Gas

	1998	1999	2000	2001	2002	2003	2004	Correlation of W/N Peak and:	
Employment	465.89	479.04	490.72	510.25	515.83	518.3	525.28	Employment	0.9377
Output	22.66	23	23.69	24.36	25.54	26.62	27.66	Output	0.9471
Households	427.26	431.53	435.57	436.98	438.36	438.68	439.28	Households	0.8715
Population	1135.71	1137.15	1139.12	1142.82	1146.79	1147.66	1148.34	Population	0.9363
Income	26168	26816	28198	28747	29193	29663	30450	Income	0.9398

Growth

Employment		1.0282	1.0244	1.0398	1.0109	1.0048	1.0135
Output		1.0150	1.0300	1.0283	1.0484	1.0423	1.0391
Households		1.0100	1.0094	1.0032	1.0032	1.0007	1.0014
Population		1.0013	1.0017	1.0032	1.0035	1.0008	1.0006
Income		1.0248	1.0515	1.0195	1.0155	1.0161	1.0265

W/N Peaks	2515	2516	2528	2547	2543	2563
W/N Peak Growth		1.0004	1.0048	1.0075	0.9984	1.0079

Peak Growth divided by:

Employment Growth	0.9729	0.9809	0.9690	0.9876	1.0031
Output Growth	0.9856	0.9755	0.9798	0.9523	0.9670
Households Growth	0.9905	0.9955	1.0043	0.9953	1.0071
Population Growth	0.9991	1.0030	1.0043	0.9950	1.0071
Income Growth	0.9762	0.9555	0.9883	0.9832	0.9919

Composite indicator

	1.0148	1.0188	1.0238	1.0211	1.0160	1.0178
Peak Growth/CI	0.9858	0.9863	0.9841	0.9778	0.9920	

Peak Growth Rate Range **1.0038** **1.0016**

Niagara Mohawk

	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	2004	Correlation of W/N Peak and:	
Employment	1626.83	1666.67	1688.44	1684.79	1674.48	1674.13	1686.48	Employment	0.2492
Output	93.19	94.09	96.13	93.88	96.15	97.59	99.97	Output	-0.1897
Households	1372.14	1379.95	1385.11	1384.78	1386.49	1388.11	1390.95	Households	0.2364
Population	3528.25	3521.08	3518.36	3517.49	3522.71	3526.49	3525.92	Population	-0.3330
Income	84525	85917	88477	89061	89029	89555	91569	Income	0.4379

Growth

Employment	1.0245	1.0131	0.9978	0.9939	0.9998	1.0074
Output	1.0097	1.0217	0.9766	1.0242	1.0150	1.0244
Households	1.0057	1.0037	0.9998	1.0012	1.0012	1.0020
Population	0.9980	0.9992	0.9998	1.0015	1.0011	0.9998
Income	1.0165	1.0298	1.0066	0.9996	1.0059	1.0225

W/N Peaks	6152	5996	6098	6448	6231	6127
W/N Peak Growth		0.9746	1.0170	1.0574	0.9663	0.9833

Peak Growth divided by:

Employment Growth	0.9513	1.0039	1.0597	0.9723	0.9835
Output Growth	0.9653	0.9954	1.0827	0.9435	0.9688
Households Growth	0.9691	1.0132	1.0576	0.9652	0.9822
Population Growth	0.9766	1.0178	1.0577	0.9649	0.9823
Income Growth	0.9588	0.9876	1.0505	0.9667	0.9775

Composite indicator

	1.0231	1.0245	1.0137	0.9874	0.9994	1.0142
Peak Growth/CI	0.9526	0.9927	1.0432	0.9787	0.9839	

Peak Growth Rate Range

1.0068 0.9926

Summary Tables

Criteria 1:	Recent Historical Load Growth	
	<u>Minimum</u>	<u>Maximum</u>
Central Hudson	1.0176	1.0355
Consolidated Edison	1.0150	1.0175
LIPA	1.0166	1.0361
NYSEG	1.0004	1.0079
Niagara Mohawk	0.9746	1.0170
NYPA		
O&R	1.0226	1.0352
RG&E	0.9926	1.0291

	Criteria 2:		Relationship to Economic Indicators	
	<u>Minimum</u>	<u>Maximum</u>	<u>Minimum</u>	<u>Maximum</u>
Central Hudson	1.0149	1.0343		
Consolidated Edison	1.0053	1.0368		
LIPA	1.0240	1.0315		
NYSEG	1.0016	1.0038		
Niagara Mohawk	0.9926	1.0068		
NYPA				
O&R	1.0250	1.0410		
RG&E	1.0024	1.0424		