



NYSERDA

Patterns and Trends
New York State Energy Profiles:
2000-2014
Final Report

October 2016

NYSERDA's Promise to New Yorkers:

NYSERDA provides resources, expertise, and objective information so New Yorkers can make confident, informed energy decisions.

Mission Statement:

Advance innovative energy solutions in ways that improve New York's economy and environment.

Vision Statement:

Serve as a catalyst – advancing energy innovation, technology, and investment; transforming New York's economy; and empowering people to choose clean and efficient energy as part of their everyday lives.

Patterns and Trends
New York State Energy Profiles:
2000–2014

Prepared by:
New York State Energy Research and Development Authority
Albany, NY

October 2016

Message from the President

Governor Andrew M. Cuomo's Reforming the Energy Vision (REV) strategy is building a clean, resilient and affordable energy system for all New Yorkers. The New York State Energy and Research Development Agency (NYSERDA) supports REV with a focus on reducing costs of renewable energy and energy efficiency, and increasing their adoption. As part of this mission, we also continue to support cleantech innovation and stimulate private investment in the clean energy economy.

As part of our work, NYSERDA provides important information to assist individuals, businesses, and institutions to make informed energy decisions. *Patterns and Trends* provides a 15-year overview of New York State energy-related data compiled by NYSERDA. Data in the report is collected and reported by sector and end use, and includes energy production and use; sources of energy supply; fuel prices; and total energy expenditures. Comparisons across states and to the U.S. average are also provided for some data sets.

Highlights from the report:

- New York State's energy consumption increased in 2014 but is 10.2% lower than the 2004 peak. It was up 2.1 percent in 2014 compared to 2013, primarily due to increased natural gas consumption for space heating in buildings as a result of colder temperatures.
- Also in 2014, New Yorkers experienced a second consecutive year of lower gasoline and heating oil prices, compared to the previous year.
- New York State uses the lowest amount of energy per person and the lowest energy consumption per unit of Gross State Product in the U.S.

We hope you find the information in *Patterns and Trends* useful, and we welcome any feedback on how this report may better meet the needs of the State's energy stakeholders.

John B. Rhodes

President and CEO

New York State Energy Research and Development Authority

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Patterns and Trends - New York State Energy Profiles: 2000–2014 presents a 15-year, historical overview of energy statistics for the State. It is an objective and reliable source of energy-related information for use by the general public, businesses, and government analysts. This report was prepared using the most recent comprehensive data available through the 2014 calendar year. Historical data prior to 2000 are available by clicking on the selected table. The timing of the report’s release is dependent on the timeliness of data availability from the Energy Information Administration and other sources.

For more information, contact Matthew Milford, NYSERDA, 17 Columbia Circle, Albany, NY 12203-6399; 518-862-1090 ext. 3416; or visit nyserdera.ny.gov

1 Overview

Patterns and Trends is organized as follows:

Energy Profiles and Comparisons for the United States and New York State compares energy consumption, selected energy prices, sources of petroleum products, and other factors influencing energy demand and expenditures in the United States and New York State. National petroleum statistics have been aggregated to represent the same six fuels included in the New York State data, specifically gasoline, distillate fuel, kerosene, aviation fuels, residual oil, and liquefied petroleum gases.

New York State Energy Consumption provides historical data for both primary and net energy consumption by fuel type and sector, including residential, commercial, industrial, and transportation. “Primary” represents total consumption of fuels by sector, including the electricity generation sector. “Net” is the end-use consumption by sector, including electricity sales, but excluding losses incurred during generation and distribution of electricity.

New York State Energy Prices presents retail energy price data. Retail energy prices are provided by fuel type for each sector in nominal dollars per physical unit and per million British thermal units (MMBtu).

New York State Energy Expenditures presents the estimated net energy expenditures by sector and fuel type in nominal dollars, as well as in 2014 constant (inflation adjusted prices) dollars. Estimated expenditures were derived by multiplying quantities consumed by their respective retail prices. Out of state energy expenditure estimates by fuel type are also provided in nominal dollars, as well as in 2014 constant (inflation adjusted prices) dollars.

New York State’s Sources of Energy provides information on sources of the State’s energy supplies.

Appendices provide data on greenhouse gas emissions from fuel combustion, household end-use energy consumption and expenditures, gasoline consumption by county, occupied housing units by type of space heating, degree-days, county population, electricity and natural gas prices, customers, and sales by sector by utility, conversion factors, and a glossary of energy terms.

2014 NEW YORK STATE ENERGY FAST FACTS

PRIMARY ENERGY CONSUMPTION

2.1% greater than 2013

Primary consumption (4.1% of U.S. total) (trillion Btu).....3,733.5

By sector:

Residential.....	(17.3%)	644.2
Commercial.....	(10.7%)	399.4
Industrial.....	(3.8%)	141.4
Transportation.....	(28.7%)	1,073.0
Electric Generation.....	(39.5%)	1,475.4

By fuel type:

Petroleum.....	(33.1%)	1,236.9
Natural Gas.....	(37.1%)	1,386.6
Nuclear.....	(12.1%)	450.1
Hydro.....	(6.3%)	234.7
Net Imported Electricity.....	(5.2%)	193.4
Other ¹	(4.5%)	167.1
Coal.....	(1.7%)	64.7

Primary consumption per capita (million Btu).....189.0

NET ENERGY CONSUMPTION AND EXPENDITURES

Net Energy Consumption (trillion Btu)	Estimated Expenditures (billion dollars)
--	---

Total:.....2,760.9.....\$66.5

By sector:

Residential.....	(29.5%)	814.7	(30.2%)	\$20.1
Commercial.....	(23.9%)	660.5	(24.5%)	\$16.3
Industrial.....	(7.3%)	202.9	(3.5%)	\$2.4
Transportation.....	(39.2%)	1,082.8	(41.7%)	\$27.7

By fuel type:

Petroleum.....	(44.1%)	1,218.1	(49.9%)	\$33.2
Natural Gas.....	(33.3%)	920.6	(13.7%)	\$9.1
Electricity.....	(18.2%)	502.8	(36.0%)	\$23.9
Other ¹	(3.6%)	100.7	(0.3%)	\$0.2
Coal.....	(0.7%)	18.7	(0.1%)	\$0.1

Estimated energy expenditures leaving the State (billions).....\$38.6

AVERAGE ENERGY PRICES

	2014	2013
Gasoline - all grades (gallon).....	\$3.42	\$3.55
Heating Oil (gallon).....	\$3.78	\$3.88
Natural Gas (thousand cubic feet)		
Residential.....	\$12.54	\$12.41
Commercial.....	\$8.31	\$7.95
Industrial.....	\$8.13	\$7.39
Electricity (kilowatt-hour)		
Residential.....	20.1¢	18.8¢
Commercial.....	16.1¢	15.4¢
Industrial.....	6.6¢	6.6¢

GREENHOUSE GAS EMISSIONS FROM FUEL COMBUSTION

Total (million metric tons of CO₂ equivalent).....181.0

By sector:

Residential.....	(19.6%)	35.5
Commercial.....	(12.2%)	22.0
Industrial.....	(6.1%)	11.0
Transportation.....	(40.9%)	74.0
Electric Generation.....	(21.2%)	38.4

By fuel type:

Petroleum.....	(53.6%)
Natural Gas.....	(42.8%)
Coal.....	(3.6%)

Greenhouse gas emissions per capita
(metric tons of CO₂ equivalent).....9.2

¹Ethanol (44.9 TBtu) is included in "Other" totals and also as a component of motor gasoline. Total consumption and percentages are based on ethanol only as "Other."

ELECTRICITY

Sales decreased 0.4% from 2013

Sales to ultimate consumers (gigawatt-hours)147,372

By sector:

Residential.....	(33.9%)	49,975
Commercial.....	(51.9%)	76,541
Industrial.....	(12.2%)	18,003
Transportation.....	(1.9%)	2,853

Generation (gigawatt-hours).....160,059

By fuel type:

Nuclear.....	(26.9%)	43,041
Natural Gas.....	(34.0%)	54,380
Hydro.....	(16.8%)	26,823
Net Imported Electricity.....	(13.8%)	22,103
Coal.....	(2.7%)	4,325
Petroleum.....	(1.3%)	2,136
Other ¹	(2.0%)	3,265
Wind.....	(2.5%)	3,986

PETROLEUM

Consumption increased 4.4% from 2013

Consumption (4.4% of U.S. total) (million barrels).....227.9

By sector:

Residential.....	(11.6%)	26.5
Commercial.....	(4.8%)	11.0
Industrial.....	(1.5%)	3.3
Transportation.....	(80.8%)	184.0
Electric Generation.....	(1.3%)	3.1

In-State production (thousand barrels).....341.0

NATURAL GAS

Consumption increased 5.6% from 2013

Consumption (5.0% of U.S. total) (billion cubic feet).....1,344.9

By sector:

Residential.....	(34.1%)	458.3
Commercial.....	(23.8%)	320.2
Industrial.....	(6.3%)	84.8
Transportation.....	(2.1%)	28.8
Electric Generation.....	(33.7%)	452.8

In-State production (billion cubic feet).....20.2

ADDITIONAL 2014 STATISTICS

Population (6.2% of U.S. total) (million).....	19.7
Number of housing units (million).....	8.2
Gross State Product (billion 2014 dollars).....	\$1,385.8
Motor vehicle registrations (million).....	10.9
Vehicle miles of travel (billion miles).....	129.3
Heating degree-days (increased 4.6% from 2013).....	6,517
Cooling degree-days (decreased 26.9% from 2013).....	471

Note: Totals may not sum exactly due to rounding.

DATA SOURCE

NEW YORK STATE ENERGY RESEARCH AND DEVELOPMENT AUTHORITY

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nyserda.ny.gov/patterns-and-trends

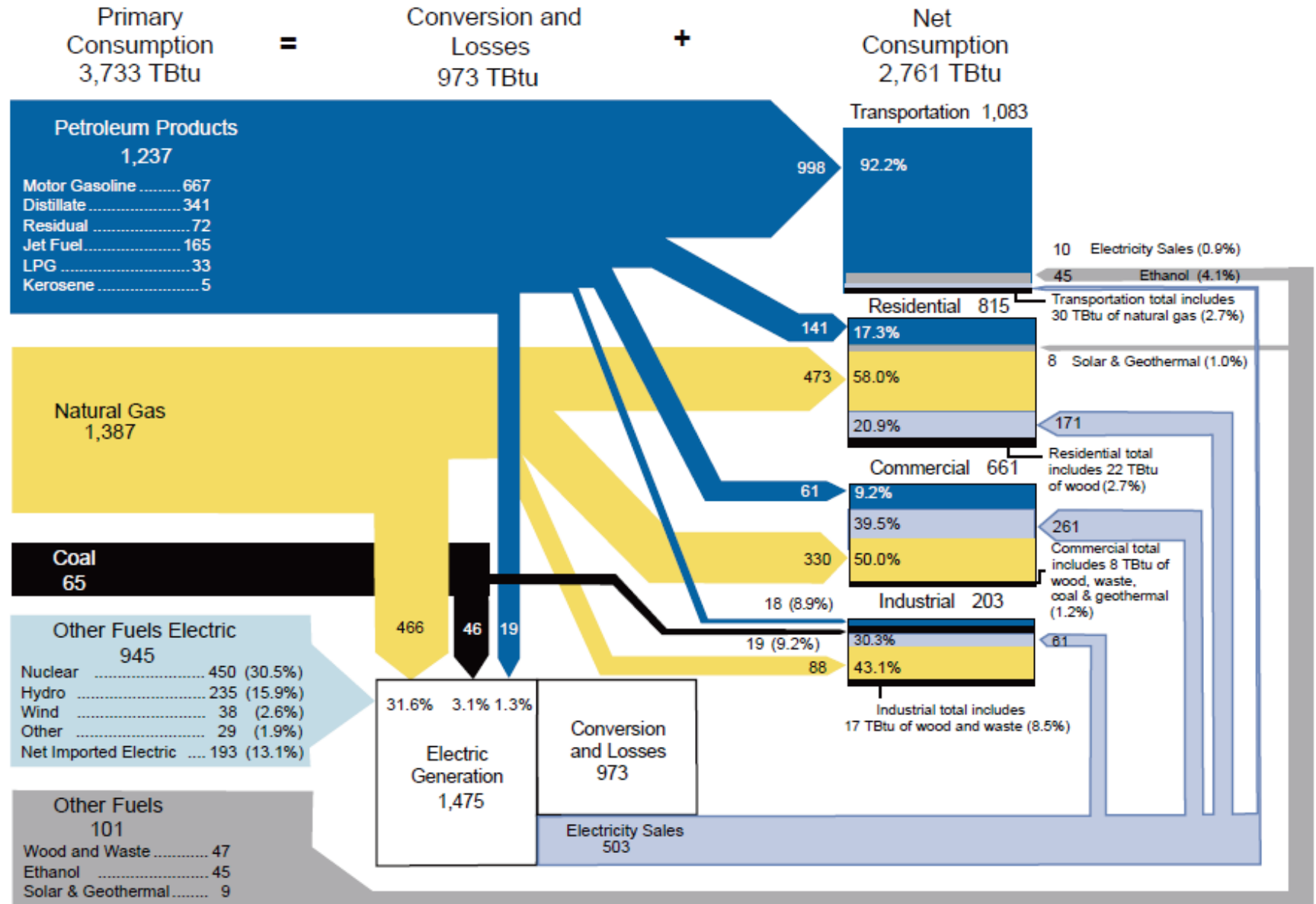
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2014 NEW YORK STATE ENERGY FLOW (Tbtu)



2 Energy Profiles and Comparisons for the United States and New York State

This section compares energy consumption, selected energy prices, sources of petroleum, and factors influencing energy demand and expenditures for the United States and New York State. Additional statistics compare recent energy consumption and expenditure trends among all states. New York and national data are comparable and exclude petroleum products not used as a form of energy, including propane used in the chemical industry, asphalt, road oil, lubricants, and petrochemical feedstocks.

Selected state and national energy consumption and expenditure data series are presented to illustrate regional differences in energy demand and expenditures. The data are derived from the U.S. Department of Energy's (DOE) Energy Information Administration *State Energy Data System (SEDS)*, and the U.S. Department of Commerce's *Statistical Abstract of the United States*.

2.1 Key Observations about 2014 New York State Energy Data

- NYS ranks eighth nationally in energy consumption.
- NYS has the lowest per capita energy usage in the U.S., accounting for 4.1 percent of the nation's total primary energy consumption. NYS accounts for 6.2 percent of the nation's population.
- Renewable resources accounted for 10.8 percent of the State's primary energy consumption compared to 9.7 percent for the U.S. in 2014.
- Coal consumption represents 1.7 percent of NYS energy use compared to 19.7 percent nationally.
- Net energy demand in the State differs from national demand in several respects (as shown in Tables 2-1 and 2-2):
 - Residential net energy use accounts for 29.5 percent of total energy demand, compared to 18.2 percent nationally.
 - Commercial net energy use accounts for 23.9 percent of total energy demand, compared to 13.7 percent nationally.
 - Industrial net energy use accounts for 7.3 percent of total energy demand, compared to 27.1 percent nationally.
 - Transportation net energy use accounts for 39.2 percent of total energy demand, compared to 41.0 percent nationally.
- In 2014, the U.S. imported 26.5 percent of total petroleum consumed in the country, a decrease from 32.9 percent in 2013.

**United States
Primary Consumption of Energy
by Fuel Type and Sector,
2014**

Figure 2-1a. United States Primary Consumption of Energy

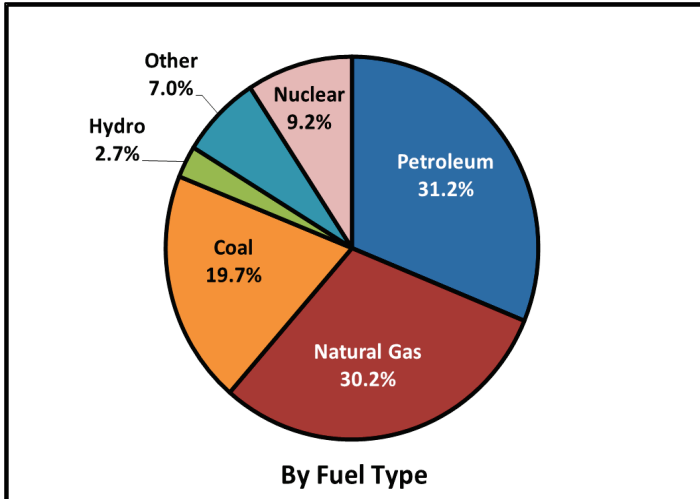


Figure 2-1b. United States Primary Consumption of Energy

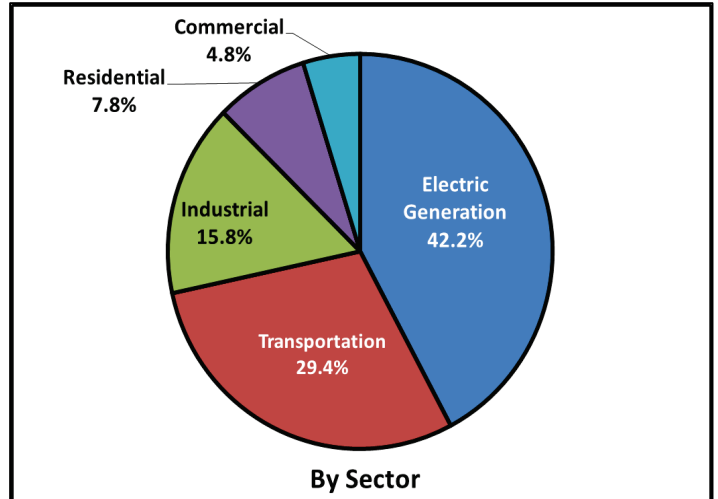


Table 2-1 (in trillion Btu)

	Residential TBtu	Commercial TBtu	Industrial TBtu	Transportation ¹ TBtu	Net Consumption TBtu	Electric Generation ² TBtu	Primary Consumption ³ TBtu	
Coal	0	40	1,529	0	1,569	16,427	17,997	
Natural Gas	5,248	3,577	9,403	901	19,129	8,385	27,513	
Petroleum Products:	1,009	578	1,915	24,630	28,132	295	28,428	
Distillate	533	357	1,366	6,170	8,426	82	8,509	
Residual	0	8	41	447	495	95	590	
Kerosene	14	2	3	0	19	0	19	
LPG	462	151	292	47	952	0	952	
Gasoline	0	60	214	16,202	16,476	0	16,476	
Jet Fuel	0	0	0	3,064	3,064	0	3,064	
Other ⁴	871	145	1,532	1,300	3,848	846	4,694	
Electric Sales	4,801	4,614	3,404	26	12,845			
Net Consumption	11,929	8,954	17,783	26,857	65,523			
						Hydro Electricity	2,454	2,454
						Nuclear Electricity	8,338	8,338
						Wind Electricity	1,726	1,726
						Primary Consumption	38,471	91,149

¹ Components of petroleum may not sum to petroleum total because ethanol and biodiesel values (other category in transportation sector) are embedded in motor gasoline and distillate, respectively.

² Hydro and wind are excluded from the "Other" category and listed separately.

³ Excludes petroleum products not used as a form of energy.

⁴ Other includes wood, waste, ethanol, landfill gas, solar, geothermal, and biodiesel.

New York State Primary Consumption of Energy by Fuel Type and Sector, 2014

Figure 2-2a. New York State Primary Consumption of Energy

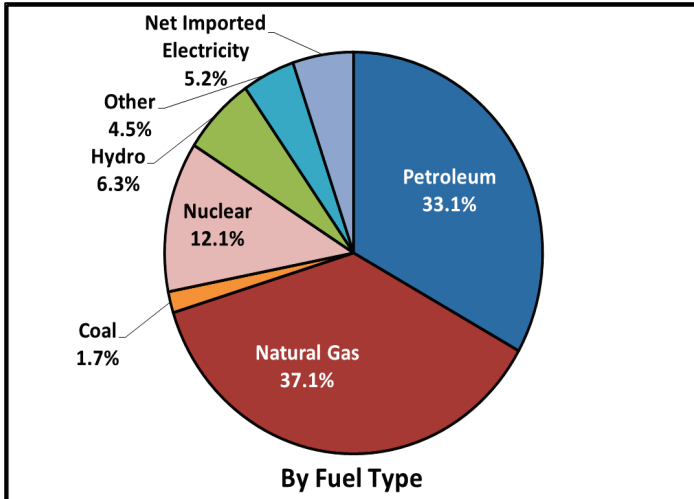


Figure 2-2b. New York State Primary Consumption of Energy

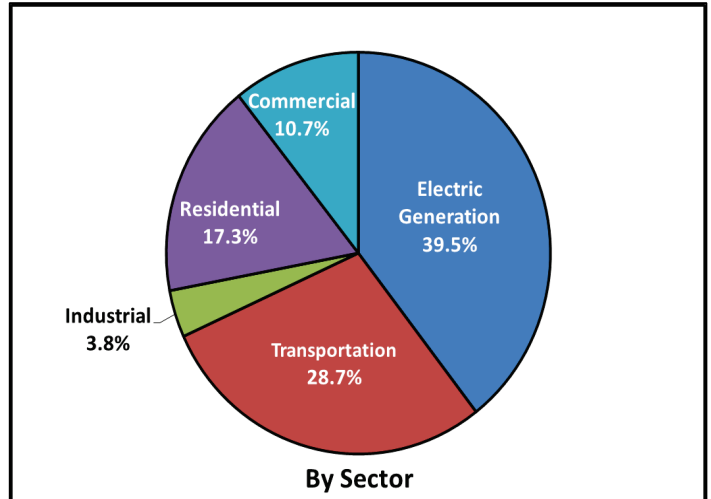


Table 2-2 (in trillion Btu)

	Residential TBtu	Commercial TBtu	Industrial TBtu	Transportation ¹ TBtu	Net Consumption TBtu	Electric Generation TBtu	Primary Consumption ^{1,2} TBtu	
Coal	0.0	0.0	18.7	0.0	18.7	45.9	64.7	
Natural Gas	472.9	330.4	87.5	29.7	920.6	466.0	1,386.6	
Petroleum Products ³ :	140.9	60.8	18.0	998.4	1,218.1	18.8	1,236.9	
Distillate	113.6	48.7	11.6	162.0	335.9	4.8	340.7	
Residual	0.0	5.3	3.5	48.8	57.6	14.0	71.6	
Kerosene	3.8	0.3	0.9	0.0	5.0	0.0	5.0	
LPG	23.4	6.5	2.1	1.3	33.2	0.0	33.2	
Gasoline	0.0	0.0	0.0	666.6	666.6	0.0	666.6	
Jet Fuel	0.0	0.0	0.0	164.6	164.6	0.0	164.6	
Other ⁴	30.4	8.2	17.2	44.9	100.7	28.6	129.4	
Electric Sales	170.5	261.2	61.4	9.7	502.8			
Net Consumption	814.7	660.5	202.9	1,082.8	2,760.9			
						Hydro Electricity	234.7	234.7
						Nuclear Electricity	450.1	450.1
						Net Imported Electricity	193.4	193.4
						Wind Electricity	37.7	37.7
						Primary Consumption	1,475.4	3,733.5

¹ Components of petroleum may not sum to petroleum total because ethanol (other category in transportation sector) is embedded in motor gasoline.

² Excludes petroleum products not used as a form of energy.

³ Petroleum includes petroleum coke used for electric generation.

⁴ Other includes wood, waste, ethanol, landfill gas, solar, and geothermal.

**United States and New York State
Selected Energy Prices
in Nominal Dollars,
2000–2014**

Table 2-3a. United States

Year	Motor Gasoline	Residential Distillate	Residential Electricity	Residential Natural Gas	Commercial Electricity	Commercial Natural Gas	Industrial Electricity	Industrial Natural Gas
	cents/gal	cents/gal	cents/kWh	\$/Mcf	cents/kWh	\$/Mcf	cents/kWh	\$/Mcf
2000	147.6	137.6	8.2	7.81	7.3	6.69	4.6	4.71
2001	140.8	131.5	8.6	9.64	7.8	8.51	5.0	5.84
2002	132.5	119.3	8.4	7.87	7.8	6.64	4.9	4.58
2003	153.0	143.1	8.7	9.45	8.0	8.26	5.1	6.34
2004	182.2	162.6	8.9	10.71	8.2	9.40	5.2	7.18
2005	222.3	215.3	9.4	12.62	8.7	11.23	5.7	9.29
2006	251.9	248.1	10.4	13.66	9.5	11.87	6.1	8.97
2007	273.5	272.2	10.7	12.99	9.6	11.24	6.4	8.48
2008	317.2	337.6	11.3	13.83	10.3	12.16	6.9	10.29
2009	229.9	251.6	11.5	12.08	10.2	9.92	6.8	6.61
2010	273.1	296.6	11.5	11.39	10.2	9.41	6.8	6.31
2011	344.6	356.3	11.7	11.03	10.2	8.99	6.8	6.10
2012	354.5	396.6	11.9	10.62	10.1	8.21	6.7	5.02
2013	344.7	388.1	12.1	10.24	10.3	8.24	6.9	5.59
2014	331.1	378.2	12.5	10.86	10.7	9.02	7.1	6.48

Table 2-3b. New York State

Year	Motor Gasoline	Residential Distillate	Residential Electricity	Residential Natural Gas	Commercial Electricity	Commercial Natural Gas	Industrial Electricity	Industrial Natural Gas
	cents/gal	cents/gal	cents/kWh	\$/Mcf	cents/kWh	\$/Mcf	cents/kWh	\$/Mcf
2000	152.3	149.9	14.0	9.80	12.1	7.73	5.4	6.10
2001	143.3	141.7	14.0	11.70	12.2	9.57	5.6	7.69
2002	135.5	126.6	13.5	9.85	11.8	6.42	5.2	5.54
2003	157.0	149.5	14.3	11.61	12.9	8.61	7.1	7.36
2004	187.4	169.6	14.5	12.49	13.0	10.10	7.0	8.04
2005	224.4	219.1	15.7	14.92	14.4	11.82	8.2	10.77
2006	256.7	255.6	16.9	15.44	15.5	11.98	9.4	10.62
2007	276.0	278.1	17.1	15.77	15.9	11.85	8.7	11.46
2008	325.6	342.5	18.3	16.86	16.8	12.93	9.4	12.37
2009	235.3	260.4	17.5	15.10	15.5	10.75	8.4	9.55
2010	277.2	301.0	18.7	14.04	16.3	10.87	8.8	8.54
2011	351.5	354.9	18.3	13.64	15.8	9.28	7.8	8.15
2012	363.9	394.3	17.6	12.87	15.1	7.79	6.7	6.87
2013	354.6	388.0	18.8	12.41	15.4	7.95	6.6	7.39
2014	341.7	378.3	20.1	12.54	16.1	8.31	6.6	8.13

**United States
Estimated Sources of Petroleum Products,
2000–2014**

Figure 2-4. United States Petroleum Imports

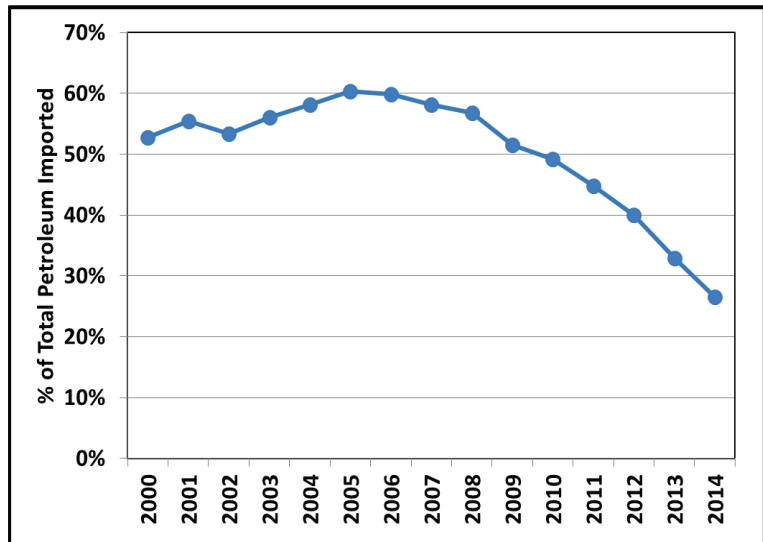


Table 2-4. United States Sources of Petroleum

Year	Total Domestic ¹	Total Foreign	OPEC ²	Non-OPEC ³
	%	%	%	%
2000	47.3	52.7	26.3	26.6
2001	44.5	55.5	28.0	27.4
2002	46.6	53.4	23.2	30.1
2003	43.9	56.1	25.7	30.4
2004	41.8	58.2	27.4	30.9
2005	39.7	60.3	26.8	33.6
2006	40.1	59.9	26.5	33.4
2007	41.8	58.2	28.8	29.4
2008	43.2	56.8	30.3	26.7
2009	48.5	51.5	24.9	26.6
2010	50.8	49.2	25.0	24.2
2011	55.2	44.8	23.4	21.4
2012	60.0	40.0	23.1	16.9
2013	67.1	32.9	19.6	13.3
2014	73.5	26.5	16.9	9.6

¹ Domestic: Oil produced in the United States or from its outer continental shelf.
² OPEC: Largest contributors are Saudi Arabia, Venezuela, Nigeria, Iraq, and Kuwait.
³ Non-OPEC: Largest contributors are Canada, Mexico, United Kingdom, Colombia, Brazil, and Russia.

**United States and New York State
Factors Influencing Energy
Demand and Expenditures,
2000–2014**

Table 2-5a. United States

Year	Population	Housing Units	Non-Manufacturing ¹ Employment	Manufacturing ¹ Employment	GDP ²	Licensed Drivers	Vehicles Registered	Vehicle Miles Traveled
	thousands	thousands	thousands	thousands	B/2014\$	millions	millions	billions
2000	281,425	116,301	114,756	17,263	\$ 14,139	191	221	2,764
2001	284,969	117,905	115,633	16,441	\$ 14,199	191	230	2,813
2002	287,625	119,456	115,369	15,259	\$ 14,446	195	230	2,874
2003	290,108	121,077	115,809	14,509	\$ 14,810	196	231	2,909
2004	292,805	122,825	117,434	14,315	\$ 15,383	199	237	2,982
2005	295,517	124,711	119,778	14,227	\$ 15,872	201	242	3,009
2006	298,380	126,500	122,243	14,155	\$ 16,271	203	244	3,034
2007	301,231	128,132	124,057	13,879	\$ 16,530	206	247	3,049
2008	304,094	129,313	123,764	13,406	\$ 16,184	208	248	2,993
2009	306,772	129,970	119,386	11,847	\$ 15,911	210	246	2,976
2010	308,746	131,705	118,747	11,528	\$ 16,246	210	242	2,985
2011	311,719	132,316	120,116	11,726	\$ 16,332	212	253	2,965
2012	314,103	132,452	122,177	11,927	\$ 16,658	212	254	2,969
2013	316,427	132,808	124,361	12,020	\$ 16,962	212	256	2,988
2014	318,907	133,963	126,773	12,185	\$ 17,393	214	260	3,026

Table 2-5b. New York State

Year	Population	Housing Units	Non-Manufacturing ¹ Employment	Manufacturing ¹ Employment	GDP ³	Licensed Drivers	Vehicles Registered	Vehicle Miles Traveled
	thousands	thousands	thousands	thousands	MM/2014\$	thousands	thousands	billions
2000	18,977	7,689	7,889	749	\$ 1,133,344	10,871	10,661	128.70
2001	19,083	7,724	7,888	707	\$ 1,155,444	11,015	10,707	130.83
2002	19,138	7,760	7,811	651	\$ 1,157,523	11,022	11,369	133.06
2003	19,176	7,799	7,798	612	\$ 1,156,094	11,357	10,802	135.05
2004	19,172	7,836	7,859	596	\$ 1,195,898	11,247	11,099	137.90
2005	19,133	7,853	7,947	579	\$ 1,241,657	11,081	11,863	137.52
2006	19,105	7,908	8,042	566	\$ 1,271,979	11,146	11,284	141.35
2007	19,132	7,940	8,172	552	\$ 1,279,761	11,369	11,495	136.74
2008	19,212	7,977	8,251	532	\$ 1,220,492	11,285	11,089	134.09
2009	19,307	8,018	8,070	476	\$ 1,262,291	11,329	11,245	133.50
2010	19,378	8,108	8,100	457	\$ 1,311,570	11,286	11,082	131.25
2011	19,523	8,120	8,220	459	\$ 1,296,545	11,211	10,085	127.73
2012	19,607	8,124	8,339	459	\$ 1,340,247	11,249	10,449	128.22
2013	19,691	8,126	8,452	456	\$ 1,356,720	11,211	10,674	129.74
2014	19,749	8,192	8,630	454	\$ 1,385,776	11,318	10,904	129.26

¹ Includes nonfarm jobs only.

² Gross domestic product in billions of 2014 dollars.

³ Gross state product in millions of 2014 dollars.

Energy Consumption and Expenditure Indicators, State Comparisons, 2014

Table 2-6

States	Primary Energy Use		Primary Energy Use		Primary Energy Use		Energy Expenditures	
	Energy Use	Ranking	per Capita	Ranking	per unit GSP	Ranking	per Capita	Ranking
	TBtu		MMBtu		Btu		Dollars	
Alabama	1,958	17	404	12	9,913	7	\$4,982	18
Alaska	603	40	818	4	10,386	5	\$9,349	4
Arizona	1,423	27	211	45	5,053	34	\$3,360	50
Arkansas	1,114	31	376	17	9,205	9	\$4,680	21
California	7,620	2	196	49	3,277	47	\$3,550	47
Colorado	1,477	25	276	34	4,837	38	\$3,733	43
Connecticut	750	36	209	46	2,991	49	\$4,307	31
Delaware	274	48	293	29	4,184	43	\$4,112	33
D.C.	179	50	271	35	1,535	51	\$3,516	48
Florida	4,122	4	207	47	4,933	35	\$3,336	51
Georgia	2,851	11	282	33	6,042	27	\$3,935	39
Hawaii	281	47	198	48	3,679	46	\$5,195	14
Idaho	520	42	318	24	8,205	16	\$4,270	32
Illinois	4,042	5	314	26	5,448	31	\$4,002	37
Indiana	2,932	9	444	9	9,040	10	\$5,176	15
Iowa	1,542	24	496	5	9,032	11	\$5,796	6
Kansas	1,132	30	390	15	7,726	19	\$5,046	17
Kentucky	1,771	21	401	13	9,393	8	\$5,092	16
Louisiana	4,279	3	921	1	17,411	1	\$9,765	3
Maine	411	43	309	27	7,460	20	\$5,681	7
Maryland	1,401	28	234	40	3,999	44	\$3,841	40
Massachusetts	1,438	26	213	44	3,151	48	\$4,082	35
Michigan	2,882	10	291	31	6,443	25	\$4,108	34
Minnesota	1,912	18	350	18	5,968	28	\$4,638	22
Mississippi	1,156	29	386	16	11,011	3	\$5,328	11
Missouri	1,904	19	314	25	6,721	23	\$4,406	27
Montana	403	44	394	14	9,030	12	\$5,402	10
Nebraska	864	33	459	8	7,810	18	\$5,486	9
Nevada	660	38	233	42	4,926	36	\$3,704	44
New Hampshire	310	46	234	41	4,408	41	\$4,790	19
New Jersey	2,340	14	262	37	4,291	42	\$4,376	28
New Mexico	679	37	326	22	7,164	22	\$4,325	30
New York	3,743	8	190	51	2,701	50	\$3,446	49
North Carolina	2,555	12	257	38	5,386	32	\$3,751	41
North Dakota	640	39	865	3	10,993	4	\$11,094	1
Ohio	3,810	7	329	21	6,470	24	\$4,431	26
Oklahoma	1,680	22	433	10	8,834	13	\$5,283	12
Oregon	987	32	249	39	4,855	37	\$3,744	42
Pennsylvania	3,902	6	305	28	5,804	29	\$4,351	29
Rhode Island	205	49	194	50	3,712	45	\$3,985	38
South Carolina	1,632	23	338	19	8,606	14	\$4,530	24
South Dakota	392	45	459	7	8,594	15	\$5,648	8
Tennessee	2,195	15	335	20	7,315	21	\$4,523	25
Texas	12,900	1	478	6	8,052	17	\$6,025	5
Utah	798	34	271	36	5,677	30	\$3,653	45
Vermont	140	51	223	43	4,716	40	\$5,225	13
Virginia	2,430	13	292	30	5,257	33	\$4,080	36
Washington	2,012	16	285	32	4,759	39	\$3,653	45
West Virginia	753	35	407	11	10,115	6	\$4,736	20
Wisconsin	1,869	20	325	23	6,371	26	\$4,592	23
Wyoming	536	41	917	2	13,103	2	\$9,997	2
United States	98,385		309		5,710		\$4,374	
NYS as a % of U.S.	3.8%		61%		47%		79%	

Note: Table shows the latest year for which consumption and expenditure data are available for all states at time of publication.

Energy Consumption and Expenditure Indicators, State Comparisons for the Residential and Commercial Sectors, 2014

Table 2-7

States	Residential Primary		Residential Energy		Commercial Primary		Commercial Energy	
	Energy Use ¹ per	Ranking	Expenditures per	Ranking	Energy Use ¹ per	Ranking	Expenditures Per	Ranking
	Housing Unit		Housing Unit		Non-Manufacturing Employee		Non-Manufacturing Employee	
	MMBtu		Dollars		MMBtu		Dollars	
Alabama	172	26	\$2,054	24	157	22	\$1,763	14
Alaska	155	39	\$2,475	7	195	2	\$2,738	1
Arizona	133	44	\$1,569	46	140	34	\$1,437	31
Arkansas	184	14	\$1,754	40	177	5	\$1,438	30
California	100	50	\$1,439	51	99	49	\$1,509	26
Colorado	156	38	\$1,642	43	121	45	\$1,148	47
Connecticut	167	30	\$3,428	1	127	40	\$1,925	8
Delaware	160	34	\$2,292	11	139	35	\$1,537	22
D.C.	126	48	\$1,545	48	149	29	\$1,688	17
Florida	131	45	\$1,585	44	130	39	\$1,396	37
Georgia	179	18	\$2,157	14	145	33	\$1,506	27
Hawaii	69	51	\$1,959	30	63	51	\$2,085	2
Idaho	175	21	\$1,662	42	146	31	\$1,177	46
Illinois	194	8	\$2,020	28	155	26	\$1,350	41
Indiana	206	2	\$2,043	26	158	21	\$1,381	39
Iowa	186	13	\$2,129	16	160	17	\$1,516	24
Kansas	192	10	\$2,139	15	175	7	\$1,627	20
Kentucky	202	4	\$1,936	31	163	16	\$1,411	36
Louisiana	173	23	\$1,772	39	146	32	\$1,417	35
Maine	125	49	\$2,524	6	113	47	\$1,968	5
Maryland	182	16	\$2,375	10	168	13	\$1,762	15
Massachusetts	158	35	\$2,829	5	124	42	\$1,771	13
Michigan	173	24	\$2,072	19	173	10	\$1,746	16
Minnesota	181	17	\$2,108	17	147	30	\$1,427	33
Mississippi	168	29	\$2,044	25	165	15	\$1,893	11
Missouri	205	3	\$2,058	21	172	11	\$1,456	28
Montana	177	20	\$1,831	38	180	4	\$1,630	19
Nebraska	200	6	\$1,979	29	158	20	\$1,270	43
Nevada	128	47	\$1,691	41	102	48	\$1,019	51
New Hampshire	157	36	\$3,128	2	122	44	\$1,916	9
New Jersey	171	27	\$2,199	13	167	14	\$1,991	4
New Mexico	129	46	\$1,463	49	158	19	\$1,520	23
New York	137	42	\$2,444	8	131	37	\$1,894	10
North Carolina	162	33	\$1,851	37	156	23	\$1,421	34
North Dakota	222	1	\$2,277	12	189	3	\$1,820	12
Ohio	184	15	\$2,096	18	152	28	\$1,378	40
Oklahoma	191	11	\$1,923	32	175	6	\$1,444	29
Oregon	145	40	\$1,571	45	123	43	\$1,143	48
Pennsylvania	174	22	\$2,438	9	125	41	\$1,255	45
Rhode Island	143	41	\$2,860	4	118	46	\$1,926	7
South Carolina	172	25	\$2,020	27	156	24	\$1,509	25
South Dakota	194	9	\$2,058	22	169	12	\$1,437	32
Tennessee	196	7	\$1,915	34	174	8	\$1,675	18
Texas	164	31	\$1,915	33	154	27	\$1,269	44
Utah	156	37	\$1,566	47	130	38	\$1,130	49
Vermont	136	43	\$3,052	3	96	50	\$1,949	6
Virginia	186	12	\$2,057	23	173	9	\$1,387	38
Washington	163	32	\$1,453	50	136	36	\$1,119	50
West Virginia	201	5	\$1,866	36	156	25	\$1,290	42
Wisconsin	170	28	\$2,067	20	159	18	\$1,544	21
Wyoming	179	19	\$1,866	35	220	1	\$2,051	3
United States	161		\$1,975		143		\$1,506	
NYS as % of U.S.	85%		124%		92%		126%	

Note: Table shows the latest year for which consumption and expenditure data are available for all states at time of publication.

¹ Use figures include electricity and the associated system losses.

Energy Consumption and Expenditure Indicators, State Comparisons for the Industrial and Transportation Sectors, 2014

Table 2-8

States	Industrial Primary Energy Use ¹		Industrial Energy Expenditures		Transportation Primary Use ¹ per Vehicle Registration		Transportation Expenditures per Vehicle Registration	
	per unit of GSP	Ranking	per unit of GSP	Ranking	Registration	Ranking	Vehicle Registration	Ranking
	Btu		Dollars		MMBtu		Dollars	
Alabama	4,295	6	\$0.0253	8	87	36	\$2,173	45
Alaska	5,666	4	\$0.0189	16	204	1	\$5,176	1
Arizona	833	40	\$0.0084	39	83	43	\$2,186	44
Arkansas	3,355	13	\$0.0245	9	100	25	\$2,550	25
California	798	41	\$0.0070	42	103	21	\$2,783	16
Colorado	1,405	31	\$0.0091	37	85	41	\$2,236	42
Connecticut	331	48	\$0.0044	48	79	44	\$2,222	43
Delaware	1,332	34	\$0.0087	38	65	50	\$1,763	50
D.C.	63	51	\$0.0009	51	62	51	\$1,429	51
Florida	560	44	\$0.0052	45	95	27	\$2,396	33
Georgia	1,631	30	\$0.0114	32	97	26	\$2,417	32
Hawaii	843	39	\$0.0172	20	101	22	\$2,689	21
Idaho	2,804	18	\$0.0222	12	77	46	\$2,119	47
Illinois	1,651	29	\$0.0121	29	93	29	\$2,373	34
Indiana	4,092	7	\$0.0264	7	105	17	\$2,729	19
Iowa	4,490	5	\$0.0296	5	86	40	\$2,241	41
Kansas	2,582	19	\$0.0166	21	118	9	\$2,966	10
Kentucky	3,518	11	\$0.0241	11	108	14	\$2,856	13
Louisiana	12,304	1	\$0.1023	1	164	4	\$3,627	4
Maine	2,308	21	\$0.0187	19	108	15	\$3,012	9
Maryland	329	49	\$0.0039	49	104	18	\$2,814	14
Massachusetts	355	47	\$0.0049	46	87	37	\$2,334	37
Michigan	1,670	28	\$0.0136	27	89	35	\$2,332	38
Minnesota	2,070	23	\$0.0149	25	86	39	\$2,284	39
Mississippi	3,797	10	\$0.0242	10	183	2	\$4,305	2
Missouri	1,282	35	\$0.0107	33	104	19	\$2,708	20
Montana	2,805	17	\$0.0188	18	71	49	\$1,944	48
Nebraska	3,236	14	\$0.0198	14	104	20	\$2,765	18
Nevada	1,338	33	\$0.0135	28	92	30	\$2,446	29
New Hampshire	597	43	\$0.0075	40	77	47	\$2,124	46
New Jersey	451	46	\$0.0047	47	125	8	\$3,092	8
New Mexico	2,412	20	\$0.0118	31	108	16	\$2,776	17
New York	282	50	\$0.0028	50	100	24	\$2,552	24
North Carolina	1,141	37	\$0.0096	35	91	32	\$2,446	30
North Dakota	5,741	3	\$0.0517	2	167	3	\$4,147	3
Ohio	2,080	22	\$0.0151	24	89	34	\$2,420	31
Oklahoma	3,187	15	\$0.0193	15	137	7	\$3,231	7
Oregon	1,213	36	\$0.0095	36	89	33	\$2,488	26
Pennsylvania	2,044	24	\$0.0162	23	86	38	\$2,343	35
Rhode Island	456	45	\$0.0070	43	71	48	\$1,911	49
South Carolina	2,864	16	\$0.0188	17	111	11	\$2,813	15
South Dakota	3,434	12	\$0.0206	13	95	28	\$2,476	27
Tennessee	1,970	26	\$0.0140	26	110	12	\$2,866	12
Texas	3,926	9	\$0.0342	4	156	5	\$3,553	5
Utah	1,677	27	\$0.0104	34	114	10	\$2,941	11
Vermont	691	42	\$0.0121	30	79	45	\$2,252	40
Virginia	977	38	\$0.0073	41	101	23	\$2,598	22
Washington	1,341	32	\$0.0062	44	92	31	\$2,459	28
West Virginia	3,936	8	\$0.0288	6	109	13	\$2,596	23
Wisconsin	2,017	25	\$0.0163	22	84	42	\$2,343	36
Wyoming	7,503	2	\$0.0473	3	145	6	\$3,445	6
United States	1,838		\$0.0143		104		\$2,661	
NYS as % of U.S.	15%		19%		97%		96%	

Note: Table shows the latest year for which consumption and expenditure data are available for all states at time of publication.

¹ Use figures include electricity and the associated system losses.

**United States and New York State
Selected Comparisons,
2014**

Figure 2-9a. Primary Consumption by Fuel Type, 2014

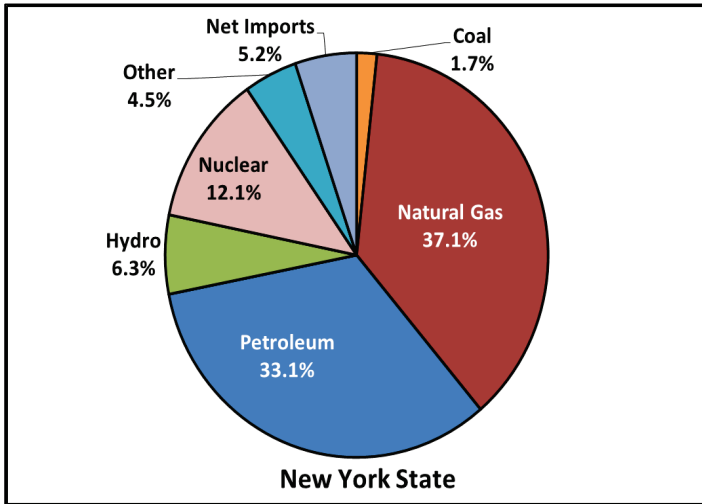


Figure 2-9b. Primary Consumption by Fuel Type, 2014

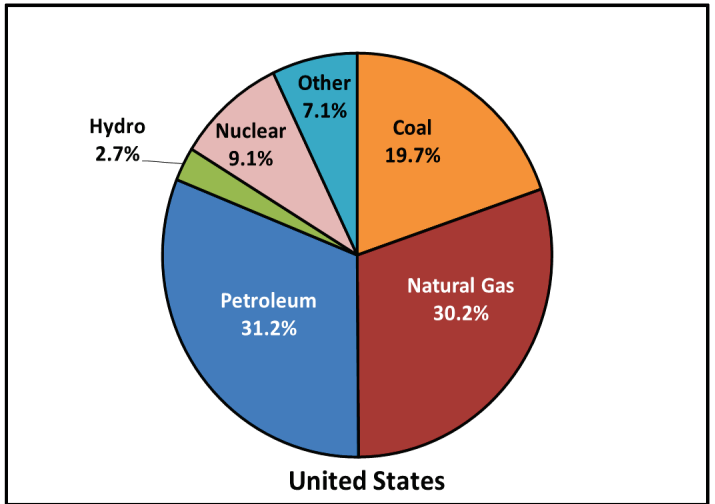


Figure 2-9c. Primary Consumption by Sector, 2014

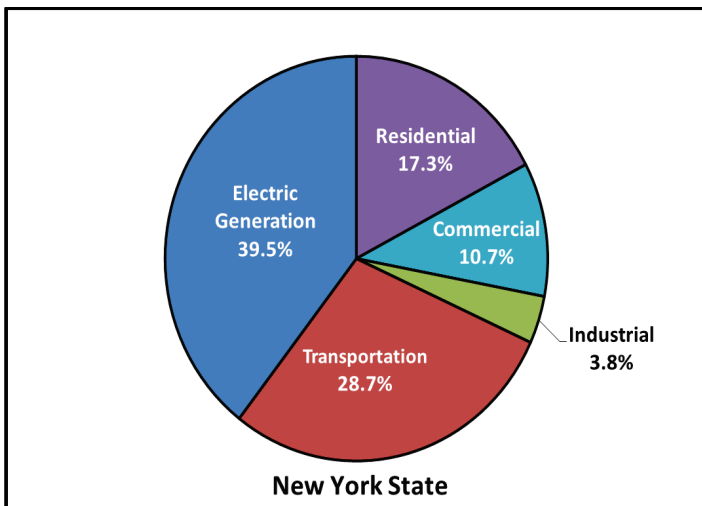
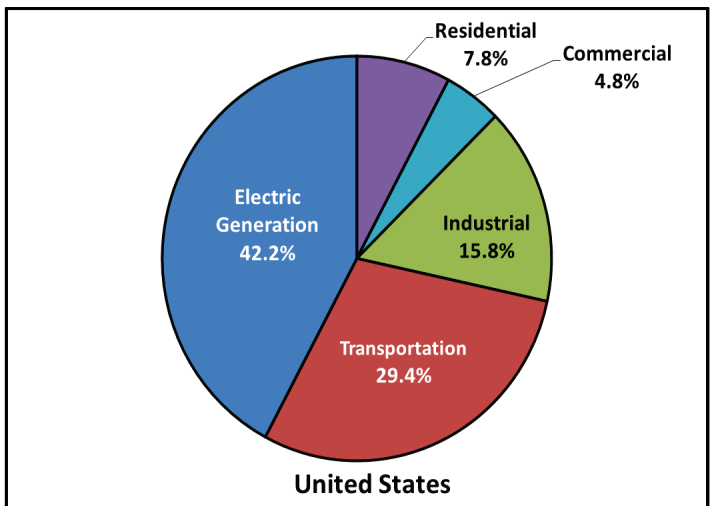


Figure 2-9d. Primary Consumption by Sector, 2014



**United States and New York State
Selected Comparisons,
2014**

Figure 2-10a. Electricity Generation by Fuel Type, 2014

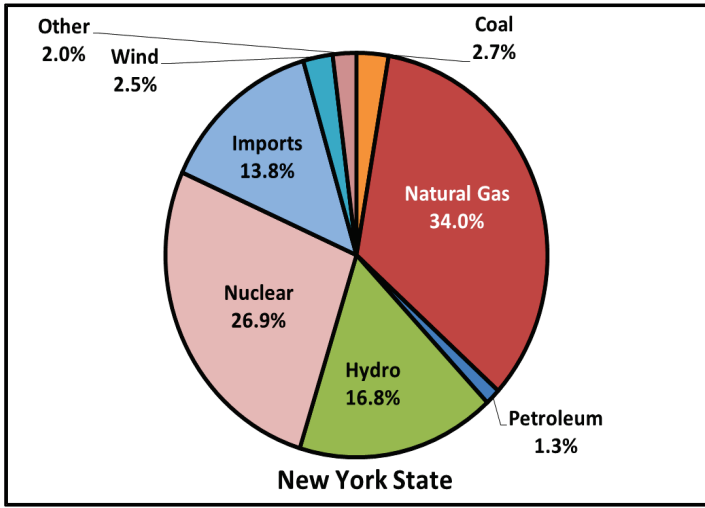


Figure 2-10b. Electricity Generation by Fuel Type, 2014

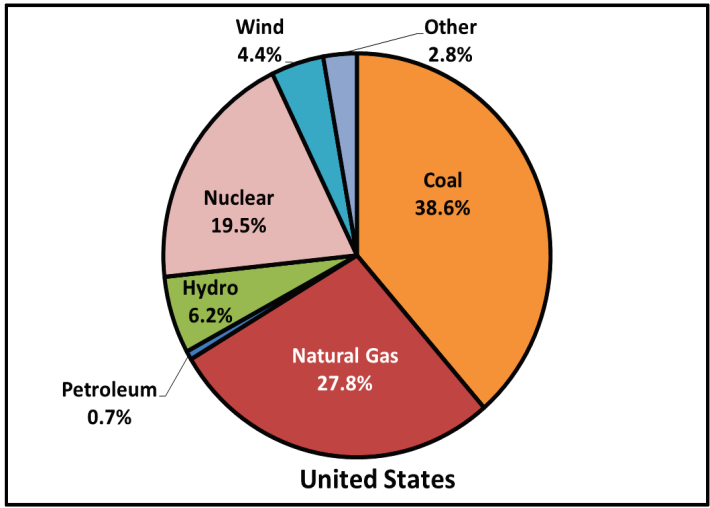


Figure 2-10c. Primary Consumption of Petroleum Products, 2014^{1,2}

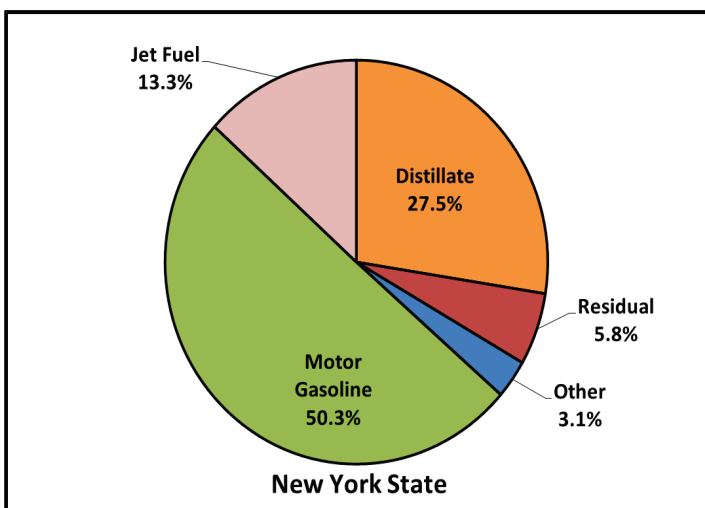
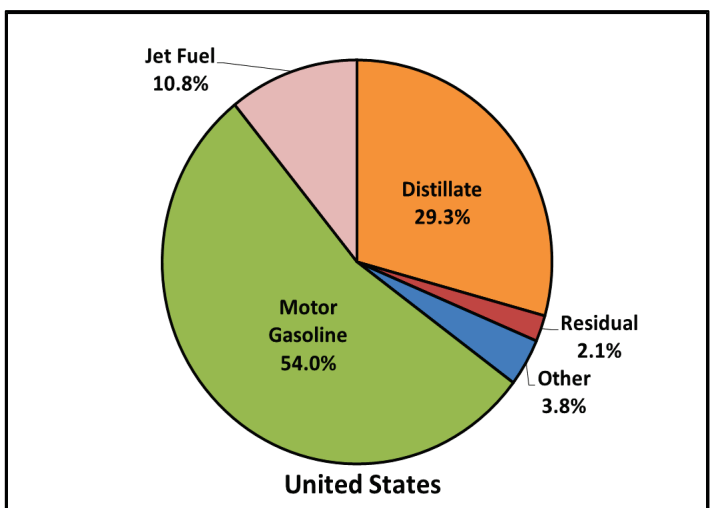


Figure 2-10d. Primary Consumption of Petroleum Products, 2014^{1,2}



¹ Excludes petroleum products not used as a form of energy.
² Motor gasoline percentages do not include ethanol embedded in motor gasoline. Percentages based on petroleum-only fuel.

**United States and New York State
Selected Comparisons,
2014**

Figure 2-11a. Petroleum Consumption by Sector, 2014¹

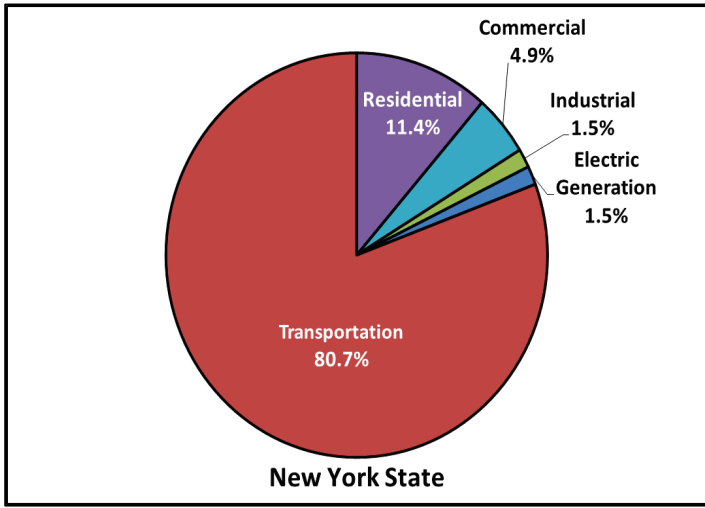


Figure 2-11b. Petroleum Consumption by Sector, 2014¹

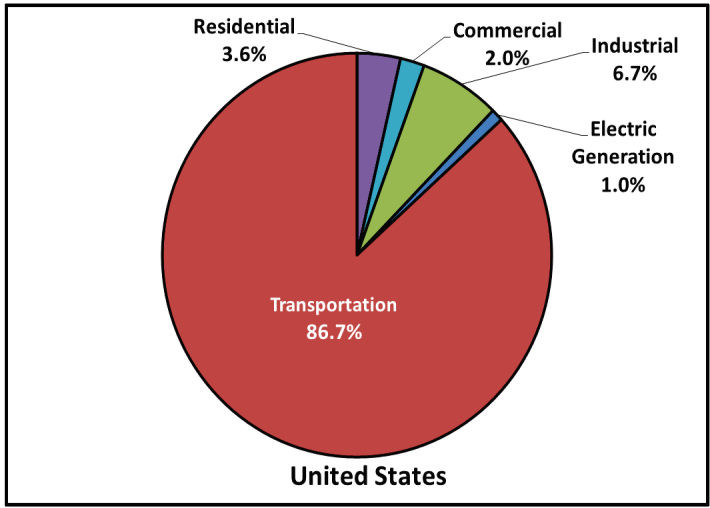


Figure 2-11c. Natural Gas Consumption by Sector, 2014

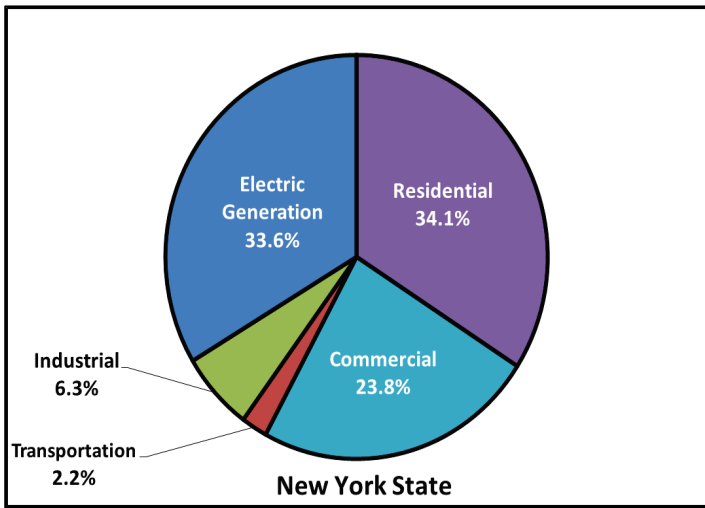
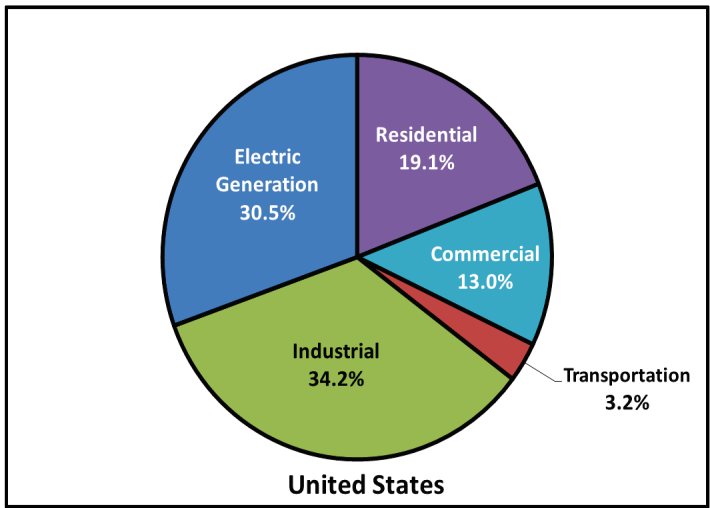


Figure 2-11d. Natural Gas Consumption by Sector, 2014



¹ Excludes petroleum products not used as a form of energy.

**United States and New York State
Selected Comparisons,
2014**

Figure 2-12a. Coal Consumption by Sector, 2014

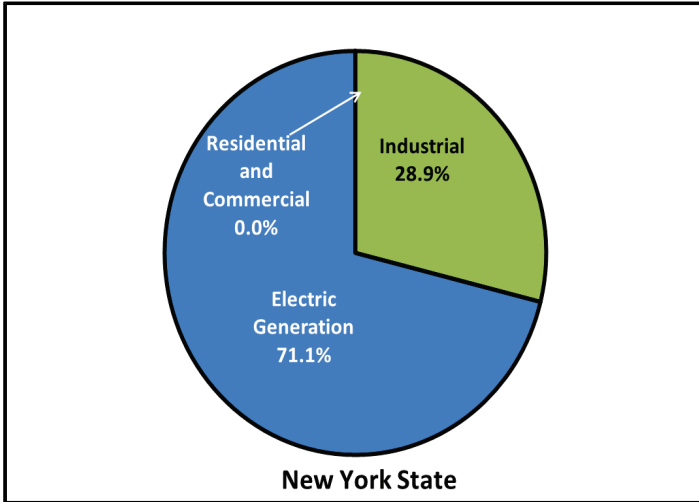


Figure 2-12b. Coal Consumption by Sector, 2014

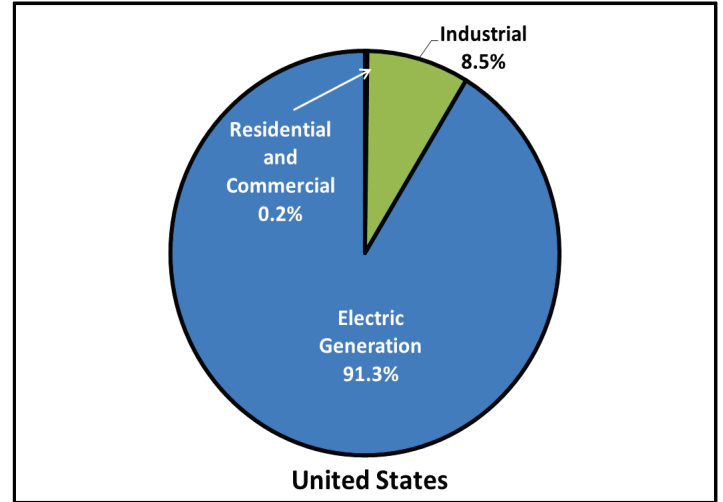


Figure 2-12c. Electricity Sales by Sector, 2014

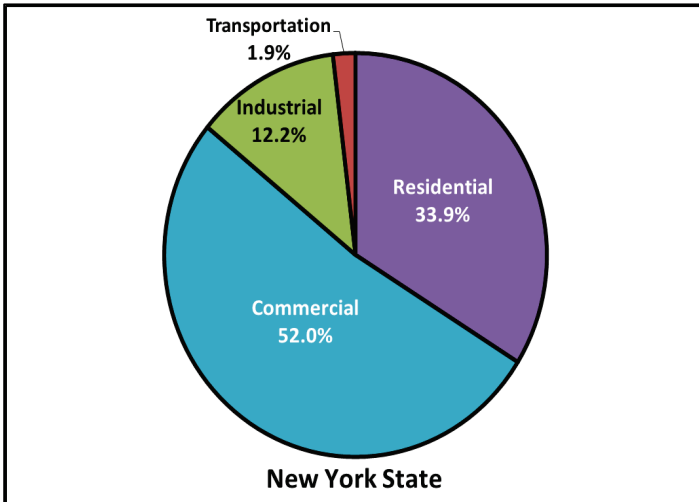
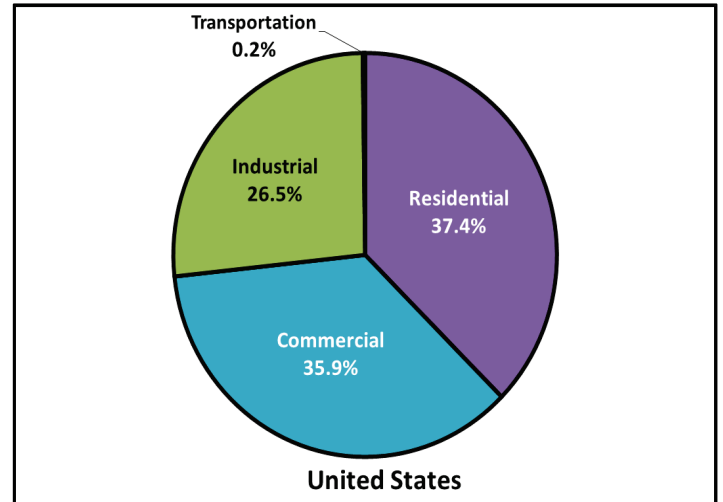


Figure 2-12d. Electricity Sales by Sector, 2014



United States and New York State Selected Energy Indicators, 2000–2014

Table 2-13a.
**Primary Consumption per Dollar of Gross
State Product/Gross Domestic Product**

Year	NYS	U.S.
	thousand Btu	thousand Btu
2000	3.58	6.99
2001	3.40	6.77
2002	3.41	6.76
2003	3.53	6.61
2004	3.48	6.51
2005	3.30	6.31
2006	3.05	6.11
2007	3.12	6.11
2008	3.23	6.11
2009	2.95	5.92
2010	2.85	6.00
2011	2.81	5.93
2012	2.66	5.67
2013	2.70	5.73
2014	2.69	5.66

**Figure 2-13a. Primary Consumption per Dollar of
Gross State Product/Gross Domestic Product**

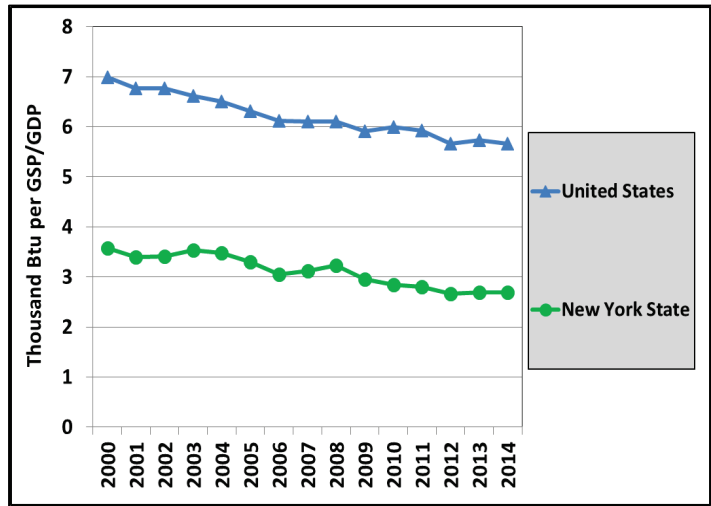
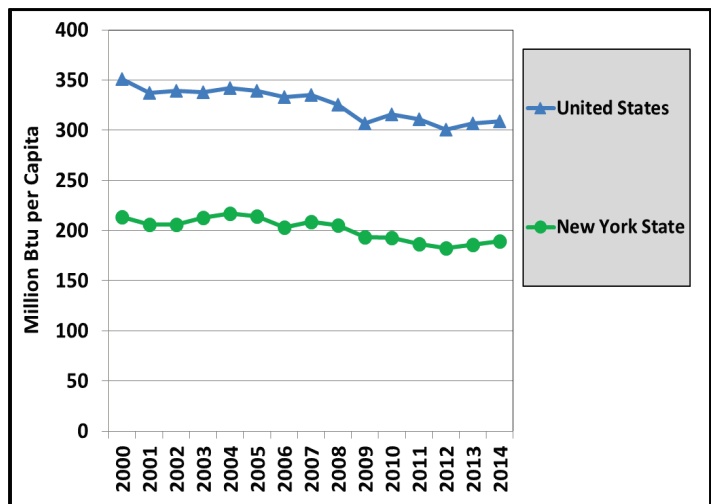


Table 2-13b.
Primary Consumption per Capita

Year	NYS	U.S.
	MMBtu	MMBtu
2000	213.59	351.11
2001	205.69	337.39
2002	206.15	339.51
2003	212.76	337.53
2004	216.86	341.88
2005	214.07	339.04
2006	202.99	333.32
2007	208.68	335.31
2008	205.15	325.16
2009	193.11	306.80
2010	192.79	315.62
2011	186.48	310.62
2012	182.11	300.58
2013	185.71	307.00
2014	189.05	308.51

Figure 2-13b. Primary Consumption per Capita

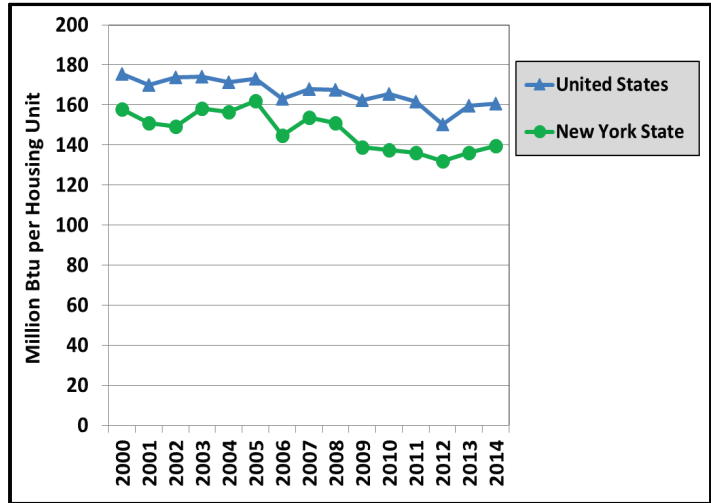


United States and New York State Selected Energy Indicators, 2000–2014

Table 2-14a.
Residential Consumption per Housing Unit

Year	NYS	U.S.
	MMBtu	MMBtu
2000	157.72	175.34
2001	151.09	169.87
2002	149.32	173.85
2003	158.25	174.18
2004	156.42	171.38
2005	162.06	173.04
2006	144.64	163.13
2007	153.85	167.83
2008	150.86	167.48
2009	139.03	162.20
2010	137.49	165.60
2011	136.23	161.49
2012	132.02	150.42
2013	136.12	159.49
2014	139.72	160.68

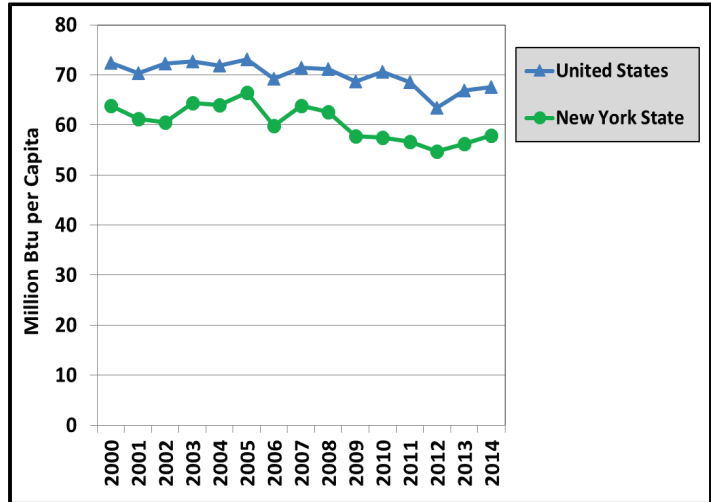
Figure 2-14a. Residential Consumption per Housing Unit



Tablet 2-14b.
Residential Consumption per Capita

Year	NYS	U.S.
	MMBtu	MMBtu
2000	63.90	72.46
2001	61.16	70.28
2002	60.55	72.20
2003	64.36	72.69
2004	63.93	71.89
2005	66.52	73.02
2006	59.87	69.16
2007	63.85	71.39
2008	62.64	71.22
2009	57.74	68.72
2010	57.53	70.64
2011	56.66	68.55
2012	54.70	63.43
2013	56.17	66.94
2014	57.95	67.50

Figure 2-14b. Residential Consumption per Capita



United States and New York State Selected Energy Indicators, 2000–2014

Table 2-15a.
**Commercial Consumption per
Nonmanufacturing Employee**

Year	NYS	U.S.
	MMBtu	MMBtu
2000	169.39	149.61
2001	165.58	148.19
2002	170.06	150.31
2003	174.30	149.69
2004	180.27	150.29
2005	168.75	148.78
2006	160.69	144.55
2007	156.73	146.77
2008	159.79	148.25
2009	156.09	149.49
2010	155.50	151.62
2011	150.43	149.22
2012	140.74	141.88
2013	139.73	143.89
2014	135.07	143.15

**Figure 2-15a. Commercial Consumption per
Nonmanufacturing Employee**

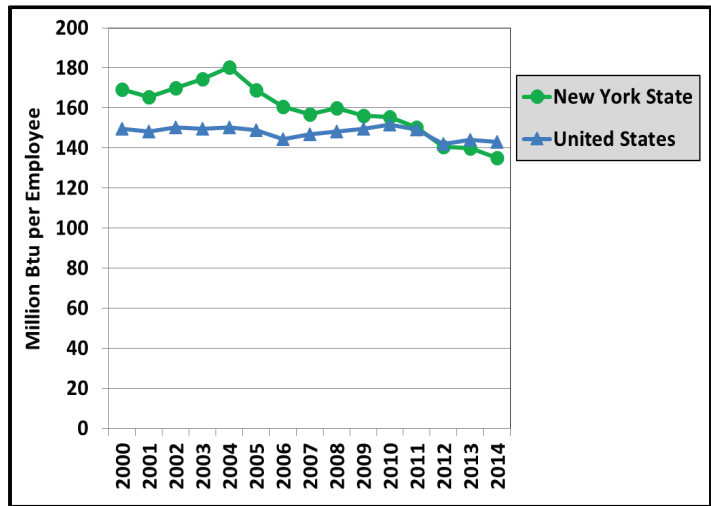
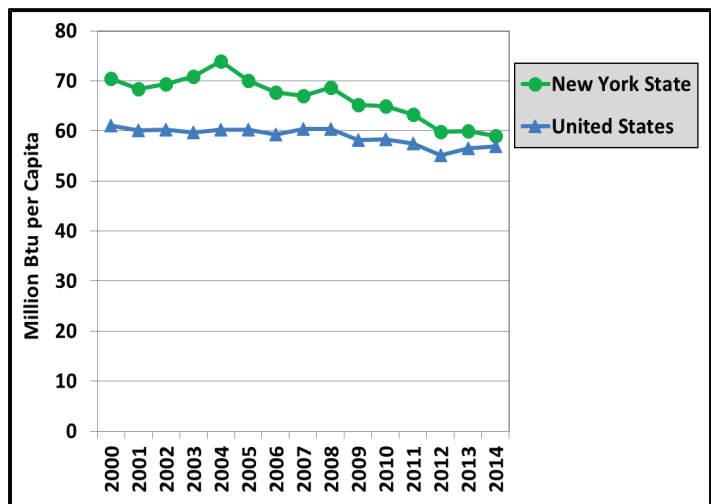


Table 2-15b.
Commercial Consumption per Capita

Year	NYS	U.S.
	MMBtu	MMBtu
2000	70.41	61.01
2001	68.44	60.13
2002	69.41	60.29
2003	70.88	59.76
2004	73.90	60.28
2005	70.09	60.30
2006	67.64	59.22
2007	66.95	60.45
2008	68.62	60.34
2009	65.24	58.18
2010	64.99	58.32
2011	63.33	57.50
2012	59.85	55.19
2013	59.98	56.55
2014	59.03	56.91

Figure 2-15b. Commercial Consumption per Capita



United States and New York State Selected Energy Indicators, 2000–2014

Table 2-16a.
**Industrial Consumption per
Manufacturing Employee**

Year	NYS MMBtu	U.S. MMBtu
2000	710.6	2,009.4
2001	676.8	1,989.1
2002	703.7	2,142.7
2003	686.8	2,246.1
2004	681.2	2,344.1
2005	700.3	2,285.2
2006	602.6	2,292.7
2007	709.7	2,338.9
2008	609.5	2,342.5
2009	593.3	2,408.4
2010	625.4	2,653.8
2011	642.1	2,635.3
2012	625.8	2,598.9
2013	714.9	2,610.6
2014	709.3	2,598.9

**Figure 2-16a. Industrial Consumption per
Manufacturing Employee**

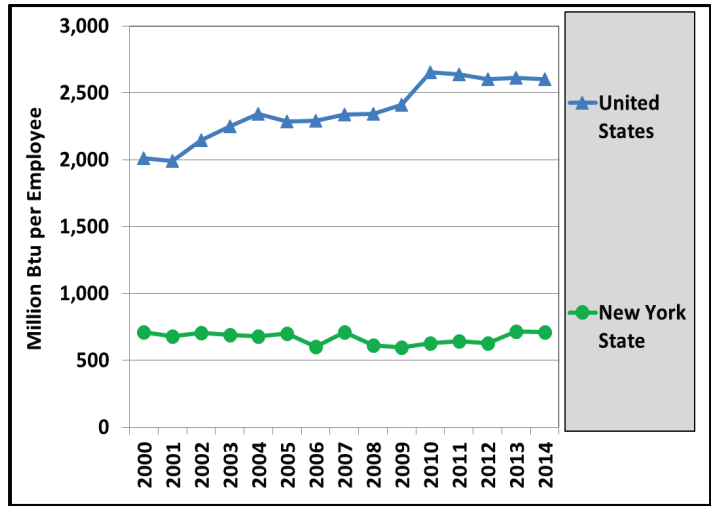
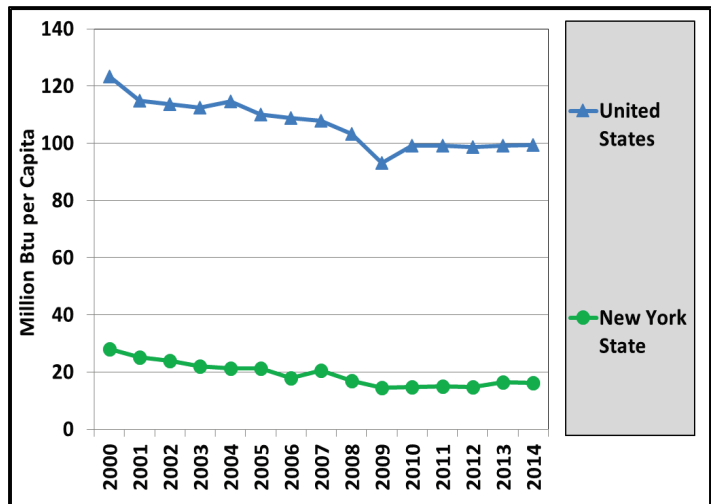


Table 2-16b.
Industrial Consumption per Capita

Year	NYS MMBtu	U.S. MMBtu
2000	28.06	123.26
2001	25.07	114.76
2002	23.93	113.68
2003	21.92	112.33
2004	21.16	114.60
2005	21.21	110.02
2006	17.87	108.76
2007	20.46	107.76
2008	16.87	103.27
2009	14.62	93.01
2010	14.75	99.09
2011	15.08	99.13
2012	14.66	98.68
2013	16.56	99.17
2014	16.29	99.30

Figure 2-16b. Industrial Consumption per Capita



United States and New York State Selected Energy Indicators, 2000–2014

Table 2-17a.
Transportation Consumption
per Vehicle Mile Traveled

Year	NYS Btu	U.S. Btu
2000	7,552	9,608
2001	7,442	9,341
2002	7,517	9,343
2003	7,896	9,250
2004	8,046	9,339
2005	7,825	9,397
2006	7,788	9,459
2007	8,034	9,455
2008	8,169	9,179
2009	8,028	8,958
2010	8,196	9,058
2011	7,857	8,984
2012	8,089	8,810
2013	8,043	8,931
2014	8,522	8,938

Figure 2-17a. Transportation Consumption
per Vehicle Mile Traveled

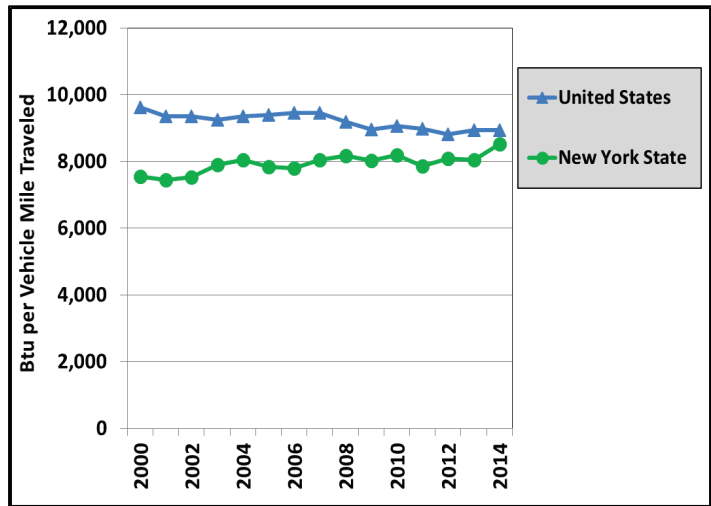
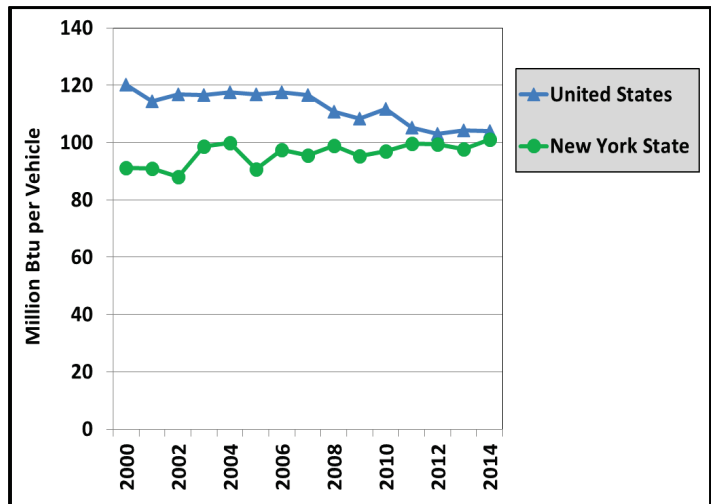


Table 2-17b.
Transportation Consumption per
Registered Motor Vehicle

Year	NYS MMBtu	U.S. MMBtu
2000	91.17	120.18
2001	90.93	114.26
2002	87.97	116.73
2003	98.72	116.48
2004	99.96	117.51
2005	90.71	116.86
2006	97.55	117.61
2007	95.57	116.60
2008	98.78	110.69
2009	95.31	108.23
2010	97.07	111.70
2011	99.51	105.18
2012	99.26	103.12
2013	97.76	104.30
2014	101.03	103.88

Figure 2-17b. Transportation Consumption per
Registered Motor Vehicle



3 New York State Energy Consumption

This section presents data on primary and net energy consumption in New York, by sector and fuel type, for the 15-year period from 2000 through 2014.

Primary consumption of energy is shown by fuel type in physical units, such as tons, cubic feet, gigawatt-hours (GWh), and barrels, and in trillion Btu (TBtu). Total primary energy consumption by sector, including residential, commercial, industrial, transportation, and electric generation, is presented for the 15-year period.

This section also presents statistics on the State's other fuels, including wood, municipal waste, solar, and geothermal energy.

Electricity generation reported does not include generator station use. Electricity from hydro, as well as wood, waste, landfill gas, wind, solar and net electricity imports, has been converted to primary energy by applying a statewide average annual heat rate (Btu per kilowatt-hour[kWh] generated) for fossil-fueled power plants. The current year heat rate can be found in Appendix G Conversion Factors.

Electricity sales figures are combined with end-use consumption of coal, petroleum products, natural gas, biofuels, solar, and geothermal to derive total net energy consumption in the residential, commercial, industrial, and transportation sectors. Net energy consumption is provided in TBtu and physical units.

End-use energy consumption by large multifamily buildings and institutional facilities is included in the commercial sector.

3.1 Key Observations about 2014 New York State Energy Consumption Data

- Total primary energy consumption was 3,733 TBtu, a 2.1 percent increase from 2013.
- Primary consumption of natural gas (1,387 TBtu) exceeded petroleum (1,237 TBtu) for the fourth year in a row as the largest energy source for NYS energy consumption, representing 37.1 percent of total primary energy consumption.
- Cumulative heating degree-days were 4.6 percent higher in 2014 compared to 2013.
- Primary consumption of energy from natural gas, petroleum, and hydropower, increased 5.4 percent, 4.3 percent and 0.5 percent, respectively in 2014, while use of nuclear power, coal, and electricity imports decreased 3.7 percent, 5.9 percent, and 14.9 percent, respectively.

- Total consumption of petroleum products was 1,237 TBtu, or 228 million barrels, representing 33.1 percent of total primary energy consumption.
- In 2014, statewide distillate oil use increased by 4.3 percent from 2013 levels. Statewide motor gasoline use increased 3.4 percent and residual fuel use increased by 3.3 percent from 2013 to 2014. Total statewide petroleum fuels use increased by 4.4 percent from 2013 to 2014.
- Sales of natural gas totaled 1,345 billion cubic feet in 2014, which was 5.6 percent above the 1,273 billion cubic feet sold in 2013.
- Sales of natural gas by sector were 34.1 percent for the residential sector, 23.8 percent for the commercial sector, 6.3 percent for the industrial sector, 2.1 percent for the transportation sector, and 33.7 percent for the electric generation sector.
- Natural gas and nuclear power accounted for 34.0 percent and 26.9 percent of the State's electricity requirements in 2014, respectively.
- Energy used for electricity generation accounted for 39.5 percent of primary energy use.
- Sales of electricity to ultimate customers decreased by 0.4 percent between 2013 and 2014.
- Total residential net energy consumption was 815 TBtu, which was 7.3 percent higher than 2013 levels. The residential sector accounted for 29.5 percent of total net energy consumption.
- Total net energy consumption in the commercial sector was 661 TBtu, or 23.9 percent of total net energy consumption. The sector's total energy use increased 0.1 percent above the 2013 level and sales of electricity in the sector increased by 0.3 percent.
- Industrial net energy consumption was 203 TBtu, or 7.3 percent of total net consumption. The sector's total energy use decreased 0.4 percent from the 2013 level.
- Transportation energy consumption was 1,083 TBtu, or up 5.7 percent from 2013. The sector accounted for 39.2 percent of total net energy consumption in 2014.

New York State Primary Consumption of Energy by Fuel Type, 2000–2014

Figure 3-1

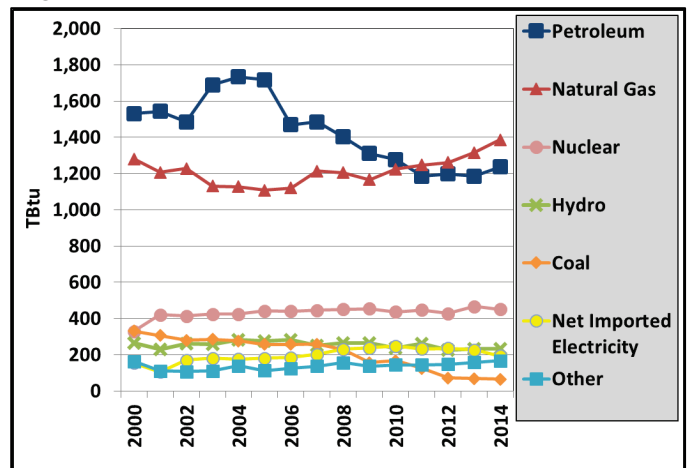


Table 3-1a. (in physical units)

Year	Coal	Natural Gas	Petroleum Products ¹	Hydro	Nuclear	Net Imported Electricity
	Mtons	Bcf	Mbbl	GWh	GWh	GWh
2000	12,611	1,245	276,729	26,753	31,508	15,723
2001	11,784	1,172	279,045	23,152	40,395	10,628
2002	10,907	1,200	269,954	26,213	39,617	17,088
2003	11,313	1,102	303,848	25,798	40,679	18,163
2004	11,335	1,098	308,604	28,153	40,640	17,646
2005	10,739	1,080	306,040	27,583	42,443	18,115
2006	10,979	1,097	265,577	28,422	42,224	18,569
2007	11,058	1,187	268,768	25,557	42,453	20,708
2008	10,158	1,180	255,310	27,501	43,209	23,899
2009	7,032	1,143	238,927	27,945	43,485	25,009
2010	7,366	1,198	233,663	25,103	41,870	26,517
2011	5,603	1,217	217,726	28,355	42,695	25,201
2012	3,137	1,223	220,232	25,303	40,775	26,180
2013	3,041	1,273	218,221	26,397	44,756	25,694
2014	2,868	1,345	227,852	26,823	43,041	22,103

Table 3-1b. (in trillion Btu)

Year	Coal	Natural Gas	Petroleum Products ¹	Hydro	Nuclear	Net Imported Electricity	Other ²	Total ³
	TBtu	TBtu	TBtu	TBtu	TBtu	TBtu	TBtu	TBtu
2000	330.8	1,279.7	1,530.0	264.3	328.6	155.4	164.5	4,053.3
2001	307.0	1,205.9	1,543.3	230.7	421.8	105.9	110.4	3,925.1
2002	280.6	1,227.2	1,485.7	260.8	413.7	170.0	107.1	3,945.2
2003	286.2	1,131.4	1,688.5	257.1	424.0	181.0	111.8	4,079.9
2004	276.5	1,126.6	1,732.9	281.6	423.8	176.5	139.6	4,157.6
2005	256.9	1,107.2	1,717.3	276.4	442.9	181.5	113.3	4,095.6
2006	256.3	1,120.2	1,468.9	282.4	440.6	184.5	125.0	3,878.0
2007	258.5	1,214.4	1,484.5	250.1	445.3	202.7	137.0	3,992.4
2008	229.0	1,205.1	1,402.2	265.3	451.6	230.6	157.6	3,941.5
2009	156.0	1,166.6	1,310.0	265.8	454.8	237.8	137.5	3,728.5
2010	167.1	1,224.5	1,277.5	235.7	437.6	248.9	144.6	3,735.9
2011	125.2	1,247.8	1,184.7	260.7	446.8	231.7	143.9	3,640.7
2012	72.9	1,261.0	1,197.9	228.0	427.3	235.9	147.6	3,570.6
2013	68.7	1,315.3	1,185.5	233.6	467.7	227.4	158.7	3,656.7
2014	64.7	1,386.6	1,236.9	234.7	450.1	193.4	167.1	3,733.5

¹ Includes petroleum coke used for electric generation.

² Includes primarily wood, wind, waste, landfill gas, solar, geothermal, and ethanol; ethanol values are embedded in motor gasoline, but are excluded from the petroleum products total.

³ Excludes nonfuel uses.

**New York State
Primary Consumption
of Refined Petroleum Products,
2000–2014**

Figure 3-1

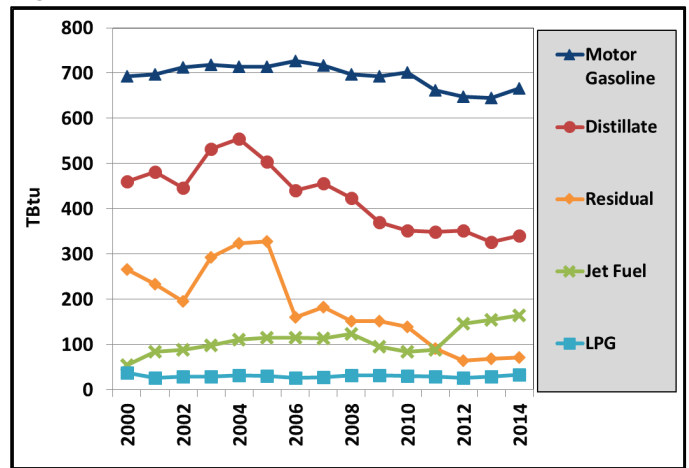


Table 3-2a. (in thousand barrels)

Year	Distillate ¹	Residual	Kerosene	LPG	Motor Gasoline	Jet Fuel ²	Total ³
	Mbbl	Mbbl	Mbbl	Mbbl	Mbbl	Mbbl	Mbbl
2000	79,038	42,349	3,443	9,850	132,831	9,591	276,729
2001	82,878	37,090	3,444	7,111	133,724	14,904	279,045
2002	76,684	31,110	2,373	7,613	136,664	15,603	269,954
2003	91,549	46,578	3,195	7,771	138,010	17,286	303,848
2004	95,300	51,469	3,182	8,639	137,391	19,526	308,604
2005	86,630	52,151	3,632	8,261	137,355	20,291	306,040
2006	75,872	25,526	2,579	7,153	140,020	20,366	265,577
2007	78,850	28,975	1,777	7,346	139,140	20,162	268,768
2008	73,289	24,203	830	8,536	136,105	21,812	255,310
2009	64,154	24,060	1,218	8,344	135,921	16,790	238,927
2010	60,987	22,233	1,701	8,152	138,087	14,808	233,663
2011	60,438	14,517	1,058	7,593	130,718	15,497	217,726
2012	61,030	10,262	569	6,982	127,902	25,864	220,232
2013	56,594	11,032	506	7,784	127,461	27,337	218,221
2014	59,002	11,396	879	8,721	131,746	29,033	227,852

Table 3-2b. (in trillion Btu)

Year	Distillate ¹	Residual	Kerosene	LPG	Motor Gasoline	Jet Fuel ²	Total ³
	TBtu	TBtu	TBtu	TBtu	TBtu	TBtu	TBtu
2000	459.9	266.2	19.5	37.1	692.6	54.3	1530.0
2001	482.3	233.2	19.5	26.8	697.2	84.3	1543.3
2002	446.2	195.6	13.5	28.9	712.2	88.4	1485.7
2003	532.7	292.8	18.1	29.4	718.1	98.0	1688.5
2004	554.5	323.6	18.0	32.7	714.6	110.6	1732.9
2005	504.0	327.9	20.6	31.0	714.0	114.9	1717.3
2006	440.3	160.5	14.6	26.9	726.8	115.5	1468.9
2007	456.1	182.2	10.1	27.8	717.3	114.2	1484.5
2008	423.6	152.2	4.7	32.5	697.7	123.6	1402.2
2009	370.9	151.3	6.9	31.8	693.3	95.2	1310.0
2010	352.4	139.8	9.6	31.1	701.2	83.9	1277.5
2011	349.1	91.3	6.0	28.9	662.5	87.8	1184.7
2012	352.4	64.5	3.2	26.5	647.6	146.6	1197.9
2013	326.8	69.4	2.9	29.6	645.2	155.0	1185.5
2014	340.7	71.6	5.0	33.2	666.6	164.6	1236.9

¹ Distillate consumption estimates include biodiesel blended into diesel fuel.

² Kerosene-type jet fuel and aviation gasoline.

³ Includes petroleum coke used for electric generation. Ethanol values are embedded in motor gasoline, but are excluded from the petroleum products total.

**New York State
Primary Consumption
of Energy by Sector¹,
2000–2014**

Figure 3-3

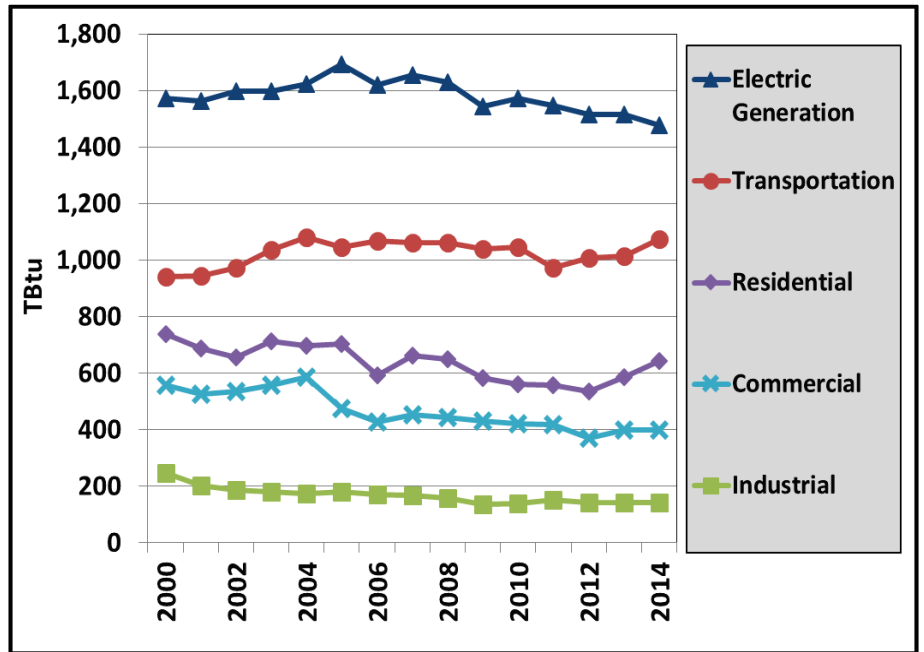


Table 3-3. (in trillion Btu)

Year	Residential	Commercial	Industrial	Transportation	Electric Generation	Total
	TBtu	TBtu	TBtu	TBtu	TBtu	TBtu
2000	736.7	557.2	246.6	941.5	1,571.3	4,053.3
2001	687.3	526.8	202.3	944.9	1,563.7	3,925.1
2002	655.4	535.2	185.4	971.6	1,597.7	3,945.2
2003	712.0	555.9	179.3	1,036.6	1,596.2	4,079.9
2004	695.7	584.8	174.4	1,079.9	1,622.8	4,157.6
2005	702.9	474.9	180.8	1,044.1	1,692.9	4,095.6
2006	592.2	426.3	170.7	1,068.8	1,619.9	3,878.0
2007	661.0	451.5	165.9	1,060.7	1,653.3	3,992.4
2008	648.8	442.8	158.1	1,062.4	1,629.4	3,941.5
2009	583.5	430.0	134.6	1,038.5	1,541.9	3,728.5
2010	561.6	420.4	139.5	1,044.1	1,570.4	3,735.9
2011	556.1	416.2	150.4	971.6	1,546.5	3,640.7
2012	536.3	369.5	142.4	1,008.1	1,514.2	3,570.6
2013	586.1	399.2	142.6	1,014.1	1,514.6	3,656.7
2014	644.2	399.4	141.4	1,073.0	1,475.4	3,733.5

¹ Customer-sited generation is included in specific end-use sectors.

**New York State
Primary Consumption of Energy
for Electric Generation,
2000–2014**

Figure 3-4

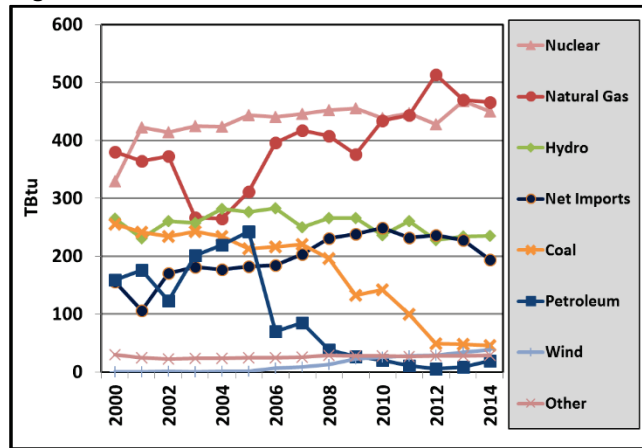


Table 3-4a. (in physical units)

Year	Coal	Natural Gas	Distillate ¹	Residual	Total Petroleum ²	Conventional Hydro	Pumped Storage Hydro	Nuclear	Net Imported Electricity	Wind	Other ⁴
	Mtons	Bcf	Mbbl	Mbbl	Mbbl	GWh	GWh	GWh	GWh	GWh	GWh
2000	9,763	373	2,352	23,056	25,409	24,910	1,843	31,508	15,723	10	2,958
2001	9,258	357	3,010	25,184	28,194	21,486	1,666	40,395	10,628	21	2,404
2002	9,154	366	2,229	17,473	19,702	24,612	1,601	39,617	17,088	82	2,282
2003	9,646	261	2,410	29,821	32,230	24,207	1,591	40,679	18,163	41	2,302
2004	9,702	259	1,740	33,236	34,977	26,745	1,408	40,640	17,646	116	2,303
2005	9,069	304	1,574	37,320	38,894	26,204	1,379	42,443	18,115	103	2,481
2006	9,417	388	622	10,614	11,236	27,110	1,312	42,224	18,569	655	2,488
2007	9,613	408	1,372	12,224	13,596	24,184	1,373	42,453	20,708	833	2,555
2008	8,885	399	809	4,935	6,106	25,711	1,790	43,209	23,899	1,251	2,996
2009	6,108	368	736	3,261	4,296	26,420	1,525	43,485	25,009	2,266	2,888
2010	6,384	425	637	1,790	3,340	24,214	889	41,870	26,517	2,596	2,916
2011	4,591	434	331	1,026	1,826	27,634	721	42,695	25,201	2,828	2,830
2012	2,228	499	392	459	851	24,572	731	40,775	26,180	2,992	2,998
2013	2,225	456	503	882	1,385	25,631	766	44,756	25,694	3,539	3,070
2014	2,154	453	833	2,228	3,061	25,974	849	43,041	22,103	3,986	3,265

Table 3-4b. (in trillion Btu)

Year	Coal	Natural Gas	Distillate ¹	Residual	Total Petroleum ²	Hydro ³	Nuclear	Net Imports ³	Wind	Other ^{3,4}	Total ⁵
	TBtu	TBtu	TBtu	TBtu	TBtu	TBtu	TBtu	TBtu	TBtu	TBtu	TBtu
2000	254.8	380.1	13.7	143.3	158.6	264.3	328.6	155.4	0.1	29.5	1571.3
2001	241.1	364.1	17.5	158.1	175.8	230.7	421.8	105.9	0.2	24.0	1563.7
2002	234.3	372.5	13.0	108.4	122.8	260.8	413.7	170.0	0.8	22.7	1597.7
2003	242.1	267.1	14.0	186.3	201.5	257.1	424.0	181.0	0.4	22.9	1596.2
2004	233.6	264.2	10.1	205.7	218.8	281.6	423.8	176.5	1.2	23.0	1622.8
2005	213.0	310.6	9.2	220.4	242.5	276.4	442.9	181.5	1.0	24.9	1692.9
2006	215.8	395.5	3.6	61.3	69.9	282.4	440.6	184.5	6.5	24.7	1619.9
2007	220.6	416.9	7.9	73.7	84.5	250.1	445.3	202.7	8.2	25.0	1653.3
2008	195.6	407.3	4.7	31.0	37.8	265.3	451.6	230.6	12.3	28.9	1629.4
2009	131.8	375.6	4.3	20.5	26.5	265.8	454.8	237.8	22.1	27.5	1541.9
2010	141.6	433.7	3.7	11.3	20.2	235.7	437.6	248.9	25.3	27.4	1570.4
2011	99.2	443.6	1.9	6.4	11.0	260.7	446.8	231.7	27.5	26.0	1546.5
2012	48.7	513.6	2.3	2.9	5.2	228.0	427.3	235.9	28.4	27.0	1514.2
2013	47.2	469.5	2.9	5.5	8.5	233.6	467.7	227.4	33.7	27.2	1514.6
2014	45.9	466.0	4.8	14.0	18.8	234.7	450.1	193.4	37.7	28.6	1475.4

¹ Includes small quantities of kerosene-type jet fuel.

² Includes petroleum coke used for electric generation.

³ Converts to TBtu by applying a three-year statewide weighted average annual heat rate for fossil-fueled power plants.

⁴ Includes primarily waste, methane, wood, and solar. See Table 3-5 for a breakout of energy output.

⁵ Excludes utility consumption of fuels used in the production of steam distributed for space heating. Excludes customer-sited generation.

**New York State
Electric Generation
by Fuel Type,
2000–2014**

Figure 3-5

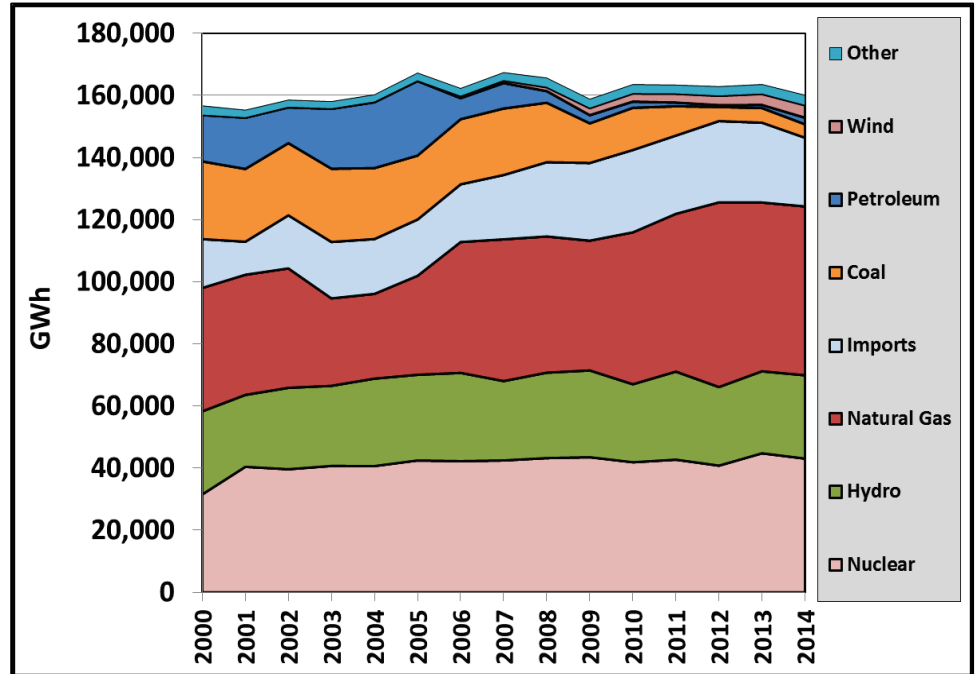


Table 3-5. (in gigawatt-hours)

Year	Coal GWh	Natural Gas GWh	Petroleum Products GWh	Conv. Hydro GWh	PS Hydro GWh	Nuclear GWh	Net Imports GWh	Other ^{1,2}			Wind GWh	Solar ³ GWh	Total GWh
								Waste GWh	LFG GWh	Wood GWh			
2000	25,010	39,729	14,945	24,910	1,843	31,508	15,723	2,958			10	0	156,636
2001	23,432	38,697	16,512	21,486	1,666	40,395	10,628	1,837	284	283	21	0	155,241
2002	23,239	38,451	11,534	24,612	1,601	39,617	17,088	1,878	198	206	82	0	158,507
2003	23,581	28,156	19,292	24,207	1,591	40,679	18,163	1,905	205	192	41	0	158,012
2004	22,853	27,294	21,205	26,745	1,408	40,640	17,646	1,883	209	211	116	0	160,211
2005	20,598	31,873	24,013	26,204	1,379	42,443	18,115	1,899	329	253	103	0	167,208
2006	20,968	42,134	6,778	27,110	1,312	42,224	18,569	1,902	326	260	655	0	162,238
2007	21,406	45,634	8,195	24,184	1,373	42,453	20,708	1,902	397	256	833	0	167,341
2008	19,154	43,856	3,745	25,711	1,790	43,209	23,899	1,903	533	560	1,251	0	165,612
2009	12,759	41,780	2,648	26,420	1,525	43,485	25,009	1,900	648	340	2,266	0	158,780
2010	13,583	48,916	2,005	24,214	889	41,870	26,517	1,893	708	315	2,596	0	163,505
2011	9,426	50,805	1,189	27,634	721	42,695	25,201	1,878	735	210	2,828	7	163,329
2012	4,551	59,462	580	24,572	731	40,775	26,180	1,897	736	311	2,992	53	162,840
2013	4,697	54,354	1,007	25,631	766	44,756	25,694	1,799	828	377	3,539	67	163,514
2014	4,325	54,380	2,136	25,974	849	43,041	22,103	1,866	789	539	3,986	71	160,059

¹ Includes primarily waste, landfill gas and wood.

² Data for disaggregation prior to 2001 are not available.

³ Solar powered electric generation is utility-scale solar electric and does not include customer-sited solar electric energy. Estimated customer-sited solar photovoltaic generation for 2014 was 291 GWh (80 percent of total solar) with 135 GWh (46.4 percent) in the residential sector, 152 GWh (52.2 percent) in the commercial sector, and four GWh (1.4 percent) in the industrial sector.

**New York State
Fossil Fuel¹ for Electric Generation Trends,
2000–2014**

Figure 3-6a. Fossil Fuel Used per kWh of in-State Generation

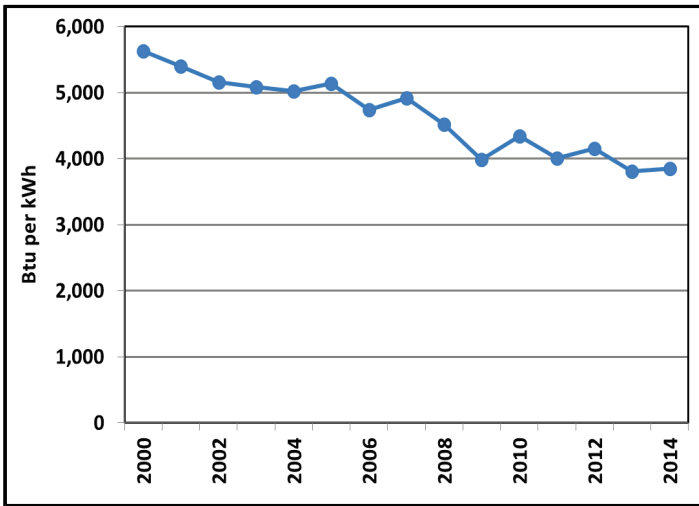


Figure 3-6b. Metric Tons Emitted of CO₂ Equivalent per GWh of in-State Generation

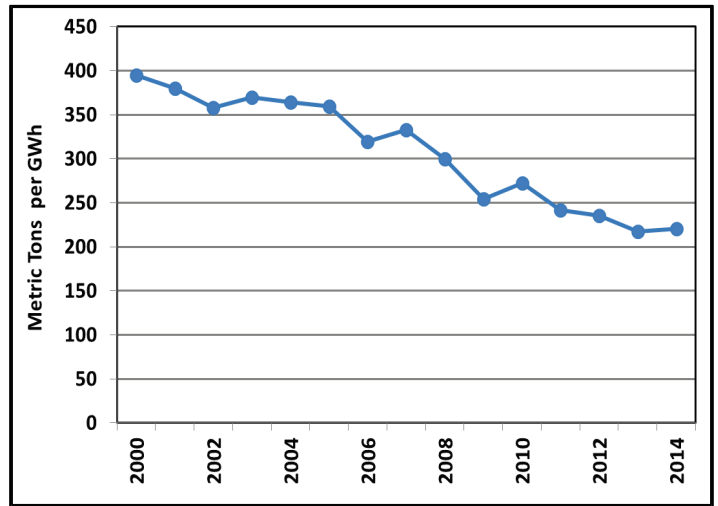


Table 3-6. Fossil Fuel Use for Electricity Trends

Year	Total Fossil Fuel Use	Fossil Fuel per kWh of in-State Generation	CO ₂ Emitted per GWh of in-State Generation
	TBtu	Btu	Metric Tons of CO _{2e}
2000	793	5,631	395
2001	781	5,401	380
2002	730	5,159	358
2003	711	5,082	370
2004	717	5,026	365
2005	766	5,139	359
2006	681	4,741	320
2007	722	4,924	333
2008	641	4,521	300
2009	534	3,991	254
2010	595	4,347	272
2011	554	4,009	242
2012	568	4,153	235
2013	525	3,810	217
2014	531	3,848	220

¹ Fossil Fuel includes natural gas, coal, and all petroleum products used for electric generation.

**New York State
Sales of Electricity
to Ultimate Consumers,
2000–2014**

Figure 3-7

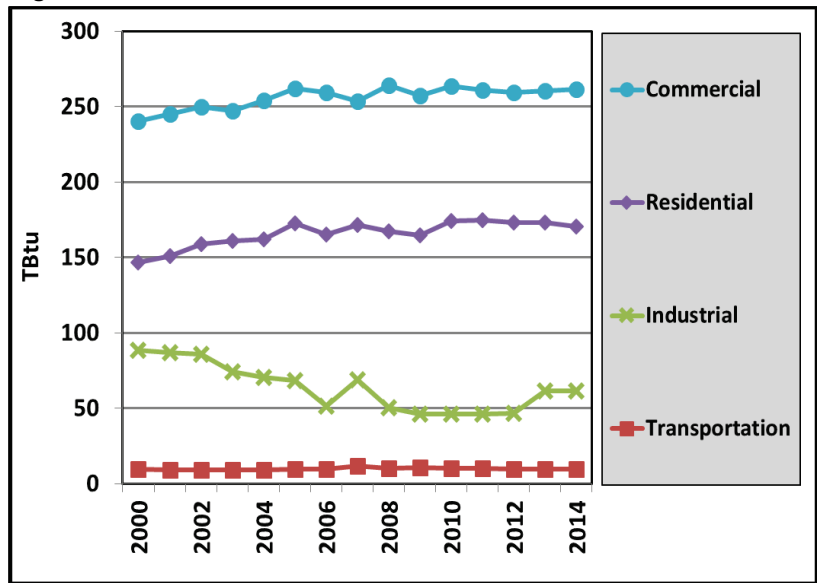


Table 3-7a. (in gigawatt-hours)

Year	Residential GWh	Commercial GWh	Industrial GWh	Transportation GWh	Total GWh
2000	43,018	70,417	25,838	2,753	142,027
2001	44,236	71,850	25,450	2,646	144,181
2002	46,457	73,198	25,148	2,637	147,440
2003	47,116	72,495	21,745	2,689	144,045
2004	47,379	74,378	20,675	2,650	145,082
2005	50,533	76,822	19,947	2,846	150,148
2006	48,427	76,029	14,976	2,806	142,238
2007	50,241	74,326	20,213	3,397	148,178
2008	49,034	77,416	14,685	2,918	144,053
2009	48,246	75,347	13,417	3,025	140,034
2010	50,946	77,276	13,480	2,922	144,624
2011	51,240	76,406	13,420	2,981	144,047
2012	50,692	76,018	13,705	2,748	143,163
2013	50,778	76,342	17,911	2,864	147,895
2014	49,975	76,541	18,003	2,853	147,372

Table 3-7b. (in trillion Btu)

Year	Residential TBtu	Commercial TBtu	Industrial TBtu	Transportation TBtu	Total TBtu
2000	146.8	240.3	88.2	9.4	484.6
2001	150.9	245.2	86.8	9.0	491.9
2002	158.5	249.8	85.8	9.0	503.1
2003	160.8	247.4	74.2	9.2	491.5
2004	161.7	253.8	70.5	9.0	495.0
2005	172.4	262.1	68.1	9.7	512.3
2006	165.2	259.4	51.1	9.6	485.3
2007	171.4	253.6	69.0	11.6	505.6
2008	167.3	264.1	50.1	10.0	491.5
2009	164.6	257.1	45.8	10.3	477.8
2010	173.8	263.7	46.0	10.0	493.5
2011	174.8	260.7	45.8	10.2	491.5
2012	173.0	259.4	46.8	9.4	488.5
2013	173.3	260.5	61.1	9.8	504.6
2014	170.5	261.2	61.4	9.7	502.8

New York State Net Consumption of Energy by Sector, 2000–2014

Figure 3-8

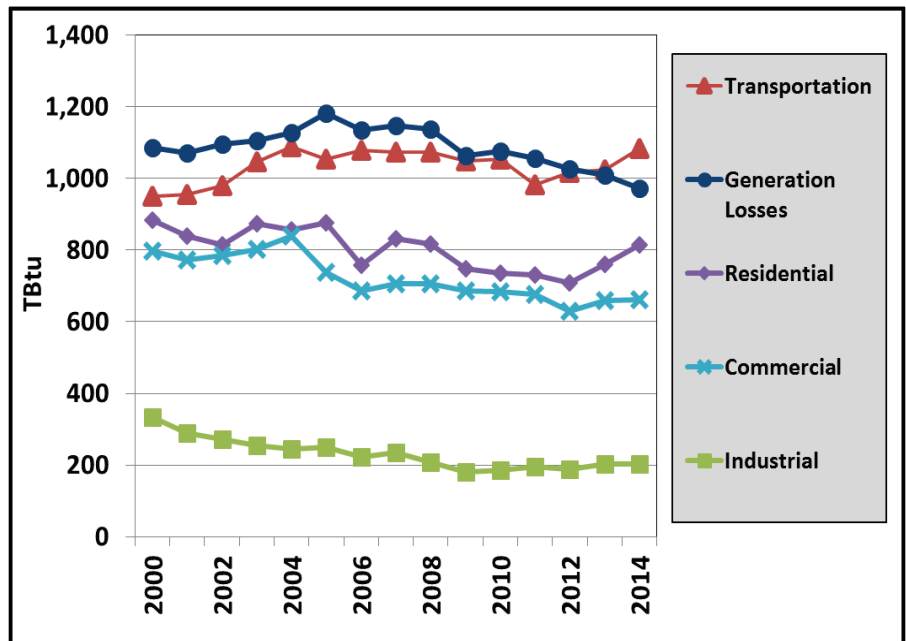


Table 3-8. (in trillion Btu)

Year	Residential	Commercial	Industrial	Transportation	Net Consumption	Generation Losses ¹	Primary Consumption
	TBtu	TBtu	TBtu	TBtu	TBtu	TBtu	TBtu
2000	883.5	797.5	334.7	950.9	2,966.6	1,086.7	4,053.3
2001	838.2	772.0	289.1	953.9	2,853.3	1,071.8	3,925.1
2002	813.9	785.0	271.2	980.6	2,850.6	1,094.6	3,945.2
2003	872.8	803.2	253.5	1,045.7	2,975.2	1,104.7	4,079.9
2004	857.4	838.6	244.9	1,088.9	3,029.8	1,127.8	4,157.6
2005	875.3	737.0	248.9	1,053.8	2,915.0	1,180.6	4,095.6
2006	757.5	685.8	221.8	1,078.4	2,743.5	1,134.6	3,878.0
2007	832.4	705.1	234.9	1,072.2	2,844.7	1,147.7	3,992.4
2008	816.1	706.9	208.2	1,072.4	2,803.6	1,137.9	3,941.5
2009	748.1	687.1	180.4	1,048.8	2,664.4	1,064.1	3,728.5
2010	735.4	684.0	185.5	1,054.0	2,659.0	1,076.9	3,735.9
2011	730.9	676.9	196.2	981.7	2,585.7	1,055.0	3,640.7
2012	709.2	628.9	189.2	1,017.5	2,544.8	1,025.7	3,570.6
2013	759.4	659.7	203.7	1,023.9	2,646.7	1,010.0	3,656.7
2014	814.7	660.5	202.9	1,082.8	2,760.9	972.6	3,733.5

¹ Conversion and transmission losses.

**New York State
Net Residential Consumption
of Energy by Fuel Type
2000–2014**

Figure 3-9

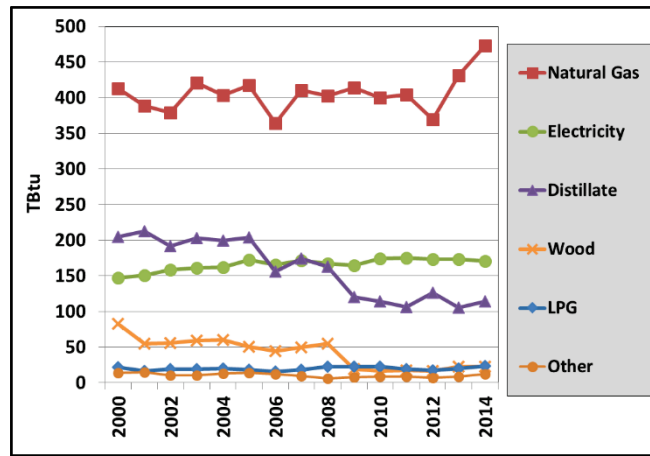


Table 3-9a. (in physical units)

Year	Coal	Natural Gas	Distillate ¹	Kerosene	LPG	Total Petroleum	Wood	Utility-Scale Electricity	Customer-Sited Solar PV
	Mtons	Bcf	Mbbl	Mbbl	Mbbl	Mbbl	Mcords	GWh	GWh
2000	11	400	35,229	2,344	5,693	43,266	4,127	43,018	n.a.
2001	13	376	36,502	2,390	4,306	43,198	2,755	44,236	n.a.
2002	5	370	32,893	1,642	4,987	39,522	2,796	46,457	n.a.
2003	11	410	34,876	1,639	4,933	41,448	2,943	47,116	n.a.
2004	16	393	34,262	2,065	5,119	41,446	3,017	47,379	n.a.
2005	13	406	35,054	2,203	4,661	41,918	2,518	50,533	n.a.
2006	13	356	26,797	1,803	4,155	32,755	2,233	48,427	n.a.
2007	13	400	30,101	1,318	4,771	36,190	2,468	50,241	n.a.
2008	0	394	28,139	661	5,885	34,685	2,762	49,034	n.a.
2009	0	405	20,755	973	5,940	27,668	967	48,246	n.a.
2010	0	390	19,781	999	5,792	26,572	844	50,946	n.a.
2011	0	394	18,454	726	5,080	24,260	864	51,240	n.a.
2012	0	358	21,943	365	4,455	26,763	806	50,692	n.a.
2013	0	416	18,199	394	5,135	23,728	1,113	50,778	n.a.
2014	0	458	19,682	672	6,103	26,457	1,113	49,975	135

Table 3-9b. (in trillion Btu)

Year	Coal	Natural Gas	Distillate ¹	Kerosene	LPG	Total Petroleum	Wood	Electricity	Solar ²	Geothermal	Total
	TBtu	TBtu	TBtu	TBtu	TBtu	TBtu	TBtu	TBtu	TBtu		TBtu
2000	0.3	413.1	205.0	13.3	21.8	240.1	82.5	146.8	0.5	0.1	883.5
2001	0.3	388.8	212.4	13.6	16.5	242.5	55.1	150.9	0.5	0.1	838.2
2002	0.1	378.8	191.4	9.3	19.1	219.8	55.9	158.5	0.6	0.1	813.9
2003	0.3	421.0	202.9	9.3	18.9	231.2	58.9	160.8	0.6	0.1	872.8
2004	0.4	403.5	199.3	11.7	19.6	230.7	60.3	161.7	0.7	0.1	857.4
2005	0.3	416.9	203.9	12.5	17.9	234.3	50.4	172.4	0.9	0.1	875.3
2006	0.3	364.3	155.5	10.2	15.9	181.7	44.7	165.2	1.2	0.1	757.5
2007	0.3	409.9	174.1	7.5	18.3	199.9	49.4	171.4	1.4	0.2	832.4
2008	0.0	402.7	162.6	3.7	22.6	189.0	55.2	167.3	1.7	0.2	816.1
2009	0.0	413.6	120.0	5.5	22.8	148.3	19.3	164.6	2.0	0.2	748.1
2010	0.0	399.7	114.3	5.7	22.2	142.2	16.9	173.8	2.6	0.3	735.4
2011	0.0	404.3	106.6	4.1	19.5	130.2	17.3	174.8	3.6	0.7	730.9
2012	0.0	369.2	126.7	2.1	17.1	145.9	16.1	173.0	4.6	0.4	709.2
2013	0.0	430.8	105.1	2.2	19.7	127.0	22.3	173.3	5.6	0.4	759.4
2014	0.0	472.9	113.6	3.8	23.4	140.9	22.3	170.5	7.7	0.4	814.7

¹ Distillate consumption estimates include biodiesel blended into diesel fuel.

² Includes solar electric and thermal energy. Residential sector solar estimates include quantities consumed by the commercial and industrial sectors.

**New York State
Net Commercial Consumption
of Energy by Fuel Type,
2000–2014**

Figure 3-10

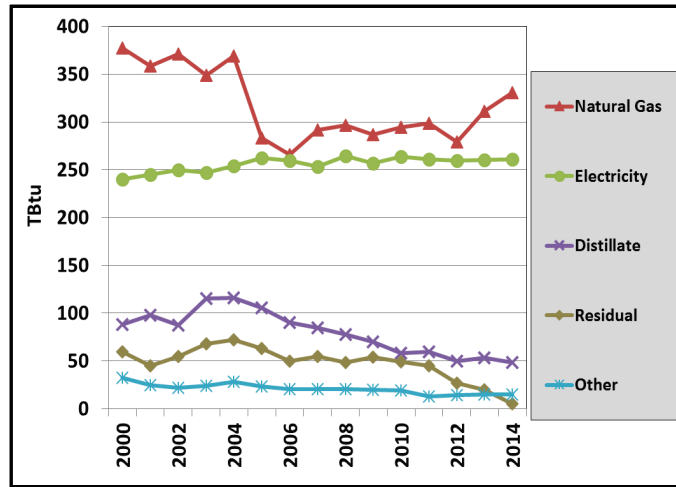


Table 3-10a. (in physical units)

Year	Coal	Natural Gas	Distillate ¹	Residual	Kerosene	LPG	Total Petroleum	Wood	Utility-Scale Electricity	Customer-Sited Solar PV
	MTons	Bcf	Mbbl	Mbbl	Mbbl	Mbbl	Mbbl	Mcords	GWh	GWh
2000	90	366	15,128	9,429	948	1,615	27,120	690	70,417	n.a.
2001	102	347	16,865	7,193	874	1,221	26,153	485	71,850	n.a.
2002	40	362	15,032	8,678	493	1,415	25,618	496	73,198	n.a.
2003	73	339	19,782	10,784	665	1,408	32,639	517	72,495	n.a.
2004	145	359	19,907	11,441	745	1,893	33,986	505	74,378	n.a.
2005	147	276	18,086	10,066	759	1,108	30,019	404	76,822	n.a.
2006	127	260	15,602	7,941	354	1,145	25,042	375	76,029	n.a.
2007	119	285	14,606	8,723	244	1,276	24,849	398	74,326	n.a.
2008	68	290	13,447	7,685	128	1,641	22,901	420	77,416	n.a.
2009	22	281	12,062	8,571	169	1,724	22,526	137	75,347	n.a.
2010	3	287	10,050	7,835	154	1,720	19,759	135	77,276	n.a.
2011	4	291	10,310	7,089	168	1,776	19,343	130	76,406	n.a.
2012	0	270	8,602	4,237	60	1,581	14,480	114	76,018	n.a.
2013	0	301	9,223	3,139	28	1,721	14,111	132	76,342	n.a.
2014	0	320	8,434	846	54	1,682	11,016	132	76,541	152

Table 3-10b. (in trillion Btu)

Year	Coal	Natural Gas	Distillate ¹	Residual	Kerosene	LPG	Total Petroleum	Wood	Waste	Electricity	Geothermal	Total
	TBtu	TBtu	TBtu	TBtu	TBtu	TBtu	TBtu	TBtu	TBtu	TBtu	TBtu	TBtu
2000	2.3	377.7	88.0	59.3	5.4	6.2	158.9	13.8	4.3	240.3	0.2	797.5
2001	2.5	358.9	98.1	45.2	5.0	4.7	153.0	9.7	2.5	245.2	0.3	772.0
2002	1.0	371.3	87.5	54.6	2.8	5.4	150.3	9.9	2.5	249.8	0.3	785.0
2003	1.8	348.8	115.1	67.8	3.8	5.4	192.1	10.3	2.4	247.4	0.4	803.2
2004	3.6	368.9	115.8	71.9	4.2	7.3	199.2	10.1	2.5	253.8	0.4	838.6
2005	3.7	283.0	105.2	63.3	4.3	4.2	177.1	8.1	2.6	262.1	0.5	737.0
2006	3.2	265.7	90.5	49.9	2.0	4.4	146.9	7.5	2.6	259.4	0.5	685.8
2007	3.0	291.9	84.5	54.8	1.4	4.9	145.6	8.0	2.5	253.6	0.6	705.1
2008	1.7	296.4	77.7	48.3	0.7	6.3	133.1	8.4	2.5	264.1	0.6	706.9
2009	0.6	286.8	69.7	53.9	1.0	6.6	131.2	2.7	2.3	257.1	0.7	687.1
2010	0.1	294.1	58.1	49.3	0.9	6.6	114.8	2.7	2.3	263.7	0.8	684.0
2011	0.1	298.9	59.6	44.6	1.0	6.8	111.9	2.6	2.1	260.7	0.6	676.9
2012	0.0	278.9	49.7	26.6	0.3	6.1	82.7	2.3	4.9	259.4	0.8	628.9
2013	0.0	311.2	53.3	19.7	0.2	6.6	79.7	2.6	4.9	260.5	0.8	659.7
2014	0.0	330.4	48.7	5.3	0.3	6.5	60.8	2.6	4.8	261.2	0.8	660.5

¹ Distillate consumption estimates include biodiesel blended into diesel fuel.

**New York State
Net Industrial Consumption
of Energy by Fuel Type,
2000–2014**

Figure 3-11

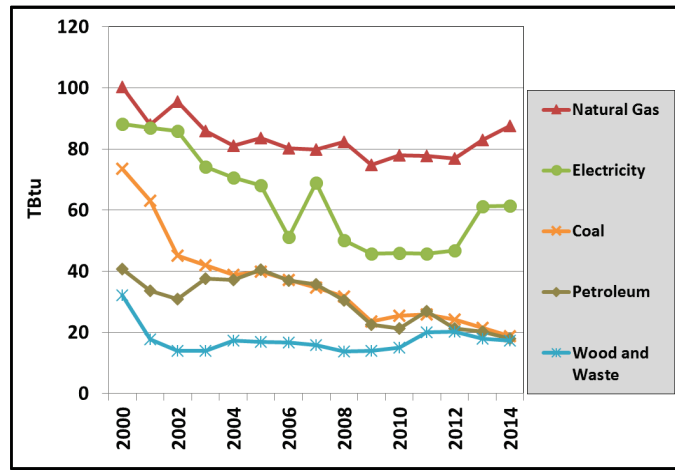


Table 3-11a. (in physical units)

Year	Coal	Natural Gas	Distillate ¹	Residual	Kerosene	LPG	Total Petroleum	Wood	Utility-Scale Electricity	Customer-Sited Electricity
	MTons	Bcf	Mbbl	Mbbl	Mbbl	Mbbl	Mbbl	Mcords	GWh	GWh
2000	2,747	97	3,285	2,005	151	2,308	7,749	1,544	25,838	n.a.
2001	2,411	85	2,981	1,544	180	1,559	6,264	858	25,450	n.a.
2002	1,708	93	2,889	1,362	238	1,145	5,634	676	25,148	n.a.
2003	1,583	84	3,050	1,584	891	1,375	6,900	669	21,745	n.a.
2004	1,472	79	3,481	1,483	372	1,561	6,897	837	20,675	n.a.
2005	1,510	81	3,371	1,337	670	2,417	7,795	822	19,947	n.a.
2006	1,422	78	3,463	1,301	422	1,754	6,940	771	14,976	n.a.
2007	1,313	78	3,625	1,461	215	1,243	6,544	735	20,213	n.a.
2008	1,205	81	3,409	1,247	41	753	5,450	613	14,685	n.a.
2009	902	73	2,931	485	76	583	4,075	578	13,417	n.a.
2010	979	76	2,274	514	548	502	3,838	637	13,480	n.a.
2011	1,008	76	2,809	1,244	164	557	4,774	706	13,420	n.a.
2012	909	75	2,502	578	144	656	3,880	744	13,705	n.a.
2013	816	80	2,274	711	84	639	3,708	640	17,911	n.a.
2014	714	85	2,001	552	153	604	3,310	652	18,003	4

Table 3-11b. (in trillion Btu)

Year	Coal	Natural Gas	Distillate ¹	Residual	Kerosene	LPG	Total Petroleum	Wood	Waste	Electricity	Total ^{2,3}
	TBtu	TBtu	TBtu	TBtu	TBtu	TBtu	TBtu	TBtu	TBtu	TBtu	TBtu
2000	73.5	100.2	19.1	12.6	0.9	8.2	40.7	30.9	1.2	88.2	334.7
2001	63.1	87.9	17.3	9.7	1.0	5.5	33.6	17.2	0.6	86.8	289.1
2002	45.2	95.4	16.8	8.6	1.4	4.1	30.8	13.5	0.5	85.8	271.2
2003	41.9	85.8	17.7	10.0	5.0	4.9	37.6	13.4	0.5	74.2	253.5
2004	38.9	81.1	20.3	9.3	2.1	5.5	37.2	16.7	0.5	70.5	244.9
2005	39.9	83.6	19.6	8.4	3.8	8.6	40.4	16.4	0.5	68.1	248.9
2006	37.1	80.2	20.1	8.2	2.4	6.2	36.9	15.4	1.2	51.1	221.8
2007	34.6	79.8	21.0	9.2	1.2	4.4	35.8	14.7	1.3	69.0	234.9
2008	31.6	82.4	19.7	7.8	0.2	2.6	30.4	12.3	1.3	50.1	208.2
2009	23.6	74.8	16.9	3.0	0.4	2.0	22.4	11.6	1.5	45.8	180.4
2010	25.4	77.8	13.1	3.2	3.1	1.7	21.2	12.7	1.5	46.0	185.5
2011	25.9	77.7	16.2	7.8	0.9	1.9	26.9	14.1	5.8	45.8	196.2
2012	24.2	77.0	14.4	3.6	0.8	2.3	21.2	14.9	5.2	46.8	189.2
2013	21.6	82.9	13.1	4.5	0.5	2.2	20.3	12.8	5.0	61.1	203.7
2014	18.7	87.5	11.6	3.5	0.9	2.1	18.0	13.0	4.2	61.4	202.9

¹ Distillate consumption estimates include biodiesel blended into diesel fuel.
² Excludes nonfuel uses (e.g., feedstock).
³ Includes fuels used by industry to generate electricity and process steam.

**New York State
Net Transportation Consumption
of Energy by Fuel Type,
2000–2014**

Figure 3-12

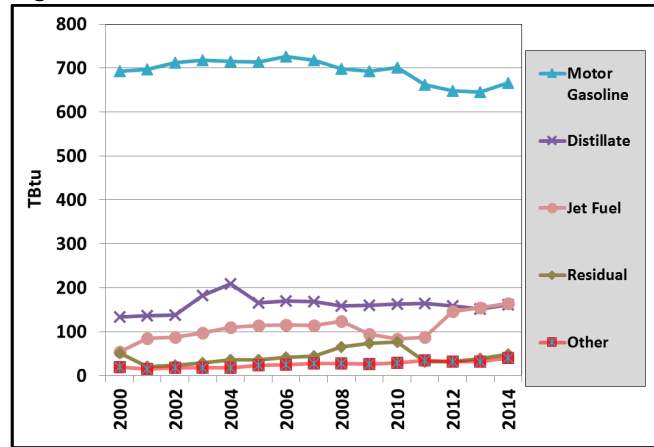


Table 3-12a. (in physical units)

Year	Natural Gas	Distillate ¹	Residual	Motor Gasoline	Jet Fuel ²	LPG	Total Petroleum	Ethanol	Electricity
	Bcf	Mbbl	Mbbl	Mbbl	Mbbl	Mbbl	Mbbl	Mbbl	GWh
2000	8	23,044	8,126	132,831	9,591	234	173,452	374	2,753
2001	6	23,520	3,207	133,724	14,904	25	175,274	106	2,646
2002	9	23,641	3,826	136,664	15,603	66	179,707	93	2,637
2003	8	31,431	4,583	138,010	17,286	55	190,825	540	2,689
2004	9	35,910	5,823	137,391	19,526	66	191,812	6,904	2,650
2005	13	28,545	5,684	137,355	20,291	75	189,670	2,280	2,846
2006	14	29,388	6,530	140,020	20,366	99	190,464	5,939	2,806
2007	16	29,146	7,063	139,140	20,162	56	188,085	7,482	3,397
2008	16	27,485	10,336	136,105	21,812	257	186,168	9,827	2,918
2009	15	27,670	11,743	135,921	16,790	97	180,362	11,859	3,025
2010	19	28,245	12,094	138,087	14,808	138	180,154	13,218	2,922
2011	23	28,534	5,158	130,718	15,497	180	167,523	12,564	2,981
2012	21	27,591	4,988	127,902	25,864	290	174,258	12,377	2,748
2013	20	26,395	6,300	127,461	27,337	289	175,289	12,493	2,864
2014	29	28,052	7,770	131,746	29,033	332	184,008	12,925	2,853

Table 3-12b. (in trillion Btu)

Year	Natural Gas	Distillate ¹	Residual	Motor Gasoline	Jet Fuel ²	LPG	Total Petroleum	Ethanol ³	Electricity	Total
	TBtu	TBtu	TBtu	TBtu	TBtu	TBtu	TBtu	TBtu	TBtu	TBtu
2000	8.5	134.1	51.1	692.6	54.3	0.9	931.7	1.3	9.4	950.9
2001	6.2	136.9	20.2	697.2	84.3	0.1	938.3	0.4	9.0	953.9
2002	9.2	137.6	24.1	712.2	88.4	0.3	962.1	0.3	9.0	980.6
2003	8.6	182.9	28.8	718.1	98.0	0.2	1,026.1	1.9	9.2	1,045.7
2004	8.9	208.9	36.6	714.6	110.6	0.3	1,047.0	23.9	9.0	1,088.9
2005	13.1	166.1	35.7	714.0	114.9	0.3	1,023.0	7.9	9.7	1,053.8
2006	14.5	170.5	41.1	726.8	115.5	0.4	1,033.7	20.6	9.6	1,078.4
2007	16.0	168.6	44.4	717.3	114.2	0.2	1,018.8	25.9	11.6	1,072.2
2008	16.3	158.9	65.0	697.7	123.6	1.0	1,012.0	34.1	10.0	1,072.4
2009	15.8	160.0	73.8	693.3	95.2	0.4	981.6	41.1	10.3	1,048.8
2010	19.2	163.2	76.0	701.2	83.9	0.5	979.1	45.8	10.0	1,054.0
2011	23.3	164.8	32.4	662.5	87.8	0.7	904.7	43.6	10.2	981.7
2012	22.2	159.3	31.4	647.6	146.6	1.1	943.0	42.9	9.4	1,017.5
2013	20.8	152.4	39.6	645.2	155.0	1.1	950.0	43.3	9.8	1,023.9
2014	29.7	162.0	48.8	666.6	164.6	1.3	998.4	44.9	9.7	1,082.8

¹ Distillate consumption estimates include biodiesel blended into diesel fuel.

² Consists of aviation gasoline and kerosene-type jet fuel.

³ Ethanol values are embedded in motor gasoline but are excluded from the petroleum products total.

4 New York Energy Prices

This section presents data on retail energy prices for the 15-year period from 2000 through 2014. Energy prices are provided by fuel type in nominal dollars per physical unit and per MMBtu for the residential, commercial, industrial, and transportation sectors.

This section includes a column in the price tables displaying gross domestic product (GDP) price deflators for converting nominal (current year) dollars into constant 2014 (real) dollars. To convert energy prices from nominal to constant 2014 dollars, divide the nominal energy price by the GDP price deflator for that particular year.

Historical petroleum, electricity, coal, and natural gas prices were compiled primarily from various reports from the DOE's Energy Information Administration.

4.1 Key Observations about 2014 New York State Energy Price Data

- Residential sector statewide average nominal fuel prices:
 - Home heating oil prices decreased by 2.5 percent from an average \$3.88 per gallon in 2013 to \$3.78 in 2014.
 - Natural gas increased by 1.1 percent from an average \$12.41 per thousand cubic feet in 2013 to \$12.54 in 2014.
 - Electricity increased by 6.8 percent from 18.8¢ per kWh in 2013 to 20.1¢ in 2014.
- Commercial sector statewide average nominal fuel prices:
 - Distillate fuel prices averaged \$2.99 per gallon in 2014, which was a 13.0 percent decrease from 2013 prices.
 - Residual oil prices averaged \$92.73 per barrel in 2014, which was a 12.4 percent decrease from 2013 prices.
 - Electricity prices averaged 16.1¢ per kWh, which was a 5.0 percent increase from 2013 prices.
 - Natural gas prices averaged \$8.31 per thousand cubic feet, which was a 4.5 percent increase from 2013 prices.
- Industrial sector statewide average nominal fuel prices:
 - Residual oil prices averaged \$92.73 per barrel in 2014, which was a 12.4 percent decrease from 2013 prices.
 - Natural gas prices averaged \$8.13 per thousand cubic feet, which was a 10.0 percent increase from 2013 prices.
 - Electricity prices averaged 6.6¢ per kWh, which was the same price compared to 2013 prices.
- The average retail price for all grades of gasoline was \$3.42 per gallon, down \$0.13 per gallon (3.6 percent) from the average price in 2013.

**New York State
Residential Energy Prices
in Nominal Dollars,
2000–2014**

Figure 4-1

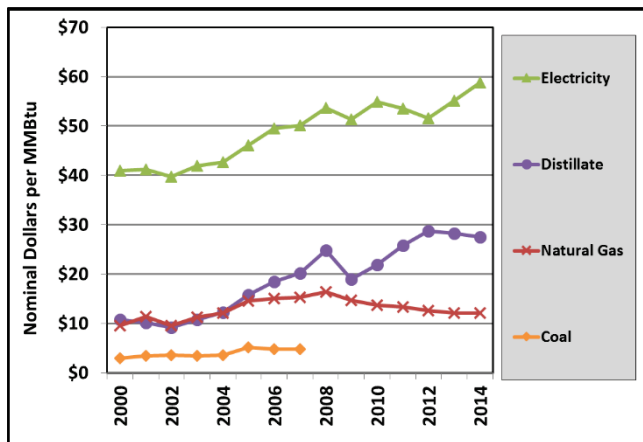


Table 4-1a. (in physical units)

Year	Coal	Distillate ¹	Kerosene	Propane	Natural Gas	Electricity	GDP Deflator ²
	\$/Ton	Cents/Gal.	Cents/Gal.	Cents/Gal.	\$/Mcf	Cents/kWh	2014=1
2000	75.56	149.91	127.44	143.25	9.80	13.97	0.727
2001	85.19	141.73	117.99	150.58	11.70	14.04	0.748
2002	83.35	126.63	106.92	132.22	9.85	13.55	0.760
2003	76.07	149.49	134.60	151.73	11.61	14.31	0.777
2004	80.37	169.55	162.14	168.06	12.49	14.54	0.798
2005	115.73	219.14	214.92	188.07	14.92	15.72	0.825
2006	105.03	255.61	260.15	211.43	15.44	16.89	0.852
2007	105.05	278.09	289.85	244.32	15.77	17.10	0.876
2008	N/A	342.53	365.31	286.15	16.86	18.31	0.909
2009	N/A	260.42	281.21	259.39	15.10	17.50	0.906
2010	N/A	301.01	320.90	275.10	14.04	18.74	0.921
2011	N/A	354.95	379.76	312.45	13.64	18.26	0.950
2012	N/A	394.28	399.87	323.69	12.87	17.62	0.970
2013	N/A	387.96	400.68	318.39	12.41	18.79	0.984
2014	N/A	378.35	402.84	338.02	12.54	20.07	1.000

Table 4-1b. (in \$/million Btu)

Year	Coal	Distillate ¹	Kerosene	Propane	Natural Gas	Electricity	GDP Deflator ²
	\$/MMBtu	\$/MMBtu	\$/MMBtu	\$/MMBtu	\$/MMBtu	\$/MMBtu	2014=1
2000	3.02	10.82	9.44	16.68	9.55	40.95	0.727
2001	3.42	10.23	8.74	17.50	11.37	41.14	0.748
2002	3.63	9.14	7.92	15.37	9.61	39.71	0.760
2003	3.42	10.79	9.97	17.56	11.28	41.94	0.777
2004	3.60	12.24	12.01	19.51	12.17	42.62	0.798
2005	5.18	15.82	15.92	21.82	14.51	46.08	0.825
2006	4.76	18.50	19.27	24.64	15.02	49.51	0.852
2007	4.76	20.19	21.47	26.75	15.36	50.11	0.876
2008	N/A	24.89	27.06	31.33	16.42	53.66	0.909
2009	N/A	18.92	20.83	28.40	14.73	51.29	0.906
2010	N/A	21.88	23.77	30.12	13.72	54.93	0.921
2011	N/A	25.81	28.13	34.21	13.35	53.52	0.950
2012	N/A	28.68	29.62	35.44	12.56	51.63	0.970
2013	N/A	28.22	29.68	34.86	12.07	55.08	0.984
2014	N/A	27.54	29.84	37.01	12.15	58.83	1.000

¹ Home heating oil.

² To convert prices to 2014 dollars, divide the selected price by the deflator factor in the same row.

**New York State
Commercial Energy Prices
in Nominal Dollars,
2000–2014**

Figure 4-2

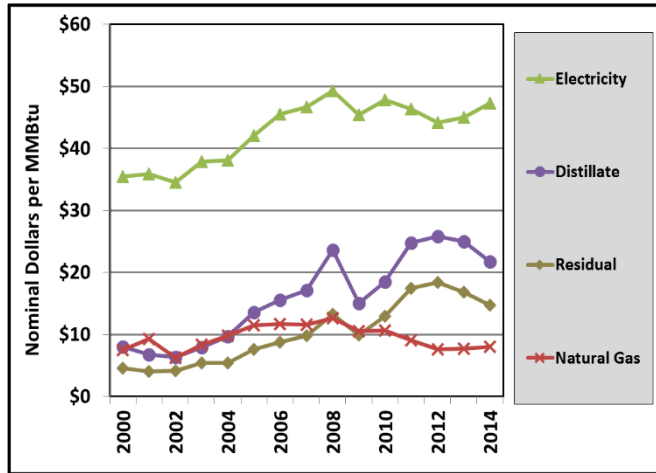


Table 4-2a. (in physical units)

Year	Coal	Distillate ¹	Residual	Kerosene	Propane	Natural Gas	Electricity	GDP Deflator ²
	\$/Ton	Cents/Gal.	\$/bbl	Cents/Gal.	Cents/Gal.	\$/Mcf	Cents/kWh	2014=1
2000	37.12	110.28	28.92	127.44	106.66	7.73	12.10	0.727
2001	37.59	93.66	25.59	117.99	113.24	9.57	12.24	0.748
2002	44.55	88.39	25.90	106.92	101.68	6.42	11.79	0.760
2003	40.84	109.87	34.20	134.60	120.53	8.61	12.93	0.777
2004	43.39	134.78	33.70	162.14	134.47	10.10	12.98	0.798
2005	48.26	188.53	47.59	214.92	151.09	11.82	14.36	0.825
2006	66.82	215.40	55.26	260.15	166.73	11.98	15.51	0.852
2007	64.04	236.22	61.74	289.85	193.44	11.85	15.92	0.876
2008	104.18	324.51	83.43	365.31	233.36	12.93	16.79	0.909
2009	134.58	206.74	62.49	281.21	188.33	10.75	15.48	0.906
2010	137.13	254.51	81.10	320.90	215.82	10.87	16.31	0.921
2011	134.11	339.96	109.46	379.76	237.83	9.28	15.81	0.950
2012	N/A	354.28	115.43	399.87	220.48	7.79	15.06	0.970
2013	N/A	343.83	105.87	400.68	217.28	7.95	15.35	0.984
2014	N/A	299.08	92.73	402.84	228.97	8.31	16.12	1.000

Table 4-2b. (in \$/million Btu)

Year	Coal	Distillate ¹	Residual	Kerosene	Propane	Natural Gas	Electricity	GDP Deflator ²
	\$/MMBtu	\$/MMBtu	\$/MMBtu	\$/MMBtu	\$/MMBtu	\$/MMBtu	\$/MMBtu	2014=1
2000	1.60	7.96	4.60	9.44	12.42	7.53	35.46	0.727
2001	1.62	6.76	4.07	8.74	13.16	9.30	35.88	0.748
2002	1.92	6.38	4.12	7.92	11.82	6.26	34.55	0.760
2003	1.76	7.93	5.44	9.97	13.95	8.37	37.89	0.777
2004	1.87	9.73	5.36	12.01	15.61	9.84	38.04	0.798
2005	2.08	13.61	7.57	15.92	17.53	11.50	42.08	0.825
2006	2.88	15.59	8.79	19.27	19.43	11.65	45.46	0.852
2007	2.76	17.15	9.82	21.47	21.18	11.54	46.65	0.876
2008	4.49	23.58	13.27	27.06	25.55	12.59	49.22	0.909
2009	5.80	15.02	9.94	20.83	20.62	10.49	45.36	0.906
2010	5.91	18.50	12.90	23.77	23.63	10.63	47.79	0.921
2011	5.78	24.72	17.41	28.13	26.04	9.08	46.33	0.950
2012	N/A	25.77	18.36	29.62	24.14	7.60	44.13	0.970
2013	N/A	25.01	16.84	29.68	23.79	7.73	45.00	0.984
2014	N/A	21.77	14.75	29.84	25.07	8.05	47.25	1.000

¹ Home heating oil.

² To convert prices to 2014 dollars, divide the selected price by the deflator factor in the same row.

**New York State
Industrial Energy Prices
in Nominal Dollars,
2000–2014**

Figure 4-3

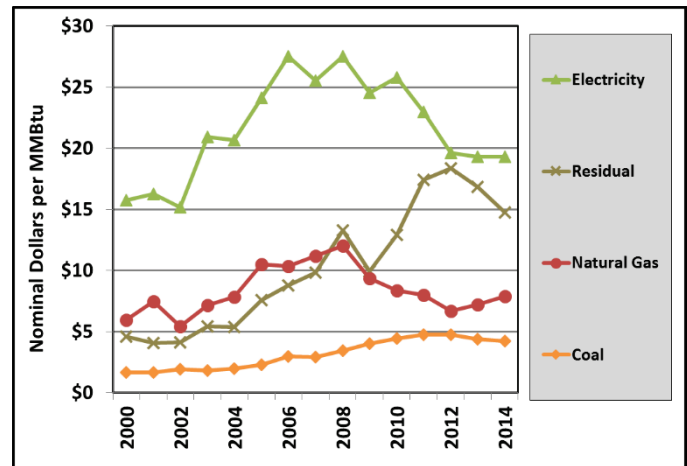


Table 4-3a. (in physical units)

Year	Coal	Distillate ¹	Residual	Kerosene	Propane	Natural Gas	Electricity	GDP Deflator ²
	\$/Ton	Cents/Gal.	\$/bbl	Cents/Gal.	Cents/Gal.	\$/Mcf	Cents/kWh	2014=1
2000	33.43	105.30	28.92	111.51	108.81	6.10	5.37	0.727
2001	33.76	91.58	25.59	90.86	111.95	7.69	5.55	0.748
2002	38.86	88.53	25.90	81.41	105.90	5.54	5.18	0.760
2003	36.35	107.93	34.20	109.76	130.56	7.36	7.14	0.777
2004	39.16	127.44	33.70	137.97	147.39	8.04	7.04	0.798
2005	45.37	190.19	47.59	181.85	160.92	10.77	8.23	0.825
2006	59.20	218.86	55.26	213.17	177.71	10.62	9.39	0.852
2007	57.94	238.56	61.74	243.27	220.66	11.46	8.71	0.876
2008	67.81	327.12	83.43	306.86	264.41	12.37	9.39	0.909
2009	78.28	197.66	62.49	204.39	217.46	9.55	8.37	0.906
2010	87.13	263.59	81.10	251.24	249.07	8.54	8.79	0.921
2011	91.68	324.42	109.46	331.56	278.20	8.15	7.83	0.950
2012	90.87	341.77	115.43	346.55	273.09	6.87	6.69	0.970
2013	83.79	332.01	105.87	351.41	267.88	7.39	6.59	0.984
2014	81.79	312.40	92.73	332.64	283.50	8.13	6.58	1.000

Table 4-3b. (in \$/million Btu)

Year	Coal	Distillate ¹	Residual	Kerosene	Propane	Natural Gas	Electricity	GDP Deflator ²
	\$/MMBtu	\$/MMBtu	\$/MMBtu	\$/MMBtu	\$/MMBtu	\$/MMBtu	\$/MMBtu	2014=1
2000	1.63	7.60	4.60	8.26	12.67	5.95	15.75	0.727
2001	1.66	6.61	4.07	6.73	13.01	7.47	16.28	0.748
2002	1.92	6.39	4.12	6.03	12.31	5.40	15.17	0.760
2003	1.81	7.79	5.44	8.13	15.11	7.15	20.92	0.777
2004	1.96	9.20	5.36	10.22	17.11	7.84	20.63	0.798
2005	2.27	13.73	7.57	13.47	18.67	10.48	24.11	0.825
2006	2.97	15.84	8.79	15.79	20.71	10.33	27.53	0.852
2007	2.91	17.32	9.82	18.02	24.16	11.16	25.53	0.876
2008	3.44	23.77	13.27	22.73	28.95	12.04	27.53	0.909
2009	4.01	14.36	9.94	15.14	23.81	9.32	24.54	0.906
2010	4.44	19.16	12.90	18.61	27.27	8.35	25.76	0.921
2011	4.74	23.59	17.41	24.56	30.46	7.97	22.96	0.950
2012	4.73	24.86	18.36	25.67	29.90	6.70	19.62	0.970
2013	4.37	24.15	16.84	26.03	29.33	7.19	19.30	0.984
2014	4.24	22.74	14.75	24.64	31.04	7.88	19.28	1.000

¹ Home heating oil.

² To convert prices to 2014 dollars, divide the selected price by the deflator factor in the same row.

**New York State
Transportation Energy Prices
in Nominal Dollars,
2000–2014**

Figure 4-4

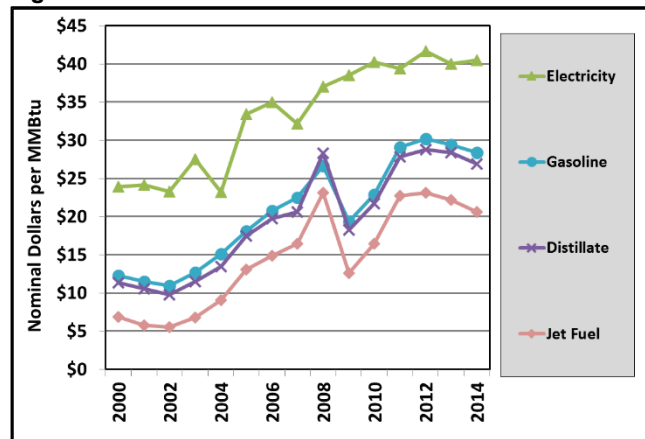


Table 4-4a. (in physical units)

Year	Motor Gasoline	Distillate ¹	Jet Fuel ²	Residual ³	Electricity ⁴	GDP Deflator ⁵
	Cents/Gal.	Cents/Gal.	Cents/Gal.	\$/bbl	Cents/kWh	2014=1
2000	152.32	156.97	93.15	25.78	8.15	0.727
2001	143.26	145.89	78.17	19.93	8.25	0.748
2002	135.49	135.92	74.79	21.82	7.95	0.760
2003	156.96	159.19	91.26	28.48	9.38	0.777
2004	187.36	186.73	122.31	29.61	7.92	0.798
2005	224.38	242.14	176.85	42.63	11.40	0.825
2006	256.71	273.29	201.02	49.10	11.94	0.852
2007	276.04	284.29	222.21	49.35	10.97	0.876
2008	325.62	389.19	312.26	75.95	12.64	0.909
2009	235.25	251.34	170.64	51.80	13.13	0.906
2010	277.23	298.94	221.81	68.28	13.74	0.921
2011	351.50	382.45	307.40	93.11	13.45	0.950
2012	363.93	395.24	312.66	96.82	14.20	0.970
2013	354.58	389.88	299.03	97.57	13.65	0.984
2014	341.67	369.97	278.24	82.93	13.82	1.000

Table 4-4b. (in \$/million Btu)

Year	Motor Gasoline	Distillate ¹	Jet Fuel ²	Residual ³	Electricity ⁴	GDP Deflator ⁵
	\$/MMBtu	\$/MMBtu	\$/MMBtu	\$/MMBtu	\$/MMBtu	2014=1
2000	12.27	11.33	6.90	4.10	23.90	0.727
2001	11.54	10.53	5.79	3.17	24.18	0.748
2002	10.92	9.81	5.54	3.47	23.29	0.760
2003	12.67	11.49	6.76	4.53	27.49	0.777
2004	15.13	13.48	9.06	4.71	23.21	0.798
2005	18.13	17.48	13.10	6.78	33.40	0.825
2006	20.77	19.78	14.89	7.81	34.98	0.852
2007	22.49	20.64	16.46	7.85	32.14	0.876
2008	26.68	28.28	23.13	12.08	37.05	0.909
2009	19.37	18.26	12.64	8.24	38.49	0.906
2010	22.93	21.73	16.43	10.86	40.28	0.921
2011	29.13	27.81	22.77	14.81	39.41	0.950
2012	30.19	28.75	23.16	15.40	41.63	0.970
2013	29.42	28.36	22.15	15.52	40.01	0.984
2014	28.36	26.93	20.61	13.19	40.49	1.000

¹ Diesel

² Kerosene-based

³ Bunker fuel

⁴ Railroad use

⁵ To convert prices to 2014 dollars, divide the selected price by the deflator factor in the same row.

5 New York State Energy Expenditures

This section presents the estimated costs of net energy consumed by sector and fuel type in nominal and constant 2014 dollars for the following selected years: 2000, 2005, and 2010 through 2014. Estimated costs were derived by multiplying quantities of fuels consumed, in TBtu, by their respective prices. Out-of-state energy expenditure estimates by fuel type are provided for 2000 through 2014 in both nominal and constant 2014 dollars.

5.1 Key Observations about 2014 New York State Energy Expenditures Data

- Cumulative heating degree-days were 4.6 percent higher in 2014 compared to 2013.
- In nominal dollars, the State's 2014 estimated energy bill of \$66.5 billion was up 2.7 percent from 2013, and 71.9 percent more than the \$38.7 billion spent in 2000.
- In constant 2014 dollars, the State's estimated energy bill increased \$0.7 billion (1.1 percent) from 2013, and was \$13.3 billion (25.1 percent) greater than in 2000.
- NYS residents spent \$20.1 billion for household energy, which was a 7.6 percent increase from the 2013 level in nominal dollars and 5.9 percent higher in constant 2014 dollars.
- The total commercial customer energy bill was \$16.3 billion, which was 2.2 percent higher than 2013 in nominal dollars and 0.6 percent higher in constant 2014 dollars.
- Industrial customers paid \$2.4 billion for energy, which was a 0.6 percent increase from 2013 levels in nominal dollars and 0.1 percent lower in constant 2014 dollars.
- The annual energy bill for transporting people and goods was \$27.7 billion, a 0.1 percent decrease from 2013 levels in nominal dollars and 1.7 percent lower in constant 2014 dollars.
- From 2013 to 2014, statewide expenditures decreased 0.7 percent for petroleum, but increased 4.9 percent for electricity and 10.9 percent for natural gas in nominal dollars.
- In nominal dollars, the State's 2014 out of state estimated energy bill of \$38.6 billion increased 2.1 percent from 2013, and 116.2 percent more than the \$17.8 billion spent in 2000.
- In constant 2014 dollars, the State's out-of-state estimated energy bill increased \$0.2 billion (0.5 percent) from 2013, and was \$14.0 billion (57.2 percent) greater than in 2000.

**New York State
Energy Expenditure Estimates
by Fuel Type and Sector
in Nominal Dollars,
2000–2014**

Figure 5-1

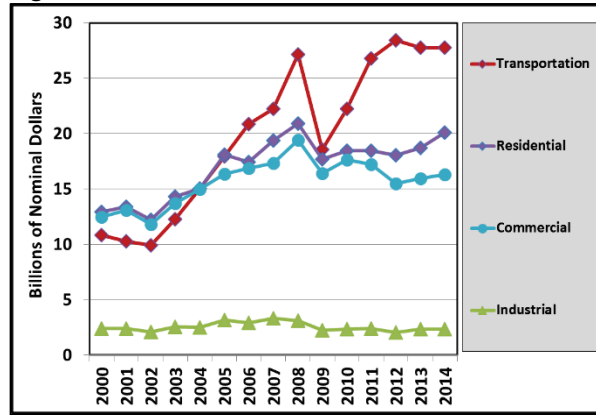


Table 5-1. (in million dollars)

	2000	2005	2010	2011	2012	2013	2014
Residential							
Coal	\$0.9	\$1.7	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Petroleum	\$2,707.8	\$3,815.3	\$3,304.6	\$3,533.7	\$4,300.6	\$3,718.3	\$4,109.9
Distillate	\$2,218.1	\$3,226.4	\$2,500.8	\$2,751.2	\$3,633.7	\$2,965.4	\$3,129.8
Kerosene	\$125.5	\$198.8	\$134.6	\$115.8	\$61.4	\$66.4	\$113.6
LPG	\$364.2	\$390.1	\$669.2	\$666.7	\$605.6	\$686.6	\$866.5
Natural Gas	\$3,945.6	\$6,049.1	\$5,483.3	\$5,397.7	\$4,637.7	\$5,199.9	\$5,746.1
Electricity	\$6,010.5	\$7,945.0	\$9,548.3	\$9,356.9	\$8,929.9	\$9,542.8	\$10,031.4
Wood	\$288.9	\$276.0	\$127.5	\$156.6	\$162.7	\$221.7	\$216.2
Total	\$12,953.6	\$18,087.1	\$18,463.8	\$18,444.9	\$18,030.9	\$18,682.7	\$20,103.6
Commercial							
Coal	\$3.7	\$7.7	\$0.5	\$0.6	\$0.0	\$0.0	\$0.0
Petroleum	\$1,101.1	\$2,054.2	\$1,886.4	\$2,452.2	\$1,925.5	\$1,825.9	\$1,309.4
Distillate	\$700.7	\$1,432.1	\$1,074.3	\$1,472.1	\$1,280.0	\$1,331.9	\$1,060.1
Residual	\$272.7	\$479.1	\$635.5	\$775.9	\$489.0	\$332.3	\$78.5
Kerosene	\$50.7	\$68.5	\$20.8	\$26.8	\$10.0	\$4.7	\$9.1
LPG	\$76.9	\$74.5	\$155.9	\$177.4	\$146.5	\$157.0	\$161.7
Natural Gas	\$2,844.0	\$3,254.4	\$3,126.7	\$2,713.8	\$2,120.0	\$2,405.7	\$2,659.6
Electricity	\$8,519.8	\$11,029.8	\$12,600.6	\$12,078.1	\$11,446.1	\$11,721.6	\$12,339.7
Total	\$12,468.5	\$16,346.1	\$17,614.1	\$17,244.8	\$15,491.6	\$15,953.2	\$16,308.7
Industrial							
Coal	\$119.8	\$90.5	\$113.0	\$122.7	\$114.3	\$94.2	\$79.3
Petroleum	\$313.8	\$544.3	\$398.9	\$600.1	\$514.9	\$470.2	\$400.2
Distillate	\$145.3	\$269.2	\$251.8	\$382.7	\$359.1	\$317.1	\$262.8
Residual	\$58.0	\$63.6	\$41.7	\$136.2	\$66.7	\$75.3	\$51.2
Kerosene	\$7.1	\$51.1	\$57.8	\$22.8	\$21.0	\$12.4	\$21.4
LPG	\$103.5	\$160.3	\$47.6	\$58.4	\$68.0	\$65.4	\$64.8
Natural Gas	\$596.4	\$876.5	\$649.9	\$619.1	\$515.6	\$596.3	\$689.5
Electricity	\$1,388.5	\$1,640.9	\$1,184.8	\$1,051.3	\$917.5	\$1,179.5	\$1,184.3
Total	\$2,418.5	\$3,152.2	\$2,346.6	\$2,393.2	\$2,062.3	\$2,340.1	\$2,353.3
Transportation							
Petroleum	\$10,613.0	\$17,599.8	\$21,844.2	\$26,382.9	\$28,042.2	\$27,384.0	\$27,343.5
Distillate	\$1,519.3	\$2,903.0	\$3,546.3	\$4,583.4	\$4,580.2	\$4,322.2	\$4,361.9
Residual	\$209.5	\$242.3	\$825.7	\$480.3	\$482.9	\$614.7	\$644.3
Motor Gasoline	\$8,497.9	\$12,944.3	\$16,078.7	\$19,298.1	\$19,550.0	\$18,982.0	\$18,905.8
Jet Fuel	\$374.9	\$1,504.9	\$1,379.1	\$2,000.1	\$3,395.8	\$3,432.7	\$3,392.0
LPG	\$11.4	\$5.4	\$14.5	\$21.0	\$33.3	\$32.5	\$39.5
Electricity	\$224.5	\$324.4	\$401.6	\$400.8	\$390.3	\$391.1	\$394.2
Total	\$10,837.5	\$17,924.2	\$22,245.8	\$26,783.8	\$28,432.5	\$27,775.1	\$27,737.7
Total							
Coal	\$124.3	\$99.8	\$113.4	\$123.3	\$114.3	\$94.2	\$79.3
Petroleum	\$14,735.7	\$24,013.7	\$27,434.3	\$32,968.9	\$34,783.2	\$33,398.5	\$33,163.0
Distillate	\$4,583.4	\$7,830.7	\$7,373.2	\$9,189.4	\$9,853.0	\$8,936.5	\$8,814.6
Residual	\$540.1	\$785.0	\$1,502.9	\$1,392.4	\$1,038.7	\$1,022.3	\$774.0
Motor Gasoline	\$8,497.9	\$12,944.3	\$16,078.7	\$19,298.1	\$19,550.0	\$18,982.0	\$18,905.8
Kerosene	\$183.3	\$318.5	\$213.2	\$165.4	\$92.4	\$83.5	\$144.1
Jet Fuel	\$374.9	\$1,504.9	\$1,379.1	\$2,000.1	\$3,395.8	\$3,432.7	\$3,392.0
LPG	\$556.1	\$630.3	\$887.2	\$923.4	\$853.4	\$941.5	\$1,132.6
Natural Gas	\$7,386.0	\$10,180.0	\$9,259.9	\$8,730.6	\$7,273.3	\$8,201.9	\$9,095.2
Electricity	\$16,143.3	\$20,940.1	\$23,735.2	\$22,887.2	\$21,683.8	\$22,834.9	\$23,949.5
Wood	\$288.9	\$276.0	\$127.5	\$156.6	\$162.7	\$221.7	\$216.2
Total	\$38,678.2	\$55,509.6	\$60,670.4	\$64,866.7	\$64,017.3	\$64,751.2	\$66,503.2

**New York State
Energy Expenditure Estimates
by Fuel Type and Sector
in Constant 2014 Dollars,
2000–2014**

Figure 5-2

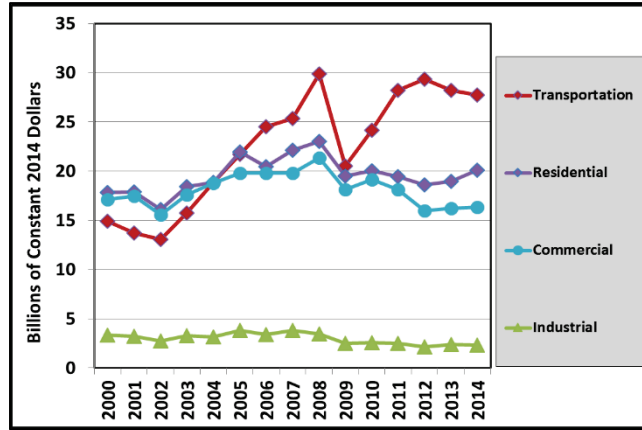


Table 5-2. (in million dollars)

	2000	2005	2010	2011	2012	2013	2014
Residential							
Coal	\$1.2	\$2.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Petroleum	\$3,722.6	\$4,624.8	\$3,587.7	\$3,719.0	\$4,434.4	\$3,778.6	\$4,109.9
Distillate	\$3,049.4	\$3,910.9	\$2,715.0	\$2,895.5	\$3,746.7	\$3,013.5	\$3,129.8
Kerosene	\$172.5	\$241.0	\$146.1	\$121.9	\$63.3	\$67.4	\$113.6
LPG	\$500.7	\$472.9	\$726.6	\$701.6	\$624.4	\$697.7	\$866.5
Natural Gas	\$5,424.2	\$7,332.5	\$5,953.1	\$5,680.8	\$4,782.0	\$5,284.2	\$5,746.1
Electricity	\$8,263.0	\$9,630.7	\$10,366.3	\$9,847.6	\$9,207.7	\$9,697.6	\$10,031.4
Wood	\$397.2	\$334.6	\$138.4	\$164.9	\$167.7	\$225.3	\$216.2
Total	\$17,808.3	\$21,924.5	\$20,045.5	\$19,412.3	\$18,591.8	\$18,985.8	\$20,103.6
Commercial							
Coal	\$5.0	\$9.3	\$0.5	\$0.7	\$0.0	\$0.0	\$0.0
Petroleum	\$1,513.7	\$2,490.0	\$2,048.1	\$2,580.8	\$1,985.4	\$1,855.6	\$1,309.4
Distillate	\$963.3	\$1,736.0	\$1,166.3	\$1,549.3	\$1,319.8	\$1,353.5	\$1,060.1
Residual	\$374.9	\$580.7	\$689.9	\$816.6	\$504.2	\$337.7	\$78.5
Kerosene	\$69.7	\$83.1	\$22.6	\$28.2	\$10.3	\$4.8	\$9.1
LPG	\$105.8	\$90.3	\$169.3	\$186.7	\$151.0	\$159.6	\$161.7
Natural Gas	\$3,909.9	\$3,944.9	\$3,394.5	\$2,856.1	\$2,185.9	\$2,444.7	\$2,659.6
Electricity	\$11,712.7	\$13,370.0	\$13,680.0	\$12,711.5	\$11,802.2	\$11,911.7	\$12,339.7
Total	\$17,141.4	\$19,814.2	\$19,123.1	\$18,149.2	\$15,973.5	\$16,212.0	\$16,308.7
Industrial							
Coal	\$164.7	\$109.7	\$122.7	\$129.1	\$117.9	\$95.7	\$79.3
Petroleum	\$431.4	\$659.8	\$433.1	\$631.5	\$530.9	\$477.8	\$400.2
Distillate	\$199.7	\$326.4	\$273.4	\$402.8	\$370.3	\$322.2	\$262.8
Residual	\$79.7	\$77.1	\$45.3	\$143.3	\$68.8	\$76.5	\$51.2
Kerosene	\$9.7	\$62.0	\$62.8	\$24.0	\$21.7	\$12.6	\$21.4
LPG	\$142.3	\$194.4	\$51.7	\$61.5	\$70.1	\$66.5	\$64.8
Natural Gas	\$819.9	\$1,062.5	\$705.6	\$651.6	\$531.7	\$606.0	\$689.5
Electricity	\$1,908.9	\$1,989.0	\$1,286.3	\$1,106.5	\$946.0	\$1,198.6	\$1,184.3
Total	\$3,324.9	\$3,821.0	\$2,547.7	\$2,518.7	\$2,126.5	\$2,378.1	\$2,353.3
Transportation							
Petroleum	\$14,590.5	\$21,333.9	\$23,715.6	\$27,766.6	\$28,914.5	\$27,828.3	\$27,343.5
Distillate	\$2,088.7	\$3,518.9	\$3,850.1	\$4,823.8	\$4,722.7	\$4,392.3	\$4,361.9
Residual	\$287.9	\$293.7	\$896.4	\$505.5	\$497.9	\$624.6	\$644.3
Motor Gasoline	\$11,682.7	\$15,690.6	\$17,456.1	\$20,310.2	\$20,158.2	\$19,289.9	\$18,905.8
Jet Fuel	\$515.4	\$1,824.1	\$1,497.2	\$2,105.0	\$3,501.4	\$3,488.4	\$3,392.0
LPG	\$15.7	\$6.5	\$15.7	\$22.1	\$34.3	\$33.0	\$39.5
Electricity	\$308.7	\$393.2	\$436.0	\$421.9	\$402.5	\$397.4	\$394.2
Total	\$14,899.1	\$21,727.1	\$24,151.5	\$28,188.4	\$29,317.0	\$28,225.7	\$27,737.7
Total							
Coal	\$170.9	\$120.9	\$123.1	\$129.8	\$117.9	\$95.7	\$79.3
Petroleum	\$20,258.3	\$29,108.6	\$29,784.4	\$34,698.0	\$35,865.2	\$33,940.3	\$33,163.0
Distillate	\$6,301.1	\$9,492.1	\$8,004.8	\$9,671.4	\$10,159.5	\$9,081.5	\$8,814.6
Residual	\$742.6	\$951.5	\$1,631.7	\$1,465.4	\$1,071.0	\$1,038.9	\$774.0
Motor Gasoline	\$11,682.7	\$15,690.6	\$17,456.1	\$20,310.2	\$20,158.2	\$19,289.9	\$18,905.8
Kerosene	\$251.9	\$386.1	\$231.5	\$174.1	\$95.3	\$84.8	\$144.1
Jet Fuel	\$515.4	\$1,824.1	\$1,497.2	\$2,105.0	\$3,501.4	\$3,488.4	\$3,392.0
LPG	\$764.5	\$764.1	\$963.2	\$971.9	\$879.9	\$956.8	\$1,132.6
Natural Gas	\$10,154.0	\$12,339.8	\$10,053.2	\$9,188.5	\$7,499.6	\$8,334.9	\$9,095.2
Electricity	\$22,193.3	\$25,382.9	\$25,768.6	\$24,087.5	\$22,358.3	\$23,205.3	\$23,949.5
Wood	\$397.2	\$334.6	\$138.4	\$164.9	\$167.7	\$225.3	\$216.2
Total	\$53,173.7	\$67,286.8	\$65,867.8	\$68,268.6	\$66,008.7	\$65,801.5	\$66,503.2

**New York Out of State
Energy Expenditure Estimates
by Fuel Type
in Nominal and
Constant 2014 Dollars
2000–2014**

Figure 5-3

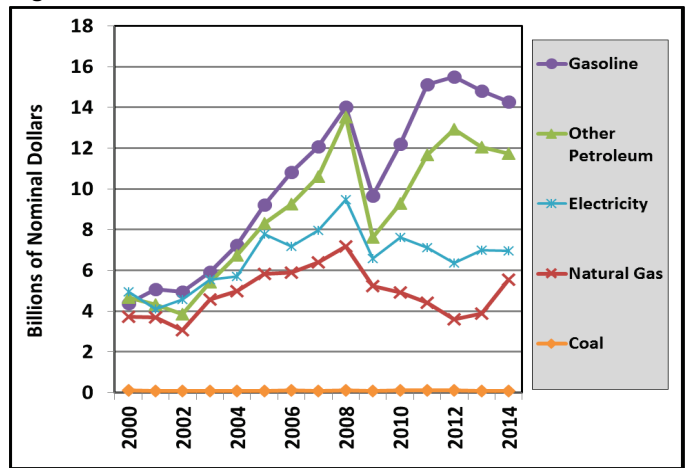


Table 5-3a. (in million nominal dollars)

Year	Coal	Natural Gas	Gasoline	Other Petroleum	Electricity	Total
2000	\$ 105.7	\$ 3,722.0	\$ 4,380.7	\$ 4,678.3	\$ 4,962.3	\$ 17,849.0
2001	\$ 93.4	\$ 3,677.7	\$ 5,075.4	\$ 4,320.3	\$ 4,097.3	\$ 17,264.1
2002	\$ 75.8	\$ 3,072.6	\$ 4,962.2	\$ 3,834.6	\$ 4,558.9	\$ 16,504.1
2003	\$ 68.1	\$ 4,563.5	\$ 5,913.9	\$ 5,410.8	\$ 5,531.0	\$ 21,487.3
2004	\$ 71.8	\$ 4,991.0	\$ 7,237.7	\$ 6,740.9	\$ 5,699.1	\$ 24,740.4
2005	\$ 84.8	\$ 5,821.2	\$ 9,221.8	\$ 8,302.0	\$ 7,766.2	\$ 31,196.0
2006	\$ 102.6	\$ 5,886.1	\$ 10,821.0	\$ 9,242.1	\$ 7,172.1	\$ 33,223.8
2007	\$ 93.8	\$ 6,383.5	\$ 12,085.1	\$ 10,603.8	\$ 7,955.4	\$ 37,121.5
2008	\$ 99.0	\$ 7,182.5	\$ 14,013.7	\$ 13,510.8	\$ 9,474.8	\$ 44,280.8
2009	\$ 83.1	\$ 5,242.7	\$ 9,654.7	\$ 7,607.6	\$ 6,570.7	\$ 29,158.8
2010	\$ 96.4	\$ 4,930.1	\$ 12,214.4	\$ 9,276.1	\$ 7,629.3	\$ 34,146.3
2011	\$ 104.8	\$ 4,403.7	\$ 15,122.9	\$ 11,656.5	\$ 7,124.8	\$ 38,412.7
2012	\$ 97.2	\$ 3,590.6	\$ 15,504.0	\$ 12,938.3	\$ 6,369.6	\$ 38,499.7
2013	\$ 80.1	\$ 3,867.4	\$ 14,816.5	\$ 12,039.6	\$ 6,983.7	\$ 37,787.3
2014	\$ 67.4	\$ 5,538.0	\$ 14,288.0	\$ 11,730.5	\$ 6,958.6	\$ 38,582.5

Table 5-3b. (in million constant 2014 dollars)

Year	Coal	Natural Gas	Gasoline	Other Petroleum	Electricity	Total
2000	\$ 145.3	\$ 5,116.9	\$ 6,022.5	\$ 6,431.6	\$ 6,822.0	\$ 24,538.3
2001	\$ 124.9	\$ 4,916.1	\$ 6,784.5	\$ 5,775.2	\$ 5,477.0	\$ 23,077.5
2002	\$ 99.7	\$ 4,043.3	\$ 6,530.0	\$ 5,046.1	\$ 5,999.2	\$ 21,718.3
2003	\$ 87.6	\$ 5,871.5	\$ 7,608.9	\$ 6,961.6	\$ 7,116.2	\$ 27,645.8
2004	\$ 89.9	\$ 6,254.9	\$ 9,070.5	\$ 8,447.9	\$ 7,142.3	\$ 31,005.5
2005	\$ 102.8	\$ 7,056.2	\$ 11,178.4	\$ 10,063.5	\$ 9,413.9	\$ 37,814.7
2006	\$ 120.5	\$ 6,912.0	\$ 12,706.9	\$ 10,852.8	\$ 8,422.1	\$ 39,014.3
2007	\$ 107.1	\$ 7,288.4	\$ 13,798.3	\$ 12,107.0	\$ 9,083.2	\$ 42,384.1
2008	\$ 108.9	\$ 7,897.5	\$ 15,408.7	\$ 14,855.8	\$ 10,418.0	\$ 48,688.9
2009	\$ 91.7	\$ 5,785.2	\$ 10,653.7	\$ 8,394.8	\$ 7,250.6	\$ 32,176.0
2010	\$ 104.7	\$ 5,352.4	\$ 13,260.8	\$ 10,070.8	\$ 8,282.8	\$ 37,071.5
2011	\$ 110.3	\$ 4,634.7	\$ 15,916.0	\$ 12,267.8	\$ 7,498.5	\$ 40,427.3
2012	\$ 100.2	\$ 3,702.3	\$ 15,986.3	\$ 13,340.8	\$ 6,567.7	\$ 39,697.3
2013	\$ 81.4	\$ 3,930.1	\$ 15,056.9	\$ 12,234.9	\$ 7,097.0	\$ 38,400.3
2014	\$ 67.4	\$ 5,538.0	\$ 14,288.0	\$ 11,730.5	\$ 6,958.6	\$ 38,582.5

6 New York State's Sources of Energy

NYS is the eighth largest energy user of all the states. Nevertheless, households, businesses, industries and electric utilities in the State rely largely on fuels produced elsewhere. Eleven percent of the total primary energy requirements were met from in-State resources in 2014. Hydroelectric power is produced at various locations throughout the State and in 2014, NYS produced more hydroelectric power than any other state east of the Rocky Mountains. NYS is currently the 13th largest state in the U.S. in installed wind power capacity through the end of 2015 with more than 1,750 MW of installed wind capacity. Crude oil and natural gas production are found in the western region of the state. The “Other” category described in this section primarily consists of wood, waste, landfill gas, solar, geothermal, and ethanol.

6.1 Key Observations about New York State Sources of Energy in 2014

- In-State resources produced 10.8 percent of the State's total primary energy requirement, including 6.3 percent from hydropower and 2.6 percent from biofuels including ethanol, waste, wood, and landfill gas, collectively. Wind, solar, and geothermal renewable resources met 1.3 percent of the State's total primary energy requirement. Petroleum and natural gas production accounted for 0.6 percent of the State's total primary energy requirement.
- Hydroelectric power and energy collectively from biofuels including ethanol, waste, wood, and landfill gas account for 58.2 percent and 24.4 percent, respectively, of the State's in-State primary energy production. Wind, solar, and geothermal resources accounted for 11.7 percent of the State's in-State primary energy production while crude oil and natural gas constitute the remaining 5.7 percent.
- In-state crude oil and natural gas production represent 0.2 percent and 1.5 percent, respectively, of the State's use of these fuels. NYS consumers rely on external sources for 100 percent of refined petroleum fuel products because there are no petroleum refineries in the state.
- In-state production of natural gas decreased 14.1 percent from 2013 to 2014.
- In 2014, in-State natural gas production was 20.2 billion cubic feet, and accounted for 0.6 percent of total statewide primary energy use.
- Energy production from wind, solar, and geothermal resources increased 14.9 percent from 2013 to 2014 while collective production of biofuels including ethanol, waste, wood, and landfill gas increased 1.4 percent.

**New York State
Primary Energy Production
by Fuel Type,¹
2000–2014**

Figure 6-1

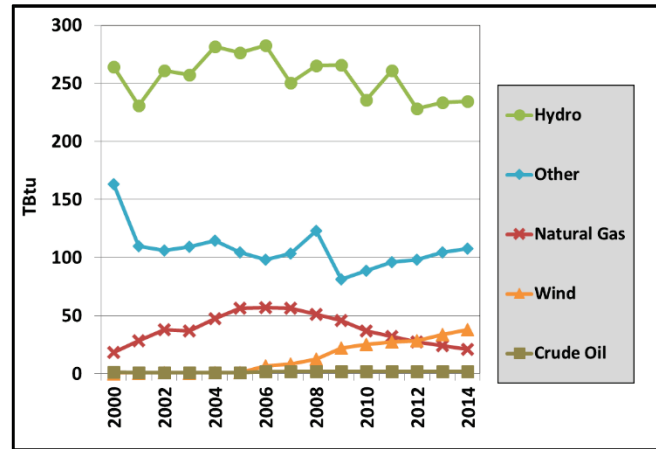


Table 6-1a. (in physical units)

Year	Hydro Electricity ²	Natural Gas	Crude Oil	Ethanol	Distributed Solar	Utility Solar	Total Solar
	GWh	Bcf	Mbbl	Mbbl	GWh	GWh	GWh
2000	26,753	17.8	210	0	n.a.	n.a.	n.a.
2001	23,152	28.0	166	0	n.a.	n.a.	n.a.
2002	26,213	37.1	165	0	n.a.	n.a.	n.a.
2003	25,798	36.0	144	0	n.a.	n.a.	n.a.
2004	28,153	46.9	170	0	n.a.	n.a.	n.a.
2005	27,583	55.2	197	0	n.a.	n.a.	n.a.
2006	28,422	55.2	319	0	n.a.	n.a.	n.a.
2007	25,557	54.9	387	100	n.a.	n.a.	n.a.
2008	27,501	50.3	397	2,064	n.a.	n.a.	n.a.
2009	27,945	44.8	324	1,189	n.a.	n.a.	n.a.
2010	25,103	35.8	387	2,672	n.a.	n.a.	n.a.
2011	28,355	31.1	391	4,011	n.a.	7	7
2012	25,303	26.4	353	3,795	n.a.	53	53
2013	26,397	23.5	313	3,991	n.a.	67	67
2014	26,823	20.2	341	4,111	291	71	362

Table 6-1b. (in trillion Btu)

Year	Hydro Electricity ²	Natural Gas	Crude Oil	Biofuels ^{3,4,5}	Wind	Solar ⁴	Geothermal ⁴	Total Production
	TBtu	TBtu	TBtu	TBtu	TBtu	TBtu		TBtu
2000	264.3	18.3	1.2	162.2	0.1	0.5	0.3	447.0
2001	230.7	28.6	1.0	109.0	0.2	0.5	0.3	370.3
2002	260.8	37.7	1.0	105.1	0.8	0.6	0.4	406.3
2003	257.1	37.1	0.8	108.5	0.4	0.6	0.5	405.0
2004	281.6	47.2	1.0	113.2	1.2	0.7	0.5	445.5
2005	276.4	56.6	1.2	102.8	1.0	0.9	0.6	439.6
2006	282.4	57.2	1.8	96.1	6.5	1.2	0.7	445.8
2007	250.1	56.2	2.2	101.3	8.2	1.4	0.7	420.2
2008	265.3	51.4	2.2	120.7	12.3	1.7	0.8	454.4
2009	265.8	45.8	1.9	78.2	22.1	2.0	1.0	416.8
2010	235.7	36.6	2.2	85.2	25.3	2.6	1.1	388.7
2011	260.7	31.9	2.2	90.9	27.5	3.6	1.3	418.1
2012	228.0	27.2	2.1	91.6	28.4	5.1	1.2	383.7
2013	233.6	24.2	1.8	96.9	33.7	6.2	1.2	397.7
2014	234.7	20.8	2.0	98.3	37.7	8.4	1.2	403.1

¹ Includes energy produced from resources indigenous to NYS.
² Includes both conventional and pumped storage hydro.
³ Includes primarily wood, waste, landfill gas, and ethanol.
⁴ Consumption used as proxy.
⁵ Ethanol TBtu are based on biomass inputs (feedstock) for the production of fuel ethanol.

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Appendix A-1

New York State Estimated Greenhouse Gas Emissions¹ from Fuel Combustion, 1990, 2000–2014

Figure A-1. Annual NYS GHG Emissions from Fuel Combustion

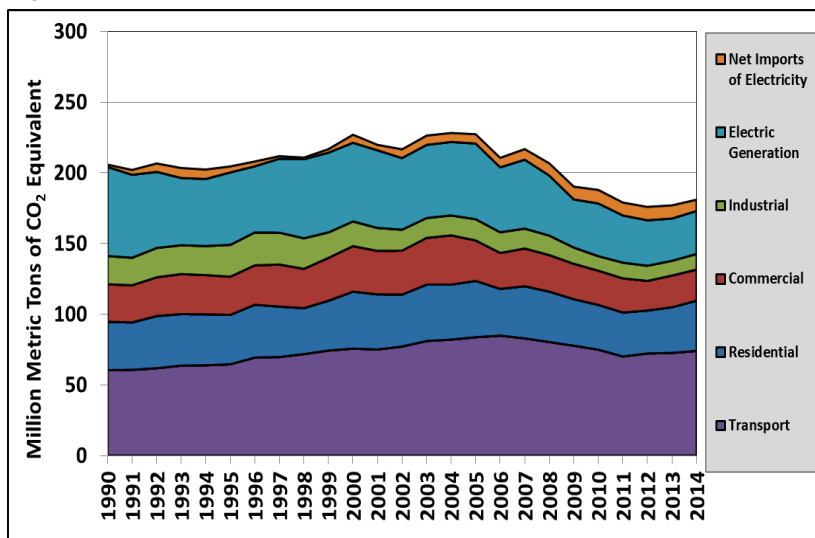


Table A-1. GHG Emissions by Sector (in million metric tons carbon dioxide equivalent)^{2,3,4}

Year	Residential	Commercial	Industrial	Transportation	Electric Generation	Net Imports of Electricity ⁵	Total ⁶
1990	34.2	26.5	20.0	60.4	63.0	1.6	205.8
.....							
2000	40.2	32.2	17.5	75.7	55.6	5.7	226.9
2001	39.0	30.8	16.2	75.0	54.9	3.8	219.8
2002	36.7	31.1	14.8	77.1	50.7	6.2	216.6
2003	39.8	33.1	14.1	81.0	51.7	6.6	226.3
2004	38.9	34.8	14.1	82.0	52.0	6.4	228.2
2005	39.8	28.6	15.0	83.7	53.6	6.6	227.3
2006	33.1	25.4	14.6	84.8	45.9	6.7	210.6
2007	36.9	26.7	14.1	82.9	48.8	7.5	216.8
2008	35.6	25.9	13.8	80.3	42.5	8.6	206.7
2009	32.9	25.1	11.5	77.7	34.0	9.0	190.2
2010	31.7	24.2	10.3	74.9	37.3	9.6	187.9
2011	31.1	24.2	11.1	70.1	33.4	9.1	178.9
2012	30.4	20.9	10.7	72.2	32.2	9.5	175.9
2013	32.3	22.4	10.4	72.6	29.9	9.3	177.0
2014	35.5	22.0	11.0	74.0	30.4	8.0	181.0
% Change 1990-2014	3.7%	-17.0%	-44.8%	22.5%	-51.7%	389.1%	-12.0%

¹ Total Greenhouse Gas (GHG) emissions from fuel combustion include carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O).
² Total GHG emissions are expressed in millions of metric tons of carbon dioxide equivalent. One ton equals approximately 2,204 pounds. “MM” equals one million. To convert emissions to short tons, multiply by a factor of 1.1023.
³ Emissions levels for 1990 form the basis of the U.S. greenhouse gas inventory and it was the base year for the United Nations Framework Convention on Climate Change’s Kyoto Protocol. Data for 1991–1999 can be found by clicking on the table above.
⁴ All data is subject to revision. Additional information on GHG emissions can be found in the Climate Action Plan (<http://www.dec.ny.gov/energy/80930.html>) and New York State Energy Plan (<http://www.nysenergyplan.com>).
⁵ GHG emissions from Net Imports of Electricity are based on estimated emissions factors for neighboring electric service territories. These values are not based upon any environmental attribute tracking system or reporting data.
⁶ In 2014 GHG emissions from fuel combustion represented 83 percent of total GHG emissions.

Appendix A-2

New York State Estimated CO₂ Emissions by Fuel Type^{1,2,3} from Fuel Combustion, 2014

Figure A-2. CO₂ Emissions from Fuel Combustion by Fuel Type^{1,2}

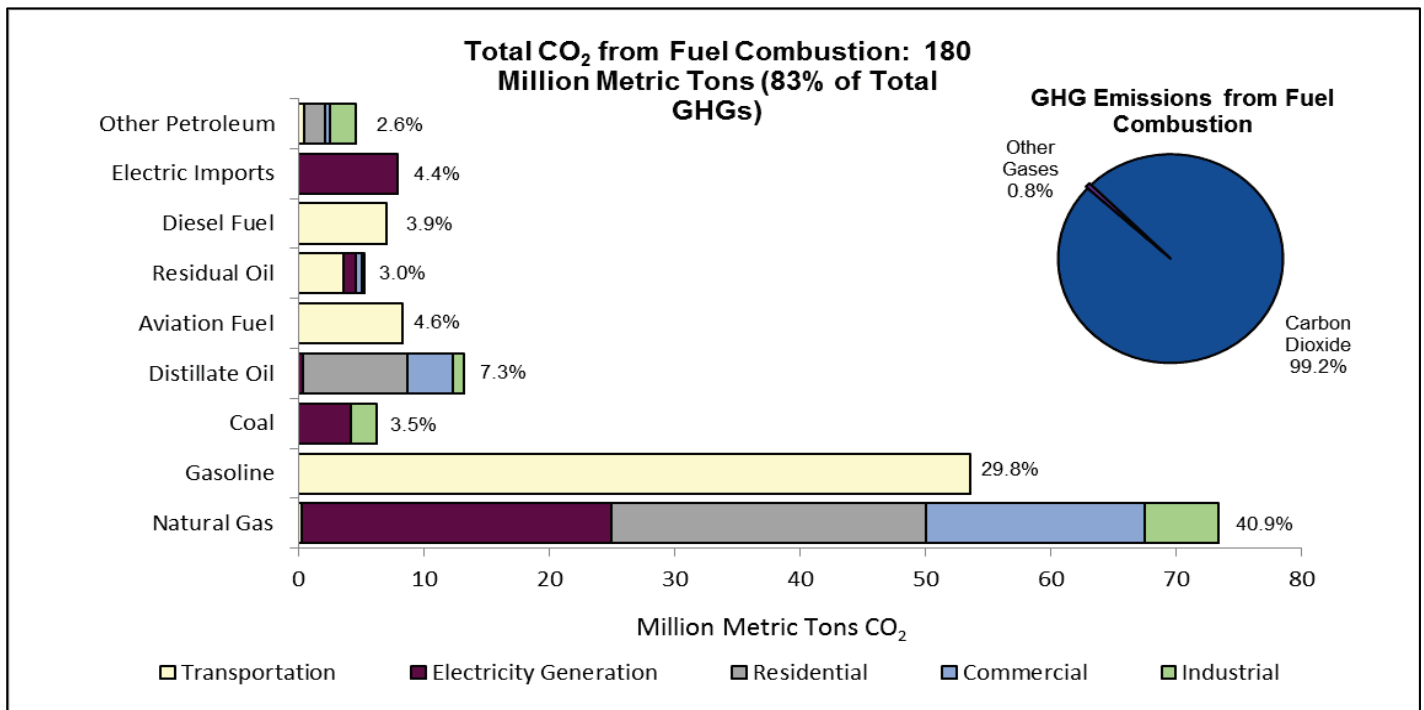


Table A-2. CO₂ Emissions from Fuel Combustion by Fuel Type (in million metric tons carbon dioxide)⁴

Fuel Type	Transportation	Electricity Generation	Residential	Commercial	Industrial	Total CO ₂ Emissions	Percent of Total CO ₂ Emissions
	(million metric tons CO ₂)						(%)
Other Petroleum	0.44	N/A	1.72	0.42	2.01	4.59	2.6
Net Imports of Electricity	N/A	7.96	N/A	N/A	N/A	7.96	4.4
Diesel Fuel (Distillate)	7.04	N/A	N/A	N/A	N/A	7.04	3.9
Residual Oil	3.60	1.05	N/A	0.40	0.26	5.31	3.0
Jet Fuel	8.32	N/A	N/A	N/A	N/A	8.32	4.6
Heating Oil (Distillate)	N/A	0.36	8.40	3.60	0.85	13.20	7.3
Coal	N/A	4.25	0.00	0.00	1.98	6.23	3.5
Gasoline	53.58	N/A	N/A	N/A	N/A	53.58	29.8
Natural Gas	0.30	24.70	25.07	17.51	5.87	73.45	40.9

¹ Emissions from fuel combustion by fuel type only include carbon dioxide (CO₂) emissions. These emissions comprise 99 percent of total GHG emissions from fuel combustion.

² In 2014 GHG emissions from fuel combustion represented 83 percent of total GHG emissions.

³ Additional information on GHG emissions can be found in the Climate Action Plan (<http://www.dec.ny.gov/energy/80930.html>) and NYS Energy Plan (<http://www.nysenergyplan.com>).

⁴ CO₂ emissions are expressed in millions of metric tons of carbon dioxide equivalent. One ton equals approximately 2,204 pounds. "MM" equals one million. To convert emissions to short tons, multiply by a factor of 1.1023.

Appendix B

New York State Household Consumption and Expenditures by End Use, 2009¹

Table B-1. Total Household Energy

	Households ² (MM)	Average per household using the fuel	
		Consumption	Expenditure
Electricity	7.2	6,578 kWh	\$1,161
Natural Gas	5.8	68 Mcf	\$1,010
Fuel Oil	2.3	501 gallons	\$1,275
Kerosene	0.2	235 Gallons	593
LPG ³	2.5	243 gallons	\$705
Wood	0.4	Q	Q

Table B-2. Space-Heating⁴

	Households ² (MM)	Average per Household using the fuel as main heating source	
		Consumption	Expenditure
Electricity	0.5	1,440 kWh	\$241
Natural Gas	4.1	59 Mcf	\$873
Fuel Oil	2.1	461 gallons	\$1,173
LPG ^{3,5}	0.2	847 gallons	\$2,406

Table B-3. Water-Heating

	Households ² (MM)	Average per Household using the fuel as water heating source	
		Consumption	Expenditure
Electricity	1.2	2,333kWh	\$398
Natural Gas	4.4	20 Mcf	\$299
Fuel Oil	1.3	120 gallons	\$305
LPG ³	0.2	175 gallons	\$545

Table B-4. Electric Air Conditioning

	Households ² (MM)	Average per Household	
		Consumption	Expenditure
Central Air	1.5	548 kWh	\$105
Room/Wall	3.9		

¹ Data in these tables represent site or delivered energy. Consumption and expenditures for biomass (e.g., wood), coal, solar, and outdoor propane grills are excluded. See RECS Terminology (<http://www.eia.gov/consumption/residential/terminology.cfm>) for further explanation of these terms.

² The 7.2 million households represent NYS single-family, mobile home, and multifamily housing units. Vacant housing units, seasonal units, second homes, military housing, and group quarters are excluded.

³ Propane

⁴ Some households may use multiple heating fuels. Averages include main (primary) and secondary space heating applications.

⁵ Propane usage and expenditure estimates for heating are from EIA's Short Term Energy and Winter Fuels Outlook for the Winter 2008–2009 period.

See Appendix D-1 and D-2 for estimate of number of households using the fuel as a primary heating source.

Q = Data not reported by the DOE's Energy Information Administration's Residential Energy Consumption Survey.

Appendix C

Estimated Annual Gasoline Sales by County in New York State, 2012–2014

Table C-1. (in thousand gallons)

County	2012	2013	2014
New York State	5,424,144	5,373,436	5,561,069
New York City	978,064	987,083	1,015,641
Rest of State	4,446,079	4,386,354	4,545,428
Albany	128,773	130,168	133,346
Alleghany	13,716	13,873	14,710
Broome	97,312	95,872	100,444
Cattaraugus	21,534	21,268	23,038
Cayuga	30,688	31,077	35,070
Chautauqua	40,877	37,399	35,898
Chemung	32,475	30,254	32,281
Chenango	21,239	20,444	20,906
Clinton	45,999	43,546	45,376
Columbia	33,185	32,661	35,291
Cortland	24,530	24,273	25,576
Delaware	20,706	20,930	22,069
Dutchess	111,016	100,123	104,094
Erie	339,391	356,154	352,098
Essex	16,502	17,532	20,394
Franklin	16,879	16,319	17,403
Fulton	22,308	22,700	25,897
Genesee	50,997	50,757	54,871
Greene	25,369	25,971	28,080
Hamilton	2,210	2,277	2,811
Herkimer	28,384	28,000	26,672
Jefferson	58,525	55,249	55,607
Lewis	10,728	11,403	12,792
Livingston	37,421	36,186	38,373
Madison	19,006	18,020	19,009
Monroe	280,692	278,573	280,493
Montgomery	37,296	38,270	40,514
Nassau	493,532	487,158	497,316
Niagara	74,715	77,473	75,881
Oneida	93,529	98,615	100,915
Onondaga	230,934	228,602	236,568
Ontario	63,340	60,546	62,288
Orange	169,837	158,245	164,798
Orleans	11,440	11,231	12,021
Oswego	52,459	51,180	52,038
Otsego	29,886	29,828	30,252
Putnam	45,606	46,629	48,540
Rensselaer	69,382	69,303	74,604
Rockland	51,405	49,103	50,915
St. Lawrence	34,032	33,988	43,907
Saratoga	117,032	104,634	110,111
Schenectady	70,320	67,284	71,920
Schoharie	13,261	13,075	13,614
Schuyler	8,440	8,193	8,537
Seneca	29,858	26,086	27,000
Steuben	50,977	48,439	51,575
Suffolk	626,796	637,062	660,495
Sullivan	24,104	22,543	29,661
Tioga	19,574	17,959	18,808
Tompkins	32,128	32,182	34,268
Ulster	91,536	86,014	81,326
Warren	44,655	40,390	42,186
Washington	16,304	15,474	16,853
Wayne	38,449	38,509	41,335
Westchester	250,777	243,345	259,440
Wyoming	16,488	16,569	17,365
Yates	7,525	7,399	7,778

Note: Individual county data for New York City are not available.

Estimated Annual Residential Energy Consumption by County in New York State, 2000–2014

Table C-2

Residential Energy Consumption	Natural Gas		Propane		Electricity		Distillate		Kerosene		Wood	
	Bcf		Mbbbl		GWh		Mbbbl		Mbbbl		MCords	
County	2014	2000	2014	2000	2014	2000	2014	2000	2014	2000	2014	2000
Albany	10.2	9.5	66	68	1,413	1,181	139	311	5	21	14	41
Allegany	1.3	1.4	51	46	129	119	15	39	1	3	22	101
Bronx	14.7	16.7	102	223	2,061	2,564	1,923	2,064	66	137	1	3
Broome	6.5	6.6	138	100	689	572	108	227	4	15	22	79
Cattaraugus	2.2	2.3	105	91	339	273	30	73	1	5	29	144
Cayuga	2.1	1.9	106	93	247	216	59	125	2	8	19	69
Chautauqua	5.0	5.0	109	96	557	461	16	41	1	3	25	123
Chemung	3.4	3.4	38	34	253	229	28	54	1	4	12	49
Chenango	0.4	0.4	66	51	231	173	80	174	3	12	24	98
Clinton	0.4	0.1	32	19	716	729	158	286	5	19	25	67
Columbia	0.4	0.4	59	31	305	301	167	279	6	19	16	54
Cortland	1.1	1.1	38	34	188	147	33	73	1	5	11	53
Delaware	0.3	0.2	56	53	182	147	103	197	4	13	31	116
Dutchess	3.6	2.7	120	84	1,147	954	659	1,065	22	71	25	65
Erie	42.5	41.8	158	153	1,725	1,510	75	130	3	9	25	108
Essex	0.1	0.0	46	30	214	192	98	187	3	12	21	58
Franklin	0.1	0.0	41	18	199	220	130	222	4	15	24	82
Fulton	1.2	1.1	48	37	143	118	77	148	3	10	17	57
Genesee	1.9	1.7	72	59	172	185	40	77	1	5	10	33
Greene	0.2	0.1	51	32	190	178	130	223	4	15	17	52
Hamilton	0.0	0.0	12	13	8	12	9	27	0	2	3	20
Herkimer	1.6	1.4	53	31	240	198	85	161	3	11	17	67
Jefferson	2.4	2.0	132	83	586	458	96	188	3	13	26	106
Kings	60.4	44.7	292	552	3,050	2,460	1,066	2,838	36	189	4	6
Lewis	0.2	0.0	36	22	75	59	51	105	2	7	25	126
Livingston	1.5	1.3	102	78	289	233	33	81	1	5	15	60
Madison	1.5	1.3	79	51	266	242	77	155	3	10	17	66
Monroe	31.3	29.4	116	103	3,325	2,915	91	213	3	14	15	74
Montgomery	1.1	1.1	24	22	141	132	61	119	2	8	11	33
Nassau	31.8	23.4	128	123	2,078	1,852	2,283	4,598	78	306	8	8
New York	22.2	21.3	176	235	7,435	5,130	1,870	3,126	64	208	1	4
Niagara	9.1	8.6	130	97	559	527	72	161	2	11	12	40
Oneida	6.9	6.4	113	83	746	686	193	375	7	25	32	121
Onondaga	17.7	17.3	141	115	2,229	1,989	102	185	3	12	18	82
Ontario	3.4	2.8	136	115	508	364	47	102	2	7	16	71
Orange	7.7	6.5	160	131	972	832	507	802	17	53	21	47
Orleans	0.9	0.8	72	56	148	139	34	78	1	5	11	35
Oswego	2.5	2.4	207	216	351	319	89	187	3	12	38	124
Otsego	0.5	0.4	94	69	192	184	118	218	4	15	28	106
Putnam	0.4	0.1	35	30	587	645	285	429	10	29	9	28
Queens	53.2	44.8	283	417	2,767	2,614	1,443	3,200	49	213	4	2
Rensselaer	3.6	3.1	113	61	680	569	192	362	7	24	26	96
Richmond	16.9	14.4	47	47	412	346	132	339	4	23	1	1
Rockland	10.9	10.4	25	25	621	476	39	51	1	3	3	5
St. Lawrence	1.9	1.6	89	65	394	293	148	312	5	21	47	178
Saratoga	6.6	5.0	214	150	893	676	179	355	6	24	29	122
Schenectady	5.3	5.4	40	30	547	468	64	149	2	10	7	21
Schoharie	0.1	0.0	41	31	145	132	75	136	3	9	18	61
Schuyler	0.2	0.2	46	42	69	59	20	46	1	3	8	35
Seneca	0.8	0.7	69	61	116	96	26	48	1	3	5	18
Steuben	2.9	2.7	121	137	366	250	39	96	1	6	33	143
Suffolk	25.6	18.2	296	264	2,865	2,698	3,502	5,653	120	376	31	46
Sullivan	0.1	0.0	98	87	338	306	204	324	7	22	23	68
Tioga	0.8	0.7	64	52	169	158	79	148	3	10	17	71
Tompkins	2.4	2.2	98	76	488	453	45	89	2	6	15	77
Ulster	1.7	1.4	190	138	689	544	429	741	15	49	35	122
Warren	1.7	1.3	79	44	255	242	81	163	3	11	15	68
Washington	0.7	0.6	69	44	210	192	124	217	4	14	29	109
Wayne	2.6	2.4	122	98	351	312	65	134	2	9	21	93
Westchester	18.0	15.9	135	150	2,397	2,006	1,522	2,435	52	162	7	12
Wyoming	1.0	1.0	57	48	198	166	20	46	1	3	14	63
Yates	0.4	0.4	68	47	117	117	18	42	1	3	10	39
New York State	458.3	400.2	6,103	5,693	49,975	43,018	19,682	35,229	672	2,344	1,113	4,127

Appendix D-2

Occupied Housing Units by Type of Space Heating Fuel by County in New York State, 2014, One-Year Estimates¹

Table D-2. (in housing units)

County	Total Occupied Units	Utility Gas	Bottled Tank or LP Gas	Electricity	Fuel Oil or Kerosene	Coal or Coke	Wood	Solar Energy	Other	No Fuel Used
New York State	7,282,398	4,186,666	258,775	770,577	1,752,656	17,720	145,012	2,573	76,963	71,456
New York City	3,148,067	1,922,060	53,479	322,619	742,633	1,756	1,336	1,018	46,085	57,081
Bronx	492,481	184,283	5,131	45,743	242,889	226	156	167	5,421	8,465
Kings	942,402	727,967	16,231	60,691	111,909	315	333	348	9,682	14,926
New York	762,228	285,461	13,934	161,365	249,313	1,052	0	331	24,312	26,460
Queens	785,985	579,742	15,468	48,731	128,198	163	749	142	6,321	6,471
Richmond	164,971	144,607	2,715	6,089	10,324	0	98	30	349	759
Rest of State	4,134,331	2,264,606	205,296	447,958	1,010,023	15,964	143,676	1,555	30,878	14,375
Albany	124,716	88,356	2,509	19,219	11,281	41	2,146	0	809	355
Broome	78,810	49,929	5,156	10,368	8,640	641	3,007	0	651	418
Cattaraugus	30,735	15,983	3,876	3,984	2,263	304	3,457	13	629	226
Cayuga	31,290	15,531	4,215	3,777	4,393	443	2,404	0	389	138
Chautauqua	52,916	37,116	3,734	7,070	977	87	2,610	0	1,143	179
Chemung	34,617	25,158	1,974	3,013	2,436	317	1,292	13	306	108
Clinton	31,426	3,278	1,336	9,373	13,530	0	3,545	0	179	185
Dutchess	104,190	25,106	4,902	15,985	53,738	169	3,519	0	639	132
Erie	383,657	340,095	6,693	24,373	5,592	54	3,318	0	1,846	1,686
Jefferson	43,516	18,034	5,548	8,880	6,672	82	3,690	0	453	157
Livingston	25,334	11,816	4,153	4,198	2,486	435	1,574	0	672	0
Madison	25,932	10,759	2,638	2,671	6,524	522	2,629	0	189	0
Monroe	298,271	239,815	4,809	41,366	6,740	153	2,082	0	1,833	1,473
Nassau	440,168	245,560	6,857	23,674	160,582	98	1,024	320	1,271	782
Niagara	86,907	69,345	4,267	6,406	4,723	19	1,763	0	210	174
Oneida	90,583	52,932	4,870	10,514	15,226	238	5,605	16	846	336
Onondaga	185,474	132,825	5,144	33,742	8,212	1,044	2,574	40	1,147	746
Ontario	43,581	24,744	4,980	6,737	3,479	547	2,172	14	705	203
Orange	124,587	63,708	5,987	11,043	38,460	452	2,714	36	1,011	1,176
Oswego	45,646	18,243	8,384	6,115	6,970	392	4,810	0	520	212
Putnam	34,234	1,978	1,792	7,758	20,901	33	1,387	0	268	117
Rensselaer	63,289	30,025	3,975	8,201	16,272	73	3,694	157	754	138
Rockland	98,873	85,609	783	7,913	3,606	0	523	0	116	323
St. Lawrence	40,286	13,589	4,039	4,725	11,435	16	5,850	0	492	140
Saratoga	90,964	53,279	8,392	10,415	14,043	237	3,506	97	781	214
Schenectady	56,255	42,420	1,720	6,590	4,430	98	697	98	158	44
Steuben	41,046	21,857	4,673	4,876	2,967	1,385	4,346	122	666	154
Suffolk	493,287	183,769	11,495	32,082	259,955	670	2,832	154	1,377	953
Sullivan	27,524	959	3,970	3,462	15,704	312	2,904	18	162	33
Tompkins	38,120	20,890	3,511	6,477	3,520	457	2,700	65	252	248
Ulster	69,522	15,243	8,559	7,793	31,951	0	4,788	88	662	438
Warren	26,193	11,383	3,048	3,468	5,792	57	1,848	27	199	371
Wayne	35,577	20,754	4,338	4,169	3,721	302	2,022	24	158	89
Westchester	342,557	159,798	6,315	40,070	131,362	414	970	194	1,967	1,467

¹ Counties with populations of less than 65,000 were not part of the American Community Survey 1-Year Estimates.

Appendix E

New York State Heating and Cooling Degree-Days, 2000–2014

Figure E-1

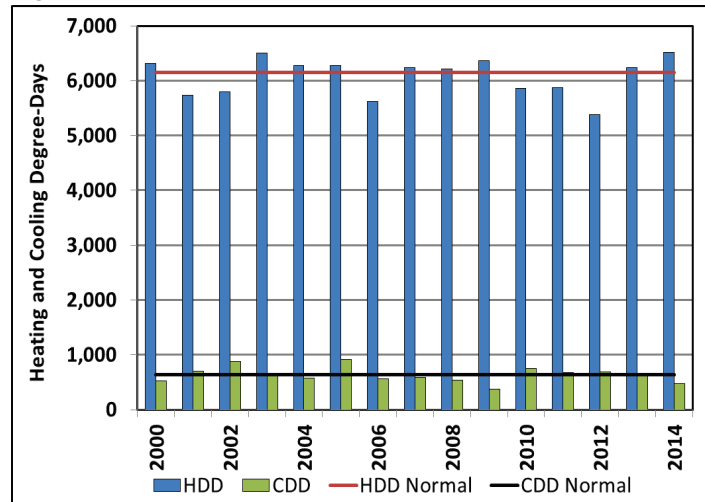


Table E-1 (monthly heating degree-days)

Year	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
2000	1,255	1,002	720	556	209	58	11	17	140	381	729	1,238	6,316
2001	1,199	1,001	992	496	188	39	13	0	97	339	538	832	5,734
2002	971	868	827	462	299	40	3	6	46	445	725	1,099	5,791
2003	1,375	1,164	898	597	277	62	1	5	64	438	610	1,012	6,503
2004	1,441	1,103	818	500	148	57	3	15	49	384	675	1,080	6,273
2005	1,277	1,011	1,029	456	325	18	0	3	35	365	622	1,130	6,271
2006	951	997	886	487	254	53	1	15	136	442	571	828	5,621
2007	1,054	1,213	939	622	218	40	16	23	74	243	752	1,045	6,239
2008	1,085	1,053	930	450	315	22	1	18	107	455	743	1,031	6,210
2009	1,367	997	890	497	240	71	18	16	140	476	583	1,073	6,368
2010	1,183	1,021	715	386	175	35	6	5	91	394	693	1,153	5,857
2011	1,292	1,051	910	490	193	33	0	4	70	381	569	876	5,869
2012	1,038	894	601	508	146	51	0	7	117	347	775	889	5,373
2013	1,102	1,028	936	540	230	54	3	9	166	350	771	1,042	6,231
2014	1,313	1,150	1,087	568	207	25	7	16	116	335	768	925	6,517
Normal*	1,207	1,021	892	516	232	46	1	13	105	397	679	1,038	6,147

Table E-2 (monthly cooling degree-days)

Year	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
2000	0	0	0	0	37	125	128	156	81	1	0	0	528
2001	0	0	0	2	27	157	160	285	65	5	0	0	701
2002	0	0	0	27	16	135	307	276	99	17	0	0	877
2003	0	0	0	0	1	90	233	269	58	0	1	0	652
2004	0	0	0	0	35	103	197	174	70	0	0	0	579
2005	0	0	0	0	0	196	285	296	120	12	0	0	909
2006	0	0	0	0	24	104	251	170	14	0	0	0	563
2007	0	0	0	0	26	104	169	188	76	28	0	0	591
2008	0	0	0	0	3	144	224	96	65	0	0	0	532
2009	0	0	0	9	5	43	107	191	20	0	0	0	375
2010	0	0	0	0	42	142	295	196	75	1	0	0	751
2011	0	0	0	0	39	97	280	169	84	1	0	0	670
2012	0	0	0	4	44	105	271	203	59	2	0	0	688
2013	0	0	0	0	32	113	301	135	57	6	0	0	644
2014	0	0	0	0	13	93	183	106	69	7	0	0	471
Normal*	0	0	0	0	18	119	233	200	64	3	0	0	637

* Note: Normal is a 30 year degree-day average value from 1981 to 2010.

Appendix F-1

New York State Electricity Prices by Sector by Utility¹ in Nominal Dollars, 2001–2014

Table F-1a. Residential Sector Electricity Prices by Utility (Nominal Cents/kWh)

Year	Central Hudson	Consolidated Edison	Long Island Power Authority	New York State Elec. & Gas Corp. (NYSEG)	National Grid	Orange & Rockland	Rochester Gas & Electric
2001	9.94	18.08	13.69	13.89	12.32	14.78	11.23
2002	9.96	16.99	13.92	12.32	12.39	12.47	10.61
2003	10.39	19.37	14.66	12.37	12.26	13.95	10.72
2004	10.43	18.93	16.05	12.43	12.83	13.84	10.38
2005	12.61	21.07	17.50	13.59	12.74	15.20	10.58
2006	12.83	20.90	20.11	13.78	14.98	15.40	11.71
2007	14.00	21.58	19.08	13.40	15.56	16.60	11.46
2008	16.28	24.18	19.67	13.19	15.45	18.12	11.85
2009	15.81	23.58	18.56	11.90	14.95	17.63	11.52
2010	16.51	25.85	20.75	11.14	15.57	18.88	12.34
2011	15.96	25.59	19.81	10.83	15.16	18.60	12.07
2012	16.22	25.65	19.03	10.70	12.91	16.85	12.21
2013	16.86	26.99	20.65	11.68	14.18	19.46	13.31
2014	18.78	28.85	20.52	13.01	15.85	23.24	14.22

Table F-1b. Commercial Sector Electricity Prices by Utility (Nominal Cents/kWh)

Year	Central Hudson	Consolidated Edison	Long Island Power Authority	New York State Elec. & Gas Corp. (NYSEG)	National Grid	Orange & Rockland	Rochester Gas & Electric
2001	7.24	15.69	11.62	11.66	10.73	11.53	9.28
2002	7.34	14.32	11.80	10.40	10.99	9.37	9.25
2003	7.61	16.36	12.50	11.28	11.79	10.89	9.78
2004	7.67	16.05	13.87	11.06	12.24	10.63	9.10
2005	10.11	18.61	15.82	12.22	13.12	12.27	9.58
2006	10.12	18.37	18.75	12.25	14.35	12.09	11.23
2007	11.26	19.27	17.76	12.05	15.38	13.53	11.00
2008	13.28	21.20	18.59	12.46	16.84	14.70	11.36
2009	12.12	19.64	17.39	9.23	12.66	13.01	10.12
2010	12.64	20.38	19.27	10.21	13.69	14.31	11.88
2011	12.13	20.70	18.12	9.62	13.13	13.64	11.39
2012	12.47	20.04	17.23	9.40	10.69	12.29	11.72
2013	13.21	20.61	18.62	11.52	12.06	14.61	13.04
2014	15.53	22.16	18.82	13.05	13.33	17.36	13.50

Table F-1c. Industrial Sector Electricity Prices by Utility (Nominal Cents/kWh)

Year	Central Hudson	Consolidated Edison	Long Island Power Authority	New York State Elec. & Gas Corp. (NYSEG)	National Grid	Orange & Rockland	Rochester Gas & Electric
2001	5.24	14.35	N/A	7.19	5.10	8.42	6.67
2002	5.00	13.03	N/A	6.49	4.85	6.06	6.67
2003	7.50	15.08	N/A	7.70	14.12	7.88	6.79
2004	7.16	14.81	N/A	6.58	13.27	7.28	7.10
2005	10.05	17.41	N/A	7.34	17.44	8.88	7.33
2006	7.66	16.82	N/A	7.25	18.31	8.54	8.17
2007	8.53	18.02	N/A	6.81	17.05	9.85	7.99
2008	12.47	19.56	N/A	7.19	20.44	11.94	8.26
2009	10.52	18.05	N/A	5.53	15.36	7.59	6.47
2010	11.15	18.92	N/A	6.04	15.00	8.08	8.90
2011	10.01	18.65	N/A	5.84	15.47	7.04	8.50
2012	10.27	17.26	N/A	5.47	10.58	5.80	9.36
2013	10.69	18.30	N/A	5.98	8.10	8.03	11.71
2014	13.02	20.18	N/A	8.81	8.65	11.09	12.07

¹ Annual average electricity prices by sector by utility are based on bundled electricity sales.

Appendix F-2

New York State Electricity Customers by Sector by Utility,¹ 2001–2014

Table F-2a. Residential Sector Electricity Customers by Utility

Year	Central Hudson	Consolidated Edison	Long Island Power Authority	New York State Elec. & Gas Corp. (NYSEG)	National Grid	Orange & Rockland	Rochester Gas & Electric
2001	237,756	2,676,565	923,730	710,050	1,382,740	143,613	284,898
2002	239,249	2,683,349	936,810	715,299	1,369,959	142,212	281,565
2003	243,689	2,691,906	967,606	708,149	1,357,582	131,739	278,996
2004	245,088	2,626,379	977,980	706,360	1,348,800	130,148	282,578
2005	248,409	2,625,628	981,532	696,362	1,349,917	131,200	264,873
2006	246,921	2,527,297	988,501	701,371	1,343,802	137,776	258,345
2007	248,621	2,403,262	989,705	679,298	1,308,819	138,326	264,226
2008	244,470	2,312,650	991,385	653,965	1,271,407	138,899	261,889
2009	240,551	2,280,223	995,350	636,962	1,245,334	140,244	259,569
2010	237,920	2,288,286	997,361	611,712	1,224,605	132,344	256,607
2011	235,742	2,263,566	997,520	587,353	1,199,358	128,238	249,138
2012	225,159	2,161,397	998,404	576,672	1,174,731	120,892	245,761
2013	217,523	2,113,173	996,217	574,429	1,165,012	117,183	246,295
2014	213,187	2,135,972	996,453	583,185	1,164,691	117,671	253,092

Table F-2b. Commercial Sector Electricity Customers by Utility

Year	Central Hudson	Consolidated Edison	Long Island Power Authority	New York State Elec. & Gas Corp. (NYSEG)	National Grid	Orange & Rockland	Rochester Gas & Electric
2001	38,157	422,659	106,563	80,008	145,892	22,579	26,639
2002	38,698	429,641	107,888	82,376	146,566	22,459	26,570
2003	44,571	445,078	115,170	85,555	141,499	20,713	28,457
2004	44,092	423,526	112,431	95,739	137,116	19,659	28,225
2005	44,673	410,162	112,638	89,068	124,672	20,037	23,527
2006	42,938	390,897	117,700	86,541	123,449	21,335	23,640
2007	43,399	391,071	117,844	81,786	117,655	21,622	24,108
2008	42,761	391,694	117,966	76,284	109,098	21,563	23,916
2009	40,613	391,850	118,095	75,082	104,171	20,769	22,832
2010	39,196	388,876	118,320	71,547	101,607	19,322	22,285
2011	37,576	371,054	117,917	68,473	98,730	18,672	21,372
2012	35,638	349,340	117,568	67,874	98,886	17,759	20,516
2013	34,217	341,327	116,388	69,136	97,955	16,935	20,991
2014	33,384	342,181	116,293	69,443	94,509	16,848	21,250

Table F-2c. Industrial Sector Electricity Customers by Utility

Year	Central Hudson	Consolidated Edison	Long Island Power Authority	New York State Elec. & Gas Corp. (NYSEG)	National Grid	Orange & Rockland	Rochester Gas & Electric
2001	918	360	N/A	2,394	1,589	99	882
2002	1,027	388	N/A	2,376	1,469	95	900
2003	1,026	298	N/A	2,284	1,218	80	809
2004	981	305	N/A	2,191	1,071	73	744
2005	988	324	N/A	1,858	890	78	618
2006	959	259	N/A	1,644	874	78	493
2007	1,181	247	N/A	1,415	817	73	472
2008	1,027	238	N/A	1,215	768	71	438
2009	905	223	N/A	1,056	755	67	406
2010	864	184	N/A	939	748	57	364
2011	834	130	N/A	853	702	52	325
2012	789	97	N/A	796	655	48	333
2013	799	85	N/A	758	630	47	314
2014	763	93	N/A	725	588	42	293

¹ Electricity customers by sector by utility are based on bundled electricity sales.

Appendix F-3

New York State Electricity Sales by Sector by Utility,¹ 2001–2014

Table F-3a. Residential Sector Electricity Sales by Utility (GWh)

Year	Central Hudson	Consolidated Edison	Long Island Power Authority	New York State Elec. & Gas Corp. (NYSEG)	National Grid	Orange & Rockland	Rochester Gas & Electric
2001	1,806	12,050	8,143	5,288	9,834	1,102	2,045
2002	1,883	12,510	8,490	5,544	10,120	1,092	2,156
2003	1,978	12,441	8,998	5,574	10,232	1,038	1,997
2004	2,003	12,673	9,183	5,607	10,169	986	2,144
2005	2,147	13,690	9,706	5,732	10,750	1,070	2,223
2006	2,005	12,590	9,278	5,649	10,248	1,035	1,983
2007	2,087	12,312	9,508	5,659	10,140	1,131	2,097
2008	2,004	11,720	9,512	5,297	9,637	1,130	2,013
2009	1,916	10,952	9,211	5,107	9,361	1,076	1,987
2010	1,959	11,518	9,972	5,121	9,543	1,115	2,035
2011	1,945	11,404	9,849	4,984	9,367	1,025	1,999
2012	1,801	10,718	9,734	4,848	9,036	955	1,927
2013	1,760	10,273	9,533	4,950	9,012	927	1,921
2014	1,685	9,869	9,389	5,015	8,915	877	1,947

Table F-3b. Commercial Sector Electricity Sales by Utility (GWh)

Year	Central Hudson	Consolidated Edison	Long Island Power Authority	New York State Elec. & Gas Corp. (NYSEG)	National Grid	Orange & Rockland	Rochester Gas & Electric
2001	1,488	19,222	9,002	2,883	9,897	1,250	1,702
2002	1,534	18,595	9,026	2,918	8,984	1,227	1,646
2003	1,935	17,766	9,593	2,474	8,075	1,296	1,618
2004	1,890	16,804	9,666	3,178	6,964	1,129	1,386
2005	1,801	15,272	9,199	2,714	5,887	1,138	1,097
2006	1,521	13,230	8,825	2,532	5,075	1,133	897
2007	1,615	12,743	8,969	2,447	4,691	1,189	931
2008	1,576	12,679	8,542	2,280	4,135	1,152	846
2009	1,297	12,324	8,305	2,002	4,016	981	711
2010	1,183	12,417	8,854	1,774	3,873	833	657
2011	1,052	11,082	8,771	1,581	3,453	696	612
2012	900	9,788	8,661	1,522	3,232	601	576
2013	849	9,744	8,499	1,438	3,290	571	602
2014	802	9,783	8,344	1,413	3,220	524	612

Table F-3c. Industrial Sector Electricity Sales by Utility (GWh)

Year	Central Hudson	Consolidated Edison	Long Island Power Authority	New York State Elec. & Gas Corp. (NYSEG)	National Grid	Orange & Rockland	Rochester Gas & Electric
2001	1,305	562	N/A	2,848	10,069	472	1,472
2002	1,000	468	N/A	2,891	9,185	288	1,380
2003	553	403	N/A	3,314	2,627	242	1,197
2004	478	372	N/A	2,176	2,445	252	823
2005	328	366	N/A	1,815	1,881	432	748
2006	511	268	N/A	1,745	1,589	305	641
2007	1,048	246	N/A	1,609	1,635	340	612
2008	148	230	N/A	1,236	1,346	282	589
2009	106	200	N/A	843	1,155	249	396
2010	95	201	N/A	585	1,490	219	343
2011	93	131	N/A	481	1,254	167	230
2012	72	114	N/A	372	1,515	113	111
2013	102	99	N/A	323	1,085	90	71
2014	83	102	N/A	192	1,018	66	62

¹ Electricity sales by sector by utility are based on bundled electricity sales.

Appendix F-4

New York State Natural Gas Prices by Sector by Utility in Nominal Dollars, 2001–2014

Table F-4a. Residential Sector Natural Gas Prices by Utility (Nominal Dollars per Thousand Cubic Feet)

Year	Brooklyn Union Gas (National Grid)	Central Hudson Gas & Electric	Consolidated Edison	Coming Natural Gas	Keyspan Energy (National Grid)	National Fuel Gas Dist.	New York State Elec. And Gas Corp. (NYSEG)	Niagara Mohawk (National Grid)	Orange & Rockland Utilities	Rochester Gas And Elec. Corp.	St. Lawrence Gas Co.
2001	11.95	11.11	14.09	8.46	12.71	12.77	8.04	10.32	10.71	10.64	8.02
2002	11.05	10.89	12.60	8.63	11.88	8.21	8.10	8.79	8.56	9.66	6.12
2003	12.61	11.77	13.35	9.21	12.80	11.51	9.68	10.43	10.84	10.83	7.61
2004	12.91	12.30	14.05	10.64	13.35	11.97	11.95	11.06	12.26	11.56	9.44
2005	15.30	14.27	16.80	11.97	15.16	14.51	13.59	13.05	14.54	13.51	11.02
2006	13.15	16.23	18.72	14.91	16.11	15.70	14.04	14.35	17.95	14.32	12.30
2007	16.12	16.46	20.05	13.40	16.47	14.36	13.88	13.12	17.95	13.86	13.33
2008	17.21	18.25	21.40	14.95	17.07	15.39	14.56	14.08	18.26	14.95	13.84
2009	14.36	17.44	20.24	12.04	15.69	13.40	13.65	12.81	17.39	12.66	12.04
2010	13.66	16.89	19.98	12.25	14.22	10.85	12.44	11.81	15.64	11.89	11.94
2011	13.10	17.72	18.49	11.33	13.90	10.89	12.70	12.14	15.33	11.63	12.84
2012	11.84	16.39	17.78	11.33	13.11	10.34	12.35	11.26	14.52	11.34	13.22
2013	11.61	15.35	17.96	11.70	12.66	9.62	11.07	10.50	13.82	10.38	12.73
2014	11.87	17.01	16.78	11.40	12.83	10.11	10.84	9.66	13.41	9.95	12.29

Table F-4b. Commercial Sector Natural Gas Prices by Utility (Nominal Dollars per Thousand Cubic Feet)

Year	Brooklyn Union Gas (National Grid)	Central Hudson Gas & Electric	Consolidated Edison	Coming Natural Gas	Keyspan Energy (National Grid)	National Fuel Gas Dist.	New York State Elec. And Gas Corp. (NYSEG)	Niagara Mohawk (National Grid)	Orange & Rockland Utilities	Rochester Gas And Elec. Corp.	St. Lawrence Gas Co.
2001	6.92	8.54	11.01	7.36	9.13	11.68	11.10	9.00	10.12	9.24	7.86
2002	5.70	8.08	8.24	10.07	8.48	7.09	8.47	7.55	8.15	8.37	5.62
2003	7.74	9.22	10.53	9.68	10.21	10.24	9.54	9.77	10.40	9.50	7.23
2004	7.74	9.22	10.53	9.68	10.21	10.24	9.54	9.77	10.40	9.50	7.23
2005	14.02	12.31	10.42	11.13	13.01	13.15	12.30	11.78	13.81	12.05	10.43
2006	12.76	13.20	10.97	13.94	13.12	13.96	12.97	12.81	17.03	12.54	11.44
2007	13.83	13.13	11.21	12.38	13.92	13.24	12.82	12.23	16.97	12.26	12.00
2008	14.96	14.46	10.54	13.70	14.95	14.04	13.54	14.35	17.15	13.23	12.53
2009	11.79	12.85	9.68	10.47	12.98	12.66	12.38	11.50	16.10	11.11	10.18
2010	11.61	11.72	8.83	10.54	11.36	10.17	11.24	10.18	13.94	10.13	9.70
2011	11.22	12.08	7.80	9.68	11.86	9.63	11.17	10.55	13.69	9.68	10.56
2012	9.23	9.74	6.79	9.28	10.71	9.31	10.39	9.34	12.47	9.25	10.47
2013	9.83	9.49	7.46	9.95	11.12	8.79	9.36	8.79	12.01	8.48	10.09
2014	10.08	11.68	8.17	9.56	10.59	9.20	9.70	8.28	11.68	8.06	10.28

Table F-4c. Industrial Sector Natural Gas Prices by Utility (Nominal Dollars per Thousand Cubic Feet)

Year	Brooklyn Union Gas (National Grid)	Central Hudson Gas & Electric	Consolidated Edison	Coming Natural Gas	Keyspan Energy (National Grid)	National Fuel Gas Dist.	New York State Elec. And Gas Corp. (NYSEG)	Niagara Mohawk (National Grid)	Orange & Rockland Utilities	Rochester Gas And Elec. Corp.	St. Lawrence Gas Co.
2001	N/A	8.20	11.01	8.73	N/A	6.04	8.34	8.25	8.66	8.93	6.35
2002	N/A	7.16	8.24	9.30	N/A	4.52	6.19	6.31	7.47	7.79	4.38
2003	N/A	8.65	9.78	8.84	N/A	6.67	6.89	7.92	10.08	8.95	6.70
2004	N/A	9.67	8.52	9.98	N/A	7.35	8.01	8.49	11.04	9.56	7.82
2005	12.56	11.67	10.19	11.97	N/A	9.34	9.64	10.61	14.19	11.30	10.22
2006	10.43	12.03	10.70	12.83	N/A	10.64	10.57	11.24	16.24	11.74	13.94
2007	13.33	12.45	10.79	0.74	N/A	10.78	11.03	10.71	16.85	11.42	11.57
2008	14.75	14.00	10.35	0.65	N/A	12.14	12.06	11.55	16.40	12.42	11.38
2009	10.66	11.92	9.49	0.69	N/A	11.89	11.07	9.26	15.36	10.62	7.81
2010	9.59	10.16	8.31	N/A	N/A	7.35	9.22	8.36	12.69	9.42	7.81
2011	9.41	10.44	7.56	N/A	N/A	8.81	8.36	9.20	11.97	8.74	8.55
2012	7.50	7.94	6.71	N/A	N/A	7.42	7.85	8.12	10.55	8.11	8.58
2013	8.65	7.69	7.18	N/A	N/A	8.05	8.36	7.80	10.83	7.51	7.36
2014	9.19	10.31	7.93	N/A	N/A	8.29	8.37	7.43	10.54	7.25	8.54

Appendix F-5

New York State Natural Gas Customers by Sector by Utility, 2001–2014

Table F-5a. Residential Sector Natural Gas Customers by Utility

Year	Brooklyn Union Gas (National Grid)	Central Hudson Gas & Electric	Consolidated Edison	Coming Natural Gas	Keyspan Energy (National Grid)	National Fuel Gas Dist.	New York State Elec. And Gas Corp. (NYSEG)	Niagara Mohawk (National Grid)	Orange & Rockland Utilities	Rochester Gas And Elec. Corp.	St. Lawrence Gas Co.
2001	1,194,700	59,401	934,197	16,957	437,775	484,199	221,432	504,368	108,867	265,692	13,589
2002	1,190,825	57,247	936,163	13,636	445,735	487,084	222,481	508,353	110,223	267,760	13,623
2003	1,140,775	58,158	919,562	17,064	461,842	486,322	222,655	512,652	111,060	269,182	13,764
2004	1,108,132	59,132	928,106	17,064	460,013	485,786	223,262	516,042	112,452	270,515	13,779
2005	1,120,046	60,489	934,272	17,061	466,673	484,083	223,977	521,491	112,760	271,828	13,819
2006	1,133,240	61,623	1,004,285	16,987	472,250	472,042	226,301	522,562	113,810	272,655	13,630
2007	1,139,533	62,605	1,045,956	13,468	477,395	479,539	227,350	526,036	114,657	273,882	13,714
2008	1,146,761	63,403	947,502	13,517	480,968	481,568	229,176	530,636	115,837	275,075	13,651
2009	1,147,105	63,570	936,894	13,531	488,324	482,209	229,805	534,864	116,773	276,202	13,782
2010	1,158,412	64,129	939,586	13,621	491,658	483,378	231,286	538,042	117,367	278,398	13,833
2011	1,165,043	64,538	942,468	13,699	495,067	483,214	231,032	540,759	117,963	280,057	13,829
2012	1,168,014	64,811	944,233	13,790	499,683	485,321	230,355	544,544	118,250	275,602	13,891
2013	1,170,112	65,652	944,930	13,744	503,537	487,184	231,138	549,251	118,997	282,576	13,955
2014	1,174,315	65,881	943,359	13,746	510,359	489,345	232,106	552,921	119,655	283,820	14,091

Table F-5b. Commercial Sector Natural Gas Customers by Utility

Year	Brooklyn Union Gas (National Grid)	Central Hudson Gas & Electric	Consolidated Edison	Coming Natural Gas	Keyspan Energy (National Grid)	National Fuel Gas Dist.	New York State Elec. And Gas Corp. (NYSEG)	Niagara Mohawk (National Grid)	Orange & Rockland Utilities	Rochester Gas And Elec. Corp.	St. Lawrence Gas Co.
2001	53,377	9,055	110,741	1,167	52,490	32,483	27,603	43,190	10,676	21,052	1,637
2002	54,139	9,202	112,497	853	52,688	32,846	28,311	42,789	10,836	21,166	1,639
2003	49,159	9,445	131,466	1,014	54,811	32,635	29,300	43,937	10,956	21,586	1,683
2004	46,781	9,647	113,292	896	55,533	32,596	29,469	44,249	11,051	21,910	1,672
2005	44,997	9,925	120,593	942	56,463	33,830	29,709	44,678	11,284	21,920	1,667
2006	42,579	10,111	144,164	854	57,062	33,784	29,197	44,622	11,369	21,837	1,606
2007	44,129	10,326	138,194	1,004	57,810	33,555	28,849	44,587	11,506	21,745	1,621
2008	40,479	10,477	121,107	1,009	58,274	33,448	28,949	44,527	11,492	21,886	1,638
2009	41,012	10,515	121,391	997	58,557	33,006	29,681	44,553	11,605	22,133	1,652
2010	41,634	10,544	122,432	1,015	58,600	33,452	29,237	44,624	11,599	22,121	1,651
2011	41,619	10,608	122,435	1,011	58,610	33,669	29,241	44,729	11,635	22,227	1,653
2012	42,372	10,639	123,369	1,023	58,714	34,213	29,160	44,438	11,600	21,672	1,658
2013	42,201	10,811	123,942	1,119	59,145	34,365	29,849	44,426	10,693	22,437	1,666
2014	40,721	10,898	131,144	1,066	60,045	34,715	29,931	44,585	11,820	22,687	1,682

Table F-5c. Industrial Sector Natural Gas Customers by Utility

Year	Brooklyn Union Gas (National Grid)	Central Hudson Gas & Electric	Consolidated Edison	Coming Natural Gas	Keyspan Energy (National Grid)	National Fuel Gas Dist.	New York State Elec. And Gas Corp. (NYSEG)	Niagara Mohawk (National Grid)	Orange & Rockland Utilities	Rochester Gas And Elec. Corp.	St. Lawrence Gas Co.
2001	N/A	326	N/A	14	NA	621	557	420	151	944	22
2002	N/A	306	46	20	NA	614	707	263	123	934	26
2003	N/A	310	50	22	NA	594	696	256	85	918	24
2004	N/A	301	55	22	NA	595	708	251	74	909	22
2005	827	299	56	22	NA	584	707	256	54	899	22
2006	784	288	54	24	NA	550	712	261	44	882	20
2007	4,686	279	48	65	NA	536	679	266	37	844	21
2008	4,318	278	51	61	NA	530	691	254	34	817	22
2009	3,960	264	48	61	NA	507	673	255	29	795	20
2010	3,622	259	46	64	NA	500	654	251	26	771	20
2011	4,053	253	48	69	NA	490	626	252	20	754	21
2012	3,428	251	48	74	NA	493	615	234	20	704	21
2013	3,864	245	48	40	NA	491	618	214	20	727	21
2014	3,885	251	48	38	NA	482	624	215	18	709	22

Appendix F-6

New York State Natural Gas Sales by Sector by Utility, 2001–2014

Table F-6a. Residential Sector Natural Gas Sales by Utility (Millions of Cubic Feet)

Year	Brooklyn Union Gas (National Grid)	Central Hudson Gas & Electric	Consolidated Edison	Coming Natural Gas	Keyspan Energy (National Grid)	National Fuel Gas Dist.	New York State Elec. And Gas Corp. (NYSEG)	Niagara Mohawk (National Grid)	Orange & Rockland Utilities	Rochester Gas And Elec. Corp.	St. Lawrence Gas Co.
2001	102,120	4,795	57,687	1,937	43,107	51,451	23,548	50,201	13,562	25,590	1,652
2002	93,469	4,532	56,302	2,258	43,288	53,961	23,024	50,485	13,431	26,661	1,700
2003	102,811	5,482	63,541	2,443	48,061	57,548	26,145	56,790	15,241	29,138	1,892
2004	100,666	5,221	60,779	2,279	47,514	54,012	24,081	53,500	14,595	27,761	1,811
2005	115,538	5,282	63,140	2,261	47,901	52,013	22,924	52,801	14,541	27,522	1,710
2006	100,274	4,707	56,736	1,955	40,747	45,242	22,263	46,300	12,409	23,793	1,545
2007	114,790	5,096	64,811	1,577	46,735	51,096	22,597	50,427	14,063	26,905	1,637
2008	114,362	5,177	64,012	1,549	46,046	49,736	22,561	49,217	13,535	26,008	1,527
2009	116,866	5,173	68,572	1,551	49,791	49,436	22,394	49,495	13,625	25,899	1,562
2010	115,924	4,802	66,362	1,507	47,017	47,028	21,017	47,256	13,143	24,532	1,433
2011	114,278	5,169	67,670	1,551	45,917	48,404	22,057	49,170	12,823	24,776	1,471
2012	105,504	4,314	63,773	1,349	41,990	42,457	19,203	42,725	11,973	22,635	1,346
2013	120,933	5,106	75,286	1,634	49,709	50,022	21,887	49,305	13,853	26,551	1,490
2014	131,329	5,706	86,791	1,783	54,763	54,928	24,132	54,315	14,821	27,450	1,649

Table F-6b. Commercial Sector Natural Gas Sales by Utility (Millions of Cubic Feet)

Year	Brooklyn Union Gas (National Grid)	Central Hudson Gas & Electric	Consolidated Edison	Coming Natural Gas	Keyspan Energy (National Grid)	National Fuel Gas Dist.	New York State Elec. And Gas Corp. (NYSEG)	Niagara Mohawk (National Grid)	Orange & Rockland Utilities	Rochester Gas And Elec. Corp.	St. Lawrence Gas Co.
2001	40,814	5,669	150,550	293	31,194	23,356	18,784	52,569	8,534	13,718	1,500
2002	64,514	5,666	155,227	233	32,984	24,541	19,098	33,716	9,573	14,804	1,536
2003	59,784	6,521	124,436	442	37,362	26,440	20,511	36,210	9,846	15,762	1,681
2004	104,493	6,758	103,119	414	37,592	24,764	19,255	34,785	10,173	15,726	1,656
2005	23,640	6,922	100,877	399	38,078	24,868	19,148	34,281	9,382	16,198	1,569
2006	20,434	6,147	100,158	345	34,749	23,212	18,825	31,045	8,685	14,598	1,411
2007	23,539	6,831	107,971	3,826	38,377	24,551	19,148	33,440	9,343	16,050	1,544
2008	23,477	6,875	114,868	3,631	38,551	24,291	19,307	32,439	8,767	16,065	1,550
2009	23,515	6,826	105,843	3,371	40,413	23,679	19,288	31,960	8,140	15,673	1,605
2010	24,033	6,240	117,023	4,230	39,211	22,636	18,232	30,917	7,681	15,193	1,542
2011	23,910	6,848	117,774	4,312	39,091	23,474	18,874	31,692	7,506	15,616	1,490
2012	22,154	6,038	112,420	3,759	35,432	20,195	17,250	29,391	7,228	14,516	1,410
2013	24,537	6,831	127,190	724	39,108	23,809	19,079	32,929	7,874	16,682	1,580
2014	26,639	7,460	128,894	768	44,811	26,509	20,708	35,925	8,477	17,644	1,855

Table F-6c. Industrial Sector Natural Gas Sales by Utility (Millions of Cubic Feet)

Year	Brooklyn Union Gas (National Grid)	Central Hudson Gas & Electric	Consolidated Edison	Coming Natural Gas	Keyspan Energy (National Grid)	National Fuel Gas Dist.	New York State Elec. And Gas Corp. (NYSEG)	Niagara Mohawk (National Grid)	Orange & Rockland Utilities	Rochester Gas And Elec. Corp.	St. Lawrence Gas Co.
2001	NA	3,184	3,417	2,944	NA	23,704	14,290	14,815	4,237	9,789	6,041
2002	NA	3,742	3,807	3,459	NA	24,512	13,898	21,583	3,259	9,770	6,334
2003	NA	3,389	2,918	2,253	NA	22,004	14,489	16,373	3,172	9,260	5,922
2004	NA	3,529	1,309	2,460	NA	20,000	13,827	16,375	3,073	9,233	6,006
2005	4,682	3,125	1,451	2,579	NA	19,257	13,056	17,545	2,999	8,597	5,730
2006	3,696	3,082	1,387	2,745	NA	16,765	12,561	20,317	2,609	7,286	5,867
2007	4,345	2,904	1,534	352	NA	17,166	13,254	20,703	2,635	7,275	5,680
2008	4,422	2,987	1,668	335	NA	16,282	13,739	23,289	2,555	8,233	5,124
2009	3,914	2,819	1,599	394	NA	13,919	13,155	21,348	2,393	7,200	3,546
2010	4,277	2,922	1,684	282	NA	14,672	12,666	23,651	2,450	6,998	3,710
2011	3,720	2,903	1,764	327	NA	14,145	12,643	24,440	2,281	6,967	3,805
2012	3,107	2,574	1,601	318	NA	13,929	12,594	25,622	2,358	6,548	3,378
2013	3,279	2,896	1,847	3,165	NA	14,379	13,160	26,296	2,327	6,826	3,426
2014	3,534	3,053	1,913	3,634	NA	16,993	13,606	26,660	2,176	7,030	3,577

Appendix G

Abbreviations

B	billion or 10 ⁹
bbl	barrel
Bcf	Billion cubic feet
Btu	British thermal unit
cf	cubic foot
CO ₂	carbon dioxide
gal	gallon
GDP	gross domestic product
GSP	gross state product
GWh	gigawatt-hour or million kWh
kWh	kilowatt-hour
LPG	liquefied petroleum gas
M	thousand or 10 ³
Mcf	Thousand cubic feet
MM	million or 10 ⁶
N/A	Not applicable
n.a.	Not available
OPEC	Organization of Petroleum Exporting Countries
T	trillion or 10 ¹²

Conversion Factors

Approximate heat content of various fuels (2014)

Coal

Electric generation	19,290,000 Btu/ton
Other end use sectors	21,307,000 Btu/ton

Natural Gas

Electric generation	1,029 Btu/cf
Other end use sectors	1,032 Btu/cf

Wood 20,000,000 Btu/cord

Electricity Sales 3,412 Btu/kWh

Electricity Generation 8,751 Btu/kWh
(Three-year statewide weighted average annual heat rate for fossil-fueled power plants)

Petroleum Products (one barrel equals 42 gallons)

Distillate fuel oil	5,770,000 Btu/barrel
Ethanol	3,558,000 Btu/barrel
Jet fuel, kerosene-type	5,670,000 Btu/barrel
Kerosene	5,670,000 Btu/barrel
Motor gasoline	5,060,000 Btu/barrel
LPG (propane)	3,836,000 Btu/barrel
Residual fuel oil	6,287,000 Btu/barrel

Appendix H

Glossary

Anthracite coal - The highest ranked coal, used primarily for residential and commercial space heating. It is a hard, brittle, and black lustrous coal, often referred to as hard coal, containing a high percentage of fixed carbon and a low percentage of volatile matter.

Barrel (bbl) - Liquid unit of volume measure equal to 42 U.S. gallons, commonly used in expressing quantities of petroleum or petroleum products.

Biofuels – Liquids derived from non-fossil biomass energy sources through chemical, thermal, and biological processes and used 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 and biodiesel blended with diesel fuel. Some electric generation uses wood or municipal waste as co-firing or primary fuels.

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

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, this unit provides a common denominator for quantifying all types of energy on an equivalent energy content basis. One Btu is equal to 252 calories of heat energy.

Coke - A solid carbonaceous residue derived from low-ash, low-sulfur bituminous coal. The volatile constituents are driven off by baking in an oven at temperatures as high as 2,000 degrees Fahrenheit so that the fixed carbon and residual ash are fused together. Coke is used as a fuel and as a reducing agent in smelting iron ore in a blast furnace.

Combined heat and power (CHP) - Includes plants designed to produce both heat and electricity from a single heat source.

Commercial sector - The part of the energy-using sector of the economy that engages primarily in providing goods and services other than manufacturing. The commercial sector includes both private and public entities, and is made up of apartment and office buildings, governmental units, schools, institutions, churches, hotels, restaurants, and retail stores are included.

Constant Dollars - Values that have been adjusted to remove the effect of changes in inflation. The price paid for a product or service in the present value of the constant dollar year. Also referred to as real dollars.

Cord of wood - A cord of wood measures 4-feet by 4-feet by 8-feet, or 128 cubic feet.

Crude oil - A mixture of hydrocarbons that exists in the liquid phase in natural underground reservoirs. Refined crude oil produces a number of different fuels, including residual fuel, motor gasoline, and distillate fuels.

Degree-days, cooling - 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 is below 65 ° Fahrenheit, then the cooling degree-days for that day are zero; otherwise, they are equal to the difference between the average and 65 °F.

Degree-days, heating - 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 °Fahrenheit when the daily mean is 65 °F or higher. If the average of a day's high and low temperature extremes is more than 65 °F, the heating degree-days for that day are taken to be zero; otherwise, they are equal to the difference between the average and 65 °F. Note that a higher number of heating degree-days implies cooler temperatures.

Dekatherm - One dekatherm equals 10 therms or 1,000,000 Btu. Unit commonly used to measure amount of natural gas, based on its heat content in Btu rather than its volume in cubic feet.

Distillate fuel - A general classification for one of the petroleum fractions produced in conventional distillation operations. It includes diesel fuels and fuel oils. Products known as No. 1, No. 2, and No. 4 diesel fuel are used in on-highway diesel engines, such as those in trucks and automobiles, as well as off-highway engines, such as those in railroad locomotives and agricultural machinery. Products known as No. 1, No. 2, and No. 4 fuel oils are used primarily for space heating and electric power generation.

Electric generation - Includes both publicly and privately owned generating plants in NYS.

End-use - Any ultimate consumption of any type of energy source including fossil fuels (petroleum, coal, natural gas) or electricity, whether generated by fossil fuel or other energy sources. End-users are often classified by economic sector, such as residential, commercial, industrial, and transportation.

Feedstock - The raw material furnished to a machine or industrial process. Fossil fuels sometimes are used as feedstocks for their chemical properties, rather than their energy value (e.g., oil used to produce plastics and synthetic fabrics).

Gallon (gal) - A unit of volume, the U.S. gallon contains 3.785 liters and is 0.083 times the imperial gallon. Also equal to 4 quarts (231 cubic inches), commonly used to measure petroleum products such as gasoline and heating oil. One U.S. gallon of water weighs 8.3 pounds.

Geothermal energy - Thermal energy generated and stored in the Earth. Water or steam extracted from geothermal reservoirs can be used for geothermal heat pumps, water heating, or electricity generation.

Gigawatt (GW) - One million kilowatts, or one billion watts.

Gigawatt-hour (GWh) - One million kilowatt-hours, or one billion watt-hours. Unit of measure for amount of electricity generated or used.

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

Industrial Sector - That section of the energy-using economy involved in or associated with either mining, construction, or manufacturing.

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

Kerosene - A petroleum middle distillate with burning properties suitable for use as an illuminant when burned in wick lamps. Kerosene also is used in space heaters, cooking stoves, and water heaters and to reduce viscosity of distillate fuels during winter.

Kilowatt (kW) - One thousand watts. A unit of power, usually used for electricity.

Kilowatt-hour (kWh) - The amount of electrical energy involved with a one kilowatt demand over a period of one hour. One kilowatt-hour is equivalent to 3,412 Btu.

Liquefied petroleum gas (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.

Mcf - One thousand cubic feet. Measure of volume commonly used for natural gas.

Megawatt (MW) - One thousand kilowatts or one million watts.

Megawatt hour (MWh) - One thousand kilowatt-hours, or one million watt-hours.

Metric Ton - A unit of weight equal to approximately 2,204 pounds.

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. Leaded and unleaded refinery products are included.

Natural gas - An odorless, colorless, tasteless, non-toxic clean-burning fossil fuel, widely used to generate electricity and also used directly by end-use customers to provide space heat, water heating, and cooking.

Naphtha - A general term applied to a petroleum fraction with an approximate boiling range between 122 and 400 °F.

Net Energy Consumption - The energy actually consumed at the end-use location (e.g., building or vehicle), including electricity as well as the fuels burned to provide space heat, water heat, etc. “Net” energy accounts for electricity based on the heat content of energy at the plug (3,412 Btu per kWh), and excludes the heat losses incurred during generation, transmission, and distribution of electricity. Adding the heat losses associated with electricity use to “net” energy results in “primary” energy.

Nominal dollars - Values that have not been adjusted to remove the effect of changes in inflation. The price paid for a product or service at the time of the transaction.

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

Organization of Petroleum Exporting Countries (OPEC) - OPEC includes Algeria, Ecuador, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates, and Venezuela.

Petroleum - A general term applied to oil and oil products in all forms, such as crude oil, lease condensate, unfinished oil and refined non-hydrocarbon compounds blended into finished petroleum products such as gasoline, diesel fuel, jet fuel, and heating oil.

Primary Energy Consumption - The total consumption of fuels, including the fuels used to generate electricity. “Primary” energy accounts for electricity based on the equivalent heat content of fuel at the generator. Subtracting the heat losses associated with electricity generation, transmission, and distribution from “primary” energy results in “net” energy.

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. Propane is often used at customer locations where natural gas is not available, as it can be easily transported by truck and stored at the customer site.

Real dollars - Values that have been adjusted to remove the effect of inflation or changes in the purchasing power of the dollar. Also referred to as constant dollars because the adjustments equalize and make the cost of commodities comparable over time.

Refined petroleum - Products made from processing crude oil, unfinished oils, natural gas liquids and other miscellaneous hydrocarbon compounds. Includes aviation gasoline, motor gasoline, naphtha- and kerosene-type jet fuels, 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 - The part of the economy having to do with the places people stay or live. The residential sector is made up of homes, apartments, condominiums, etc including private households. Specifically included are the following end-uses: space heating and cooling, water heating, cooking, lighting, clothes drying, and refrigeration.

Residual fuel - The heavier oils that remain after the distillate fuel oils and lighter hydrocarbons are boiled off in refinery operations. Included are products known as No. 5 and 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.

Short Ton (Coal) - A unit of weight equal to 2,000 pounds. A long ton or metric ton is equal to 2,204 pounds.

Solar Electric - A technology that directly converts light energy radiated by the sun as electromagnetic waves (electromagnetic radiation) into electricity by means of solar electric (also known as photovoltaic or PV) panels or concentrating (focusing) collectors.

Solar Thermal - A technology that collects heat energy from the sun to heat water. Solar thermal energy is used for space heating; domestic hot water heating; and heating swimming pools, hot tubs, or spas.

Therm - 100,000 Btu.

Transportation Sector - An energy-consuming sector that consists of all vehicles whose primary purpose is transporting people and/or goods from one physical location to another. Included are automobiles; trucks; buses; motorcycles; trains, subways, and other rail vehicles; aircraft; and ships, barges, and other waterborne vehicles. Vehicles whose primary purpose is not transportation (e.g., construction cranes and bulldozers, farming vehicles, and warehouse tractors and forklifts) are classified in the sector of their primary use.

Trillion (T) - 1,000,000,000,000, or 10^{12} .

Ton - In the United States, Canada, and Union of South Africa, a unit of weight equal to 2,000 pounds, often used to measure amounts of coal and air emissions of various pollutants. The American ton is often called the “short.” The metric or “long ton” equals 2,204 pounds.

Watt (W) - The unit of measure for electric power or rate of doing work. 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.

Watt-hour (Wh) - An electrical energy unit of measure equal to one watt of power supplied to, or taken from, an electrical circuit operating continuously for one hour.

Appendix I

Data Sources

State Energy Data System - U.S. Department of Energy, Energy Information Administration (DOE/EIA)

State Energy Price & Expenditure Report - DOE/EIA

Annual and Monthly Energy Review - DOE/EIA

Electric Power Annual - DOE/EIA

Retail Motor Gasoline Price Report - DOE/EIA

Residential Energy Consumption Survey - DOE/EIA

Detailed Population Characteristics - U.S. Bureau of the Census

Detailed Housing Characteristics - U.S. Bureau of the Census

Heating and Cooling Degree-day Report - U.S. National Climatic Data Center

Employment and Earnings - U.S. Bureau of Labor Statistics

Survey of Current Business - U.S. Bureau of Economic Analysis

United States Highway Statistics - U.S. Federal Highway Administration

Motor Gasoline Reported by State - U.S. Federal Highway Administration

New York State, Gas and Mineral Resources - NYS Department of Environmental Conservation

Highway Statistics for New York State - NYS Department of Motor Vehicles

Motor Fuel Volume & Revenue Report - NYS Department of Taxation & Finance

Population & Housing Estimates - NYS Empire State Development

New York State Renewable Portfolio Standard Annual Performance Report – NYSERDA

Load & Capacity Data Report - New York Independent System Operator

NYSERDA, a public benefit corporation, offers objective information and analysis, innovative programs, technical expertise, and support to help New Yorkers increase energy efficiency, save money, use renewable energy, and reduce reliance on fossil fuels. NYSERDA professionals work to protect the environment and create clean-energy jobs. NYSERDA has been developing partnerships to advance innovative energy solutions in New York State since 1975.

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