



## Section L

# Energy and Utilities

*Information on energy production and utilization in New York State — including electricity generation; energy usage and demand; oil and gas production; and nuclear power generation.*

### Highlights

- Nearly 416 trillion Btu's of energy were produced in New York in 2005.
- Over 4,000 trillion Btu's of energy were consumed in 2005, nearly ten times as much energy as New York produced.
- New Yorkers paid over \$57 billion for all types of energy in 2005, 21 percent more than in 2004.
- Petroleum products provided 41 percent of the energy consumed in New York State in 2005, followed by natural gas at 29 percent.
- New York has six of the nation's 104 nuclear power plants and they supplied 10 percent of the State's energy consumption in 2005.

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**Glossary**

**TABLE L-1**  
**Electric Power Industry — Selected Years 2000-04**  
**Net Summer Capacity — 2000 and 2004(a)**  
**United States by State**

State	Net Generation (billion kWh)				Net Summer Capacity (million kWh)	
	2000(r)	2002	2003	2004	2000(r)	2004
United States	3,802.1	3,858.5	3,883.2	3,970.6	811.7	962.9
Alabama	124.4	132.9	137.5	137.4	23.5	30.6
Alaska	6.2	6.8	6.3	6.5	2.1	1.9
Arizona	88.9	94.1	94.4	104.6	15.3	24.3
Arkansas	43.9	47.6	50.4	51.9	9.7	13.5
California	208.1	184.2	192.8	194.8	51.9	58.3
Colorado	44.2	45.6	46.6	47.9	8.4	11.1
Connecticut	33.0	31.3	29.5	32.6	6.4	7.9
Delaware	6.0	6.0	7.4	7.9	2.1	3.4
District of Columbia	0.1	0.3	0.1	b	0.8	0.8
Florida	191.8	203.4	212.6	218.1	41.5	50.7
Georgia	123.9	126.5	124.1	126.8	27.8	35.3
Hawaii	10.6	11.7	11.0	11.4	2.4	2.3
Idaho	11.9	9.8	10.4	10.9	3.0	3.0
Illinois	178.5	188.1	189.1	192.0	36.3	42.0
Indiana	127.8	125.6	124.9	127.8	23.3	26.7
Iowa	41.5	42.5	42.1	43.2	9.1	10.9
Kansas	44.8	47.2	46.6	46.8	10.1	10.9
Kentucky	93.0	92.1	91.7	94.5	16.8	19.6
Louisiana	92.9	95.0	94.9	98.2	21.0	26.5
Maine	14.0	22.5	19.0	19.1	4.2	4.2
Maryland	51.1	48.3	52.2	52.1	10.4	12.5
Massachusetts	38.7	42.0	48.4	47.5	12.4	14.0
Michigan	104.2	117.9	111.3	118.5	25.8	30.4
Minnesota	51.4	52.8	55.1	52.4	10.3	11.6
Mississippi	37.6	42.9	40.1	43.7	9.0	17.0
Missouri	76.6	81.2	87.2	87.6	17.3	20.2
Montana	26.5	25.5	26.3	26.8	5.2	5.1
Nebraska	29.1	31.6	30.5	32.0	6.0	6.7
Nevada	35.5	32.1	33.2	37.7	6.7	8.7
New Hampshire	15.0	16.0	21.6	23.9	2.9	4.3
New Jersey	58.1	61.6	57.4	55.9	16.5	18.2
New Mexico	34.0	30.7	32.7	32.9	5.6	6.3
New York	138.1	139.6	137.6	138.0	35.6	37.8
North Carolina	122.3	124.5	127.6	126.3	24.5	27.1
North Dakota	31.3	31.3	31.3	29.9	4.7	4.8
Ohio	149.1	147.1	146.6	148.3	28.4	34.1
Oklahoma	55.6	59.2	60.6	60.7	14.1	19.4
Oregon	51.8	47.1	49.0	51.4	11.3	12.1
Pennsylvania	201.7	204.3	206.3	214.7	36.7	45.1
Rhode Island	6.0	7.1	5.6	4.9	1.2	1.7
South Carolina	93.3	96.6	93.8	97.9	18.7	22.2
South Dakota	9.7	7.7	7.9	7.5	2.8	2.7
Tennessee	95.8	96.1	92.2	97.6	19.5	20.9
Texas	377.7	385.6	379.2	390.3	81.7	101.1
Utah	36.6	36.6	38.0	38.2	5.2	6.2
Vermont	6.3	5.5	6.0	5.5	1.0	1.0
Virginia	77.2	75.0	75.3	78.9	19.4	22.5
Washington	108.2	102.8	100.1	102.2	26.1	27.6
West Virginia	92.9	94.8	94.7	89.7	15.0	16.4
Wisconsin	59.6	58.4	60.1	60.4	13.6	14.7
Wyoming	45.5	43.8	43.6	44.8	6.2	6.6

NOTE: Detail may not add to totals due to rounding.

See Glossary on page 512 for explanation of abbreviations.

r Revised.

a As of December 31 of each year. Covers utilities for public use.

b Represents less than 50 million kWh or 50,000 kW.

SOURCE: *Statistical Abstract of the United States, 2007*, [www.census.gov/prod/2006pubs/07statab/energy.pdf](http://www.census.gov/prod/2006pubs/07statab/energy.pdf) (last viewed August 8, 2007); U.S. Energy Information Administration, *Electric Power Annual 2004*.

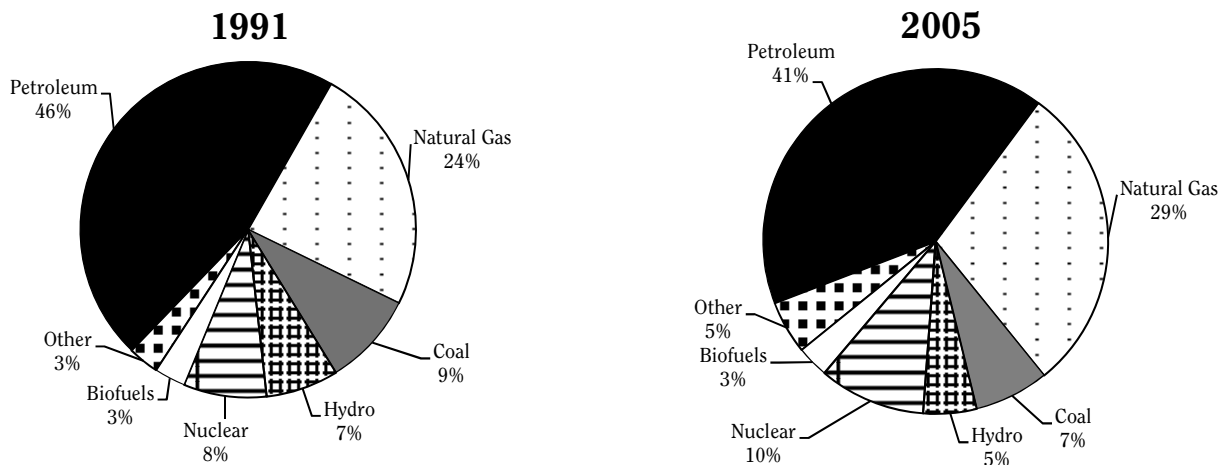
**TABLE L-2**  
**Production of Primary Energy Resources**  
**New York State — 1991-2005**

Year	Hydro Electricity		Natural Gas		Crude Oil		Biofuel <sup>1</sup>	Wind	Total Energy Production
	TBtu	GWh	TBtu	Bcf	TBtu	Mbbl			
1991r	273.1	26,165	24.1	23.4	2.5	426	95.0	—	394.7
1992r	279.5	27,025	24.3	23.6	2.4	406	104.5	—	410.7
1993r	291.8	28,308	22.5	21.9	2.0	341	117.6	—	433.9
1994r	274.9	26,645	22.2	21.6	1.7	299	122.7	—	421.5
1995r	256.1	24,831	19.8	19.3	1.8	304	124.9	—	402.6
1996r	287.5	27,805	18.7	18.2	1.8	309	141.2	—	449.2
1997r	301.5	29,525	16.6	16.2	1.6	276	179.5	—	499.2
1998r	287.1	28,158	17.1	16.6	1.3	217	160.5	—	466.0
1999r	241.8	23,643	17.3	16.8	1.1	193	168.4	—	428.6
2000r	244.0	23,919	18.3	17.8	1.0	181	177.4	0.1	440.7
2001r	225.4	22,153	28.7	28.0	1.1	183	127.3	0.2	382.6
2002r	239.9	24,127	38.1	37.1	1.0	179	116.3	0.8	396.1
2003r	232.8	23,357	36.9	36.0	0.9	157	119.1	0.8	390.5
2004r	238.8	23,177	48.1	46.9	1.1	184	121.5	1.2	410.6
2005p	238.2	23,076	56.6	55.2	1.2	211	119.0	1.0	416.0

NOTE: See Glossary on page 512 for explanation of abbreviations.  
 — Represents zero.  
 p Preliminary.  
 r Revised.

<sup>1</sup> Includes primarily wood, wastes, and ethanol.  
 SOURCE: New York State Department of Environmental Conservation; material compiled by New York State Energy Research and Development Authority.

**FIGURE L-1**  
**Primary Consumption of Energy by Type of Fuel**  
**New York State — 1991 and 2005**



SOURCE: New York State Department of Environmental Conservation; material compiled by New York State Energy Research and Development Authority.

**TABLE L-3**  
**Oil and Gas Production**  
**New York State — 1966-2005**

Year	Production		Number of Wells						
	Oil (Mbbls)	Gas (MMcf)	Oil	Gas	Shut-In		Storage	P & A <sup>1</sup>	Water Injection
					Oil and Gas				
1966	1,728	2,699	7,300	1,164	4,500		450	NA	
1967	1,972	2,230	7,000	1,159	4,600		500	NA	
1968	1,532	2,969	6,400	1,111	4,450		650	NA	
1969	1,256	4,278	5,800	820	1,009		721	NA	
1970	1,193	3,093	5,600	600	1,350		732	NA	
1971	1,097	2,202	5,552	628	1,567		729	418	
1972	1,018	3,362	5,528	750	1,619		734	573	
1973	969	4,588	5,288	789	1,484		736	544	
1974	896	4,918	5,513	1,061	1,862		735	622	
1975	875	7,483	5,231	1,111	1,883		765	553	
					Shut-In				
					Oil	Gas			
1976	857	9,200	5,016	1,195	1,393	432	764	442	
1977	824	10,700	4,913	1,467	1,528	292	764	455	
1978	852	13,900	5,039	1,452e	1,512e	352e	763	352	
1979	855	15,500	5,100	1,620e	1,500e	520e	763	117	2,500e
1980	824	15,650	5,220	2,076	1,400e	500e	765	119	3,500e
1981r	869	19,000	5,176	2,636	1,402	726	822	184	3,038a
1982r	831	18,760	5,272	2,969	1,308	996	831	262	2,924e
1983r	902	20,380	4,705	3,489	1,436	995	839	90	2,093
1984r	952	27,000	4,584	4,279	1,475	821	839	182	1,811
1985r	1,071	33,061	4,814	4,794	1,614	891	841	269	2,037
1986r	853	34,796	4,448	5,088	1,677	791	836	471	1,658
1987r	710	29,549	4,228	5,351	1,582	961	845	417	1,376
1988r	567	28,125	4,368	5,328	1,478	870	854	322	1,382
1989r	496	25,673	4,043	5,411	1,775	845	845	260	1,196
1990r	417	25,112	3,906	5,536	1,752	955	854	961	1,274
1991r	426	23,438	3,619	5,757	1,362	707	869	376	875
1992r	406	23,586	3,761	5,866	939	563	865	244	835
1993r	341	22,145	3,783	5,986	1,137	505	865	263	859
1994r	299	21,537	3,670	6,017	1,326	561	876	234	923
1995r	304	18,799	3,208	6,216	1,108	665	866	191	783
1996r	309	18,238	3,438	5,894	1,648	564	868	184	668
1997r	276	16,194	3,446	5,739	1,265	709	867	141	554
1998r	217	16,607	3,739	5,903	1,590	579	885b	169	471
1999r	193	16,836	3,463	5,756	1,165	583	885b	138	223
2000r	181	17,752	2,802	5,747	1,314	843	870b	131	627
2001r	183	27,947	3,072	5,916	1,223	835	892b	131	553
2002e	179	36,814	3,096	5,752	1,341	925	920b	125	434
2003	164	36,017	2,978	5,827	1,653	905	922b	141	238
2004	184	46,948	3,153	6,076	1,640	886	908b	142	656
2005	211	55,176	2,767	5,957	1,404	781	932	150	460

NOTE: See Glossary on page 512 for explanation of abbreviations.  
r Revised.  
e Estimated.  
NA Not available.

a Active injection wells.  
b Includes LPG storage wells.  
1 Plugged and abandoned during the year.

SOURCE: New York State Department of Environmental Conservation,  
Division of Mineral Resources.

TABLE L-4

**Primary Consumption of Energy by Type of Fuel  
New York State — 1991-2005**

Year	Coal		Natural Gas		Petroleum Products		Hydro	
	TBtu	MTons	TBtu	Bcf	TBtu	Mbbl	TBtu	GWh
1991r	352.3	13,641	917.3	893	1,770.8	315,496	273.1	26,165
1992r	356.0	13,761	1,034.0	1,004	1,667.8	298,609	279.5	27,025
1993r	326.2	12,651	1,023.1	994	1,660.9	297,647	291.8	28,308
1994r	316.8	12,230	1,095.6	1,065	1,595.5	287,262	274.9	26,645
1995r	305.3	11,785	1,295.4	1,260	1,547.4	280,623	256.1	24,831
1996r	311.8	12,074	1,230.7	1,200	1,591.6	287,810	287.5	27,805
1997r	325.2	12,522	1,358.0	1,325	1,548.3	280,835	301.5	29,525
1998r	337.4	12,953	1,267.1	1,233	1,549.8	280,961	287.1	28,158
1999r	318.0	12,187	1,308.7	1,275	1,603.8	290,502	241.8	23,643
2000r	330.9	12,611	1,274.8	1,244	1,697.0	306,903	244.0	23,919
2001r	312.9	12,068	1,203.8	1,170	1,665.1	300,797	225.4	22,153
2002r	287.6	11,472	1,225.8	1,199	1,591.1	289,027	239.9	24,127
2003r	303.9	11,959	1,166.3	1,132	1,773.5	319,364	232.8	23,357
2004r	321.7	12,653	1,163.4	1,134	1,855.7	333,476	238.8	23,177
2005p	316.1	12,430	1,237.7	1,204	1,777.1	319,674	238.2	23,076

Year	Nuclear		Net Imported Electricity		Biofuels <sup>1</sup>	Total <sup>2</sup>
	TBtu	GWh	TBtu	GWh		
1991r	298.3	28,448	104.8	10,419	95.0	3,811.6
1992r	252.9	24,155	176.4	17,482	104.5	3,869.3
1993r	282.4	26,889	219.4	22,688	117.6	3,921.4
1994r	305.5	29,231	212.3	21,747	122.7	3,923.3
1995r	276.7	26,336	142.3	15,016	124.9	3,948.1
1996r	370.0	35,226	121.0	12,795	141.2	4,053.8
1997r	310.3	29,570	77.5	8,064	179.5	4,100.3
1998r	328.5	31,314	62.9	6,514	160.5	3,993.3
1999r	386.8	37,019	100.4	10,071	168.4	4,127.8
2000r	328.6	31,508	184.4	18,557	177.4	4,237.2
2001r	422.0	40,395	127.4	12,872	127.4	4,084.0
2002r	394.0	39,617	190.5	19,153	117.1	4,045.9
2003r	405.5	40,679	203.1	20,371	119.9	4,205.0
2004r	418.7	40,640	231.4	22,464	122.7	4,352.4
2005p	438.0	42,443	219.7	21,291	120.0	4,346.9

NOTE: TBtu totals may not equal sum of components due to rounding.  
See Glossary on page 512 for explanation of abbreviations.

p Preliminary.  
r Revised.

1 Includes primarily wood, wastes, and ethanol.

2 Excludes nonfuel uses and steam.

SOURCE: New York State Energy Research and Development Authority.

TABLE L-5

**Primary Consumption of Refined Petroleum Products by Type of Product  
New York State — 1991-2005**

Year	Distillate		Residual		Kerosene			
	TBtu	Mbbl	TBtu	Mbbl	TBtu	Mbbl		
1991r	396.5	68,062	426.0	67,751	15.0	2,646		
1992r	423.7	72,742	322.4	51,283	10.6	1,861		
1993r	424.6	72,900	300.7	47,823	13.7	2,422		
1994r	426.5	73,218	252.3	40,125	13.0	2,289		
1995r	409.8	70,349	189.4	30,127	13.4	2,363		
1996r	418.9	71,914	230.3	36,628	16.3	2,883		
1997r	413.8	71,033	188.6	29,992	16.5	2,906		
1998r	375.8	64,515	224.6	35,732	19.0	3,358		
1999r	419.2	71,969	222.3	35,352	17.5	3,086		
2000r	460.4	79,038	266.2	42,349	19.5	3,443		
2001r	482.8	82,878	233.2	37,090	19.5	3,445		
2002r	446.7	76,684	195.6	31,110	13.5	2,373		
2003r	518.0	88,919	292.8	46,575	18.1	3,195		
2004r	552.2	95,301	323.3	51,429	18.0	3,182		
2005p	461.7	79,264	336.0	53,441	20.6	3,632		

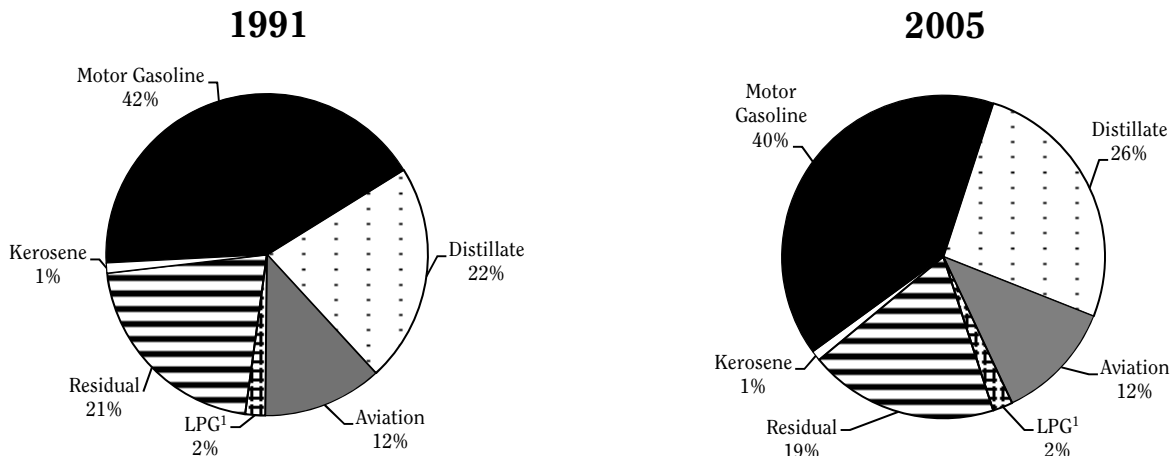
Year	LPG <sup>1,2</sup>		Motor Gasoline		Aviation Fuels <sup>3</sup>		Total <sup>2</sup>	
	TBtu	Mbbl	TBtu	Mbbl	TBtu	Mbbl	TBtu	Mbbl
1991r	26.0	7,207	700.3	133,311	207.1	36,519	1,700.8	315,496
1992r	25.6	7,077	678.0	129,064	207.4	36,582	1,667.8	298,609
1993r	22.1	6,139	691.9	131,710	207.8	36,653	1,660.9	297,647
1994r	23.1	6,352	670.6	128,228	210.1	37,050	1,595.5	287,262
1995r	22.9	6,332	691.7	132,627	220.1	38,825	1,547.4	280,623
1996r	25.6	7,073	683.2	130,979	217.3	38,333	1,591.6	287,810
1997r	24.2	6,687	682.5	130,923	222.8	39,294	1,548.3	280,835
1998r	26.4	7,306	685.2	131,469	218.8	38,581	1,549.8	280,961
1999r	26.5	7,316	696.3	133,621	222.0	39,158	1,603.8	290,502
2000r	35.5	9,849	692.0	132,831	223.4	39,393	1,697.0	306,903
2001r	25.7	7,111	696.7	133,724	207.2	36,549	1,665.1	300,797
2002r	27.5	7,612	711.7	136,664	196.1	34,584	1,591.1	289,027
2003r	28.2	7,771	718.6	138,010	197.8	34,894	1,773.5	319,364
2004r	31.2	8,640	716.5	137,607	211.6	37,317	1,855.7	333,476
2005p	31.2	8,640	707.3	135,844	220.3	38,853	1,777.1	319,674

NOTE: TBtu totals may not equal sum of components due to rounding.  
See Glossary on page 512 for explanation of abbreviations.  
p Preliminary.  
r Revised.

1 Propane.  
2 Excludes nonfuel uses.  
3 Kerosene-type jet fuel and aviation gasoline.  
SOURCE: New York State Energy Research and Development Authority.

FIGURE L-2

**Primary Consumption of Refined Petroleum Products by Type of Product  
New York State — 1991 and 2005**



1 Propane.

SOURCE: New York State Department of Environmental Conservation; material compiled by New York State Energy Research and Development Authority.

**TABLE L-6**  
**Primary Consumption of Energy for Electric Generation**  
**by Type of Fuel**  
**New York State — 1991-2005**

Year	Coal		Natural Gas		Petroleum Products				Total	
	TBtu	MTons	TBtu	Bcf	Distillate		Residual		TBtu	Mbbbl
					TBtu	Mbbbl	TBtu	Mbbbl		
1991r	263.1	10,177	235.7	229	5.7	982	279.3	44,432	285.1	45,414
1992r	277.9	10,727	261.6	254	2.9	499	181.0	28,786	183.9	29,285
1993r	244.4	9,472	247.6	241	5.3	903	147.4	23,444	152.7	24,347
1994r	237.1	9,152	297.0	289	13.4	2,300	111.8	17,786	125.2	20,086
1995r	227.4	8,774	440.4	431	9.5	1,627	77.1	12,264	86.6	13,891
1996r	232.3	8,992	326.9	320	7.4	1,268	93.9	14,940	101.3	16,208
1997r	246.2	9,464	422.9	413	9.1	1,568	80.6	12,813	89.7	14,381
1998r	258.6	9,928	386.3	377	8.1	1,390	145.1	23,075	153.2	24,465
1999r	241.8	9,265	443.0	433	12.9	2,207	126.1	20,053	138.9	22,260
2000r	254.8	9,763	380.1	373	13.7	2,352	143.3	22,789	157.0	25,141
2001r	239.0	9,258	364.0	357	17.5	3,010	158.1	25,146	175.6	28,156
2002r	234.3	9,154	372.5	366	13.0	2,229	108.4	17,244	121.4	19,473
2003r	242.1	9,646	265.6	261	14.0	2,410	186.3	29,627	200.3	32,037
2004r	253.2	10,090	263.6	259	10.1	1,740	205.7	32,722	215.8	34,462
2005p	248.5	9,902	309.4	304	11.2	1,921	229.5	36,503	240.7	38,424

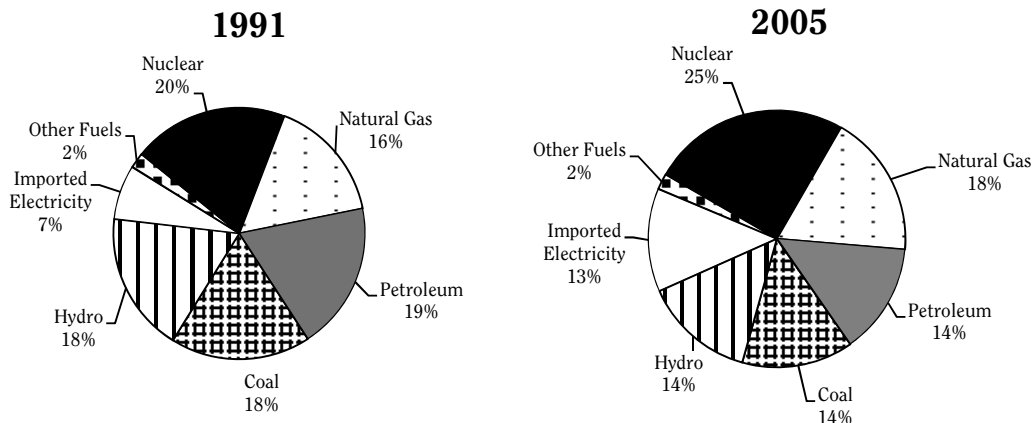
Year	Hydro		Nuclear		Net Imported Electricity		Biofuels <sup>1</sup>		Wind		Total <sup>2</sup>
	TBtu	GWh	TBtu	GWh	TBtu	GWh	TBtu	GWh	TBtu	GWh	TBtu
1991r	273.1	26,165	298.3	28,448	104.8	10,419	29.8	2,033	—	—	1,489.8
1992r	279.5	27,025	252.9	24,155	176.4	17,482	37.7	2,320	—	—	1,468.0
1993r	291.8	28,308	282.4	26,889	219.4	22,688	34.9	2,374	—	—	1,473.2
1994r	274.9	26,645	305.5	29,231	212.3	21,747	40.1	2,602	—	—	1,492.1
1995r	256.1	24,831	276.7	26,336	142.3	15,016	38.7	2,632	—	—	1,468.2
1996r	287.5	27,805	370.0	35,226	121.0	12,795	41.2	2,863	—	—	1,480.2
1997r	301.5	29,525	310.3	29,570	77.5	8,064	41.4	2,809	—	—	1,489.5
1998r	287.1	28,158	328.5	31,314	62.9	6,514	39.6	2,754	—	—	1,516.2
1999r	241.8	23,643	386.8	37,019	100.4	10,071	41.4	2,950	—	—	1,594.1
2000r	244.0	23,919	328.6	31,508	184.4	18,557	41.3	2,958	0.1	10	1,590.3
2001r	225.4	22,153	422.0	40,395	127.4	12,872	39.9	2,704	0.2	21	1,593.6
2002r	239.9	24,127	394.0	39,617	190.5	19,153	31.7	2,541	0.8	82	1,585.1
2003r	232.8	23,357	405.5	40,679	203.1	20,371	30.7	2,493	0.8	85	1,580.9
2004r	238.8	23,177	418.7	40,640	231.4	22,464	29.7	2,699	1.2	112	1,652.4
2005p	238.2	23,076	438.0	42,443	219.7	21,291	29.2	2,916	1.0	101	1,724.8

NOTE: TBtu totals may not equal sum of components due to rounding.  
 See glossary on page 512 for explanation of abbreviations.

— Represents zero.  
 p Preliminary.  
 r Revised.

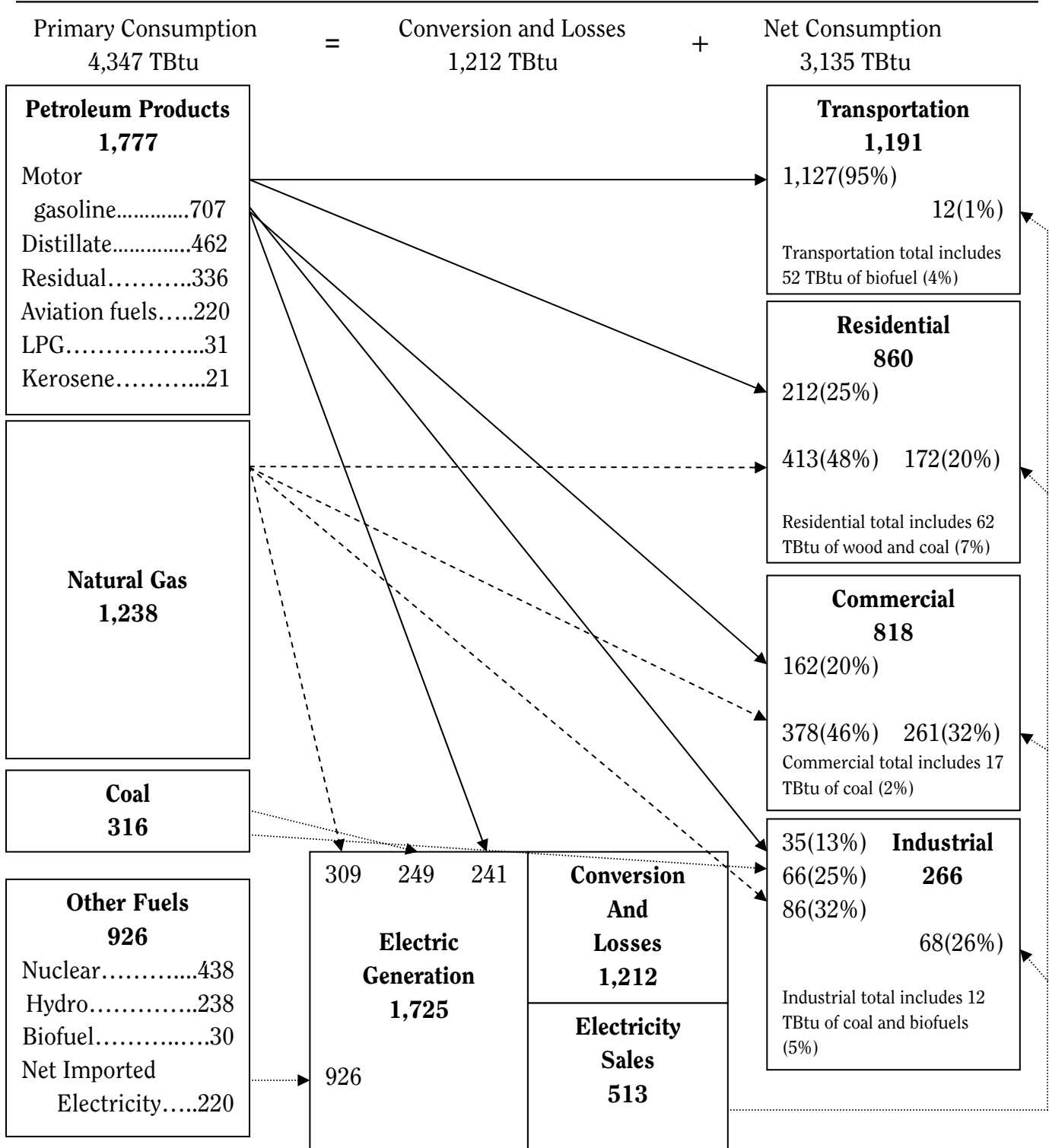
1 Includes renewable fuels and biofuels used by generators, not including wind.  
 2 Electricity generated from combined heat and power is included. Generation data net of station use.  
 SOURCE: New York State Energy Research and Development Authority.

**FIGURE L-3**  
**Primary Consumption of Energy by the Electric Utility Sector by Type of Fuel**  
**New York State — 1991 and 2005**



SOURCE: New York State Department of Environmental Conservation; material compiled by New York State Energy Research and Development Authority.

**FIGURE L-4**  
**Energy Flow**  
**New York State — 2005**



SOURCE: New York State Energy Research and Development Authority

TABLE L-7

### Net Consumption of Energy by the Residential Sector New York State — 1991-2005

Year	Coal		Natural Gas		Petroleum Products			
	TBtu	MTons	TBtu	Bcf	Distillate		Kerosene	
					TBtu	Mbbl	TBtu	Mbbl
1991r	1.3	50	348.1	339	168.7	28,963	11.9	2,098
1992r	1.2	50	389.8	379	189.6	32,553	7.1	1,252
1993r	1.0	42	395.5	384	178.3	30,618	8.9	1,565
1994r	0.7	28	396.3	385	173.4	29,769	7.9	1,396
1995r	0.7	29	386.7	375	166.7	28,624	7.0	1,240
1996r	0.8	34	414.4	403	176.1	30,240	8.2	1,450
1997r	0.7	28	385.7	376	171.1	29,367	9.9	1,744
1998r	0.4	16	349.6	340	155.2	26,637	10.6	1,866
1999r	0.6	22	381.3	371	165.1	28,347	13.2	2,327
2000r	0.3	11	413.1	400	205.2	35,229	13.3	2,344
2001r	0.3	12	388.7	376	212.6	36,502	13.6	2,390
2002r	0.3	13	380.3	370	191.6	32,893	9.3	1,642
2003r	0.3	13	426.4	413	188.1	32,293	9.3	1,639
2004r	0.3	13	411.1	399	174.9	30,020	11.7	2,065
2005p	0.3	11	413.0	401	177.9	30,540	12.5	2,203

#### Petroleum Products (continued)

Year	LPG <sup>1</sup>		Total		Wood		Electricity		Total
	TBtu	Mbbl	TBtu	Mbbl	TBtu	Mcords	TBtu	GWh	TBtu
1991r	18.3	5,051	198.9	36,112	39.9	1,994	133.7	39,177	721.8
1992r	18.0	4,965	214.7	38,770	41.8	2,092	132.1	38,720	779.7
1993r	15.5	4,293	202.7	36,476	55.2	2,758	136.1	39,897	790.4
1994r	15.8	4,350	197.1	35,515	52.4	2,618	136.8	40,105	783.4
1995r	16.4	4,516	190.1	34,380	52.4	2,618	136.1	39,887	766.0
1996r	17.8	4,937	202.2	36,627	54.4	2,719	137.5	40,285	809.0
1997r	15.8	4,379	196.8	35,490	84.0	4,202	136.7	40,059	804.0
1998r	15.6	4,323	181.4	32,826	74.7	3,734	138.4	40,563	744.4
1999r	17.0	4,691	195.3	35,365	78.6	3,931	146.4	42,919	802.2
2000r	22.4	6,211	240.9	43,784	84.5	4,225	146.8	43,018	883.1
2001r	17.0	4,698	243.2	43,590	55.1	2,755	150.3	44,048	836.5
2002r	19.7	5,411	220.6	39,976	55.9	2,796	157.7	46,234	814.7
2003r	19.6	5,390	226.0	40,876	58.9	2,944	160.8	47,116	869.5
2004r	21.6	5,961	232.9	42,289	60.3	3,018	161.7	47,379	858.8
2005p	21.6	5,961	212.0	38,704	61.8	3,090	172.4	50,533	859.5

NOTE: TBtu totals may not equal sum of components due to rounding.

See Glossary on page 512 for explanation of abbreviations.

p Preliminary.

r Revised.

1 Propane.

SOURCE: New York State Energy Research and Development Authority.

**TABLE L-8**  
**Net Consumption of Energy by the Commercial Sector**  
**New York State — 1991-2005**

Year	Petroleum Products							
	Coal		Natural Gas		Distillate		Residual	
	TBtu	MTons	TBtu	Bcf	TBtu	Mbbl	TBtu	Mbbl
1991r	5.7	229	205.0	200	86.0	14,767	106.9	17,002
1992r	5.6	226	223.6	217	94.1	16,161	99.2	15,773
1993r	4.6	190	227.2	221	94.0	16,130	108.8	17,303
1994r	3.9	157	229.6	223	94.6	16,232	101.0	16,057
1995r	4.8	191	238.5	231	91.5	15,711	85.2	13,555
1996r	6.2	249	259.9	253	90.5	15,531	80.4	12,791
1997r	5.6	226	329.5	321	83.5	14,337	63.5	10,105
1998r	3.3	131	345.3	335	69.4	11,914	42.5	6,765
1999r	4.0	158	370.4	360	81.2	13,946	46.8	7,439
2000r	2.3	90	375.4	366	88.1	15,128	59.3	9,429
2001r	2.5	102	358.0	347	98.2	16,865	45.2	7,193
2002r	1.0	40	372.8	362	87.6	15,032	54.6	8,678
2003r	1.8	73	350.2	339	111.8	19,198	67.8	10,784
2004r	1.8	73	368.7	359	116.0	19,907	71.9	11,441
2005p	1.8	73	378.4	367	91.5	15,712	62.8	9,981

Year	Petroleum Products (continued)									
	Kerosene		LPG <sup>1</sup>		Total		Wood Waste	Electricity		Total
	TBtu	Mbbl	TBtu	Mbbl	TBtu	Mbbl	TBtu	TBtu	GWh	TBtu
1991r	1.2	213	3.2	891	197.3	32,873	4.5	192.5	56,408	605.0
1992r	2.3	408	3.2	876	198.8	33,218	4.8	191.3	56,079	624.1
1993r	3.5	616	2.7	758	209.0	34,807	7.6	195.9	57,410	644.2
1994r	3.1	538	2.8	768	201.3	33,595	8.2	200.6	58,802	643.7
1995r	4.0	714	2.9	797	183.7	30,777	10.6	213.3	62,509	650.9
1996r	4.3	751	3.1	871	178.3	29,944	11.0	213.8	62,663	669.2
1997r	4.5	801	2.8	773	154.4	26,016	17.7	218.5	64,033	725.7
1998r	5.6	981	2.8	763	120.3	20,423	15.9	224.6	65,834	709.4
1999r	3.9	682	3.0	828	134.9	22,895	16.8	231.9	67,969	758.0
2000r	5.4	948	4.0	1,096	156.7	26,601	18.1	240.3	70,418	792.8
2001r	5.0	874	3.0	829	151.4	25,761	14.1	238.4	69,861	764.4
2002r	2.8	493	3.5	960	148.4	25,163	14.4	239.5	70,190	776.0
2003r	3.8	665	3.5	951	186.8	31,598	15.3	247.4	72,497	801.5
2004r	4.2	745	3.8	1,052	195.9	33,145	16.2	253.8	74,378	836.4
2005p	4.3	759	3.8	1,052	162.4	27,504	15.0	260.7	76,396	818.3

NOTE: TBtu totals may not equal sum of components due to rounding.

See Glossary on page 512 for explanation of abbreviations.

p Preliminary.

r Revised.

1 Propane.

SOURCE: New York State Energy Research and Development Authority.

**TABLE L-9**  
**Net Consumption of Energy by the Industrial Sector**  
**New York State — 1991-2005**

Year	Petroleum Products							
	Coal		Natural Gas		Distillate		Residual	
	TBtu	Mtons	TBtu	Bcf	TBtu	Mbbl	TBtu	Mbbl
1991r	82.2	3,185	123.3	120	20.5	3,522	14.9	2,369
1992r	71.3	2,758	152.8	148	21.1	3,624	19.1	3,036
1993r	76.2	2,947	146.5	142	25.1	4,317	24.3	3,860
1994r	75.1	2,893	166.3	162	19.9	3,411	19.9	3,160
1995r	72.4	2,791	221.2	215	17.9	3,071	12.5	1,990
1996r	72.5	2,799	221.4	216	17.8	3,053	15.4	2,456
1997r	72.7	2,804	212.1	207	17.0	2,922	12.4	1,965
1998r	75.1	2,878	177.8	173	17.6	3,016	11.7	1,868
1999r	71.6	2,742	105.2	102	20.0	3,441	10.2	1,623
2000r	73.5	2,747	100.2	97	19.1	3,285	12.6	2,005
2001r	71.1	2,695	87.9	84	17.4	2,981	9.7	1,554
2002r	52.2	2,273	91.4	92	16.8	2,889	8.6	1,362
2003r	59.7	2,229	84.7	82	17.2	2,960	10.0	1,584
2004r	66.4	2,479	80.1	78	20.3	3,481	9.3	1,483
2005p	65.5	2,444	85.5	83	17.1	2,928	8.3	1,321

Year	Petroleum Products (continued)									
	Kerosene		LPG <sup>1</sup>		Total		Wood Waste	Electricity		Total <sup>2</sup>
	TBtu	Mbbl	TBtu	Mbbl	TBtu	Mbbl	TBtu	TBtu	GWh	TBtu
1991r	1.9	335	4.0	1,107	41.3	7,333	20.8	106.2	31,112	373.8
1992r	1.1	201	4.0	1,092	45.3	7,953	20.2	105.9	31,027	395.5
1993r	1.4	241	3.5	961	54.2	9,379	19.6	103.0	30,187	399.5
1994r	2.0	355	3.4	948	45.2	7,874	21.3	100.5	29,467	408.4
1995r	2.3	409	3.2	881	35.9	6,351	20.9	86.4	25,317	436.8
1996r	3.9	682	4.1	1,142	41.2	7,333	32.6	88.5	25,947	456.3
1997r	2.0	361	5.2	1,445	36.6	6,693	34.5	86.3	25,285	442.2
1998r	2.9	511	6.1	1,687	38.3	7,082	28.9	86.0	25,218	406.2
1999r	0.4	77	6.4	1,772	37.1	6,913	30.4	88.2	25,835	332.4
2000r	0.9	151	8.3	2,308	40.9	7,749	32.1	88.2	25,838	334.9
2001r	1.0	181	5.6	1,559	33.7	6,265	17.7	84.2	24,689	294.7
2002r	1.4	238	4.1	1,145	30.9	5,634	14.0	82.9	24,290	271.4
2003r	5.1	891	5.0	1,379	37.3	6,814	13.7	74.2	21,745	269.6
2004r	2.1	372	5.6	1,561	37.3	6,897	14.7	70.5	20,675	269.0
2005p	3.8	670	5.6	1,561	34.8	6,480	12.3	67.7	19,848	265.7

NOTE: TBtu totals may not equal sum of components due to rounding.  
 See Glossary on page 512 for explanation of abbreviations.

p Preliminary.  
 r Revised.

1 Propane.

2 Excludes non-fuel uses (e.g., feedstock).

SOURCE: New York State Energy Research and Development Authority.

TABLE L-10

### Net Consumption of Energy by the Transportation Sector New York State — 1991-2005

Year	Natural Gas		Distillate		Residual		Motor Gasoline		Aviation Fuels <sup>1</sup>	
	TBtu	Bcf	TBtu	Mbbl	TBtu	Mbbl	TBtu	Mbbl	TBtu	Mbb
1991r	5.2	5	115.5	19,828	24.8	3,948	700.3	133,311	207.1	36,519
1992r	6.2	6	115.9	19,905	23.2	3,688	678.0	129,064	207.4	36,582
1993r	6.4	6	121.9	20,932	20.2	3,216	691.9	131,710	207.8	36,653
1994r	6.4	6	125.3	21,506	19.6	3,122	670.6	128,228	210.1	37,050
1995r	8.6	8	124.2	21,316	14.6	2,318	691.7	132,627	220.1	38,825
1996r	8.4	8	127.1	21,822	40.5	6,441	683.2	130,979	217.3	38,333
1997r	7.7	8	133.0	22,839	32.1	5,109	682.5	130,923	222.8	39,294
1998r	8.2	8	125.6	21,558	25.3	4,024	685.2	131,469	218.8	38,581
1999r	8.8	9	140.0	24,028	39.2	6,237	696.3	133,621	222.0	39,158
2000r	8.5	8	134.2	23,044	51.1	8,126	692.0	132,831	223.4	39,393
2001r	6.2	6	137.0	23,520	20.2	3,207	696.7	133,724	207.2	36,549
2002r	8.8	9	137.7	23,641	24.1	3,826	711.7	133,664	196.1	34,584
2003r	42.2	40	177.7	30,504	28.8	4,580	718.6	138,010	197.8	34,894
2004r	47.4	45	209.2	35,910	36.4	5,783	716.5	137,607	211.6	37,317
2005p	51.4	49	164.0	28,163	35.4	5,636	707.3	135,844	220.3	38,853

Year	LPG <sup>2</sup>		Total Petroleum		Ethanol		Electricity		Total
	TBtu	Mbbl	TBtu	Mbbl	TBtu	Mbbl	TBtu	GWh	TBtu
1991r	0.6	158	1,048.3	193,764	—	—	9.3	2,714	1,062.7
1992r	0.5	144	1,025.1	189,383	—	—	9.0	2,644	1,040.3
1993r	0.5	127	1,042.3	192,638	0.3	83	9.1	2,676	1,058.2
1994r	1.0	286	1,026.6	190,192	0.7	205	9.6	2,803	1,043.3
1995r	0.5	138	1,051.1	195,224	2.3	654	9.4	2,757	1,071.4
1996r	0.4	123	1,068.6	197,698	2.0	552	9.0	2,632	1,087.9
1997r	0.3	90	1,070.8	198,255	1.9	532	8.8	2,567	1,089.1
1998r	1.9	533	1,056.8	196,165	1.4	394	8.8	2,580	1,075.2
1999r	0.1	25	1,097.6	203,069	1.2	341	9.1	2,654	1,116.7
2000r	0.8	234	1,101.5	203,628	1.3	377	9.4	2,753	1,120.7
2001r	0.1	25	1,061.2	197,025	0.4	107	9.6	2,800	1,077.3
2002r	0.2	66	1,069.8	198,781	0.3	95	9.7	2,850	1,088.6
2003r	0.2	51	1,123.1	208,039	0.5	132	9.8	2,866	1,175.6
2004r	0.2	66	1,173.8	216,683	0.6	166	9.0	2,650	1,230.9
2005p	0.2	66	1,127.3	208,562	0.7	188	11.8	3,470	1,191.2

NOTE: TBtu totals may not equal sum of components due to rounding.  
See Glossary on page 512 for explanation of abbreviations.

— Represents zero.  
p Preliminary.  
r Revised.

1 Kerosene-type jet fuel and aviation gasoline.  
2 Propane.

SOURCE: New York State Energy Research and Development Authority.

**TABLE L-11**  
**Net Energy Bill by Sector and Type of Fuel**  
**New York State — Selected Years 1991–2005**  
(millions of current dollars)

Fuel	All Sectors	Residential	Commercial	Industrial	Transportation
--- 1991r ---					
All Fuels	\$ 28,574.9	\$ 8,932.6	\$ 7,807.6	\$ 2,841.7	\$ 8,992.9
Coal	156.8	4.5	9.9	142.4	X
Petroleum	11,622.1	1,749.2	863.9	214.1	8,794.9
Distillate	3,087.0	1,408.7	517.0	114.9	1,046.4
Residual	403.3	X	302.3	42.1	59.0
Gasoline	6,610.8	X	X	X	6,610.8
Kerosene	92.7	74.1	7.5	11.0	X
Aviation	1,072.1	X	X	X	1,072.1
LPG <sup>1</sup>	356.2	266.4	37.1	46.1	6.6
Natural Gas	4,146.7	2,488.9	1,090.6	567.2	X
Electricity	12,649.2	4,690.1	5,843.2	1,918.0	198.0
--- 1996r ---					
All Fuels	\$ 33,239.9	\$ 10,967.5	\$ 9,951.7	\$ 2,891.6	\$ 9,429.2
Coal	131.5	2.7	9.9	118.9	X
Petroleum	12,074.9	1,719.8	922.9	226.6	9,205.6
Distillate	3,281.4	1,403.9	543.7	104.6	1,229.2
Residual	514.8	X	324.9	62.4	127.6
Gasoline	6,784.2	X	X	X	6,784.2
Kerosene	97.4	49.6	25.7	22.1	X
Aviation	1,060.7	X	X	X	1,060.7
LPG <sup>1</sup>	336.5	266.3	28.6	37.5	4.0
Natural Gas	6,416.1	3,590.2	1,738.7	1,087.1	X
Electricity	14,617.5	5,654.7	7,280.1	1,459.0	223.6
--- 2001r ---					
All Fuels	\$ 39,383.0	\$ 13,209.0	\$ 12,822.4	\$ 2,381.4	\$ 10,970.2
Coal	123.8	1.0	4.1	118.7	X
Petroleum	14,507.9	2,606.9	928.7	233.1	10,739.2
Distillate	4,392.2	2,173.0	663.1	114.8	1,441.3
Residual	287.5	X	184.1	39.5	63.9
Gasoline	8,033.0	X	X	X	8,033.0
Kerosene	168.7	118.4	43.3	6.9	X
Aviation	1,199.9	X	X	X	1,199.9
LPG <sup>1</sup>	426.7	315.5	38.2	71.9	1.2
Natural Gas	8,413.3	4,418.0	3,337.1	658.2	X
Electricity	16,338.0	6,183.0	8,552.6	1,371.4	231.0
--- 2005p ---					
All Fuels	\$ 57,614.4	\$ 17,708.7	\$ 16,858.1	\$ 3,063.1	\$ 19,984.5
Coal	139.4	1.2	3.5	134.7	X
Petroleum	25,956.4	3,837.9	1,938.8	483.3	19,696.4
Distillate	7,558.7	3,081.4	1,293.5	227.9	2,955.9
Residual	774.5	X	475.6	62.9	236.0
Gasoline	13,629.7	X	X	X	13,629.7
Kerosene	382.3	242.6	79.8	59.9	X
Aviation	2,870.1	X	X	X	2,870.1
LPG <sup>1</sup>	741.2	514.0	89.9	132.5	4.7
Natural Gas	11,675.9	5,930.8	4,816.3	928.8	X
Electricity	19,842.7	7,938.7	10,099.6	1,516.4	288.0

NOTE: Detail may not add to totals due to rounding.

p Preliminary.

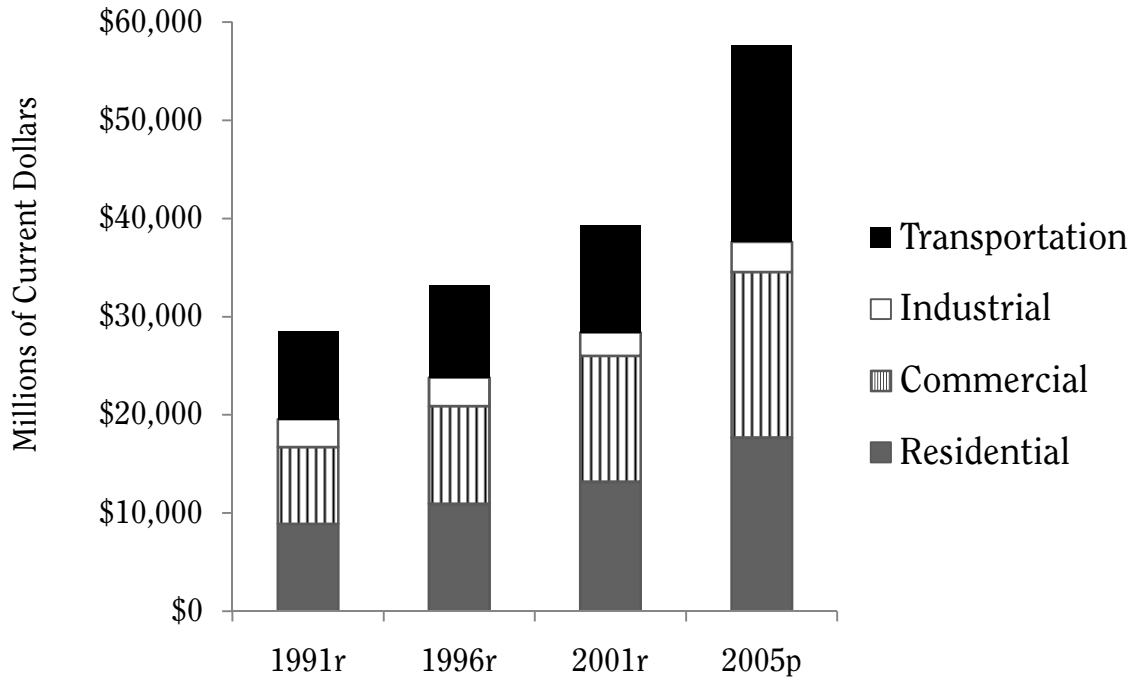
r Revised.

X Not applicable.

1 Propane.

SOURCE: New York State Energy Research and Development Authority.

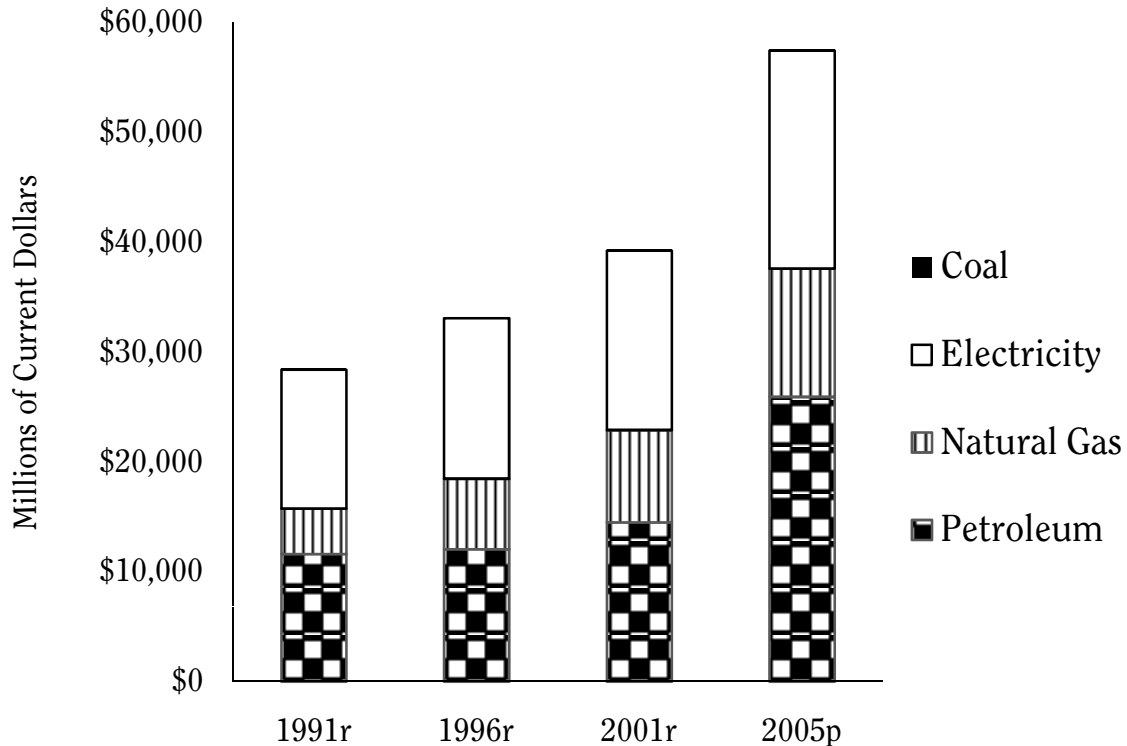
**FIGURE L-5**  
**Net Energy Costs by Sector**  
**New York State — Selected Years — 1991-2005**



p Preliminary.  
r Revised.

SOURCE: New York State Energy Research and Development Authority.

**FIGURE L-6**  
**Net Energy Costs by Fuel Type**  
**New York State — Selected Years — 1991-2005**



NOTE: Because coal is a small subgroup, it is not viewable in this chart. The net energy costs for coal in 1991 is \$156.8; 1996 is \$131.5; 2001 is \$123.8; and 2005 is \$139.4.

p Preliminary.  
r Revised.

SOURCE: New York State Energy Research and Development Authority.

TABLE L-12

### Residential Retail Energy Prices New York State — 1991-2005

Date	Coal		Distillate <sup>1</sup>		Kerosene		LPG <sup>2</sup>		Natural Gas		Electricity	
	\$/ton	\$/MMBtu	cents/gallon	\$/MMBtu	cents/gallon	\$/MMBtu	cents/gallon	\$/MMBtu	\$/Mcf	\$/MMBtu	cents/kWh	\$/MMBtu
1991r	79.58	3.44	115.81	8.35	84.11	6.23	125.55	14.59	7.37	7.15	11.97	35.09
1992r	74.23	3.21	106.93	7.71	78.30	5.80	124.54	14.43	7.60	7.37	12.43	36.43
1993r	74.76	3.25	104.16	7.51	75.06	5.56	114.59	13.35	8.13	7.91	13.17	38.61
1994r	76.04	3.29	100.41	7.24	75.87	5.62	126.01	14.56	8.76	8.51	13.55	39.72
1995r	73.52	3.18	99.30	7.16	72.63	5.38	123.10	14.27	8.39	8.17	13.90	40.73
1996r	77.78	3.38	110.54	7.97	81.41	6.03	128.43	14.93	8.90	8.67	14.04	41.14
1997r	80.30	3.57	110.81	7.99	84.51	6.26	129.32	15.02	9.73	9.47	14.12	41.38
1998r	70.27	3.25	98.61	7.11	59.94	4.44	119.18	13.85	9.62	9.31	13.62	39.91
1999r	76.65	3.21	100.83	7.27	73.58	5.45	121.05	14.06	9.12	8.87	13.27	38.90
2000r	75.56	3.02	149.92	10.81	127.44	9.44	152.35	17.74	9.86	9.55	13.97	40.95
2001r	85.19	3.42	141.74	10.22	117.99	8.74	159.88	18.58	11.75	11.40	14.04	41.14
2002r	83.35	3.63	126.62	9.13	106.92	7.92	140.39	16.32	9.85	9.57	13.55	39.71
2003r	84.52	3.80	149.51	10.78	134.60	9.97	160.37	18.56	11.59	11.22	14.31	41.94
2004r	94.33	4.23	169.62	12.23	162.14	12.01	178.14	20.68	12.50	12.17	14.54	42.61
2005p	93.01	4.17	240.23	17.32	262.19	19.42	205.60	23.79	14.79	14.36	15.71	46.04

NOTE: See glossary on page 512 for explanation of abbreviations.

p Preliminary.

r Revised.

1 Home heating oil.

2 Propane.

SOURCE: New York State Energy Research and Development Authority.

TABLE L-13

### Commercial Retail Energy Prices New York State — 1991-2005

Date	Coal		Distillate		Residual		Kerosene		Natural Gas		Electricity	
	\$/ton	\$/MMBtu	cents/gallon	\$/MMBtu	\$/bbl	\$/MMBtu	cents/gallon	\$/MMBtu	\$/Mcf	\$/MMBtu	cents/kWh	\$/MMBtu
1991r	40.22	1.74	83.35	6.01	17.78	2.83	84.11	6.23	5.48	5.32	10.36	30.36
1992r	40.43	1.75	75.86	5.47	18.17	2.89	78.30	5.80	5.76	5.59	10.76	31.52
1993r	38.39	1.67	73.37	5.29	18.11	2.88	75.06	5.56	6.16	5.99	11.23	32.92
1994r	38.60	1.67	71.43	5.15	19.36	3.08	75.87	5.62	6.51	6.33	11.27	33.03
1995r	38.61	1.67	70.18	5.06	21.00	3.34	72.63	5.38	6.07	5.91	11.48	33.64
1996r	36.82	1.60	83.35	6.01	25.40	4.04	81.41	6.03	6.87	6.69	11.62	34.05
1997r	37.12	1.65	76.28	5.50	21.63	3.44	84.51	6.26	6.49	6.32	11.68	34.22
1998r	29.62	1.37	60.89	4.39	14.96	2.38	59.94	4.44	6.11	5.91	11.04	32.36
1999r	32.00	1.34	65.32	4.71	17.48	2.78	73.58	5.45	5.15	5.01	10.33	30.28
2000r	40.03	1.60	110.40	7.96	28.92	4.60	127.44	9.44	7.77	7.57	12.10	35.46
2001r	40.35	1.62	93.62	6.75	25.59	4.07	117.99	8.74	9.61	9.32	12.24	35.88
2002r	44.09	1.92	88.35	6.37	25.90	4.12	106.92	7.92	6.42	6.24	11.79	34.55
2003r	39.15	1.76	109.84	7.92	34.20	5.44	134.60	9.97	8.60	8.33	12.93	37.89
2004r	43.69	1.96	134.81	9.72	33.70	5.36	162.14	12.01	10.11	9.84	12.98	38.04
2005p	43.08	1.93	196.01	14.13	47.65	7.58	250.17	18.53	13.11	12.73	13.22	38.75

NOTE: See glossary on page 512 for explanation of abbreviations.

p Preliminary.

r Revised.

SOURCE: New York State Energy Research and Development Authority.

TABLE L-14

### Industrial Retail Energy Prices New York State — 1991-2005

Date	Coal		Distillate		Residual		Kerosene	
	\$/ton	\$/MMBtu	cents/gallon	\$/MMBtu	\$/bbl	\$/MMBtu	cents/gallon	\$/MMBtu
1991r	42.68	1.73	77.67	5.60	17.78	2.83	78.30	5.80
1992r	42.67	1.74	76.42	5.51	18.17	2.89	65.88	4.88
1993r	41.58	1.70	70.32	5.07	18.11	2.88	65.34	4.84
1994r	41.54	1.70	70.45	5.08	19.36	3.08	69.53	5.15
1995r	41.19	1.69	67.13	4.84	21.00	3.34	60.21	4.46
1996r	40.10	1.64	81.55	5.88	25.40	4.04	77.22	5.72
1997r	41.38	1.69	74.75	5.39	21.63	3.44	70.74	5.24
1998r	36.68	1.45	57.97	4.18	14.96	2.38	54.14	4.01
1999r	36.69	1.47	64.77	4.67	17.48	2.78	62.51	4.63
2000r	40.64	1.63	105.27	7.59	28.92	4.60	111.51	8.26
2001r	41.79	1.67	91.67	6.61	25.59	4.07	90.86	6.73
2002r	50.57	1.92	88.48	6.38	25.90	4.12	81.41	6.03
2003r	46.51	1.85	107.90	7.78	34.20	5.44	109.76	8.13
2004r	55.38	2.06	127.46	9.19	33.70	5.36	137.97	10.22
2005p	54.61	2.03	185.32	13.36	47.65	7.58	212.89	15.77

Year	LPG <sup>1</sup>		Natural Gas		Electricity	
	cents/gallon	\$/MMBtu	\$/Mcf	\$/MMBtu	cents/kWh	\$/MMBtu
1991r	99.21	11.53	4.74	4.60	6.17	18.07
1992r	85.25	9.88	4.94	4.79	6.50	19.06
1993r	83.28	9.70	5.16	5.02	6.67	19.53
1994r	74.78	8.64	5.23	5.08	6.78	19.86
1995r	73.93	8.57	4.67	4.55	5.79	16.97
1996r	78.20	9.09	5.04	4.91	5.62	16.48
1997r	86.44	10.04	5.05	4.92	5.20	15.23
1998r	80.37	9.34	4.03	3.90	4.94	14.49
1999r	82.05	9.53	3.90	3.79	4.76	13.96
2000r	110.79	12.90	6.14	5.98	5.37	15.75
2001r	109.80	12.76	7.72	7.49	5.56	16.28
2002r	103.92	12.08	5.53	5.37	5.18	15.17
2003r	128.14	14.83	7.35	7.12	7.14	20.92
2004r	144.81	16.81	8.05	7.84	7.04	20.63
2005p	203.89	23.67	11.19	10.86	7.64	22.39

NOTE: See glossary on page 512 for explanation of abbreviations.

p Preliminary.

r Revised.

<sup>1</sup> Propane.

SOURCE: New York State Energy Research Development Authority.

TABLE L-15

**Transportation Retail Energy Prices  
New York State — 1991-2005**

Date	Gasoline		Distillate <sup>1</sup>		Jet Fuel <sup>2</sup>		Residual <sup>3</sup>		Electricity <sup>4</sup>	
	cents/ gallon	\$/ MMBtu	cents/ gallon	\$/ MMBtu	cents/ gallon	\$/ MMBtu	\$/ bbl	\$/ MMBtu	cents/ kWh	\$/ MMBtu
1991r	118.07	9.44	125.65	9.06	69.90	5.18	14.94	2.38	7.30	21.38
1992r	116.07	9.28	123.30	8.89	65.30	4.84	14.64	2.33	8.11	23.77
1993r	113.06	9.04	125.38	9.04	60.30	4.47	14.41	2.29	8.53	25.00
1994r	114.06	9.16	128.29	9.25	55.89	4.14	15.09	2.40	8.68	25.44
1995r	118.83	9.57	125.10	9.02	54.54	4.04	16.72	2.66	8.46	24.79
1996r	123.32	9.93	134.11	9.67	65.88	4.88	19.80	3.15	8.50	24.90
1997r	124.62	10.04	128.84	9.29	61.16	4.53	17.54	2.79	8.52	24.98
1998r	106.23	8.56	113.73	8.20	45.90	3.40	12.20	1.94	8.21	24.07
1999r	118.74	9.57	122.05	8.80	57.11	4.23	15.53	2.47	8.14	23.85
2000r	159.65	12.87	165.32	11.92	93.15	6.90	25.78	4.10	8.16	23.90
2001r	143.03	11.53	145.90	10.52	78.17	5.79	19.93	3.17	8.25	24.18
2002r	134.17	10.82	136.61	9.85	74.79	5.54	22.82	3.63	7.95	23.29
2003r	168.10	13.56	159.91	11.53	91.26	6.76	28.48	4.53	9.38	27.49
2004r	188.24	15.16	187.37	13.51	122.31	9.06	29.61	4.71	7.90	23.15
2005p	239.40	19.27	249.90	18.02	175.88	13.03	41.87	6.66	8.30	24.33

NOTE: See glossary on page 512 for explanation of abbreviations.

p Preliminary.

r Revised.

1 Diesel.

2 Kerosene-based.

3 Bunker fuel.

4 Consumed by railroads.

SOURCE: New York State Energy Research and Development Authority.

TABLE L-16

**Sources and Disposition of Energy  
by the New York Power Authority  
New York State — 2006**

	Megawatt Hours (thousands)
Sources of Energy	
All Purchases and Generation	43,419
Generation (excluding station use)	26,887
Steam	6,150
Hydro	20,149
Gas Turbines	588
Purchases from Utilities, Utility Affiliates and Power Marketers	16,532
Losses and Unaccounted for	-526
Disposition of Energy	
All Sales	42,893
Direct Sales to Commercial and Industrial Customers <sup>1</sup>	4,845
Sales to Municipal Electric Systems, Rural Electric Cooperatives and Other Public Customers <sup>2</sup>	16,995
Sales to utilities and the New York Independent System Operator for resale <sup>3</sup>	21,053

1 Includes sales to 25 companies, primarily industrial.

2 Includes sales to 47 municipal systems, 4 rural cooperatives and more than 100 public agencies in New York State and to 7 neighboring states.

3 Includes sales to the 6 investor-owned utilities in New York State, the Long Island Power Authority and the New York Independent System

Operator (ISO). Portions were designated for resale to residential and farm customers or to business and not-for-profit customers in the state.

SOURCE: Power Authority of the State of New York.

**TABLE L-17**  
**Generation by Major Privately Owned Electric Utilities**  
**by Type of Prime Mover Driving the Generator**  
**New York State — 1972-2005**  
(millions of kilowatt-hours)

Year	Total	Hydro	Steam		Other
			Fossil Fuel	Nuclear	
1972	81,660	4,450	64,188	6,726	6,296
1973	83,231	4,276	67,048	7,138	4,769
1974	81,100	4,492	63,950	9,909	2,749
1975	82,669	4,251	65,891	10,939	1,588
1976	79,604	4,614	65,107	8,406	1,477
1977	82,692	4,101	66,528	11,160	903
1978	82,498	3,634	66,471	12,031	362
1979	77,807	3,930	62,668	10,740	469
1980	80,106	3,292	64,404	11,864	546
1981	79,498	3,831	65,442	9,628	597
1982	75,263	3,734	63,555	7,960	14
1983	79,424	3,769	63,917	11,710	28
1984	78,655	4,207	64,131	10,249	68
1985	82,408	3,649	63,563	15,196	—
1986	77,764	4,642	62,283	10,544	295
1987	86,926	3,847	68,936	13,822	321
1988	95,421	3,537	78,334	12,985	565
1989	101,961	4,057	84,711	11,796	1,397
1990	99,790	4,611	81,106	14,036	38
1991	97,410	3,797	75,281	17,745	587
1992	88,987	3,626	65,709	19,389	263
1993	79,897	3,300	55,206	20,940	451
1994	80,440	3,950	51,500	24,400	590
1995	75,870	2,980	52,850	20,030	10
1996	75,959	4,694	46,302	24,053	910
1997	75,973	4,065	53,065	18,578	265
1998a	60,994	3,786	39,170	17,594	444
1999a	45,443	1,948	22,953	20,208	334
2000a	24,908	703	8,181	15,886	138
2001a	23,674	468	3,560	19,371	275
2002a,r	7,368	504	2,766	3,839	259
2003a,r	8,542	711	2,621	1,917	3,293
2004a,r	9,753	719	2,983	1,917	4,134
2005a	13,030	649	3,239	—	9,142

— Represents zero.

r Revised.

a Excludes sales by Long Island Power Authority (formerly Long Island Lighting Co.).

SOURCE: New York State Department of Public Service, Office of Accounting and Finance.

TABLE L-18

**Energy Sales to Ultimate Customers of Major Privately Owned Electric Utilities  
by Type of Customer  
New York State — 1972-2005  
(millions of kilowatt-hours)**

Year	All Sales <sup>1</sup>	Residential	Commercial and Industrial	Other <sup>2</sup>
1972	87,793	26,804	52,152	8,837
1973	93,101	28,497	55,344	9,260
1974	89,207	27,234	52,902	9,071
1975	89,353	28,012	52,179	9,162
1976	91,211	28,733	53,932	8,546
1977	88,902	29,044	55,254	4,604
1978	89,228	29,201	56,715	3,312
1979	90,398	29,451	57,698	3,249
1980	90,604	29,815	57,469	3,320
1981	91,012	29,731	57,958	3,323
1982	89,324	29,660	56,536	3,128
1983	92,498	30,792	58,500	3,206
1984	95,525	31,524	60,790	3,211
1985	96,271	31,424	61,562	3,285
1986	99,003	32,389	63,329	3,285
1987	102,823	33,869	65,569	3,385
1988	109,096	35,946	69,639	3,511
1989	111,441	36,304	71,585	3,552
1990	112,441	36,997	71,821	3,623
1991	112,426	37,504	71,255	3,667
1992	111,478	37,050	70,748	3,680
1993	113,520	38,200	71,125	4,195
1994	113,970	38,353	71,947	3,670
1995	113,389	38,190	71,537	3,662
1996	114,271	38,488	72,139	3,644
1997	114,681	38,289	72,747	3,645
1998a	96,838	30,996	62,585	3,257
1999a	93,947	32,659	58,238	3,050
2000a	88,732	31,864	54,078	2,790
2001a	88,472	32,345	53,739	2,388
2002a	86,921	33,637	50,979	2,305
2003a	84,908	34,099	48,125	2,684
2004a	99,072	35,293	60,260	3,519
2005a	100,920	37,885	59,433	3,602

a Excludes sales by Long Island Power Authority (formerly Long Island Lighting Co.).

1 Excluding sales for resale.

2 Other now includes Street and Highway Lighting, Other Public Authorities, Railroads and Railways and Interdepartmental.

SOURCE: New York State Department of Public Service, Office of Accounting and Finance.

**TABLE L-19**  
**Energy Sales to Final Customers of Major Privately Owned Gas Utilities**  
**by Type of Customer**  
**New York State — 1972-2005**  
(millions of therms)

Year	All Sales <sup>1</sup>	Residential	Commercial and Industrial	Other <sup>2</sup>
1972	6,673	3,852	2,646	175
1973	6,267	3,535	2,543	189
1974	6,598	3,663	2,768	167
1975	6,380	3,646	2,596	138
1976	6,878	3,942	2,780	156
1977	6,311	3,689	2,477	145
1978	6,586	3,756	2,689	141
1979	6,632	3,608	2,848	176
1980	6,838	3,635	2,925	278
1981	7,143	3,665	3,150	328
1982	7,081	3,658	3,060	363
1983	6,739	3,515	2,796	428
1984	7,105	3,687	2,928	490
1985	6,802	3,545	2,860	397
1986	6,332	3,678	2,446	208
1987	6,104	3,657	2,148	299
1988	6,212	3,898	2,070	244
1989	6,172	3,969	1,975	227
1990	5,889	3,664	1,915	310
1991	5,760	3,616	1,811	333
1992	6,438	4,111	1,975	352
1993	6,714	4,133	1,983	598
1994	6,745	4,110	2,286	349
1995	6,786	4,039	2,286	461
1996	6,888	4,285	2,255	349
1997	6,653	4,090	2,132	431
1998a	4,713	3,100	1,338	275
1999a	5,447	3,653	1,553	241
2000a	5,825	3,830	1,776	219
2001a	5,026	3,265	1,529	232
2002a	5,358	3,461	1,659	238
2003a,r	5,605	3,692	1,649	264
2004a,r	5,728	3,619	1,812	297
2005a	5,547	3,569	1,647	331

r Revised.

a Does not include former Long Island Lighting Company gas operations (now KeySpan East).

1 Excluding sales for resale.

2 Other now includes Interdepartmental, which was listed separately in earlier years. All figures shown for Other below are revised from earlier editions.

SOURCE: New York State Department of Public Service, Office of Accounting and Finance.

TABLE L-20

**Residential Customers of Electric and Gas Utilities  
Usage and Bill per Customer and Revenue per Unit Consumed  
New York State — Selected Years 1960-2005**

Year	Average Usage per Customer (kWh)	Electricity			
		Average Annual Bill per Customer		Revenue per kWh	
		Current Dollars	Constant Dollars <sup>1</sup>	Current Dollars	Constant Dollars <sup>1</sup>
1960	2,598	\$ 83.84	\$ 355.91	\$ 0.0323	\$ 0.1397
1965	3,293	99.94	372.12	0.0303	0.1153
1970	4,662	134.43	406.42	0.0288	0.0889
1975	5,120	266.15	780.48	0.0520	0.1555
1976	5,269	286.43	794.92	0.0544	0.1539
1977	5,315	316.67	825.74	0.0596	0.1585
1978	5,329	328.02	798.36	0.0616	0.1528
1979	5,336	361.51	812.29	0.0677	0.1553
1980	5,359	414.27	852.32	0.0773	0.1623
1981	5,312	506.70	953.64	0.0954	0.1831
1982	5,260	529.67	938.35	0.1007	0.1820
1983	5,416	576.89	983.20	0.1065	0.1852
1984	5,491	606.72	996.91	0.1105	0.1852
1985	5,417	604.00	962.04	0.1115	0.1812
1986	5,523	598.53	932.73	0.1084	0.1723
1987	5,709	616.16	932.32	0.1079	0.1666
1988	5,989	642.87	940.72	0.1073	0.1602
1989	5,985	671.72	946.87	0.1122	0.1614
1990	6,046	711.39	965.05	0.1177	0.1628
1991	6,100	751.05	983.24	0.1231	0.1644
1992	5,969	764.41	976.93	0.1281	0.1670
1993	6,119	830.45	1,036.42	0.1357	0.1728
1994	6,107	853.83	1,043.91	0.1398	0.1744
1995	6,046	865.94	1,036.09	0.1432	0.1748
1996	6,069	879.05	1,031.82	0.1448	0.1734
1997	6,019	876.83	1,009.56	0.1457	0.1711
1998	5,683	794.38	903.31	0.1398	0.1621
1999a	5,934	816.81	915.10	0.1376	0.1573
2000a	5,843	855.18	935.63	0.1464	0.1634
2001a	5,911	861.06	921.79	0.1457	0.1591
2002a	6,148	847.28	887.73	0.1378	0.1473
2003a	6,206	914.27	935.11	0.1473	0.1507
2004a	6,373	916.60	916.60	0.1438	0.1467
2005a	6,813	1,045.49	1,045.49	0.1535	0.1535

(Continued on the following page)

TABLE L-20 (continued)

**Residential Customers of Electric and Gas Utilities  
Usage and Bill per Customer and Revenue per Unit Consumed  
New York State — Selected Years 1960-2005**

Year	Average Usage per Customer (Mcf)	Gas			
		Average Annual Bill per Customer		Revenue per Mcf	
		Current Dollars	Constant Dollars <sup>1</sup>	Current Dollars	Constant Dollars <sup>1</sup>
1960	65.1	\$ 90.90	\$ 358.88	\$ 1.40	\$ 6.06
1965	80.0	105.86	394.16	1.32	5.03
1970	92.0	125.54	379.55	1.36	4.21
1975	89.8	221.02	648.14	2.46	7.36
1976	98.9	275.78	765.36	2.79	7.89
1977	94.9	311.91	813.33	3.29	8.74
1978	97.2	342.82	834.38	3.53	8.76
1979	93.4	370.38	832.22	3.97	9.09
1980	104.2	516.49	1,062.63	4.96	10.40
1981	94.3	509.26	958.46	5.40	10.37
1982	93.9	604.68	1,071.23	6.44	11.64
1983	87.7	680.52	1,159.81	7.76	13.49
1984	91.5	695.99	1,143.59	7.61	12.75
1985	87.3	667.48	1,063.15	7.65	12.42
1986	90.2	665.90	1,037.71	7.38	11.74
1987	88.9	588.16	889.95	6.62	10.21
1988	94.2	614.61	899.36	6.52	9.74
1989	99.5	700.23	987.06	7.04	10.12
1990	87.0	632.18	857.60	7.27	10.06
1991	85.5	634.16	830.21	7.42	9.91
1992	96.2	716.82	916.11	7.45	9.72
1993	96.0	782.53	976.61	8.15	10.38
1994	95.8	828.05	1,012.39	8.64	10.76
1995	93.3	771.00	922.50	8.26	10.09
1996	98.6	881.55	1,034.76	8.94	10.71
1997	93.8	872.68	1,004.78	9.30	10.93
1998	79.0	744.10	846.14	9.42	10.93
1999a	83.9	766.44	858.67	9.14	10.44
2000a	89.3	894.21	978.33	10.01	11.17
2001a	80.0	947.51	1,014.34	11.84	12.94
2002a	81.6	795.75	833.74	9.76	10.43
2003a	85.6	893.24	913.61	10.44	10.89
2004a	91.9	1,117.40	1,117.40	12.15	12.40
2005a	87.5	1,292.84	1,292.84	14.78	14.78

NOTE: See Glossary on page 512 for explanation of abbreviations.

1 Base year 1996 = 100.

a Does not include former Long Island Lighting Company gas operations (now KeySpan East).

SOURCE: New York State Department of Public Service, Office of Accounting and Finance.

TABLE L-21

**Electric Service Companies<sup>1</sup>**  
**Average Annual Bill Data**  
**New York State — 2005**

Company	Average Number of Customers	Sales Revenues (thousands)	Kilowatt- Hours Sold (millions)	Average Annual Bill per Customer	Average Usage per Customer (000 kWh)	Average Revenue per kWh Sold (cents)
--- Total <sup>2</sup> ---						
Central Hudson	289,961	\$ 502,478	4,465	\$ 800	15	11.25¢
Consolidated Edison	3,176,836	6,517,848	46,192	2,052	15	14.11
New York State E&G	859,877	1,619,512	19,121	1,883	22	8.47
Niagara Mohawk	1,483,209	2,553,668	24,240	1,722	16	10.53
Orange & Rockland	218,182	449,464	4,635	2,060	21	9.70
Rochester G&E	358,795	658,045	10,706	1,834	30	6.15
Composite	6,386,860	\$ 12,301,015	109,359	\$ 1,884	17	11.25¢
--- Residential ---						
Central Hudson	245,858	\$ 270,647	2,147	\$ 1,101	9	12.61¢
Consolidated Edison	2,709,844	2,923,677	14,270	1,079	5	20.49
New York State E&G	744,627	804,489	6,272	1,080	8	12.83
Niagara Mohawk	1,352,751	1,369,033	10,750	1,012	8	12.74
Orange & Rockland	188,276	201,742	1,672	1,072	9	12.07
Rochester G&E	319,429	244,133	2,774	764	9	8.80
Composite	5,560,785	\$ 5,813,721	37,885	\$ 1,045	7	15.35¢
--- Commercial ---						
Central Hudson	39,347	\$ 146,314	1,401	\$ 3,719	36	10.44¢
Consolidated Edison	462,379	3,404,445	30,240	7,363	65	11.26
New York State E&G	98,761	303,978	3,925	3,078	40	7.74
Niagara Mohawk	125,051	754,825	5,814	6,036	46	12.98
Orange & Rockland	29,206	156,982	1,847	5,375	63	8.50
Rochester G&E	35,132	104,447	2,689	2,973	77	3.88
Composite	789,876	\$ 4,870,991	45,916	\$ 6,167	58	10.61¢
--- Industrial <sup>3</sup> ---						
Central Hudson	992	\$ 26,780	328	\$ 26,996	331	10.05¢
Consolidated Edison	480	88,644	952	184,675	1,897	10.05
New York State E&G	2,658	154,428	3,268	58,099	1,229	4.73
Niagara Mohawk	861	339,519	6,766	394,331	7,858	5.02
Orange & Rockland (includes Power Pick)	118	42,821	674	210,445	5,931	6.35
Rochester G&E	1,143	62,796	1,530	68,262	1,339	4.10
Composite	6,252	\$ 714,988	13,518	\$ 68,262	2,162	5.29¢
--- Sales for Resale ---						
Central Hudson	5	\$ 16,6820	189			8.90¢
Consolidated Edison	1	46,410	—	—		
New York State E&G	9	231,912	3,994			5.81
Niagara Mohawk	169	62,650	799			7.84
Orange & Rockland	3	32,413	319			10.16
Rochester G&E	10	219,026	3,138			6.98
Composite	197	\$ 609,231	8,439			7.22¢
--- All Other Sales of Electricity ---						
Central Hudson	3,759	\$ 41,917	400			10.48¢
Consolidated Edison	4,132	54,672	730			7.49
New York State E&G	13,822	124,705	1,662			7.50
Niagara Mohawk	4,377	27,641	111			24.90
Orange & Rockland	579	15,506	123			12.61
Rochester G&E	3,081	27,643	575			4.81
Composite	29,750	\$ 292,084	3,601			8.11¢

— Represents zero.

NA Not available.

1 Excludes sales by Long Island Power Authority (formerly Long Island Lighting Company).

2 Excludes Other Operating Revenue.

3 Excludes Expansion and Replacement sales made by the New York Power Authority.

SOURCE: New York State Department of Public Service.

**TABLE L-22**  
**Gas Service Companies**  
**Average Annual Bill Data**  
**New York State — 2005**

Company	Average Number of Customers	Sales Revenues (thousands)	Mcf Sold (thousands)	Average Annual Bill Per Customer	Average Usage per Customer (Mcf)	Average Revenue per Mcf Sold
--- Total <sup>1</sup> ---						
Brooklyn Union Gas	1,094,492	\$ 1,839,040	120,762	\$ 1,680	110	\$ 15.23
Central Hudson	69,182	138,351	11,135	2,000	161	12.42
Consolidated Edison	1,054,922	1,545,518	135,421	1,465	128	11.41
Corning Natural Gas	11,326	20,254	1,651	1,788	146	12.27
Key Span Gas East	493,263	1,342,639	104,988	2,722	213	12.79
National Fuel Gas Dist. (NY & PA)	675,474	1,134,905	80,068	1,680	119	14.17
New York State E&G	247,017	447,635	34,173	1,812	138	13.10
Niagara Mohawk	490,856	787,917	61,377	1,605	125	12.84
Orange & Rockland	78,199	193,255	15,681	2,471	201	12.32
Rochester G&E	246,970	374,820	28,742	1,518	116	13.04
St. Lawrence	15,373	39,600	3,720	2,576	242	10.65
Valley Energy <sup>2</sup>	1,573	3,063	264	1,947	168	11.60
Composite	4,478,647	\$ 7,873,379	597,982	\$ 1,758	134	\$ 13.17
--- Residential ---						
Brooklyn Union Gas	1,056,246	\$ 1,374,704	85,679	\$ 1,301	81	\$ 16.04
Central Hudson	59,660	74,142	5,197	1,243	87	14.27
Consolidated Edison	933,882	849,737	55,796	910	60	15.23
Corning Natural Gas	10,404	14,170	1,084	1,362	104	13.07
Key Span Gas East	443,064	698,003	43,701	1,575	99	15.97
National Fuel Gas Dist. (NY & PA)	635,632	958,099	66,558	1,507	105	14.39
New York State E&G	221,075	321,278	23,053	1,453	104	13.94
Niagara Mohawk	455,908	592,646	46,206	1,300	101	12.83
Orange & Rockland	71,863	129,622	9,184	1,804	128	14.11
Rochester G&E	230,902	311,508	23,382	1,349	101	13.32
St. Lawrence	13,746	18,807	1,706	1,368	124	11.02
Valley Energy <sup>2</sup>	1,379	1,590	129	1,153	94	12.33
Composite	4,133,761	\$ 5,344,306	361,675	\$ 1,293	87	\$ 14.78
--- Commercial <sup>3</sup> ---						
Brooklyn Union Gas	25,582	\$ 206,737	15,030	\$ 8,081	588	\$ 13.75
Central Hudson	8,519	45,396	3,660	5,329	430	12.40
Consolidated Edison	117,996	545,261	60,180	4,621	510	9.06
Corning Natural Gas	845	2,802	228	3,316	270	12.29
Key Span Gas East	45,362	352,175	25,638	7,764	565	13.74
National Fuel Gas Dist. (NY & PA)	38,856	160,500	11,972	4,131	308	13.41
New York State E&G	23,939	88,109	6,810	3,681	284	12.94
Niagara Mohawk	34,804	190,706	14,733	5,479	423	12.94
Orange & Rockland	6,272	28,633	2,135	4,565	340	13.41
Rochester G&E	14,927	51,914	4,351	3,478	291	11.93
St. Lawrence	1,619	9,529	913	5,886	564	10.44
Valley Energy <sup>2</sup>	194	1,473	135	7,593	696	10.91
Composite	318,915	\$ 1,683,235	145,785	\$ 5,278	457	\$ 11.05
--- Industrial <sup>3</sup> ---						
Brooklyn Union Gas	10,297	\$ 83,217	6,050	\$ 8,082	588	\$ 13.75
Central Hudson	283	5,020	430	17,739	1,519	11.67
Consolidated Edison	55	7,573	2,700	137,691	49,091	2.80
Corning Natural Gas	6	239	20	39,833	3,333	11.95
Key Span Gas East	4,817	37,399	2,723	7,764	565	13.73
National Fuel Gas Dist. (NY & PA)	986	16,306	1,538	16,538	1,560	10.60
New York State E&G	451	21,328	2,071	47,290	4,592	10.30
Niagara Mohawk	144	4,565	438	31,701	3,042	10.42
Orange & Rockland	63	26,968	3,089	428,063	49,032	8.73
Rochester G&E	493	6,098	547	12,369	1,110	11.15
St. Lawrence	8	11,264	1,101	1,408,000	137,625	10.23
Composite	17,603	\$ 219,977	20,707	\$ 12,497	1,176	\$ 10.62
--- Sales for Resale ---						
Central Hudson	\$ 6,382	702				\$ 9.09
Consolidated Edison	1	2464	128			19.25
Corning Natural Gas	1	2,831	300			9.44
Key Span Gas East	20	255,062	32,926			7.75
National Fuel Gas Dist. (NY & PA)	—	—	—			—
New York State E&G	—	529	834			0.63
Orange & Rockland	1	8,032	1,273			6.31
Composite	23	\$ 275,300	36,163			\$ 7.61
--- All Other Sales ---						
Brooklyn Union Gas	2,367	\$ 174,382	14,003			\$ 12.45
Central Hudson	720	13,793	1,146			12.04
Consolidated Edison	2,988	140,483	16,617			8.45
Corning Natural Gas	70	212	19			11.16
New York State E&G	1,552	16,391	1,405			11.67
Rochester G&E	648	5,300	462			11.47
Composite	8,345	\$ 350,561	33,652			\$ 10.42

NOTE: See Glossary on page 512 for explanation of abbreviations.

— Represents zero.

1 Excludes Other Operating Revenues (including Transportation).

2 Valley Energy purchased the Waverly Gas operations of NUI Utilities, Inc. in 2001.

3 Excludes transportation and off-system sales that were reported as commercial or industrial sales of gas.

SOURCE: New York State Department of Public Service, Office of Accounting and Finance.

TABLE L-23

**New York Independent System Operator Electric Energy Load and Capacity Schedule  
2007-16  
(Kilowatts)**

New York Control Area (NYCA)	Winter Capability Period									
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Inventory of All Power Resources										
Steam Turbine (Oil)	1,688,100	1,688,100	1,688,100	1,688,100	1,688,100	1,688,100	1,688,100	1,688,100	1,688,100	1,688,100
Steam Turbine (Oil & Gas)	9,052,500	9,052,500	8,164,000	8,164,000	8,164,000	8,164,000	8,164,000	8,164,000	8,164,000	8,164,000
Steam Turbine (Gas)	1,091,600	1,091,600	1,091,600	1,091,600	1,091,600	1,091,600	1,091,600	1,091,600	1,091,600	1,091,600
Steam Turbine (Coal)	3,380,400	3,142,400	3,142,400	3,142,400	3,142,400	3,142,400	3,142,400	3,142,400	3,142,400	3,142,400
Steam Turbine (Wood)	38,000	38,000	38,000	38,000	38,000	38,000	38,000	38,000	38,000	38,000
Steam Turbine (Refuse)	265,610	265,610	265,610	265,610	265,610	265,610	265,610	265,610	265,610	265,610
Steam (PWR <sup>1</sup> Nuclear)	2,650,100	2,650,100	2,650,100	2,650,100	2,650,100	2,650,100	2,650,100	2,650,100	2,650,100	2,650,100
Steam (BWR <sup>2</sup> Nuclear)	2,640,900	2,640,900	2,640,900	2,640,900	2,640,900	2,640,900	2,640,900	2,640,900	2,640,900	2,640,900
Pumped Storage Hydro	1,294,500	1,294,500	1,294,500	1,294,500	1,294,500	1,294,500	1,294,500	1,294,500	1,294,500	1,294,500
Internal Combustion	129,804	129,804	129,804	129,804	129,804	129,804	129,804	129,804	129,804	129,804
Conventional Hydro	4,541,918	4,541,918	4,541,918	4,541,918	4,541,918	4,541,918	4,541,918	4,541,918	4,541,918	4,541,918
Combined Hydro	8,883,800	8,883,800	8,883,800	8,883,800	8,883,800	8,883,800	8,883,800	8,883,800	8,883,800	8,883,800
Jet Engine (Oil)	638,700	638,700	638,700	638,700	638,700	638,700	638,700	638,700	638,700	638,700
Jet Engine (Gas & Oil)	200,400	200,400	200,400	200,400	200,400	200,400	200,400	200,400	200,400	200,400
Combustion Turbine (Oil)	1,848,200	1,848,200	1,848,200	1,848,200	1,848,200	1,848,200	1,848,200	1,848,200	1,848,200	1,848,200
Combustion Turbine (Oil & Gas)	1,704,000	1,704,000	1,704,000	1,704,000	1,704,000	1,704,000	1,704,000	1,704,000	1,704,000	1,704,000
Combustion Turbine (Gas)	1,401,800	1,401,800	1,401,800	1,401,800	1,401,800	1,401,800	1,401,800	1,401,800	1,401,800	1,401,800
Wind	345,847	345,847	345,847	345,847	345,847	345,847	345,847	345,847	345,847	345,847
Other	680	680	680	680	680	680	680	680	680	680
Additions	—	—	—	—	—	—	—	—	—	—
Reratings	—	—	—	—	—	—	—	—	—	—
Retirements	-238,000	-888,500	—	—	—	—	—	—	—	—
Total NYCA Winter Capability	41,558,859	40,670,359	40,670,359	40,670,359	40,670,359	40,670,359	40,670,359	40,670,359	40,670,359	40,670,359
Purchases <sup>b</sup>	80,000	80,000	—	—	—	—	—	—	—	—
Sales <sup>c</sup>	-273,000	-273,000	-273,000	-273,000	-263,000	-263,000	-263,000	-263,000	-263,000	-263,000
Net Winter Capability	41,365,859	40,477,359	40,397,359	40,397,359	40,407,359	40,407,359	40,407,359	40,407,359	40,407,359	40,407,359
Winter Peak Load Forecast	26,783,000	27,197,000	27,453,000	27,615,000	27,759,000	27,860,000	27,990,000	28,140,000	28,438,000	28,708,000
Winter Reserve Margin	13,137,580	13,293,520	13,478,840	13,734,560	13,951,640	14,139,740	14,257,540	14,430,860	14,490,400	14,507,140
Annual Peak Load + 18% Reserve Margin	39,920,580	40,490,520	40,931,840	41,349,560	41,710,640	41,999,740	42,247,540	42,570,860	42,928,400	43,215,140
Actual Reserve kW	14,582,859	13,200,359	12,944,359	12,792,359	12,648,359	12,547,359	12,417,359	12,267,359	11,969,359	11,699,359
Actual Winter Reserve Margin	54.45%	48.54%	47.15%	46.32%	45.56%	45.04%	44.36%	43.59%	42.09%	40.75%

(Continued on the following page)

TABLE L-23 (continued)

**New York Independent System Operator Electric Energy Load and Capacity Schedule  
2007-16  
(Kilowatts)**

New York Control Area (NYCA)	Summer Capability Period									
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Inventory of All Power Resources										
Steam Turbine (Oil)	1,669,600	1,669,600	1,669,600	1,669,600	1,669,600	1,669,600	1,669,600	1,669,600	1,669,600	1,669,600
Steam Turbine (Oil & Gas)	9,153,200	9,153,200	8,264,900	8,264,900	8,264,900	8,264,900	8,264,900	8,264,900	8,264,900	8,264,900
Steam Turbine (Gas)	1,111,200	1,111,200	1,111,200	1,111,200	1,111,200	1,111,200	1,111,200	1,111,200	1,111,200	1,111,200
Steam Turbine (Coal)	3,504,700	3,339,700	3,109,100	3,109,100	3,109,100	3,109,100	3,109,100	3,109,100	3,109,100	3,109,100
Steam Turbine (Wood)	39,000	39,000	39,000	39,000	39,000	39,000	39,000	39,000	39,000	39,000
Steam Turbine (Refuse)	262,002	262,002	262,002	262,002	262,002	262,002	262,002	262,002	262,002	262,002
Steam (PWR <sup>1</sup> Nuclear)	2,545,800	2,640,800	2,640,800	2,640,800	2,640,800	2,640,800	2,640,800	2,640,800	2,640,800	2,640,800
Steam (BWR <sup>2</sup> Nuclear)	2,623,500	2,623,500	2,623,500	2,623,500	2,623,500	2,623,500	2,623,500	2,623,500	2,623,500	2,623,500
Pumped Storage Hydro	1,292,000	1,292,000	1,292,000	1,292,000	1,292,000	1,292,000	1,292,000	1,292,000	1,292,000	1,292,000
Internal Combustion	120,623	120,623	120,623	120,623	120,623	120,623	120,623	120,623	120,623	120,623
Conventional Hydro	4,407,924	4,407,924	4,407,924	4,407,924	4,407,924	4,407,924	4,407,924	4,407,924	4,407,924	4,407,924
Combined Hydro	7,791,400	7,791,400	7,791,400	7,791,400	7,791,400	7,791,400	7,791,400	7,791,400	7,791,400	7,791,400
Jet Engine (Oil)	518,700	518,700	518,700	518,700	518,700	518,700	518,700	518,700	518,700	518,700
Jet Engine (Gas & Oil)	165,200	165,200	165,200	165,200	165,200	165,200	165,200	165,200	165,200	165,200
Combustion Turbine (Oil)	1,423,000	1,423,000	1,423,000	1,423,000	1,423,000	1,423,000	1,423,000	1,423,000	1,423,000	1,423,000
Combustion Turbine (Oil & Gas)	1,340,500	1,340,500	1,340,500	1,340,500	1,340,500	1,340,500	1,340,500	1,340,500	1,340,500	1,340,500
Combustion Turbine (Gas)	1,242,900	1,242,900	1,242,900	1,242,900	1,242,900	1,242,900	1,242,900	1,242,900	1,242,900	1,242,900
Wind	244,547	344,547	344,547	344,547	344,547	344,547	344,547	344,547	344,547	344,547
Other	680	680	680	680	680	680	680	680	680	680
Special Case Resources — SCR <sup>4</sup>	1,080,000	1,080,000	1,080,000	1,080,000	1,080,000	1,080,000	1,080,000	1,080,000	1,080,000	1,080,000
Additions	100,000	—	—	—	—	—	—	—	—	—
Reratings	95,000	—	—	—	—	—	—	—	—	—
Retirements	-165,000	-1,118,900	—	—	—	—	—	—	—	—
Total NYCA Summer Capability	40,566,476	39,447,576	39,447,576	39,447,576	39,447,576	39,447,576	39,447,576	39,447,576	39,447,576	39,447,576
Purchases <sup>3</sup>	80,000	—	—	—	—	—	—	—	—	—
Sales <sup>3</sup>	-273,000	-273,000	-273,000	-263,000	-263,000	-263,000	-263,000	-263,000	-263,000	-263,000
Net Summer Capability	40,373,476	39,174,576	39,174,576	39,184,576	39,184,576	39,184,576	39,184,576	39,184,576	39,184,576	39,184,576
Summer Peak Load Forecast	33,831,000	34,314,000	34,688,000	35,042,000	35,348,000	35,593,000	35,803,000	36,077,000	36,380,000	36,623,000
Reserve Margin (at 18% of Peak Load)	6,089,580	6,176,520	6,243,840	6,307,560	6,362,640	6,406,740	6,444,540	6,493,860	6,548,400	6,592,140
Annual Peak Load + 18% Reserve Margin	39,920,580	40,490,520	40,931,840	41,349,560	41,710,640	41,999,740	42,247,540	42,570,860	42,928,400	43,215,140
Actual Reserve kW	6,542,476	4,860,576	4,486,576	4,142,576	3,836,576	3,591,576	3,381,576	3,107,576	2,804,576	2,561,576
Actual Summer Reserve Margin	19.34%	14.16%	12.93%	11.82%	10.85%	10.09%	9.44%	8.61%	7.71%	6.99%
Proposed Resource Additions — kW	1,604,100	2,243,600	2,243,600	2,243,600	2,243,600	2,243,600	2,243,600	2,243,600	2,243,600	2,243,600
Adjusted Summer Reserve Margin	24.08%	20.70%	19.40%	18.22%	17.20%	16.39%	15.71%	14.83%	13.88%	13.12%

NOTE: See Glossary on page 512 for explanation of abbreviations.

— Represents zero.

1 Pressurized Water Reactor.

2 Boiling Water Reactor.

3 Purchases and Sales are with neighboring Control Areas.

4 Special Case Resources (SCR) are loads capable of being interrupted upon demand and distributed generators that are not visible to the Independent System Operator's Market Information System and that are subject to special rules in order to participate as installed Capacity suppliers.

SOURCE: New York Independent System Operator, *The New York Independent System Operator 2006 Load and Capacity Data*.

TABLE L-24

**New York Independent System Operator Long-Term Electric Energy Forecast  
2005 Baseline and 2006-16 Forecast**

Year	Energy (GWh)			Summer Peak (MW)			Winter Peak (MW) <sup>1</sup>		
	Low Growth	Base Case	High Growth	Low Growth	Base Case	High Growth	Low Growth	Base Case	High Growth
2005		167,208			32,075			24,947	
2005 Weather Normalized		163,360			33,068			24,770	
2006	166,606	166,893	167,217	33,161	33,295	33,433	26,282	26,311	26,345
2007	169,530	170,133	170,779	33,631	33,831	34,035	26,716	26,783	26,858
2008	171,988	172,916	173,907	34,040	34,314	34,595	27,093	27,197	27,311
2009	173,409	174,634	175,955	34,338	34,688	35,049	27,320	27,453	27,602
2010	174,605	176,145	177,820	34,604	35,042	35,496	27,455	27,615	27,799
2011	175,441	177,341	179,430	34,815	35,348	35,904	27,564	27,759	27,985
2012	176,012	178,282	180,795	34,954	35,593	36,261	27,634	27,860	28,127
2013	176,630	179,302	182,287	35,043	35,803	36,602	27,734	27,990	28,299
2014	177,330	180,422	183,904	35,178	36,077	37,026	27,857	28,140	28,489
2015	179,035	182,588	186,623	35,322	36,380	37,501	28,128	28,438	28,828
2016	180,620	184,630	189,223	35,396	36,623	37,928	28,381	28,708	29,133
- - - Annual Average Growth Rate - - -									
1995-2005 (Actual)		1.12%			1.88%			0.54%	
2005-16 (Actual)		0.91%			1.21%			1.28%	
2006-16 (Normal)		1.12%			0.93%			1.35%	

NOTE: See Glossary on page 512 for explanation of abbreviations.  
2005 Weather-normalized Summer peak is 33,068 MW; 2005-06 normalized Winter peak is 27,770 MW; normalized annual usage is 163,360 GWh. Growth rates are shown based on both 2005 actual and 2005 normal loads.

<sup>1</sup> Winter peaks run from November of current year through April of next.

SOURCE: New York Independent System Operator, *The New York Independent System Operator 2006 Load and Capacity Data*.

TABLE L-25

**Energy Conversion Factors  
New York State — 2005**

Fuel Type	Approximate Heat Content of Various Fuels	
	Units	2005
Wood	Btu/cord	20,000,000
Coal	Btu/Short ton	
Electric Generation Consumption		19,974,000
Other End Use Sectors Consumption		22,243,000
Natural Gas	Btu/Cubic Foot	
Electric Generation Consumption		1,029
Other End Use Sectors Consumption		1,030
Electricity Consumption	Btu/kWh	3,412
Petroleum Products	Btu/barrel	
Distillate Fuel Oil		5,825,000
Ethanol		3,539,000
Jet Fuel, Kerosene Type		5,670,000
Kerosene		5,670,000
Motor Gasoline		5,218,000
LPG (propane)		3,620,000
Residual Fuel Oil		6,287,000

NOTE: See Glossary on page 512 for explanation of abbreviations.

SOURCE: New York State Energy Research and Development Authority.

**TABLE L-26**  
**Oil and Gas Drillings and Completions**  
**New York State — 1966-2005**

Year	Drillings		Completions										
	Total Started	Waiting on Completion	Total <sup>1</sup>	Oil	Gas	Dry Holes	Service	Disposal	Injection	Solution Mining	Storage	Stratigraphic	Geothermal
1966	66		25	6	19	41	—						
1967	238		203	163	13	35	27						
1968	120		107	83	10	13	14						
1969	139		126	88	13	13	25						
1970	112		102	60	8	10	24			10			
1971	125		114	79	10	11	24			1			
1972	140		131	91	20	9	15			5			
1973	204		182	123	39	22	20				—		
1974	495		450	140	253	45	57				—		
1975	496		460	149	267	36	44				—		
1976	537		490	126	324	47	40				—		
1977	538		470	119	256	68	95				—		
1978	482		456	161	224	26	71				—		
1979	623e		593	172e	410e	30	11e				—		
1980	589		579	120	456	10	—			3	—		
1981	724		705	123	560	19	13			9	—		
1982	703		690	89	590	13	2			9	—		
1983	776		722	55	635	20	1	1	—	8	2	—	
1984	739	127	791	148	605	29	—	1	—	7	1	—	
1985	556	155	544	119	392	25	1	—	—	7	—	—	
1986	311	106a	345	45	278	13	—	—	—	7	1	—	1
1987	217	55a	318	20	242	17	—	1	1	25	12	—	—
1988	211	25	205	15	164	18	1	—	—	6	—	—	1
1989	217	80	245	28	181	12	—	—	14	8	—	—	2
1990	221	38	223	43	148	16	—	—	1	12	—	—	3
1991	213	12	215	51	133	17	1	—	—	1	12	—	—
1992	205	31	192	71	75	17	1	—	—	15	13	—	—
1993	134	b	165	26	96	19	4	—	2	12	5	—	2
1994	133	b	139	34	51	7	—	—	—	6	—	—	41
1995	111	b	110	20	31	2	2	—	14	14	7	—	20
1996	146	b	125	70	35	4	2	2	—	4	8	—	—
1997	91	b	66	29	21	3	—	—	—	12	1	—	—
1998	74	b	90	7	41	20	—	—	—	19	3	—	—
1999	101	b	87	25	28	21	—	—	—	7	—	—	6
2000	128	b	159	17	112	16	—	—	—	13	—	—	1
2001	137	b	171	24	97	24	—	—	—	15	5	—	1
2002	108	b	98	12	38	28	—	—	—	9	10	—	1
2003	137	b	115	28	31	23	—	—	—	11	3	—	4
2004	181	b	188	56	70	28	—	—	—	15	1	—	6
2005	314	b	258	97	110	18	—	—	2	14	5	—	12

NOTE: Detail may not add to total due to rounding.

— Represents zero.

e Estimated.

r Revised.

a Includes wells begun to be drilled in previous years.

b This statistic has been discontinued.

1 Completions Totals do not include the numbers in "Dry Holes."

SOURCE: New York State Department of Environmental Conservation, Division of Mineral Resources.

**TABLE L-27**  
**Oil and Gas Reserves**  
**New York State — 1966-2005**

Year	Gas Reserves <sup>1</sup> (MMcf)			Oil Reserves <sup>1</sup>
	Total	In Situ	In Storage Reservoirs	(Mbbbl)
1966	120,781	NA	NA	10,182
1967	121,086	NA	NA	14,578
1968	124,087	NA	NA	13,046
1969	121,000	NA	NA	11,790
1970	117,907	26,104	91,803	10,596
1971	115,705	42,116	73,589	9,772
1972	139,184	51,240	87,944	9,246
1973	136,842	37,851	98,991	8,288
1974	165,546	67,355	98,191	10,898
1975	215,843	99,755	116,088	10,024
1976	236,029	126,541	109,488	9,168
1977	247,303	133,199	114,104	9,094
1978	262,711	147,323	115,388	8,996
1979	282,520	159,806	122,714	9,642
1980	281,000	170,431	110,569	9,419
1981	277,000	157,402	119,598	9,070
1982	330,472	186,180	144,292	8,739
1983	363,895	229,406	134,489	11,788
1984	395,845	251,880	143,965	11,200
1985	398,906	260,431	138,475	10,707
1986r	404,420	263,479	140,941	9,854
1987	406,871	266,508	140,363	10,425
1988	407,337	262,518	144,819	2,000
1989r	401,859	270,074	131,785	2,441
1990r	408,310	266,410	141,900	2,001
1991r	416,014	265,320	150,694	2,100
1992r	403,788	252,988	150,800	2,962
1993r	399,243	245,843	153,400	2,900
1994r	387,067	232,867	154,200	2,800
1995	378,584	219,084	159,500	2,850
1996	376,622	205,522	171,100	2,900
1997	347,042	192,546	154,496	2,645
1998r	354,454	189,342	165,112	2,428
1999a	222,370	65,160	157,210	846
2000	243,586	96,273	147,313	783
2001r	288,767	124,454	164,313	1,189
2002	335,830	173,731	162,099	1,069
2003	340,495	163,559	176,936	1,066
2004	370,439	208,707	161,732	1,056
2005	388,897	219,607	169,290	1,322

NOTE: See Glossary on page 512 for explanation of abbreviations.

NA Not available.

r Revised.

a Reserves revised based on updated estimation methods.

1 Proven reserves at year end.

SOURCE: New York State Department of Environmental Conservation,  
Division of Mineral Resources.

TABLE L-28

**Nuclear Power Plants — Net Generation and Summer Capability  
United States by State — 2004**

State	Units	Net Nuclear Generation (million kWh)	Net Summer Capability (million kWh)
United States	104	788,528	99.63
Alabama	5	31,636	5.01
Alaska	—	—	—
Arizona	3	28,113	3.80
Arkansas	2	15,450	1.84
California	4	30,268	4.32
Colorado	—	—	—
Connecticut	2	16,539	2.04
Delaware	—	—	—
District of Columbia	—	—	—
Florida	5	31,216	3.90
Georgia	4	33,748	4.05
Hawaii	—	—	—
Idaho	—	—	—
Illinois	11	92,047	11.38
Indiana	—	—	—
Iowa	1	4,929	0.56
Kansas	1	10,133	1.17
Kentucky	—	—	—
Louisiana	2	17,080	2.06
Maine	—	—	—
Maryland	2	14,580	1.74
Massachusetts	1	5,939	0.69
Michigan	4	30,562	3.97
Minnesota	3	13,296	1.61
Mississippi	1	10,233	1.27
Missouri	1	7,831	1.14
Montana	—	—	—
Nebraska	2	10,241	1.23
Nevada	—	—	—
New Hampshire	1	10,178	1.16
New Jersey	4	27,082	3.97
New Mexico	—	—	—
New York	6	40,640	5.07
North Carolina	5	40,091	4.94
North Dakota	—	—	—
Ohio	2	15,950	2.11
Oklahoma	—	—	—
Oregon	—	—	—
Pennsylvania	9	77,459	9.23
Rhode Island	—	—	—
South Carolina	7	51,201	6.47
South Dakota	—	—	—
Tennessee	3	28,612	3.40
Texas	4	40,435	4.86
Utah	—	—	—
Vermont	1	3,858	0.51
Virginia	4	28,315	3.44
Washington	1	8,982	1.12
West Virginia	—	—	—
Wisconsin	3	11,888	1.59
Wyoming	—	—	—

NOTE: Detail may not add to totals due to rounding.

— Represents zero.

SOURCE: *Statistical Abstract of the United States, 2006*, [www.census.gov/prod/2004pubs/03statab/energy.pdf](http://www.census.gov/prod/2004pubs/03statab/energy.pdf) (last viewed July 29, 2005); United States Energy Information Administration, *Electric Power Annual, 2002*.

**Barrel.** Liquid volume measure equal to 42 gallons, commonly used in expressing quantities of petroleum or petroleum products.

**Biofuels.** Nonfossil biomass energy sources that are essentially unprocessed; they are burned or gasified to produce thermal energy or electricity. Examples are fuel wood, waste wood, garbage, and crop waste. Different mixes of biofuels are used by each consuming sector. The residential sector burns wood for space heating. The transportation sector uses ethanol as an additive to motor gasoline. Some electric generation uses wood or municipal waste as co-firing or primary fuels.

**Bituminous Coal.** Often referred to as “soft coal.” It is more volatile than anthracite and has a higher heat content than lignite. It is the most predominantly used coal and has a heating value of 11,450 to 13,010 Btu per pound.

**British Thermal Unit (Btu).** The quantity of heat necessary to raise the temperature of one pound of water one degree Fahrenheit. Because different energy types use different standards of measurement, they are often converted to Btu to enable comparison. One Btu is equal to 252 calories of heat.

**Coke.** Primarily used in the steel-making process, a porous, solid residue resulting from the incomplete combustion of coal in a closed chamber or oven with a limited supply of air.

**Commercial Sector.** That sector of the economy which engages primarily in the sale of services and needs energy for uses other than those involving industrial uses, electric utilities and residential uses. Included are apartment buildings, office buildings, governmental units, schools, institutions and churches.

**Crude Oil.** A mixture of hydrocarbons that exist in the liquid phase in natural underground reservoirs. Refined crude oil produces a number of different fuels, such as residual fuel, motor gasoline and distillate.

**Degree Days, Cooling.** This statistic is a measure of temperature as it affects energy demand for space cooling. It is similar to heating degree-days although the relationship is not as precise. If the average of a day's high and low temperature extremes are below 65°F, then the degree-days for that day are taken to be zero; otherwise, they are equal to the difference between the average and 65°F. A larger number of cooling degree-days implies hotter temperatures.

**Degree Days, Heating.** This statistic is a measure of temperature as it affects energy demand for space heating. It is based on the fact that most buildings require no heat to maintain an inside temperature of at least 70°F when the daily mean is 65°F or higher. If the average of a day's high and low temperature extremes are above 65°F, the degree-days for that day are taken to be zero; otherwise, they are equal to the difference between the average and 65°F. A larger number of heating degree-days implies colder temperatures.

**Distillate Fuel Oil.** Usually means “home heating oil.” Its products are actually No. 1 and No. 2 heating oils, diesel fuels and No. 4 fuel oil. These products are used primarily for space heating, on-highway and off-road diesel engine fuel (including railroad engine fuel) and electric power generation.

**Electricity Generated With Nonfossil Fuels.** Includes all electrical generation produced by nuclear, hydro and other sources such as wood, waste products, geothermal and solar sources.

**Energy Requirements.** There are nearly 18 million New Yorkers and we consumed 145 billion kilowatt hours of electricity in 1991. It is projected that we will demand 167 billion kilowatt hours in the year 2008. This projection of future energy requirements considers energy conservation, regulatory influences, population, weather, societal and economic influences.

**Energy Sources.** Electrical power is provided by converting the energy of an energy resource (e.g., coal, oil, etc.) into electricity. There are a variety of raw energy resources, which utilities select to use for conversion to electricity. The selection is made based on many factors such as: geographical location, source, availability and cost of energy source, environmental criteria, and population density.

**Fossil Fuels.** Any naturally occurring fuel of an organic nature such as coal, oil and natural gas derived from the remains of ancient plants and animals. These sometimes are called conventional fuels or conventional energy sources (as compared with solar power, wind energy, etc.) because the bulk of today's energy is derived from them and most of the industrial economy is based upon them.

**Gallon (gal).** A unit of volume, the U.S. gallon contains 3.785 liters and is .083 times the imperial gallon. One U.S. gallon of water weighs 8.3 pounds.

**Generating Capacity.** This is the total output measured in watts that all the generators installed in the system can produce. Therefore, a reserve, the difference between the total installed generating capacity and the peak load, is required. The desired reserve is based on reliability and economic considerations.

**Gigawatt (GW).** 1,000,000 kilowatts, or 1 billion watts.

**Gigawatt-hour (GWh).** One billion watt-hours.

**Hydro-** A prefix used to identify a type of generating station, power or energy output in which the prime mover is water.

**Industrial Sector.** That section of the economy involved in mining, construction or manufacturing.

**Jet Fuel.** Includes both naphtha-type and kerosene-type jet fuel meeting standards for use in aircraft turbine engines. Some jet fuel is used for generating electricity in gas turbines.

**Kerosene.** A petroleum middle distillate having burning properties suitable for use as an illuminant when burned in wick lamps. Kerosene is also used in space heaters, cooking stoves and water heaters.

**Kilowatt (kW).** One thousand watts, usually the yardstick for measurement of generator capacity, (e.g., a 500,000 KW generator). One kW (Kilowatt) equals 1,000 watts.

**Kilowatt Hour (kWh).** One thousand watt-hours. The electric energy needed to operate a 100-watt bulb for 10 hours.

**Liquefied petroleum gases (LPG).** Propane, propylene, butane and propane-butane mixtures produced at a refinery or natural gas-processing plant, including plants that fractionate raw natural gas-processing plant liquids. These are derived by refining and processing natural gas, crude oil or unfinished oil.

**Megawatt (MW).** One megawatt equals 1,000 kW or 1,000,000 watts. It is the generating capacity needed to light 10,000 one-hundred watt light bulbs or to satisfy the varied electrical needs of about 1,000 people. Three megawatts is

approximately the capacity required to satisfy the electrical needs of a large suburban shopping mall. An office building the size of the United Nations in New York City requires 7 megawatts. On a typical weekday, a city the size of Albany, NY, requires about 440 megawatts of capacity to meet the industrial, commercial and residential needs of her citizens.

**Megawatt-hour (MWh).** One million watthours.

**Motor gasoline.** A complex mixture of relatively volatile hydrocarbons, with or without small quantities of additives that have been blended to form a fuel suitable for use in spark-ignition engines. Included are leaded and unleaded and refinery products.

**Natural Gas.** A mixture of hydrocarbon compounds and small quantities of various nonhydrocarbons existing in the gaseous phase ("gas well" gas) or in solution with crude oil ("oil well" gas) in natural underground reservoir conditions. It comes from the ground with or without accompanying crude oil and is generally much higher in heat content than manufactured gas. It is used as the raw material in the petrochemical industry for the manufacturing of fertilizer and cellophane.

**Natural Gas Liquids.** Products obtained from processing natural gas at natural gas processing plants, including natural gasoline plants, cycling plants and fractionators. Products obtained include ethane, liquefied petroleum gases (propane, butane and propane-butane mixtures), isopentane, natural gasoline, plant condensate and other minor quantities of finished products such as motor gasoline, special naphthas, jet fuel, kerosene and distillate fuel oil.

**Nuclear.** The energy liberated by fission, fusion, or radioactive decay.

**Peak Load.** Peak load is a measurement of the greatest amount of electrical power in watts demanded during a specific period, e.g., hourly, daily, monthly and yearly. It is comparable to the "Rush Hour" demands on our transportation systems.

**Petroleum.** A generic term applied to oil and oil products in all forms, such as crude oil, lease condensate, unfinished oil, refined petroleum products, natural gas plants, liquids and nonhydrocarbon compounds blended into finished petroleum products.

**Propane.** A colorless, highly volatile hydrocarbon that is readily recovered as a liquefied gas at natural gas processing plants and refineries. It is used primarily for residential and commercial heating and cooling and also as a fuel for transportation and industrial uses, including petrochemical feedstocks. Propane is the first product refined from crude petroleum.

**Refined Petroleum.** Products obtained from processing crude oil, unfinished oils, natural gas liquid and miscellaneous hydrocarbon compounds. Includes aviation gasoline, motor gasoline, naphtha-type jet fuel, kerosene-type jet fuel, kerosene, distillate fuel oil, residual fuel oil, ethane, liquefied petroleum gases, petrochemical feedstocks, special naphthas, lubricants, paraffin

wax, petroleum coke, asphalt, road oil, still gas and miscellaneous products.

**Residential Sector.** Includes private households. Specifically included are the following end-uses: space heating, space cooling, water heating, cooking, lighting, clothes drying and refrigeration.

**Residual Fuel.** The heavier oils that remain after distillate fuel oils and lighter hydrocarbons are boiled off in refinery operations. Included are products known as No. 5 and No. 6 fuel oil, heavy diesel oil, Navy Special Fuel Oil, Bunker C Oil and acid sludge and pitch used as refinery fuels. Residual fuel oil is used for production of electric power, space heating, vessel bunkering and various industrial purposes.

**Therm.** One therm is equal to 100,000 Btu's (see British Thermal Units).

**Ton.** In the United States, Canada, and Union of South Africa, a unit of weight equal to 2,000 pounds. The American ton is often called the short ton. The metric ton equals 2,204.62 pounds.

**Transmission Lines.** To transport electricity from the generating stations to the consumer, a vast network of high and low voltage wires and cables is required along with supporting towers, switchgear, transformers, lightning and grounding cables, ground rods, etc. Some conductors are placed underground but most transmission is accomplished by overhead wire conductors.

**Watt.** The unit of measure for electric power or rate of doing work. It is the rate of energy transfer equivalent to one ampere flowing under a pressure of one volt at unity power factor. It is analogous to horsepower or foot-pounds per minute of mechanical power. One horsepower is equivalent to approximately 746 watts.

#### Abbreviations

<b>M</b>	<b>Thousand or 10<sup>3</sup></b>
<b>MM</b>	<b>Million or 10<sup>6</sup></b>
<b>B</b>	<b>Billion or 10<sup>9</sup></b>
<b>T</b>	<b>Trillion or 10<sup>12</sup></b>
<b>kWh</b>	<b>Kilowatt-hour</b>
<b>MWh</b>	<b>Megawatt-hour or thousand kWh</b>
<b>GWh</b>	<b>Gigawatt-hour or million kWh</b>
<b>cf</b>	<b>Cubic foot</b>
<b>Mcf</b>	<b>Thousand cubic feet</b>
<b>Bcf</b>	<b>Billion cubic feet</b>
<b>bbl</b>	<b>Barrel</b>
<b>Mbbl</b>	<b>Thousand barrels</b>
<b>MTons</b>	<b>Thousand tons</b>
<b>Btu</b>	<b>British Thermal Unit</b>
<b>LPG</b>	<b>Liquefied petroleum gas</b>
<b>MGD</b>	<b>Million gallons per day</b>

