

Cost and Quality of Fuels for Electric Plants 2009

November 2010

U.S. Energy Information Administration
Assistant Administrator for Energy Statistics
Office of Electricity, Renewables, and Uranium Statistics
U.S. Department of Energy
Washington DC 20585

**This report is only available online at:
http://www.eia.gov/cneaf/electricity/cq/cq_sum.html**

This report was prepared by the U.S. Energy Information Administration (EIA), the statistical and analytical agency within the U.S. Department of Energy. By law, EIA's data, analyses, and forecasts are independent of approval by any other officer or employee of the United States Government. The views in this report therefore should not be construed as representing those of the Department of Energy or other Federal agencies.

Preface

Background

The *Cost and Quality of Fuels for Electric Plants* reports have been prepared in the past by the Electric Power Division (EPD) within the Office of Coal, Nuclear, Electric and Alternate Fuels (CNEAF), U.S. Energy Information Administration (EIA), U.S. Department of Energy (DOE). Due to a reorganization within EIA, the 2010 edition (which includes 2009 data) and subsequent reports are being prepared by the Electric Power Operations Team within the Office of Electricity, Renewables, and Uranium Statistics (ERUS) under the Assistant Administrator for Energy Statistics, EIA. This publication provides information concerning the quality, quantity, and cost of fossil fuels used by U.S. electric power generating plants for both electric power generation and, in the case of a combined heat and power plant, useful thermal output. These plants are comprised of regulated utility power plants and independent power producers, including combined heat and power producers in the commercial and industrial sectors. This publication continues the coverage of fuel cost and quality data presented in previous annual *Cost and Quality of Fuels for Electric Plants* reports.

Data Sources and Coverage

The information contained in previous reports was compiled from three separate surveys: the Federal Energy Regulatory Commission (FERC) Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants;" the EIA Form EIA-423, "Monthly Cost and Quality of Fuels for Electric Plants Report," and Schedule 2 of Form EIA-923, "Power Plant Operations Report." In 2008, EIA made significant changes to its data collection vehicles and the 423 forms were subsumed under the then new Form EIA-923. In this publication, 2009 data are provided solely by Schedule 2 of Form EIA-923. The geographic coverage of all three surveys includes the contiguous United States, Alaska, Hawaii, and the District of Columbia.

In prior *Cost and Quality of Fuels for Electric Plants reports*, two sets of tables were presented for most of the detailed data, i.e. Table A and Table B. Table A covered the latest year of final data while Table B covered the previous year. Beginning with this report, the B Tables will no longer be presented. All prior year reports are available at the following website:

http://www.eia.gov/cneaf/electricity/cq/cq_sum.html.

For a discussion on the Instrument and Design History for the data contained in this report, please see Appendix A, "Technical Notes."

Please note that the cost data from unregulated plants are protected and not disclosed to the public. This may result in the appearance of a 'W' (for withheld) in a State-level table where suppression rules apply. (See suppression rules methodology: "Policy on the Disclosure of Individually Identifiable Energy Information in the Possession of the EIA" [45 Federal Register 59812, 1980].)

Data Download

The data used to produce this report, other than withheld cost information, are available as Excel files at the following url: <http://www.eia.gov/cneaf/electricity/page/eia423.html>.

Display of Average Fuel Cost Information

Due to the detailed nature of some of the information presented in the *Cost and Quality of Fuels for Electric Plants 2009* tables (i.e., where fuel rank, mine type, or purchase type are presented), the sensitivity of the cost information dictates that a significant amount of information be withheld. In order to provide as much meaningful cost information as possible, the average costs presented for these levels of detail include only the costs submitted by the regulated (utility) plants. Notes have been provided for each table to assist with the interpretation of the information presented. Wherever possible, State- and national-level aggregations are published if sufficient data are available to avoid disclosure of individual company plant-level costs.

Publication Contacts:

Questions of a general nature concerning this report should be directed to:

Channele Wirman, Project Leader
(202) 586-5356
email: channele.wirman@eia.gov

Specific questions about the data should be directed to:

Rebecca Peterson
(202) 586-4509
email: rebecca.peterson@eia.gov

Quality

The U.S. Energy Information Administration is committed to quality products and service. To ensure that this report meets the highest standards for quality, please forward your comments or suggestions about this publication to Rebecca Peterson at (202) 586-4509, or email: rebecca.peterson@eia.gov. For general inquiries about energy data, please contact the National Energy Information Center at (202) 586-8800, or email: infoctr@eia.gov.

Contents

	Pages
Summary Tables	1
Fossil-Fuel Data at the Census Division and State Level	4
Origin and Destination of Coal	22
Appendices	
A. Relative Standard Error.....	34
B. Technical Notes.....	39
Glossary	44

Tables

Pages

Summary Tables	1
Table ES1. Receipts of Fossil Fuels by Type of Fuel, 2009.....	2
Table ES2. Average Delivered Cost of Fuels by Type of Fuel, 2009	2
Table ES3. Average Quality of Coal by State of Origin: Total (All Sectors), 2009 - 2008	3
Table ES4. Receipts of Coal by Rank: Total (All Sectors), 2009 - 2008	3
Fossil-Fuel Data at the Census Division and State Level.....	4
Table 1. Receipts of Coal at Electric Plants by Census Division and State: Total (All Sectors), 2009 and 2008	5
Table 2. Average Delivered Cost of Coal by Census Division and State: Total (All Sectors), 2009 and 2008.....	6
Table 3.1. Receipts (All Sectors) and Average Delivered Cost (Utility Sector Only) of Coal by Type of Purchase, Census Division, and State, 2009.....	7
Table 3.2. Receipts (All Sectors) and Average Delivered Cost (Utility Sector Only) of Coal by Mine Type, Census Division, and State, 2009	8
Table 4. Receipts (All Sectors) and Average Delivered Cost (Utility Sector Only) of Coal by Rank, Census Division, and State, 2009	9
Table 5. Receipts of Petroleum Liquids at Electric Plants by Census Division and State: Total (All Sectors), 2009 and 2008..	10
Table 6. Average Delivered Cost of Petroleum Liquids by Census Division and State: Total (All Sectors), 2009 and 2008.....	11
Table 7.A. Receipts (All Sectors) and Average Delivered Cost (Utility Sector Only) of Distillate Fuel Oil by Type of Purchase, Census Division, and State, 2009	12
Table 7.B. Receipts (All Sectors) and Average Delivered Cost (Utility Sector Only) of Residual Fuel Oil by Type of Purchase, Census Division, and State, 2009	13
Table 8. Receipts of Petroleum Coke at Electric Plants by Census Division and State: Total (All Sectors), 2009 and 2008	14
Table 9. Average Delivered Cost of Petroleum Coke by Census Division and State: Total (All Sectors), 2009 and 2008.....	15
Table 10. Receipts (All Sectors) and Average Delivered Cost (Utility Sector Only) of Petroleum Coke by Type of Purchase, Census Division and State, 2009	16
Table 11. Receipts and Average Delivered Cost of Petroleum Liquids and Petroleum Coke by Type, Census Division and State: Total (All Sectors), 2009	17
Table 12. Receipts of Natural Gas at Electric Plants by Census Division and State: Total (All Sectors), 2009 and 2008	18
Table 13. Average Delivered Cost of Natural Gas by Census Division and State: Total (All Sectors), 2009 and 2008	19
Table 14.1. Receipts (All Sectors) and Average Delivered Cost (Utility Sector Only) of Natural Gas by Type of Purchase, Census Division, and State, 2009	20
Table 14.2. Receipts (All Sectors) and Average Delivered Cost (Utility Sector Only) of Natural Gas by Type of Delivery, Census Division, and State, 2009	21
Origin and Destination of Coal.....	22
Table 15. Destination and Origin of Coal to Electric Plants By State: Total (All Sectors), 2009	23
Table 16. Origin and Destination of Coal to Electric Plants By State: Total (All Sectors), 2009	28
A. Relative Standard Error.....	34
Table A1. Relative Standard Error for Receipts and Average Delivered Cost by Fuel Type: Total (All Sectors) by Census Division and State, 2009.....	35
Table A2. Relative Standard Error for Receipts and Average Delivered Cost with Unclassified Purchase Type: Total (All Sectors) by Census Division and State, 2009	36
Table A3. Relative Standard Error for Receipts and Average Delivered Cost of Coal: Total (All Sectors) by Census Division and State, 2009	37
Table A4. Relative Standard Error for Receipts and Average Delivered Cost of Natural Gas by Type of Delivery: Total (All Sectors) by Census Division and State, 2009	38

Summary Tables

Table ES1. Receipts of Fossil Fuels by Type of Fuel, 2009

Type of Fuel	Total All Sectors	Electric Power Sector		Commercial Sector ¹	Industrial Sector ²
		Electric Utilities	Independent Power Producers		
Total Coal (thousand tons)³	981,477	719,253	240,687	1,876	19,661
Bituminous ⁴	418,688	322,426	81,473	1,394	13,395
Subbituminous	484,007	362,141	115,339	482	6,045
Lignite	64,966	34,030	30,933	--	3
Total Petroleum (thousand barrels)	88,951	52,122	20,066	628	16,135
Petroleum Liquids	54,181	32,959	11,408	583	9,232
Residual	35,497	22,441	7,285	228	5,543
Distillate ⁵	14,980	9,322	2,813	355	2,489
Other Fuel Oil ⁶	3,705	1,195	1,309	*	1,200
Petroleum Coke ⁷	34,769	19,163	8,659	45	6,903
Total Natural Gas (Thousand Mcf)⁸	8,118,550	2,962,640	3,987,721	79,308	1,088,880

¹ Commercial combined-heat-and-power (CHP) and commercial electricity-only plants.

² Industrial combined-heat-and-power (CHP) and industrial electricity-only plants.

³ Includes anthracite, bituminous coal, subbituminous coal, lignite and waste coal; includes imported coal as well as domestic production.

⁴ Includes anthracite.

⁵ Distillate fuel oil (all diesel and No. 1, No. 2, and No. 4 fuel oils).

⁶ Other Fuel Oil includes jet fuel, kerosene, and waste oil data.

⁷ Petroleum coke (converted to liquid petroleum equivalent). As stated in the EIA Glossary (<http://www.eia.doe.gov/cneaf/electricity/page/glossary.html>), in order to convert petroleum coke to the liquid petroleum equivalent, the quantity conversion is 5 barrels (42 U.S. gallons per barrel) per short ton (2,000 pounds). Coke from petroleum has an average heating value of 6.024 million Btu per barrel.

⁸ Natural gas, including a small amount of supplemental gaseous fuels that cannot be identified separately. Natural gas values do not include blast furnace gas or other manufactured gases.

* = Value is less than half of the smallest unit of measure (e.g., for values with no decimals, the smallest unit is "1" and values under 0.5 are shown as "*".)

Notes: • Totals may not equal sum of components because of independent rounding. • Monetary values are expressed in nominal terms.

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

Table ES2. Average Delivered Cost of Fuels by Type of Fuel, 2009

Type of Fuel	Total All Sectors	Electric Power Sector		Commercial Sector ¹	Industrial Sector ²
		Electric Utilities	Independent Power Producers		
Total Coal (dollars per ton)³	43.74	44.47	39.94	63.68	61.68
Bituminous ⁴	65.81	65.33	66.21	77.02	73.92
Subbituminous	28.51	28.34	28.66	25.15	35.85
Lignite	20.37	18.80	22.10	--	44.30
Total Petroleum (dollars per barrel)	41.64	44.10	37.22	61.28	38.41
Petroleum Liquids	62.47	64.18	59.76	65.26	59.52
Residual	56.67	58.12	52.79	46.65	56.34
Distillate ⁵	76.53	78.45	73.64	77.21	72.52
Other Fuel Oil ⁶	61.18	66.84	68.73	29.49	47.31
Petroleum Coke ⁷	9.18	9.57	7.53	9.31	10.16
Total Natural Gas (dollar per Mcf)⁸	4.86	5.63	4.41	5.30	4.38
Total Coal (cents per MMBtu)³	221	222	211	290	281
Bituminous ⁴	275	276	267	327	307
Subbituminous	164	162	166	145	204
Lignite	158	145	173	--	321
Total Petroleum (cents per MMBtu)	702	737	635	1,021	654
Petroleum Liquids	1,026	1,044	1,002	1,082	983
Residual	898	915	854	732	891
Distillate ⁵	1,322	1,353	1,275	1,329	1,255
Other Fuel Oil ⁶	1,177	1,315	1,336	514	879
Petroleum Coke ⁷	161	168	131	165	180
Total Natural Gas (cents per MMBtu)⁸	474	550	430	518	427

¹ Commercial combined-heat-and-power (CHP) and commercial electricity-only plants.

² Industrial combined-heat-and-power (CHP) and industrial electricity-only plants.

³ Includes anthracite, bituminous coal, subbituminous coal, lignite and waste coal.

⁴ Includes anthracite.

⁵ Distillate fuel oil (all diesel and No. 1, No. 2, and No. 4 fuel oils).

⁶ Other Fuel Oil includes jet fuel, kerosene, and waste oil data.

⁷ Petroleum coke (converted to liquid petroleum equivalent). As stated in the EIA Glossary (<http://www.eia.doe.gov/cneaf/electricity/page/glossary.html>), in order to convert petroleum coke to liquid petroleum equivalent the quantity conversion is 5 barrels (42 U.S. gallons per barrel) per short ton (2,000 pounds). Coke from petroleum has an average heating value of 6.024 million Btu per barrel.

⁸ Natural gas, including a small amount of supplemental gaseous fuels that cannot be identified separately. Natural gas values do not include blast furnace gas or other manufactured gases.

Notes: • Totals may not equal sum of components because of independent rounding. • Monetary values are expressed in nominal terms.

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

Table ES3. Average Quality of Coal by State of Origin: Total (All Sectors), 2009 - 2008

State of Origin	Heat Value (Btu per pound)		Sulfur (percent by weight)		Sulfur (pounds per Million Btu)		Ash (percent by weight)	
	2009	2008	2009	2008	2009	2008	2009	2008
Alabama.....	11,986	11,938	1.48	1.59	1.24	1.33	12.84	13.02
Alaska.....	8,520	8,698	.50	.33	.59	.38	8.91	5.83
Arizona.....	10,751	10,841	.64	.56	.59	.52	10.56	10.05
Colorado.....	10,870	11,171	.49	.50	.45	.45	9.98	9.70
Illinois.....	11,471	11,423	2.73	2.69	2.38	2.36	9.03	8.89
Indiana.....	11,149	11,138	2.56	2.54	2.30	2.28	9.11	9.21
Kansas.....	11,521	11,417	3.61	3.48	3.13	3.05	13.78	12.96
Kentucky.....	12,129	12,138	1.77	1.67	1.46	1.38	10.33	10.53
Louisiana.....	6,902	7,125	.77	.75	1.11	1.05	13.65	11.56
Maryland.....	11,956	11,721	2.03	1.86	1.70	1.59	15.32	17.43
Mississippi.....	5,103	5,068	.47	.48	.92	.95	15.24	15.92
Missouri.....	10,588	10,946	3.49	3.93	3.29	3.59	14.29	15.86
Montana.....	8,934	8,843	.49	.51	.55	.57	7.19	7.68
New Mexico.....	9,276	9,279	.79	.78	.85	.84	19.42	19.70
North Dakota.....	6,552	6,543	.75	.75	1.14	1.15	9.64	9.88
Ohio.....	12,105	12,155	3.68	3.69	3.04	3.04	10.43	10.24
Oklahoma.....	9,539	10,202	1.62	2.05	1.70	2.01	29.56	26.28
Pennsylvania.....	11,486	11,549	2.08	2.07	1.81	1.79	16.64	16.29
Tennessee.....	12,650	12,557	1.25	1.22	.98	.97	8.87	9.44
Texas.....	6,434	6,514	1.17	.98	1.83	1.50	17.13	16.37
Utah.....	11,472	11,488	.58	.57	.51	.50	11.62	11.83
Virginia.....	12,688	12,603	1.01	1.01	.79	.80	10.71	11.17
West Virginia.....	12,310	12,240	1.53	1.48	1.25	1.21	11.56	11.77
Wyoming.....	8,652	8,646	.30	.30	.35	.35	5.17	5.18
Subtotal.....	9,875	9,904	1.01	.98	1.03	.99	8.90	8.93
Imported.....	11,284	11,282	.55	.53	.49	.47	7.00	7.00
Unclassified ¹	10,095	10,466	1.48	1.44	1.47	1.37	15.89	14.55
Total.....	9,902	9,947	1.01	.97	1.02	.98	8.94	8.95

¹ Represents imputed data. Beginning in 2008, the receipts and cost data are imputed for plants between 1 and 50 megawatts.

Notes: • Coal includes anthracite, bituminous coal, subbituminous coal, lignite, and waste coal. • Totals may not equal sum of components because of independent rounding.

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

Table ES4. Receipts of Coal by Rank: Total (All Sectors), 2009 - 2008

Rank	Receipts (thousand tons)	Average Quality				Average Delivered Cost	
		Btu (per pound)	Sulfur (percent by weight)	Sulfur (pounds per Million Btu)	Ash (percent by weight)	(cents per Million Btu)	(dollars per ton)
2009							
Total Coal¹.....	981,477	9,902	1.01	1.02	8.94	221	43.74
Bituminous ²	418,688	11,954	1.77	1.48	10.54	275	65.81
Subbituminous.....	484,007	8,699	.34	.39	5.84	164	28.51
Lignite.....	64,966	6,427	.95	1.48	14.03	158	20.37
2008							
Total Coal¹.....	1,069,709	9,947	.97	.98	8.95	207	41.14
Bituminous ²	463,943	11,973	1.68	1.40	10.63	250	59.92
Subbituminous.....	522,228	8,700	.34	.39	5.83	162	28.11
Lignite.....	68,945	6,495	.86	1.32	13.81	141	18.28

¹ Includes anthracite, bituminous coal, subbituminous coal, lignite, and waste coal; includes imported coal as well as domestic production.

² Includes anthracite.

Notes: • Totals may not equal sum of components because of independent rounding. • Monetary values are expressed in nominal terms.

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

Fossil-Fuel Data at the Census Division and State Level

Table 1. Receipts of Coal at Electric Plants by Census Division and State: Total (All Sectors), 2009 and 2008
(Thousand Tons)

Census Division and State	2009	2008
New England	6,586	8,409
Connecticut	1,147	2,033
Maine	65	243
Massachusetts	4,122	4,674
New Hampshire	1,252	1,459
Rhode Island	--	--
Vermont	--	--
Middle Atlantic	60,170	71,032
New Jersey	2,336	4,483
New York	6,573	9,505
Pennsylvania	51,261	57,044
East North Central	225,363	244,955
Illinois	55,086	60,517
Indiana	58,281	61,080
Michigan	36,474	38,251
Ohio	51,834	58,556
Wisconsin	23,686	26,551
West North Central	148,815	156,070
Iowa	26,300	27,801
Kansas	20,348	21,533
Minnesota	17,922	19,860
Missouri	42,559	44,793
Nebraska	14,349	14,663
North Dakota	25,148	25,163
South Dakota	2,189	2,257
South Atlantic	164,233	183,337
Delaware	1,564	2,363
District of Columbia	--	--
Florida	23,912	29,016
Georgia	35,365	39,683
Maryland	10,426	11,167
North Carolina	28,787	31,394
South Carolina	17,705	15,919
Virginia	13,033	15,511
West Virginia	33,441	38,284
East South Central	100,810	116,508
Alabama	29,698	36,613
Kentucky	41,003	41,399
Mississippi	8,911	9,730
Tennessee	21,197	28,765
West South Central	148,426	157,287
Arkansas	14,507	15,707
Louisiana	16,933	15,399
Oklahoma	21,570	23,213
Texas	95,415	102,968
Mountain	116,525	120,272
Arizona	22,190	23,379
Colorado	19,274	18,913
Idaho	177	198
Montana	9,901	12,321
Nevada	4,061	3,963
New Mexico	16,535	15,419
Utah	18,097	18,142
Wyoming	26,290	27,938
Pacific Contiguous	8,845	10,236
California	1,631	1,804
Oregon	1,552	2,655
Washington	5,662	5,777
Pacific Noncontiguous	1,705	1,603
Alaska	901	922
Hawaii	803	681
U.S. Total	981,477	1,069,709

Notes: • Includes anthracite, bituminous coal, subbituminous coal, lignite, and waste coal. • Includes imported coal as well as domestic production. • Totals may not equal sum of components because of independent rounding.

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

Table 2. Average Delivered Cost of Coal by Census Division and State: Total (All Sectors), 2009 and 2008

Census Division and State	2009		2008		Percent Change 2008-2009 (cents per million Btu)	Percent Change 2008-2009 (dollars per ton)
	(cents per million Btu)	(dollars per ton)	(cents per million Btu)	(dollars per ton)		
New England	349	82.56	312	71.74	11.66	15.09
Connecticut.....	W	W	W	W	W	W
Maine.....	W	W	W	W	W	W
Massachusetts.....	338	79.30	294	67.74	14.90	17.07
New Hampshire.....	366	94.15	353	90.86	3.93	3.62
Rhode Island.....	--	--	--	--	--	--
Vermont.....	--	--	--	--	--	--
Middle Atlantic	241	53.05	225	50.18	7.40	5.71
New Jersey.....	401	92.22	333	80.36	20.57	14.76
New York.....	273	61.09	257	57.88	6.11	5.55
Pennsylvania.....	230	50.23	210	46.53	9.32	7.95
East North Central	205	41.48	190	38.22	8.23	8.53
Illinois.....	165	29.37	158	28.09	4.75	4.56
Indiana.....	202	42.32	193	40.50	4.64	4.49
Michigan.....	207	40.39	197	38.94	5.34	3.72
Ohio.....	239	56.36	205	46.92	16.81	20.12
Wisconsin.....	206	36.67	198	35.81	3.63	2.40
West North Central	143	23.86	137	22.95	4.18	3.96
Iowa.....	134	23.21	127	21.93	5.21	5.84
Kansas.....	143	24.38	141	24.15	1.15	.95
Minnesota.....	164	29.19	169	30.10	-2.75	-3.02
Missouri.....	W	W	151	26.66	W	W
Nebraska.....	W	W	90	15.35	W	W
North Dakota.....	W	W	110	14.69	W	W
South Dakota.....	176	29.45	174	29.16	1.04	.99
South Atlantic	328	78.29	291	69.17	12.66	13.18
Delaware.....	W	W	W	W	W	W
District of Columbia.....	--	--	--	--	--	--
Florida.....	339	81.03	297	70.83	14.13	14.40
Georgia.....	362	79.24	307	67.22	18.01	17.88
Maryland.....	301	75.24	366	90.47	-17.82	-16.83
North Carolina.....	359	88.53	326	79.77	10.18	10.98
South Carolina.....	W	W	W	W	W	W
Virginia.....	308	76.88	277	69.18	11.05	11.13
West Virginia.....	254	60.87	222	52.72	14.85	15.46
East South Central	246	53.36	241	52.82	2.14	1.03
Alabama.....	W	W	271	57.86	W	W
Kentucky.....	217	49.89	214	49.30	1.73	1.20
Mississippi.....	W	W	W	W	W	W
Tennessee.....	257	56.81	W	W	W	W
West South Central	172	27.70	164	26.33	4.98	5.21
Arkansas.....	W	W	W	W	W	W
Louisiana.....	W	W	W	W	W	W
Oklahoma.....	W	W	W	W	W	W
Texas.....	W	W	162	25.17	W	W
Mountain	158	30.13	150	28.63	5.14	5.23
Arizona.....	W	W	W	W	W	W
Colorado.....	W	W	W	W	W	W
Idaho.....	W	W	W	W	W	W
Montana.....	W	W	W	W	W	W
Nevada.....	W	W	W	W	W	W
New Mexico.....	190	35.03	199	36.59	-4.81	-4.26
Utah.....	W	W	W	W	W	W
Wyoming.....	W	W	W	W	W	W
Pacific Contiguous	226	40.92	215	38.36	5.47	6.67
California.....	W	W	W	W	W	W
Oregon.....	176	29.57	145	24.15	21.20	22.44
Washington.....	W	W	W	W	W	W
Pacific Noncontiguous	223	42.54	277	52.74	-19.21	-19.34
Alaska.....	W	W	W	W	W	W
Hawaii.....	W	W	W	W	W	W
U.S. Total	221	43.74	207	41.14	6.78	6.32

W = Withheld to avoid disclosure of individual company data.

Notes: • Includes anthracite, bituminous coal, subbituminous coal, lignite, and waste coal. • Totals may not equal sum of components because of independent rounding. • The cost of coal receipts displayed for the States of Virginia, Florida, Ohio, Kentucky, Tennessee, Michigan, and Alabama may not represent the total average delivered cost of coal for these States and their respective Census Divisions. In some instances, coal is delivered to a transfer facility prior to being delivered to the power plant. The costs presented in this table is the initial delivery costs, not any additional costs incurred to deliver the coal from the transfer facility to the power plant site. • Monetary values are expressed in nominal terms.

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

Table 3.1. Receipts (All Sectors) and Average Delivered Cost (Utility Sector Only) of Coal by Type of Purchase, Census Division, and State, 2009

Census Division and State	Type of Purchase								
	Contract			Spot			Unclassified ¹		
	Receipts (1,000 tons)	Cost		Receipts (1,000 tons)	Cost		Receipts (1,000 tons)	Cost	
(cents per million Btu)		(dollars per ton)	(cents per million Btu)		(dollars per ton)	(cents per million Btu)		(dollars per ton)	
New England	4,415	366	94.15	2,121	--	--	50	--	--
Connecticut	969	--	--	178	--	--	--	--	--
Maine	64	--	--	1	--	--	--	--	--
Massachusetts	2,131	--	--	1,941	--	--	50	--	--
New Hampshire	1,252	366	94.15	--	--	--	--	--	--
Rhode Island	--	--	--	--	--	--	--	--	--
Vermont	--	--	--	--	--	--	--	--	--
Middle Atlantic	55,452	403	100.84	2,782	--	--	1,936	--	--
New Jersey	2,314	803	207.98	22	--	--	--	--	--
New York	6,292	358	89.29	252	--	--	28	--	--
Pennsylvania	46,846	--	--	2,508	--	--	1,908	--	--
East North Central	202,611	203	42.06	20,257	257	54.79	2,495	199	43.20
Illinois	54,760	177	33.28	8	--	--	318	241	52.05
Indiana	52,136	195	40.56	5,580	282	64.45	565	241	54.57
Michigan	32,685	204	39.75	3,480	191	35.71	309	194	48.95
Ohio	42,277	220	52.61	9,201	271	61.31	356	235	57.16
Wisconsin	20,752	194	34.10	1,989	246	44.43	946	165	31.82
West North Central	130,526	139	23.24	15,872	155	24.48	2,417	154	27.74
Iowa	23,222	121	20.72	2,260	144	25.39	819	145	24.79
Kansas	18,971	143	24.29	1,377	149	25.56	--	--	--
Minnesota	16,256	164	29.17	675	172	30.16	991	145	25.72
Missouri	41,045	152	26.67	1,305	156	26.88	208	241	56.18
Nebraska	8,652	110	18.67	5,604	167	28.84	93	--	--
North Dakota	20,191	109	14.69	4,650	138	17.08	307	--	--
South Dakota	2,189	176	29.45	--	--	--	--	--	--
South Atlantic	149,235	333	78.82	13,171	369	90.12	1,827	405	100.76
Delaware	1,356	--	--	202	--	--	NM	NM	NM
District of Columbia	--	--	--	--	--	--	--	--	--
Florida	21,269	331	78.99	2,500	385	91.11	142	--	--
Georgia	34,297	359	78.00	1,067	416	105.34	NM	NM	NM
Maryland	9,243	--	--	1,183	--	--	--	--	--
North Carolina	28,199	363	89.34	391	410	102.89	197	--	--
South Carolina	15,422	361	89.92	2,282	388	96.39	NM	NM	NM
Virginia	9,705	298	74.27	1,873	343	85.05	1,455	--	--
West Virginia	29,743	255	61.37	3,673	334	80.70	26	NM	NM
East South Central	93,281	240	52.81	6,798	308	70.84	732	428	99.91
Alabama	27,824	262	54.55	1,476	350	80.28	397	--	--
Kentucky	37,433	210	48.18	3,570	294	67.80	--	--	--
Mississippi	8,655	337	74.28	252	--	--	NM	NM	NM
Tennessee	19,369	247	53.60	1,498	301	68.54	330	--	--
West South Central	137,677	178	29.55	10,625	225	38.60	123	--	--
Arkansas	14,387	167	29.03	--	--	--	120	--	--
Louisiana	14,065	235	36.81	2,864	--	--	NM	NM	NM
Oklahoma	20,982	164	28.28	589	191	35.56	--	--	--
Texas	88,243	179	28.73	7,172	226	38.68	--	--	--
Mountain	109,259	158	30.40	5,538	202	40.53	1,728	158	29.60
Arizona	21,232	178	34.72	959	245	44.83	--	--	--
Colorado	16,911	155	30.28	1,908	172	34.40	456	192	40.74
Idaho	--	--	--	--	--	--	177	--	--
Montana	9,656	137	17.80	--	--	--	245	--	--
Nevada	3,499	214	46.95	562	246	49.51	--	--	--
New Mexico	16,535	190	35.03	--	--	--	--	--	--
Utah	15,988	149	33.29	2,109	198	41.73	--	--	--
Wyoming	25,439	116	20.28	--	--	--	851	137	24.01
Pacific Contiguous	8,650	176	29.51	50	175	32.99	146	--	--
California	1,464	--	--	22	--	--	146	--	--
Oregon	1,524	176	29.51	28	175	32.99	--	--	--
Washington	5,662	--	--	--	--	--	--	--	--
Pacific Noncontiguous	--	--	--	700	--	--	1,005	129	20.38
Alaska	--	--	--	--	--	--	901	129	20.38
Hawaii	--	--	--	700	--	--	103	--	--
U.S. Total	891,106	219	43.79	77,912	259	52.07	12,459	166	31.35

¹ Represents imputed data. Beginning in 2008, the receipts and cost data are imputed for plants between 1 and 50 megawatts.

NM = Not meaningful due to large relative standard error or excessive percentage change.

Notes: • Includes anthracite, bituminous coal, subbituminous coal, lignite, and waste coal. • Includes imported coal as well as domestic production. • Receipts include data supplied by both regulated and unregulated plants.

Average delivered cost of fuel includes data supplied by regulated plants only. • Totals may not equal sum of components because of independent rounding. • The cost of coal receipts displayed for the States of Virginia, Florida, Ohio, Kentucky, Tennessee, Michigan, and Alabama may not represent the total average delivered cost of coal for these States and their respective Census Divisions. In some instances, coal is delivered to a transfer facility prior to being delivered to the power plant. The costs presented in this table include the initial delivery costs, not any additional costs incurred to deliver the coal from the transfer facility to the power plant site. • Monetary values are expressed in nominal terms.

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

Table 3.2. Receipts (All Sectors) and Average Delivered Cost (Utility Sector Only) of Coal by Mine Type, Census Division, and State, 2009

Census Division and State	Mine Type											
	Surface			Underground			Preparation Plant ¹			Unclassified ²		
	Receipts (1,000 tons)	Cost		Receipts (1,000 tons)	Cost		Receipts (1,000 tons)	Cost		Receipts (1,000 tons)	Cost	
		(cents per million Btu)	(dollars per ton)		(cents per million Btu)	(dollars per ton)		(cents per million Btu)	(dollars per ton)		(cents per million Btu)	(dollars per ton)
New England	4,307	368	92.26	929	365	95.48	1,301	--	--	50	--	--
Connecticut	793	--	--	192	--	--	162	--	--	--	--	--
Maine	65	--	--	--	--	--	--	--	--	--	--	--
Massachusetts	2,934	--	--	--	--	--	1,138	--	--	50	--	--
New Hampshire	515	368	92.26	737	365	95.48	--	--	--	--	--	--
Rhode Island	--	--	--	--	--	--	--	--	--	--	--	--
Vermont	--	--	--	--	--	--	--	--	--	--	--	--
Middle Atlantic	25,523	403	100.84	28,180	--	--	1,406	--	--	5,061	--	--
New Jersey	1,427	803	207.98	910	--	--	--	--	--	--	--	--
New York	3,909	358	89.29	2,627	--	--	9	--	--	28	--	--
Pennsylvania	20,188	--	--	24,643	--	--	1,398	--	--	5,033	--	--
East North Central	166,021	191	37.12	48,336	236	56.59	8,511	260	61.27	2,495	199	43.20
Illinois	51,455	175	31.73	3,314	184	37.45	--	--	--	318	241	52.05
Indiana	41,400	181	36.37	13,913	241	55.82	2,403	260	58.94	565	241	54.57
Michigan	31,221	185	34.39	3,456	300	75.60	1,488	270	67.82	309	194	48.95
Ohio	20,123	229	51.63	26,736	223	54.72	4,619	256	60.48	356	235	57.16
Wisconsin	21,823	191	33.15	918	378	88.61	--	--	--	946	165	31.82
West North Central	144,041	138	22.82	2,312	305	67.81	45	479	123.12	2,417	154	27.74
Iowa	24,649	120	20.51	833	367	83.05	--	--	--	819	145	24.79
Kansas	20,348	143	24.38	--	--	--	--	--	--	--	--	--
Minnesota	16,565	163	28.93	363	218	40.82	3	431	94.38	991	145	25.72
Missouri	41,205	145	25.30	1,104	318	74.26	42	482	125.23	208	241	56.18
Nebraska	14,244	133	22.65	12	191	42.31	--	--	--	93	--	--
North Dakota	24,841	114	15.14	--	--	--	--	--	--	307	--	--
South Dakota	2,189	176	29.45	--	--	--	--	--	--	--	--	--
South Atlantic	76,518	329	74.88	58,416	338	83.41	27,472	349	86.47	1,827	405	100.76
Delaware	606	--	--	875	--	--	76	--	--	NM	NM	NM
District of Columbia	--	--	--	--	--	--	--	--	--	--	--	--
Florida	11,628	335	79.28	10,748	338	80.87	1,394	350	86.47	142	--	--
Georgia	24,720	319	65.27	7,088	460	115.31	3,556	406	101.80	NM	NM	NM
Maryland	3,539	--	--	6,289	--	--	598	--	--	--	--	--
North Carolina	14,901	356	87.41	8,401	362	89.82	5,288	388	95.50	197	--	--
South Carolina	5,867	387	95.66	6,776	311	77.85	5,061	410	102.76	NM	NM	NM
Virginia	6,407	288	70.75	1,614	320	80.76	3,558	331	84.04	1,455	--	--
West Virginia	8,850	276	63.38	16,625	254	62.82	7,940	266	64.76	26	NM	NM
East South Central	54,923	249	51.41	42,624	239	56.57	2,531	272	64.34	732	360	81.76
Alabama	21,022	268	53.36	8,231	263	61.89	47	317	74.55	398	261	56.73
Kentucky	18,149	223	49.74	20,980	208	48.74	1,874	270	64.09	--	--	--
Mississippi	6,579	329	68.95	2,329	346	80.77	--	--	--	NM	NM	NM
Tennessee	9,173	238	44.48	11,084	258	62.49	610	--	--	331	251	54.66
West South Central	147,458	182	30.29	845	175	40.84	--	--	--	123	--	--
Arkansas	14,387	167	29.03	--	--	--	--	--	--	120	--	--
Louisiana	16,929	235	36.81	--	--	--	--	--	--	NM	NM	NM
Oklahoma	20,726	164	28.32	845	175	40.84	--	--	--	--	--	--
Texas	95,415	187	30.46	--	--	--	--	--	--	--	--	--
Mountain	86,292	157	28.86	28,053	167	36.58	452	166	34.29	1,728	158	29.60
Arizona	22,190	181	35.16	--	--	--	--	--	--	--	--	--
Colorado	13,750	143	26.57	5,069	187	41.91	--	--	--	456	192	40.74
Idaho	--	--	--	--	--	--	--	--	--	177	--	--
Montana	9,656	137	17.80	--	--	--	--	--	--	245	--	--
Nevada	1,822	204	38.34	2,239	226	52.23	--	--	--	--	--	--
New Mexico	15,376	186	34.30	1,159	235	44.69	--	--	--	--	--	--
Utah	1,645	251	44.56	16,000	149	33.51	452	166	34.29	--	--	--
Wyoming	21,854	108	18.66	3,585	161	29.93	--	--	--	851	137	24.01
Pacific Contiguous	7,250	175	29.57	1,442	--	--	7	--	--	146	--	--
California	36	--	--	1,442	--	--	7	--	--	146	--	--
Oregon	1,552	175	29.57	--	--	--	--	--	--	--	--	--
Washington	5,662	--	--	--	--	--	--	--	--	--	--	--
Pacific Noncontiguous	700	--	--	--	--	--	--	--	--	1,005	129	20.38
Alaska	--	--	--	--	--	--	--	--	--	901	129	20.38
Hawaii	700	--	--	--	--	--	--	--	--	103	--	--
U.S. Total	713,032	200	37.32	211,136	256	60.78	41,724	324	78.95	15,584	166	31.36

¹ Represents coal purchased directly from preparation plants where originating mine cannot be identified.

² Represents imputed data. Beginning in 2008, the receipts and cost data are imputed for plants between 1 and 50 megawatts.

NM = Not meaningful due to large relative standard error or excessive percentage change.

Notes: • Includes anthracite, bituminous coal, subbituminous coal, lignite, and waste coal. • Includes imported coal as well as domestic production. • Receipts include data supplied by both regulated and unregulated plants.

Average delivered cost of fuel includes data supplied by regulated plants only. • Totals may not equal sum of components because of independent rounding. • The cost of coal receipts displayed for the States of Virginia, Florida, Ohio, Kentucky, Tennessee, Michigan, and Alabama may not represent the total average delivered cost of coal for these States and their respective Census Divisions. In some instances, coal is delivered to a transfer facility prior to being delivered to the power plant. The costs presented in this table include the initial delivery costs, not any additional costs incurred to deliver the coal from the transfer facility to the power plant site. • Monetary values are expressed in nominal terms.

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

Table 4. Receipts (All Sectors) and Average Delivered Cost (Utility Sector Only) of Coal by Rank, Census Division, and State, 2009

Census Division and State	Bituminous ¹			Subbituminous			Lignite			Total ²		
	Receipts (1,000 tons)	Heat Value (Btu per pound)	Cost (cents per million Btu)	Receipts (1,000 tons)	Heat Value (Btu per pound)	Cost (cents per million Btu)	Receipts (1,000 tons)	Heat Value (Btu per pound)	Cost (cents per million Btu)	Receipts (1,000 tons)	Heat Value (Btu per pound)	Cost (cents per million Btu)
New England	6,096	12,053	366	490	9,130	--	--	--	--	6,586	11,836	349
Connecticut.....	657	12,459	--	490	9,130	--	--	--	--	1,147	11,038	W
Maine.....	65	12,779	--	--	--	--	--	--	--	65	12,779	W
Massachusetts.....	4,122	11,735	--	--	--	--	--	--	--	4,122	11,735	338
New Hampshire.....	1,252	12,849	366	--	--	--	--	--	--	1,252	12,849	366
Rhode Island.....	--	--	--	--	--	--	--	--	--	--	--	--
Vermont.....	--	--	--	--	--	--	--	--	--	--	--	--
Middle Atlantic	43,514	12,548	403	5,075	8,933	--	--	--	--	60,170	10,989	241
New Jersey.....	1,397	13,026	803	939	9,210	--	--	--	--	2,336	11,491	401
New York.....	3,824	12,853	358	2,748	8,870	--	--	--	--	6,573	11,187	273
Pennsylvania.....	38,293	12,500	--	1,387	8,872	--	--	--	--	51,261	10,940	230
East North Central	97,693	11,806	229	127,161	8,796	179	--	--	--	225,363	10,100	205
Illinois.....	3,959	10,779	210	50,618	8,732	162	--	--	--	55,086	8,876	165
Indiana.....	38,839	11,311	208	19,442	8,790	185	--	--	--	58,281	10,470	202
Michigan.....	7,645	12,575	310	28,829	9,003	167	--	--	--	36,474	9,751	207
Ohio.....	45,289	12,187	230	6,545	8,869	201	--	--	--	51,834	11,768	239
Wisconsin.....	1,960	11,852	344	21,726	8,656	189	--	--	--	23,686	8,920	206
West North Central	3,328	11,315	297	121,626	8,630	141	23,861	6,552	113	148,815	8,357	143
Iowa.....	1,179	10,916	315	25,121	8,551	120	--	--	--	26,300	8,657	134
Kansas.....	265	10,649	199	20,083	8,498	142	--	--	--	20,348	8,526	143
Minnesota.....	133	11,943	374	17,789	8,855	163	--	--	--	17,922	8,878	164
Missouri.....	1,738	11,640	308	40,820	8,681	145	--	--	--	42,559	8,802	W
Nebraska.....	12	11,100	191	14,337	8,542	133	--	--	--	14,349	8,544	W
North Dakota.....	--	--	--	1,287	8,902	120	23,861	6,552	113	25,148	6,672	W
South Dakota.....	--	--	--	2,189	8,386	176	--	--	--	2,189	8,386	176
South Atlantic	148,125	12,318	347	15,117	8,553	203	--	--	--	164,233	11,942	328
Delaware.....	1,564	12,567	--	--	--	--	--	--	--	1,564	12,567	W
District of Columbia.....	--	--	--	--	--	--	--	--	--	--	--	--
Florida.....	23,912	11,957	337	--	--	--	--	--	--	23,912	11,957	339
Georgia.....	21,853	12,433	430	13,512	8,508	202	--	--	--	35,365	10,933	362
Maryland.....	10,309	12,540	--	117	9,870	--	--	--	--	10,426	12,510	301
North Carolina.....	28,787	12,333	363	--	--	--	--	--	--	28,787	12,333	359
South Carolina.....	17,705	12,471	364	--	--	--	--	--	--	17,705	12,471	W
Virginia.....	13,033	12,501	306	--	--	--	--	--	--	13,033	12,501	308
West Virginia.....	30,963	12,252	266	1,488	8,855	214	--	--	--	33,441	11,959	254
East South Central	74,324	11,759	257	22,742	8,788	194	3,744	5,103	--	100,810	10,841	246
Alabama.....	17,390	11,771	316	12,308	8,721	176	--	--	--	29,698	10,507	W
Kentucky.....	39,191	11,593	219	1,812	8,849	182	--	--	--	41,003	11,472	217
Mississippi.....	3,886	11,617	352	1,281	9,257	279	3,744	5,103	--	8,911	8,541	W
Tennessee.....	13,857	12,252	267	7,341	8,803	212	--	--	--	21,197	11,057	257
West South Central	547	10,177	172	110,826	8,567	177	37,053	6,480	226	148,426	8,052	172
Arkansas.....	120	11,949	--	14,387	8,673	167	--	--	--	14,507	8,700	W
Louisiana.....	NM	NM	NM	13,273	8,559	256	3,659	6,902	206	16,933	8,201	W
Oklahoma.....	427	9,676	172	21,144	8,647	164	--	--	--	21,570	8,668	W
Texas.....	--	--	--	62,022	8,516	180	33,393	6,434	239	95,415	7,787	W
Mountain	42,627	10,847	177	72,928	8,857	146	307	6,485	137	116,525	9,565	158
Arizona.....	7,638	10,742	174	14,552	9,171	185	--	--	--	22,190	9,712	W
Colorado.....	9,097	10,825	180	10,178	8,902	133	--	--	--	19,274	9,810	W
Idaho.....	123	11,947	--	NM	NM	NM	--	--	--	177	10,963	W
Montana.....	--	--	--	9,348	8,522	--	307	6,485	137	9,901	8,409	W
Nevada.....	2,239	11,545	226	1,822	9,227	204	--	--	--	4,061	10,505	W
New Mexico.....	6,588	9,681	236	9,947	8,924	157	--	--	--	16,535	9,226	190
Utah.....	16,452	11,238	149	1,227	8,883	251	--	--	--	18,097	10,965	W
Wyoming.....	489	11,946	--	25,800	8,731	116	--	--	--	26,290	8,791	W
Pacific Contiguous	1,631	11,854	--	7,214	8,408	176	--	--	--	8,845	9,044	226
California.....	1,631	11,854	--	--	--	--	--	--	--	1,631	11,854	W
Oregon.....	--	--	--	1,552	8,426	176	--	--	--	1,552	8,426	176
Washington.....	--	--	--	5,662	8,403	--	--	--	--	5,662	8,403	W
Pacific Noncontiguous	803	10,640	--	828	8,698	117	--	--	--	1,705	9,519	223
Alaska.....	--	--	--	828	8,698	117	--	--	--	901	8,520	W
Hawaii.....	803	10,640	--	--	--	--	--	--	--	803	10,640	W
U.S. Total	418,688	11,954	276	484,007	8,699	162	64,966	6,427	145	981,477	9,902	221

¹ Includes anthracite.

² Includes waste coal not included elsewhere in this table; includes imported coal as well as domestic production.

NM = Not meaningful due to large relative standard error or excessive percentage change.

W = Withheld to avoid disclosure of individual company data.

Notes: • Receipts, heat value, and total average delivered cost include data supplied by both regulated and unregulated plants. Average delivered cost for Bituminous, Subbituminous, and Lignite include data supplied by regulated plants only. • Totals may not equal sum of components because of independent rounding. • The cost of coal receipts displayed for the States of Virginia, Florida, Ohio, Kentucky, Tennessee, Michigan, and Alabama may not represent the total average delivered cost of coal for these States and their respective Census Divisions. In some instances, coal is delivered to a transfer facility prior to being delivered to the power plant. The costs presented in this table include the initial delivery costs, not any additional costs incurred to deliver the coal from the transfer facility to the power plant site. • Monetary values are expressed in nominal terms.

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

Table 5. Receipts of Petroleum Liquids at Electric Plants by Census Division and State: Total (All Sectors), 2009 and 2008
(Thousand Barrels)

Census Division and State	2009	2008
New England	4,815	7,014
Connecticut	658	686
Maine	1,469	1,929
Massachusetts	2,204	3,714
New Hampshire	384	585
Rhode Island	90	88
Vermont	NM	NM
Middle Atlantic	8,729	8,595
New Jersey	907	817
New York	6,457	5,976
Pennsylvania	1,365	1,802
East North Central	1,997	2,320
Illinois	245	271
Indiana	333	372
Michigan	714	734
Ohio	581	570
Wisconsin	124	372
West North Central	833	1,000
Iowa	129	186
Kansas	76	100
Minnesota	195	234
Missouri	198	155
Nebraska	81	88
North Dakota	134	168
South Dakota	NM	69
South Atlantic	16,807	21,267
Delaware	634	457
District of Columbia	53	166
Florida	10,474	14,234
Georgia	786	1,388
Maryland	397	869
North Carolina	899	NM
South Carolina	772	571
Virginia	2,481	2,133
West Virginia	310	264
East South Central	2,071	1,668
Alabama	1,336	589
Kentucky	291	290
Mississippi	56	253
Tennessee	388	536
West South Central	939	997
Arkansas	209	147
Louisiana	402	634
Oklahoma	48	35
Texas	280	180
Mountain	454	542
Arizona	90	109
Colorado	39	68
Idaho	NM	NM
Montana	48	65
Nevada	32	31
New Mexico	82	103
Utah	NM	82
Wyoming	105	84
Pacific Contiguous	737	699
California	320	363
Oregon	79	NM
Washington	337	307
Pacific Noncontiguous	16,799	17,038
Alaska	2,075	1,659
Hawaii	14,724	15,378
U.S. Total	54,181	61,139

NM = Not meaningful due to large relative standard error or excessive percentage change.

Notes: • Includes distillate fuel oil (all diesel and No. 1, No. 2, and No. 4 fuel oils), residual fuel oil (No. 5 and No. 6 fuel oils and bunker C fuel oil), jet fuel, kerosene, and waste oil. • Totals may not equal sum of components because of independent rounding.

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

Table 6. Average Delivered Cost of Petroleum Liquids by Census Division and State: Total (All Sectors), 2009 and 2008

Census Division and State	2009		2008		Percent Change 2008-2009 (cents per million Btu)	Percent Change 2008-2009 (dollars per barrel)
	(cents per million Btu)	(dollars per barrel)	(cents per million Btu)	(dollars per barrel)		
New England	831	51.57	1,294	81.21	-35.76	-36.49
Connecticut	860	52.91	1,744	108.85	-50.69	-51.39
Maine	841	52.30	1,081	67.88	-22.20	-22.95
Massachusetts	830	51.44	1,347	84.53	-38.36	-39.15
New Hampshire	W	W	1,069	68.40	W	W
Rhode Island	W	W	1,649	98.20	W	W
Vermont	NM	NM	1,999	115.97	NM	NM
Middle Atlantic	W	W	1,463	90.43	W	W
New Jersey	1,011	58.00	1,547	89.81	-34.65	-35.42
New York	W	W	W	W	W	W
Pennsylvania	W	W	W	W	W	W
East North Central	1,149	68.35	W	W	W	W
Illinois	1,505	86.74	2,432	140.24	-38.09	-38.15
Indiana	W	W	2,002	117.31	W	W
Michigan	W	W	W	W	W	W
Ohio	W	W	W	W	W	W
Wisconsin	W	W	W	W	W	W
West North Central	W	W	W	W	W	W
Iowa	W	W	W	W	W	W
Kansas	W	W	2,220	128.29	W	W
Minnesota	1,210	71.12	W	W	W	W
Missouri	W	W	W	W	W	W
Nebraska	1,056	62.29	1,772	103.81	-40.44	-40.00
North Dakota	W	W	W	W	W	W
South Dakota	W	W	W	W	W	W
South Atlantic	W	W	W	W	W	W
Delaware	1,120	64.91	1,811	109.34	-38.12	-40.63
District of Columbia	W	W	W	W	W	W
Florida	1,019	64.76	1,396	89.63	-26.96	-27.75
Georgia	W	W	W	W	W	W
Maryland	1,014	59.78	1,721	103.36	-41.12	-42.16
North Carolina	1,014	62.30	NM	NM	NM	NM
South Carolina	938	56.92	W	W	W	W
Virginia	978	59.76	1,380	85.40	-29.13	-30.02
West Virginia	W	W	W	W	W	W
East South Central	1,249	72.13	W	W	W	W
Alabama	W	W	1,672	98.37	W	W
Kentucky	1,417	82.55	W	W	W	W
Mississippi	W	W	W	W	W	W
Tennessee	W	W	W	W	W	W
West South Central	1,144	68.64	1,151	71.52	-.55	-4.02
Arkansas	W	W	W	W	W	W
Louisiana	W	W	W	W	W	W
Oklahoma	W	W	W	W	W	W
Texas	W	W	W	W	W	W
Mountain	W	W	W	W	W	W
Arizona	W	W	W	W	W	W
Colorado	1,249	64.99	W	W	W	W
Idaho	NM	NM	NM	NM	NM	NM
Montana	1,328	71.54	W	W	W	W
Nevada	W	W	W	W	W	W
New Mexico	W	W	W	W	W	W
Utah	1,413	82.77	2,217	129.40	-36.26	-36.04
Wyoming	W	W	W	W	W	W
Pacific Contiguous	W	W	W	W	W	W
California	W	W	W	W	W	W
Oregon	W	W	W	W	W	W
Washington	W	W	W	W	W	W
Pacific Noncontiguous	1,082	64.84	1,788	106.89	-39.48	-39.34
Alaska	W	W	W	W	W	W
Hawaii	W	W	W	W	W	W
U.S. Total	1,026	62.47	1,552	95.38	-33.93	-34.50

NM = Not meaningful due to large relative standard error or excessive percentage change.

W = Withheld to avoid disclosure of individual company data.

Notes: • Includes distillate fuel oil (all diesel and No. 1, No. 2, and No. 4 fuel oils), residual fuel oil (No. 5 and No. 6 fuel oils and bunker C fuel oil), jet fuel, kerosene, and waste oil. • Totals may not equal sum of components because of independent rounding. • Monetary values are expressed in nominal terms.

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

Table 7.A. Receipts (All Sectors) and Average Delivered Cost (Utility Sector Only) of Distillate Fuel Oil by Type of Purchase, Census Division, and State, 2009

Census Division and State	Contract			Spot			Unclassified ¹		
	Receipts (1,000 barrels)	Cost		Receipts (1,000 barrels)	Cost		Receipts (1,000 barrels)	Cost	
		(cents per million Btu)	(\$ per bbl)		(cents per million Btu)	(\$ per bbl)		(cents per million Btu)	(\$ per bbl)
New England	80	1,191	69.34	312	1,346	78.46	244	1,187	68.83
Connecticut	3	1,455	84.66	53	--	--	NM	NM	NM
Maine	8	--	--	4	--	--	23	1,273	74.66
Massachusetts	61	1,171	68.19	238	--	--	155	1,185	68.70
New Hampshire	9	--	--	16	1,346	78.46	NM	NM	NM
Rhode Island	--	--	--	1	--	--	NM	1,184	68.53
Vermont	--	--	--	--	--	--	NM	NM	NM
Middle Atlantic	776	1,322	77.83	443	1,030	60.22	231	1,253	73.18
New Jersey	7	1,221	71.42	26	--	--	25	1,159	67.47
New York	448	1,322	77.84	165	1,030	60.22	144	1,253	73.24
Pennsylvania	321	--	--	251	--	--	62	1,215	70.11
East North Central	481	1,289	74.46	760	1,278	74.03	167	1,326	76.83
Illinois	94	1,651	94.88	140	1,369	78.74	NM	1,310	75.47
Indiana	169	1,286	74.12	81	1,272	73.54	NM	NM	NM
Michigan	9	1,453	84.29	169	1,275	73.76	NM	1,327	76.87
Ohio	206	1,270	73.54	290	1,272	73.72	NM	NM	NM
Wisconsin	2	1,317	75.72	79	1,254	73.12	NM	NM	NM
West North Central	95	1,338	77.12	491	1,304	75.65	144	1,322	76.59
Iowa	14	1,196	69.67	101	1,347	77.80	NM	NM	NM
Kansas	2	1,103	64.24	60	1,284	74.31	NM	1,309	75.80
Minnesota	47	1,306	74.86	62	1,419	81.60	NM	1,294	74.52
Missouri	14	1,510	86.88	141	1,252	72.52	42	1,316	76.15
Nebraska	--	--	--	45	1,367	79.97	NM	NM	NM
North Dakota	17	1,393	80.39	70	1,269	74.42	NM	NM	NM
South Dakota	--	--	--	11	1,148	67.09	NM	NM	NM
South Atlantic	2,027	1,305	75.86	2,189	1,457	85.14	301	1,255	72.79
Delaware	515	--	--	111	--	--	NM	NM	NM
District of Columbia	53	--	--	--	--	--	--	--	--
Florida	335	1,301	75.59	851	1,564	91.10	43	1,365	79.36
Georgia	216	1,246	72.45	21	--	--	142	1,339	76.90
Maryland	86	--	--	164	--	--	NM	NM	NM
North Carolina	291	1,243	72.13	68	1,159	68.05	NM	NM	NM
South Carolina	193	1,337	77.48	1	1,551	89.89	NM	1,275	74.34
Virginia	182	1,329	77.41	827	1,349	79.19	77	1,219	70.50
West Virginia	156	1,457	85.03	146	1,384	80.55	--	--	--
East South Central	202	1,257	72.47	633	1,327	76.16	990	1,373	78.59
Alabama	136	1,259	72.27	115	1,193	67.66	947	1,289	73.97
Kentucky	49	1,293	74.73	239	1,443	84.20	NM	NM	NM
Mississippi	18	1,148	67.02	5	1,684	99.32	22	1,307	76.60
Tennessee	--	--	--	274	1,251	70.93	NM	1,385	78.53
West South Central	43	--	--	256	1,420	82.69	213	1,267	74.02
Arkansas	--	--	--	66	1,613	94.39	NM	NM	NM
Louisiana	27	--	--	42	1,217	70.88	152	1,235	72.09
Oklahoma	3	--	--	20	1,480	88.03	11	1,277	74.52
Texas	12	--	--	128	1,288	73.76	29	1,168	66.18
Mountain	242	1,457	84.14	142	1,411	80.26	NM	NM	NM
Arizona	7	1,794	98.67	69	1,439	82.38	NM	NM	NM
Colorado	--	--	--	26	1,257	69.98	NM	NM	NM
Idaho	--	--	--	--	--	--	NM	NM	NM
Montana	26	--	--	5	1,258	73.99	NM	NM	NM
Nevada	12	--	--	19	1,416	82.60	NM	NM	NM
New Mexico	67	1,551	87.78	15	1,411	77.61	NM	NM	NM
Utah	39	1,396	81.92	7	1,481	85.80	NM	NM	NM
Wyoming	90	1,390	81.18	2	2,381	130.95	NM	NM	NM
Pacific Contiguous	26	--	--	118	1,238	71.89	111	1,427	83.03
California	--	--	--	17	1,691	98.08	96	1,427	83.02
Oregon	--	--	--	61	967	56.10	--	--	--
Washington	26	--	--	39	1,689	98.33	NM	1,417	84.53
Pacific Noncontiguous	2,154	1,373	79.57	35	1,671	95.04	1,047	1,348	77.28
Alaska	--	--	--	26	1,671	95.04	725	1,340	76.53
Hawaii	2,154	1,373	79.57	9	--	--	323	1,381	80.07
U.S. Total	6,126	1,344	77.95	5,380	1,375	79.82	3,474	1,325	76.38

¹ Represents imputed data which includes plants below 50 megawatts and missing data. Beginning in 2008, the receipts and cost data are imputed for plants between 1 and 50 megawatts. NM = Not meaningful due to large relative standard error or excessive percentage change.

Notes: • Distillate fuel oil includes all diesel, No. 1, No. 2, and No. 4 fuel oils. • Receipts include data supplied by both regulated and unregulated plants. Average delivered cost of fuel includes data supplied by regulated plants only. • Totals may not equal sum of components because of independent rounding. • Monetary values are expressed in nominal terms.

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

Table 7.B. Receipts (All Sectors) and Average Delivered Cost (Utility Sector Only) of Residual Fuel Oil by Type of Purchase, Census Division, and State, 2009

Census Division and State	Contract			Spot			Unclassified ¹		
	Receipts (1,000 barrels)	Cost		Receipts (1,000 barrels)	Cost		Receipts (1,000 barrels)	Cost	
		(cents per million Btu)	(\$ per bbl)		(cents per million Btu)	(\$ per bbl)		(cents per million Btu)	(\$ per bbl)
New England	265	--	--	2,473	604	38.84	1,176	768	48.46
Connecticut	200	--	--	283	--	--	65	--	--
Maine	30	--	--	627	--	--	589	--	--
Massachusetts	35	--	--	1,354	643	41.28	340	798	50.23
New Hampshire	--	--	--	209	602	38.72	128	--	--
Rhode Island	--	--	--	--	--	--	54	--	--
Vermont	--	--	--	--	--	--	NM	NM	NM
Middle Atlantic	4,832	810	51.33	1,606	--	--	280	--	--
New Jersey	383	778	48.75	63	--	--	--	--	--
New York	4,449	814	51.63	878	--	--	233	--	--
Pennsylvania	--	--	--	665	--	--	47	--	--
East North Central	--	--	--	234	425	26.35	356	899	57.02
Illinois	--	--	--	--	--	--	--	--	--
Indiana	--	--	--	74	--	--	NM	NM	NM
Michigan	--	--	--	160	425	26.35	242	899	57.02
Ohio	--	--	--	--	--	--	NM	--	--
Wisconsin	--	--	--	--	--	--	NM	NM	NM
West North Central	--	--	--	38	485	29.82	NM	--	--
Iowa	--	--	--	--	--	--	--	--	--
Kansas	--	--	--	--	--	--	--	--	--
Minnesota	--	--	--	12	590	38.35	NM	--	--
Missouri	--	--	--	--	--	--	--	--	--
Nebraska	--	--	--	27	435	26.09	--	--	--
North Dakota	--	--	--	--	--	--	NM	NM	NM
South Dakota	--	--	--	--	--	--	--	--	--
South Atlantic	6,539	920	59.46	3,922	965	61.52	1,520	972	62.44
Delaware	--	--	--	--	--	--	NM	NM	NM
District of Columbia	--	--	--	--	--	--	--	--	--
Florida	4,727	951	61.57	3,718	974	62.15	787	976	62.77
Georgia	305	--	--	--	--	--	NM	NM	NM
Maryland	--	--	--	62	--	--	NM	NM	NM
North Carolina	154	--	--	--	--	--	372	--	--
South Carolina	340	--	--	33	--	--	--	--	--
Virginia	1,014	756	48.27	110	632	40.38	255	--	--
West Virginia	--	--	--	--	--	--	--	--	--
East South Central	--	--	--	26	951	62.29	140	--	--
Alabama	--	--	--	14	--	--	72	--	--
Kentucky	--	--	--	--	--	--	--	--	--
Mississippi	--	--	--	12	951	62.29	--	--	--
Tennessee	--	--	--	--	--	--	NM	--	--
West South Central	14	--	--	133	706	45.31	213	--	--
Arkansas	--	--	--	73	515	32.71	NM	NM	NM
Louisiana	--	--	--	60	933	60.63	107	--	--
Oklahoma	14	--	--	--	--	--	--	--	--
Texas	--	--	--	--	--	--	NM	--	--
Mountain	--	--	--	--	--	--	NM	NM	NM
Arizona	--	--	--	--	--	--	--	--	--
Colorado	--	--	--	--	--	--	--	--	--
Idaho	--	--	--	--	--	--	--	--	--
Montana	--	--	--	--	--	--	NM	NM	NM
Nevada	--	--	--	--	--	--	--	--	--
New Mexico	--	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--	--
Wyoming	--	--	--	--	--	--	NM	NM	NM
Pacific Contiguous	3	--	--	24	1,241	80.16	NM	NM	NM
California	--	--	--	4	1,241	80.16	--	--	--
Oregon	3	--	--	--	--	--	NM	--	--
Washington	--	--	--	20	--	--	NM	NM	NM
Pacific Noncontiguous	9,412	935	59.04	511	1,088	64.16	1,709	984	61.15
Alaska	--	--	--	511	1,088	64.16	41	901	53.14
Hawaii	9,412	935	59.04	--	--	--	1,668	986	61.40
U.S. Total	21,065	903	57.48	8,967	939	59.40	5,465	972	60.64

¹ Represents imputed data which includes plants below 50 megawatts and missing data. Beginning in 2008, the receipts and cost data are imputed for plants between 1 and 50 megawatts. NM = Not meaningful due to large relative standard error or excessive percentage change.

Notes: • Receipts include data supplied by both regulated and unregulated plants. Average delivered cost of fuel includes data supplied by regulated plants only. • Totals may not equal sum of components because of independent rounding. • Monetary values are expressed in nominal terms.

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

Table 8. Receipts of Petroleum Coke at Electric Plants by Census Division and State: Total (All Sectors), 2009 and 2008

Census Division and State	2009		2008	
	Thousand Tons	Thousand Barrels Equivalent	Thousand Tons	Thousand Barrels Equivalent
New England	--	--	--	--
Connecticut.....	--	--	--	--
Maine.....	--	--	--	--
Massachusetts.....	--	--	--	--
New Hampshire.....	--	--	--	--
Rhode Island.....	--	--	--	--
Vermont.....	--	--	--	--
Middle Atlantic	279	1,394	192	961
New Jersey.....	--	--	--	--
New York.....	179	894	67	334
Pennsylvania.....	100	500	126	628
East North Central	905	4,526	1,149	5,747
Illinois.....	--	--	--	--
Indiana.....	13	66	--	--
Michigan.....	186	928	162	811
Ohio.....	296	1,480	519	2,597
Wisconsin.....	410	2,051	468	2,338
West North Central	69	344	172	862
Iowa.....	9	45	58	289
Kansas.....	48	240	55	275
Minnesota.....	--	--	55	273
Missouri.....	12	60	5	25
Nebraska.....	--	--	--	--
North Dakota.....	--	--	--	--
South Dakota.....	--	--	--	--
South Atlantic	1,741	8,707	1,986	9,931
Delaware.....	--	--	--	--
District of Columbia.....	--	--	--	--
Florida.....	1,440	7,201	1,610	8,051
Georgia.....	272	1,358	374	1,870
Maryland.....	--	--	--	--
North Carolina.....	--	--	--	--
South Carolina.....	30	148	--	--
Virginia.....	--	--	--	--
West Virginia.....	--	--	2	10
East South Central	1,059	5,296	1,070	5,349
Alabama.....	--	--	--	--
Kentucky.....	1,059	5,296	1,070	5,349
Mississippi.....	--	--	--	--
Tennessee.....	--	--	--	--
West South Central	1,863	9,315	1,392	6,959
Arkansas.....	--	--	--	--
Louisiana.....	1,316	6,579	895	4,477
Oklahoma.....	2	8	11	53
Texas.....	546	2,728	486	2,429
Mountain	260	1,299	239	1,193
Arizona.....	--	--	--	--
Colorado.....	--	--	--	--
Idaho.....	--	--	--	--
Montana.....	260	1,299	239	1,193
Nevada.....	--	--	--	--
New Mexico.....	--	--	--	--
Utah.....	--	--	--	--
Wyoming.....	--	--	--	--
Pacific Contiguous	778	3,889	840	4,198
California.....	778	3,889	840	4,198
Oregon.....	--	--	--	--
Washington.....	--	--	--	--
Pacific Noncontiguous	--	--	--	--
Alaska.....	--	--	--	--
Hawaii.....	--	--	--	--
U.S. Total	6,954	34,769	7,040	35,202

Notes: • As stated in the EIA Glossary (<http://www.eia.doe.gov/cneaf/electricity/page/glossary.html>), in order to convert petroleum coke to the liquid petroleum equivalent, the quantity conversion is 5 barrels (42 U.S. gallons per barrel) per short ton (2,000 pounds). Coke from petroleum has an average heating value of 6.024 million Btu per barrel. • Totals may not equal sum of components because of independent rounding.

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

Table 9. Average Delivered Cost of Petroleum Coke by Census Division and State: Total (All Sectors), 2009 and 2008

Census Division and State	2009		2008		Percent Change 2008-2009 (cents per million Btu)	Percent Change 2008-2009 (dollars per ton)
	(cents per million Btu)	(dollars per ton)	(cents per million Btu)	(dollars per ton)		
New England	--	--	--	--	--	--
Connecticut	--	--	--	--	--	--
Maine	--	--	--	--	--	--
Massachusetts	--	--	--	--	--	--
New Hampshire	--	--	--	--	--	--
Rhode Island	--	--	--	--	--	--
Vermont	--	--	--	--	--	--
Middle Atlantic	W	W	201	53.55	W	W
New Jersey	--	--	--	--	--	--
New York	W	W	W	W	W	W
Pennsylvania	W	W	W	W	W	W
East North Central	172	48.36	W	W	W	W
Illinois	--	--	--	--	--	--
Indiana	W	W	--	--	--	--
Michigan	W	W	W	W	W	W
Ohio	W	W	W	W	W	W
Wisconsin	W	W	W	W	W	W
West North Central	W	W	W	W	W	W
Iowa	W	W	W	W	W	W
Kansas	156	45.14	157	44.77	-22	.83
Minnesota	--	--	114	31.61	--	--
Missouri	153	44.58	146	41.46	4.81	7.53
Nebraska	--	--	--	--	--	--
North Dakota	--	--	--	--	--	--
South Dakota	--	--	--	--	--	--
South Atlantic	W	W	W	W	W	W
Delaware	--	--	--	--	--	--
District of Columbia	--	--	--	--	--	--
Florida	251	71.28	216	61.33	16.01	16.22
Georgia	W	W	W	W	W	W
Maryland	--	--	--	--	--	--
North Carolina	--	--	--	--	--	--
South Carolina	107	32.67	--	--	--	--
Virginia	--	--	--	--	--	--
West Virginia	--	--	W	W	--	--
East South Central	98	27.59	W	W	W	W
Alabama	--	--	--	--	--	--
Kentucky	98	27.59	W	W	W	W
Mississippi	--	--	--	--	--	--
Tennessee	--	--	--	--	--	--
West South Central	127	36.39	289	83.50	-56.03	-56.42
Arkansas	--	--	--	--	--	--
Louisiana	W	W	W	W	W	W
Oklahoma	W	W	W	W	W	W
Texas	W	W	W	W	W	W
Mountain	W	W	W	W	W	W
Arizona	--	--	--	--	--	--
Colorado	--	--	--	--	--	--
Idaho	--	--	--	--	--	--
Montana	W	W	W	W	W	W
Nevada	--	--	--	--	--	--
New Mexico	--	--	--	--	--	--
Utah	--	--	--	--	--	--
Wyoming	--	--	--	--	--	--
Pacific Contiguous	W	W	W	W	W	W
California	W	W	W	W	W	W
Oregon	--	--	--	--	--	--
Washington	--	--	--	--	--	--
Pacific Noncontiguous	--	--	--	--	--	--
Alaska	--	--	--	--	--	--
Hawaii	--	--	--	--	--	--
U.S. Total	161	45.89	211	59.72	-23.43	-23.16

W = Withheld to avoid disclosure of individual company data.

Notes: • Totals may not equal sum of components because of independent rounding. • Monetary values are expressed in nominal terms.

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

Table 10. Receipts (All Sectors) and Average Delivered Cost (Utility Sector Only) of Petroleum Coke by Type of Purchase, Census Division and State, 2009

Census Division and State	Contract			Spot			Unclassified ¹		
	Receipts (1,000 tons)	Cost		Receipts (1,000 tons)	Cost		Receipts (1,000 tons)	Cost	
		(cents per million Btu)	(\$ per ton)		(cents per million Btu)	(\$ per ton)		(cents per million Btu)	(\$ per ton)
New England	--	--	--	--	--	--	--	--	--
Connecticut.....	--	--	--	--	--	--	--	--	--
Maine.....	--	--	--	--	--	--	--	--	--
Massachusetts.....	--	--	--	--	--	--	--	--	--
New Hampshire.....	--	--	--	--	--	--	--	--	--
Rhode Island.....	--	--	--	--	--	--	--	--	--
Vermont.....	--	--	--	--	--	--	--	--	--
Middle Atlantic	264	--	--	2	--	--	13	NM	NM
New Jersey.....	--	--	--	--	--	--	--	--	--
New York.....	178	--	--	1	--	--	--	--	--
Pennsylvania.....	86	--	--	1	--	--	13	NM	NM
East North Central	382	147	41.16	148	144	40.77	375	180	50.76
Illinois.....	--	--	--	--	--	--	--	--	--
Indiana.....	4	--	--	10	164	46.77	--	--	--
Michigan.....	12	191	54.65	37	--	--	136	--	--
Ohio.....	92	--	--	--	--	--	NM	--	--
Wisconsin.....	274	142	39.56	101	142	40.20	NM	NM	NM
West North Central	49	156	45.12	11	153	44.64	9	NM	NM
Iowa.....	*	220	58.41	--	--	--	9	NM	NM
Kansas.....	48	156	45.14	--	--	--	--	--	--
Minnesota.....	--	--	--	--	--	--	--	--	--
Missouri.....	1	153	43.89	11	153	44.64	--	--	--
Nebraska.....	--	--	--	--	--	--	--	--	--
North Dakota.....	--	--	--	--	--	--	--	--	--
South Dakota.....	--	--	--	--	--	--	--	--	--
South Atlantic	1,080	287	82.30	662	139	38.61	--	--	--
Delaware.....	--	--	--	--	--	--	--	--	--
District of Columbia.....	--	--	--	--	--	--	--	--	--
Florida.....	1,043	293	83.71	397	139	38.61	--	--	--
Georgia.....	7	--	--	265	--	--	--	--	--
Maryland.....	--	--	--	--	--	--	--	--	--
North Carolina.....	--	--	--	--	--	--	--	--	--
South Carolina.....	30	107	32.67	--	--	--	--	--	--
Virginia.....	--	--	--	--	--	--	--	--	--
West Virginia.....	--	--	--	--	--	--	--	--	--
East South Central	725	100	28.27	334	92	26.13	--	--	--
Alabama.....	--	--	--	--	--	--	--	--	--
Kentucky.....	725	100	28.27	334	92	26.13	--	--	--
Mississippi.....	--	--	--	--	--	--	--	--	--
Tennessee.....	--	--	--	--	--	--	--	--	--
West South Central	1,679	132	37.91	128	--	--	56	--	--
Arkansas.....	--	--	--	--	--	--	--	--	--
Louisiana.....	1,270	132	37.91	--	--	--	46	--	--
Oklahoma.....	2	--	--	--	--	--	--	--	--
Texas.....	407	--	--	128	--	--	NM	NM	NM
Mountain	216	--	--	44	--	--	--	--	--
Arizona.....	--	--	--	--	--	--	--	--	--
Colorado.....	--	--	--	--	--	--	--	--	--
Idaho.....	--	--	--	--	--	--	--	--	--
Montana.....	216	--	--	44	--	--	--	--	--
Nevada.....	--	--	--	--	--	--	--	--	--
New Mexico.....	--	--	--	--	--	--	--	--	--
Utah.....	--	--	--	--	--	--	--	--	--
Wyoming.....	--	--	--	--	--	--	--	--	--
Pacific Contiguous	69	--	--	2	--	--	707	--	--
California.....	69	--	--	2	--	--	707	--	--
Oregon.....	--	--	--	--	--	--	--	--	--
Washington.....	--	--	--	--	--	--	--	--	--
Pacific Noncontiguous	--	--	--	--	--	--	--	--	--
Alaska.....	--	--	--	--	--	--	--	--	--
Hawaii.....	--	--	--	--	--	--	--	--	--
U.S. Total	4,463	181	51.77	1,332	121	34.07	1,160	180	50.76

¹ Represents imputed data. Beginning in 2008, the receipts and cost data are imputed for plants between 1 and 50 megawatts.

* = Value is less than half of the smallest unit of measure (e.g., for values with no decimals, the smallest unit is "1" and values under 0.5 are shown as "*.")

NM = Not meaningful due to large relative standard error or excessive percentage change.

Notes: • Totals may not equal sum of components because of independent rounding. • Monetary values are expressed in nominal terms.

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

Table 12. Receipts of Natural Gas at Electric Plants by Census Division and State: Total (All Sectors), 2009 and 2008
(Thousand Mcf)

Census Division and State	2009	2008
New England	394,249	394,730
Connecticut	77,029	65,187
Maine	58,027	59,901
Massachusetts	162,734	165,924
New Hampshire	38,365	49,195
Rhode Island	58,031	54,484
Vermont	64	38
Middle Atlantic	784,342	752,014
New Jersey	179,531	186,281
New York	381,601	413,327
Pennsylvania	223,209	152,405
East North Central	281,030	275,521
Illinois	49,647	49,742
Indiana	53,263	52,012
Michigan	88,738	99,021
Ohio	40,719	25,605
Wisconsin	48,662	49,141
West North Central	119,973	134,928
Iowa	17,625	21,458
Kansas	32,204	26,780
Minnesota	35,056	33,968
Missouri	29,852	42,888
Nebraska	3,353	7,266
North Dakota	959	NM
South Dakota	922	2,568
South Atlantic	1,343,453	1,128,275
Delaware	12,401	12,981
District of Columbia	--	--
Florida	935,903	816,252
Georgia	156,066	107,306
Maryland	20,987	23,742
North Carolina	40,384	36,793
South Carolina	74,785	46,973
Virginia	100,902	81,380
West Virginia	2,024	2,849
East South Central	475,250	392,067
Alabama	250,093	178,936
Kentucky	12,257	13,629
Mississippi	207,836	193,463
Tennessee	5,064	6,038
West South Central	2,730,689	2,757,580
Arkansas	93,434	73,848
Louisiana	469,799	487,810
Oklahoma	294,383	290,446
Texas	1,873,073	1,905,476
Mountain	721,179	734,036
Arizona	262,866	284,700
Colorado	114,854	108,215
Idaho	14,512	14,069
Montana	1,170	1,423
Nevada	196,689	184,246
New Mexico	70,626	72,539
Utah	51,057	58,101
Wyoming	9,403	10,744
Pacific Contiguous	1,228,217	1,264,618
California	1,017,068	1,060,611
Oregon	115,521	126,636
Washington	95,628	77,371
Pacific Noncontiguous	40,168	45,278
Alaska	40,168	45,278
Hawaii	--	--
U.S. Total	8,118,550	7,879,046

NM = Not meaningful due to large relative standard error or excessive percentage change.

Notes: • Natural gas, including small amount of supplemental gaseous fuels that cannot be identified separately. Natural gas values do not include blast furnace gas or other manufactured gases. • Totals may not equal sum of components because of independent rounding.

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

Table 13. Average Delivered Cost of Natural Gas by Census Division and State: Total (All Sectors), 2009 and 2008

Census Division and State	2009		2008		Percent Change 2008-2009 (cents per million Btu)	Percent Change 2008-2009 (dollars per Mcf)
	(cents per million Btu)	(dollars per Mcf)	(cents per million Btu)	(dollars per Mcf)		
New England	491	5.05	1,012	10.46	-51.51	-51.69
Connecticut	485	4.92	1,033	10.46	-53.08	-52.96
Maine	493	5.15	1,006	10.60	-51.00	-51.42
Massachusetts	489	5.05	1,014	10.49	-51.76	-51.86
New Hampshire	W	W	W	W	W	W
Rhode Island	W	W	W	W	W	W
Vermont	563	5.66	909	9.14	-38.07	-38.07
Middle Atlantic	501	5.13	1,047	10.73	-52.15	-52.21
New Jersey	515	5.30	1,041	10.74	-50.51	-50.65
New York	518	5.28	1,062	10.82	-51.21	-51.20
Pennsylvania	461	4.73	1,016	10.48	-54.63	-54.87
East North Central	468	4.75	919	9.34	-49.06	-49.10
Illinois	517	5.20	967	9.78	-46.59	-46.83
Indiana	465	4.71	948	9.62	-50.96	-51.04
Michigan	453	4.59	861	8.73	-47.43	-47.42
Ohio	433	4.47	1,035	10.72	-58.15	-58.30
Wisconsin	481	4.88	895	9.10	-46.26	-46.37
West North Central	W	W	W	W	W	W
Iowa	W	W	W	W	W	W
Kansas	407	4.13	W	W	W	W
Minnesota	598	6.05	891	9.03	-32.83	-33.00
Missouri	W	W	W	W	W	W
Nebraska	W	W	W	W	W	W
North Dakota	W	W	NM	NM	W	W
South Dakota	514	5.15	724	7.32	-29.09	-29.64
South Atlantic	675	6.93	1,014	10.44	-33.48	-33.65
Delaware	W	W	W	W	W	W
District of Columbia	--	--	--	--	--	--
Florida	764	7.82	1,010	10.38	-24.39	-24.66
Georgia	452	4.68	996	10.31	-54.61	-54.61
Maryland	521	5.48	1,051	11.03	-50.42	-50.32
North Carolina	W	W	W	W	W	W
South Carolina	407	4.18	1,017	10.48	-60.04	-60.11
Virginia	452	4.69	1,043	10.80	-56.62	-56.57
West Virginia	545	5.60	1,048	10.77	-48.03	-48.00
East South Central	432	4.42	962	9.85	-55.09	-55.18
Alabama	425	4.36	973	10.00	-56.28	-56.40
Kentucky	624	6.39	W	W	W	W
Mississippi	428	4.35	942	9.61	-54.63	-54.73
Tennessee	501	5.16	W	W	W	W
West South Central	397	4.07	880	9.03	-54.87	-54.95
Arkansas	405	4.15	890	9.18	-54.45	-54.79
Louisiana	427	4.41	945	9.78	-54.79	-54.91
Oklahoma	379	3.92	793	8.18	-52.18	-52.08
Texas	392	4.00	876	8.96	-55.27	-55.36
Mountain	443	4.56	778	8.01	-43.00	-43.14
Arizona	407	4.16	837	8.60	-51.35	-51.63
Colorado	413	4.27	678	7.02	-39.13	-39.17
Idaho	463	4.70	W	W	W	W
Montana	W	W	W	W	W	W
Nevada	533	5.50	797	8.28	-33.17	-33.57
New Mexico	W	W	802	8.20	W	W
Utah	366	3.82	W	W	W	W
Wyoming	299	2.95	423	4.17	-29.37	-29.26
Pacific Contiguous	436	4.48	799	8.20	-45.41	-45.40
California	431	4.42	808	8.29	-46.67	-46.68
Oregon	419	4.29	705	7.20	-40.55	-40.42
Washington	515	5.30	833	8.57	-38.20	-38.16
Pacific Noncontiguous	W	W	W	W	W	W
Alaska	W	W	W	W	W	W
Hawaii	--	--	--	--	--	--
U.S. Total	474	4.86	902	9.26	-47.41	-47.52

NM = Not meaningful due to large relative standard error or excessive percentage change.

W = Withheld to avoid disclosure of individual company data.

Notes: • Natural gas, including small amount of supplemental gaseous fuels that cannot be identified separately. Natural gas values do not include blast furnace gas or other manufactured gases. • Totals may not equal sum of components because of independent rounding. • Monetary values are expressed in nominal terms.

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

Table 14.1. Receipts (All Sectors) and Average Delivered Cost (Utility Sector Only) of Natural Gas by Type of Purchase, Census Division, and State, 2009

Census Division and State	Contract			Spot			Unclassified ¹		
	Receipts (1,000 Mcf)	Cost		Receipts (1,000 Mcf)	Cost		Receipts (1,000 Mcf)	Cost	
		(cents per million Btu)	(\$ per Mcf)		(cents per million Btu)	(\$ per Mcf)		(cents per million Btu)	(\$ per Mcf)
New England	118,687	484	4.95	259,003	589	6.13	16,560	458	4.73
Connecticut	23,767	870	8.92	47,025	--	--	6,237	--	--
Maine	31,218	--	--	26,519	--	--	291	--	--
Massachusetts	6,600	460	4.72	149,118	642	6.59	7,016	458	4.73
New Hampshire	37,538	--	--	492	557	5.84	334	--	--
Rhode Island	19,500	--	--	35,849	--	--	2,682	--	--
Vermont	64	563	5.66	--	--	--	--	--	--
Middle Atlantic	345,492	517	5.28	414,185	485	4.92	24,665	497	5.06
New Jersey	74,733	--	--	95,603	--	--	9,195	--	--
New York	195,960	517	5.28	173,379	485	4.92	12,262	498	5.07
Pennsylvania	74,798	--	--	145,204	--	--	3,207	480	4.92
East North Central	113,809	598	6.10	138,722	498	5.06	28,499	479	4.86
Illinois	22,046	365	3.65	24,951	708	7.17	2,650	493	4.97
Indiana	15,267	585	6.01	32,626	456	4.64	5,370	512	5.18
Michigan	55,274	682	6.88	24,573	590	5.91	8,892	468	4.75
Ohio	2,501	499	5.13	33,203	412	4.21	5,015	463	4.78
Wisconsin	18,722	590	5.90	23,368	519	5.27	6,572	481	4.89
West North Central	38,151	436	4.39	69,031	525	5.33	12,791	467	4.74
Iowa	5,417	523	5.32	11,688	487	4.91	520	472	4.78
Kansas	10,276	372	3.75	20,085	425	4.33	1,843	395	4.01
Minnesota	9,912	483	4.83	18,683	690	6.98	6,461	451	4.56
Missouri	9,908	426	4.29	17,181	501	5.10	NM	539	5.48
Nebraska	2,169	607	6.04	1,112	683	6.87	72	NM	NM
North Dakota	1	609	6.28	--	--	--	958	506	5.19
South Dakota	468	514	5.17	282	569	5.67	172	423	4.25
South Atlantic	843,275	742	7.60	469,288	691	7.11	30,891	750	7.67
Delaware	1,222	--	--	10,863	--	--	NM	NM	NM
District of Columbia	--	--	--	--	--	--	--	--	--
Florida	681,909	789	8.07	241,085	818	8.37	12,910	779	7.97
Georgia	54,804	471	4.85	96,479	427	4.46	4,784	469	4.86
Maryland	4,121	--	--	9,738	--	--	7,128	--	--
North Carolina	1,494	362	3.71	38,449	781	8.01	441	--	--
South Carolina	69,889	395	4.07	4,874	829	8.52	NM	NM	NM
Virginia	29,413	--	--	67,114	476	4.95	4,376	--	--
West Virginia	423	632	6.32	687	453	4.79	914	--	--
East South Central	147,754	488	4.88	308,947	428	4.38	18,549	433	4.41
Alabama	101,983	452	4.65	139,843	428	4.39	8,267	--	--
Kentucky	7,173	710	7.29	1,361	605	6.21	3,723	515	5.28
Mississippi	38,349	454	4.34	165,236	426	4.36	4,251	409	4.17
Tennessee	249	--	--	2,508	457	4.70	2,307	--	--
West South Central	1,324,732	399	4.13	1,315,501	413	4.22	90,456	408	4.16
Arkansas	12,716	--	--	70,809	625	6.35	9,909	399	4.09
Louisiana	234,293	594	6.12	216,904	423	4.35	18,602	414	4.27
Oklahoma	193,471	397	4.14	99,127	383	3.92	1,785	392	4.06
Texas	884,252	387	3.95	928,661	410	4.19	60,160	408	4.16
Mountain	202,183	475	4.86	500,538	477	4.90	18,458	471	4.88
Arizona	79,096	470	4.81	182,747	396	4.05	1,023	--	--
Colorado	67,181	973	9.85	45,251	380	3.78	2,422	465	4.81
Idaho	8,150	--	--	3,104	643	6.45	3,258	--	--
Montana	646	571	6.12	9	--	--	515	451	4.62
Nevada	13,967	--	--	182,721	589	6.09	NM	NM	NM
New Mexico	30,610	490	5.04	37,942	433	4.44	2,074	NM	NM
Utah	2,531	--	--	43,638	348	3.63	4,888	NM	NM
Wyoming	--	--	--	5,126	496	4.90	4,277	480	4.74
Pacific Contiguous	542,410	490	4.98	519,731	465	4.76	166,076	468	4.80
California	443,191	518	5.25	411,929	431	4.40	161,948	469	4.81
Oregon	71,242	--	--	42,759	428	4.39	1,520	477	4.87
Washington	27,976	398	4.10	65,043	611	6.29	2,608	453	4.66
Pacific Noncontiguous	34,728	511	5.14	--	--	--	5,440	483	4.87
Alaska	34,728	511	5.14	--	--	--	5,440	483	4.87
Hawaii	--	--	--	--	--	--	--	--	--
U.S. Total	3,711,220	630	6.45	3,994,946	495	5.07	412,384	488	4.98

¹ Represents imputed data which includes plants below 50 megawatts and missing data. Beginning in 2008, the receipts and cost data are imputed for plants between 1 and 50 megawatts.

NM = Not meaningful due to large relative standard error or excessive percentage change.

Notes: • Natural gas, including a small amount of supplemental gaseous fuels that cannot be identified separately. Natural gas values do not include blast furnace gas or other manufactured gases. • Receipts and total average delivered cost include data supplied by both regulated and unregulated plants. Average delivered cost for firm, interruptible, and unclassified delivery types include data supplied by regulated plants only. • Totals may not equal sum of components because of independent rounding. • Monetary values are expressed in nominal terms.

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

Table 14.2. Receipts (All Sectors) and Average Delivered Cost (Utility Sector Only) of Natural Gas by Type of Delivery, Census Division, and State, 2009

Census Division and State	Firm			Interruptible			Unclassified ¹		
	Receipts (1,000 Mcf)	Cost		Receipts (1,000 Mcf)	Cost		Receipts (1,000 Mcf)	Cost	
		(cents per million Btu)	(\$ per Mcf)		(cents per million Btu)	(\$ per Mcf)		(cents per million Btu)	(\$ per Mcf)
New England	259,764	562	5.89	117,926	519	5.32	16,560	458	4.73
Connecticut	46,015	--	--	24,777	870	8.92	6,237	--	--
Maine	36,857	--	--	20,879	--	--	291	--	--
Massachusetts	105,838	--	--	49,879	505	5.18	7,016	458	4.73
New Hampshire	38,001	562	5.89	29	472	4.96	334	--	--
Rhode Island	33,053	--	--	22,297	--	--	2,682	--	--
Vermont	--	--	--	64	563	5.66	--	--	--
Middle Atlantic	493,471	508	5.18	266,206	1,136	11.71	24,665	497	5.06
New Jersey	61,027	--	--	109,309	--	--	9,195	--	--
New York	275,344	508	5.18	93,995	1,136	11.71	12,262	498	5.07
Pennsylvania	157,100	--	--	62,902	--	--	3,207	480	4.92
East North Central	167,213	538	5.46	85,318	476	4.85	28,499	479	4.86
Illinois	25,291	566	5.66	21,705	727	7.37	2,650	493	4.97
Indiana	17,423	497	5.06	30,471	466	4.75	5,370	512	5.18
Michigan	61,508	646	6.49	18,339	442	4.49	8,892	468	4.75
Ohio	29,664	509	5.21	6,040	376	3.84	5,015	463	4.78
Wisconsin	33,326	517	5.26	8,764	529	5.35	6,572	481	4.89
West North Central	66,528	468	4.75	40,654	532	5.37	12,791	467	4.74
Iowa	8,438	529	5.36	8,667	470	4.75	520	472	4.78
Kansas	18,935	433	4.41	11,426	364	3.67	1,843	395	4.01
Minnesota	14,438	580	5.84	14,157	680	6.88	6,461	451	4.56
Missouri	22,704	442	4.48	4,385	634	6.40	NM	539	5.48
Nebraska	1,348	682	6.76	1,933	599	6.01	72	NM	NM
North Dakota	--	--	--	1	609	6.28	958	506	5.19
South Dakota	665	522	5.25	85	635	6.19	172	423	4.25
South Atlantic	1,203,393	735	7.53	109,170	613	6.38	30,891	750	7.67
Delaware	11,846	--	--	239	--	--	NM	NM	NM
District of Columbia	--	--	--	--	--	--	--	--	--
Florida	893,971	790	8.08	29,023	983	10.31	12,910	779	7.97
Georgia	141,729	440	4.58	9,554	--	--	4,784	469	4.86
Maryland	12,505	--	--	1,353	--	--	7,128	--	--
North Carolina	38,529	779	7.98	1,414	406	4.17	441	--	--
South Carolina	74,383	401	4.12	380	943	9.63	NM	NM	NM
Virginia	29,510	--	--	67,016	476	4.95	4,376	--	--
West Virginia	919	453	4.79	191	632	6.32	914	--	--
East South Central	395,720	437	4.46	60,982	484	4.97	18,549	433	4.41
Alabama	231,815	434	4.45	10,011	612	6.30	8,267	--	--
Kentucky	2,348	925	9.49	6,186	588	6.04	3,723	515	5.28
Mississippi	158,801	430	4.36	44,784	416	4.26	4,251	409	4.17
Tennessee	2,756	457	4.70	--	--	--	2,307	--	--
West South Central	2,018,542	408	4.18	621,691	412	4.23	90,456	408	4.16
Arkansas	71,804	3,677	37.31	11,721	480	4.88	9,909	399	4.09
Louisiana	272,067	505	5.18	179,130	423	4.35	18,602	414	4.27
Oklahoma	247,057	397	4.11	45,541	366	3.76	1,785	392	4.06
Texas	1,427,614	404	4.12	385,299	411	4.21	60,160	408	4.16
Mountain	665,199	478	4.90	37,522	459	4.65	18,458	471	4.88
Arizona	261,590	428	4.37	253	637	6.48	1,023	--	--
Colorado	92,966	384	3.81	19,466	389	3.90	2,422	465	4.81
Idaho	11,076	658	6.61	178	391	3.91	3,258	--	--
Montana	636	582	6.14	19	538	6.04	515	451	4.62
Nevada	189,934	589	6.09	6,755	--	--	NM	NM	NM
New Mexico	60,419	425	4.36	8,134	535	5.48	2,074	NM	NM
Utah	43,769	348	3.63	2,400	--	--	4,888	NM	NM
Wyoming	4,809	417	4.28	317	567	5.42	4,277	480	4.74
Pacific Contiguous	879,023	484	4.94	183,118	429	4.41	166,076	468	4.80
California	678,399	466	4.72	176,721	429	4.41	161,948	469	4.81
Oregon	109,656	428	4.39	4,345	--	--	1,520	477	4.87
Washington	90,968	558	5.75	2,052	--	--	2,608	453	4.66
Pacific Noncontiguous	34,728	511	5.14	--	--	--	5,440	483	4.87
Alaska	34,728	511	5.14	--	--	--	5,440	483	4.87
Hawaii	--	--	--	--	--	--	--	--	--
U.S. Total	6,183,580	571	5.85	1,522,587	459	4.72	412,384	488	4.98

¹ Represents imputed data which includes plants below 50 megawatts and missing data. Beginning in 2008, the receipts and cost data are imputed for plants between 1 and 50 megawatts.

NM = Not meaningful due to large relative standard error or excessive percentage change.

Notes: • Natural gas, including a small amount of supplemental gaseous fuels that cannot be identified separately. Natural gas values do not include blast furnace gas or other manufactured gases. • Receipts and total average delivered cost include data supplied by both regulated and unregulated plants. Average delivered cost for firm, interruptible, and unclassified delivery types include data supplied by regulated plants only. • Totals may not equal sum of components because of independent rounding. • Monetary values are expressed in nominal terms.

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

Origin and Destination of Coal

Table 15. Destination and Origin of Coal to Electric Plants By State: Total (All Sectors), 2009

Destination Origin	Quantity (thousand tons)	Average Quality				Average Delivered Cost	
		Heat Value (Btu per pound)	Sulfur (percent by weight)	Sulfur (pounds per Million Btu)	Ash (percent by weight)	(cents per million Btu)	(dollars per ton)
Alabama.....	29,698	10,507	.92	.87	8.44	W	W
Alabama.....	7,959	11,953	1.45	1.21	13.00	326	77.72
Colorado.....	905	11,278	.62	.55	11.21	308	69.54
Illinois.....	411	11,724	1.97	1.68	8.56	305	71.49
Indiana.....	1,090	11,543	1.12	.97	6.69	334	77.04
Kentucky.....	2,376	11,842	2.47	2.09	11.46	265	62.82
Tennessee.....	21	12,540	1.00	.80	8.00	515	129.24
Utah.....	653	11,783	.73	.62	11.18	294	69.35
Virginia.....	10	12,500	1.30	1.04	12.00	258	64.48
West Virginia.....	329	12,750	.88	.69	9.29	405	103.31
Wyoming.....	12,308	8,721	.32	.37	5.14	176	30.62
Imported.....	3,239	11,383	.59	.52	6.38	319	72.71
Unclassified ¹	397	11,759	1.33	1.14	10.74	--	--
Alaska.....	901	8,520	.50	.59	8.91	W	W
Alaska.....	901	8,520	.50	.59	8.91	129	20.38
Arizona.....	22,190	9,712	.65	.67	10.87	W	W
Arizona.....	7,487	10,751	.64	.59	10.56	169	36.24
Colorado.....	151	10,293	.40	.39	6.28	473	97.27
Montana.....	634	9,250	.32	.35	4.52	171	31.71
New Mexico.....	8,922	9,368	.83	.89	14.68	192	36.02
Wyoming.....	4,996	8,809	.38	.43	5.49	174	30.61
Arkansas.....	14,507	8,700	.27	.31	4.97	W	W
Wyoming.....	14,387	8,673	.26	.30	4.92	167	29.03
Unclassified ¹	120	11,949	1.78	1.49	10.59	--	--
California.....	1,631	11,854	.62	.52	9.72	W	W
Colorado.....	75	10,941	.54	.50	10.71	--	--
Utah.....	1,411	11,899	.62	.52	9.67	--	--
Unclassified ¹	146	11,893	.64	.54	9.74	--	--
Colorado.....	19,274	9,810	.38	.39	7.28	W	W
Colorado.....	10,792	10,614	.45	.43	9.03	175	37.06
Montana.....	50	9,982	.43	.43	6.28	228	45.44
Wyoming.....	7,976	8,667	.27	.32	4.83	127	22.01
Unclassified ¹	456	10,744	.45	.42	9.02	192	40.74
Connecticut.....	1,147	11,038	.67	.60	6.93	W	W
Pennsylvania.....	29	12,967	1.83	1.41	7.30	--	--
West Virginia.....	629	12,436	1.06	.85	10.79	--	--
Imported.....	490	9,130	.09	.10	1.95	--	--
Delaware.....	1,564	12,567	.80	.64	10.86	W	W
Colorado.....	37	12,166	.53	.43	9.47	--	--
Kentucky.....	572	12,488	.71	.57	10.49	--	--
Pennsylvania.....	93	12,784	1.15	.90	11.21	--	--
Virginia.....	311	12,672	1.05	.83	11.28	--	--
West Virginia.....	544	12,582	.71	.57	11.05	--	--
Unclassified ¹	NM	NM	NM	NM	NM	NM	NM
Florida.....	23,912	11,957	1.45	1.22	9.78	339	81.03
Colorado.....	1,180	11,327	.60	.53	10.20	429	97.29
Illinois.....	2,595	11,537	2.74	2.37	8.82	243	56.15
Kentucky.....	10,123	12,321	1.86	1.51	9.53	335	82.72
Pennsylvania.....	134	13,034	1.99	1.53	8.32	540	140.84
Utah.....	421	12,019	1.15	.95	8.65	411	98.82
Virginia.....	329	12,638	.83	.66	9.38	477	120.45
West Virginia.....	4,869	12,137	.90	.74	11.73	397	95.33
Imported.....	4,118	11,199	.62	.55	8.74	292	65.34
Unclassified ¹	142	11,933	1.48	1.24	9.77	--	--
Georgia.....	35,365	10,933	.76	.70	8.25	362	79.24
Alabama.....	596	12,434	1.64	1.32	12.13	334	82.89
Indiana.....	297	11,673	1.11	.95	6.54	393	91.66
Kentucky.....	15,861	12,459	1.04	.83	10.51	436	108.53
Pennsylvania.....	29	12,441	.87	.70	9.71	337	83.23
Tennessee.....	1,078	12,698	1.27	1.00	8.29	413	104.84
Virginia.....	1,793	12,412	1.22	.98	11.10	436	109.38
West Virginia.....	2,098	12,280	.86	.70	11.67	430	105.77
Wyoming.....	13,512	8,508	.28	.33	4.58	202	34.39
Imported.....	100	11,330	.46	.41	4.90	348	78.78
Unclassified ¹	NM	NM	NM	NM	NM	NM	NM

Table 15. Destination and Origin of Coal to Electric Plants By State: Total (All Sectors), 2009
(Continued)

Destination Origin	Quantity (thousand tons)	Average Quality				Average Delivered Cost	
		Heat Value (Btu per pound)	Sulfur (percent by weight)	Sulfur (pounds per Million Btu)	Ash (percent by weight)	(cents per million Btu)	(dollars per ton)
Hawaii	803	10,640	.65	.61	7.80	W	W
Imported.....	803	10,640	.65	.61	7.80	--	--
Idaho	177	10,963	1.34	1.22	9.14	W	W
Unclassified ¹	177	10,963	1.34	1.22	9.14	--	--
Illinois	55,086	8,876	.48	.54	5.24	165	29.37
Illinois.....	4,022	10,574	3.08	2.91	10.87	199	41.37
Indiana.....	13	11,583	1.27	1.10	7.29	--	--
Kentucky.....	115	7,348	2.25	3.06	23.98	131	19.24
Wyoming.....	50,618	8,732	.25	.28	4.73	162	28.44
Unclassified ¹	318	10,803	3.12	2.88	9.61	241	52.05
Indiana	58,281	10,470	1.73	1.65	7.72	202	42.32
Alabama.....	17	11,510	2.15	1.87	7.30	145	33.40
Colorado.....	321	11,802	.47	.40	9.99	208	49.09
Illinois.....	4,503	11,097	2.58	2.32	8.99	241	54.30
Indiana.....	28,497	11,128	2.59	2.33	9.22	186	41.33
Kentucky.....	1,572	12,274	1.94	1.58	9.35	353	88.21
Montana.....	794	9,506	.40	.42	4.16	--	--
Ohio.....	11	11,507	1.83	1.59	9.13	394	90.68
Pennsylvania.....	1,326	13,053	2.23	1.70	7.79	263	68.62
West Virginia.....	2,027	12,405	1.45	1.17	10.24	293	72.62
Wyoming.....	18,648	8,760	.24	.28	4.78	185	32.47
Unclassified ¹	565	11,313	2.49	2.20	9.22	241	54.57
Iowa	26,300	8,657	.42	.49	5.15	134	23.21
Colorado.....	25	10,857	.52	.48	13.61	--	--
Illinois.....	821	10,997	3.18	2.89	9.18	267	60.92
Indiana.....	55	11,144	.41	.37	8.00	500	111.34
Montana.....	29	10,300	.57	.55	7.50	315	64.89
Wyoming.....	24,551	8,549	.31	.36	4.96	120	20.41
Unclassified ¹	819	9,252	1.20	1.30	6.25	145	24.79
Kansas	20,348	8,526	.40	.46	5.22	143	24.38
Missouri.....	265	10,649	3.52	3.30	14.38	199	42.47
Wyoming.....	20,083	8,498	.35	.42	5.10	142	24.14
Kentucky	41,003	11,472	2.54	2.21	10.56	217	49.89
Alabama.....	83	10,867	2.91	2.68	9.90	179	38.82
Colorado.....	1,760	11,601	.50	.44	9.59	266	61.79
Illinois.....	2,616	11,715	2.70	2.31	8.53	263	61.72
Indiana.....	1,565	11,051	2.95	2.67	9.46	208	46.06
Kentucky.....	27,565	11,595	2.75	2.37	10.58	211	49.00
Ohio.....	2,735	11,442	3.74	3.27	14.66	200	45.72
Pennsylvania.....	267	13,042	2.67	2.05	8.34	284	74.03
Tennessee.....	53	12,138	1.08	.89	10.99	240	58.14
Utah.....	460	11,683	.48	.41	9.24	252	58.94
West Virginia.....	2,086	11,824	1.86	1.58	14.29	235	55.52
Wyoming.....	1,812	8,849	.29	.32	5.16	182	32.17
Louisiana	16,933	8,201	.39	.47	6.69	W	W
Louisiana.....	3,657	6,902	.77	1.11	13.65	206	28.43
Wyoming.....	13,273	8,559	.28	.33	4.77	256	44.13
Unclassified ¹	NM	NM	NM	NM	NM	NM	NM
Maine	65	12,779	.82	.64	7.42	W	W
Imported.....	65	12,779	.82	.64	7.42	--	--
Maryland	10,426	12,510	1.25	1.00	10.34	301	75.24
Kentucky.....	610	12,648	1.24	.98	9.03	--	--
Maryland.....	920	11,493	1.74	1.52	18.41	--	--
Pennsylvania.....	2,915	13,007	1.83	1.40	7.36	--	--
Virginia.....	20	12,425	.68	.55	11.40	--	--
West Virginia.....	5,426	12,507	.92	.74	11.09	--	--
Wyoming.....	69	10,354	.52	.51	7.81	--	--
Imported.....	464	11,588	.52	.45	6.44	--	--
Massachusetts	4,122	11,735	.58	.49	7.41	338	79.30
West Virginia.....	1,138	12,446	.81	.65	10.04	--	--
Imported.....	2,934	11,458	.49	.43	6.39	--	--
Unclassified ¹	50	11,775	.58	.49	7.43	--	--
Michigan	36,474	9,751	.49	.51	5.78	207	40.39
Colorado.....	513	11,614	.52	.45	9.62	354	82.12
Illinois.....	136	11,184	1.62	1.45	8.08	277	60.17

Table 15. Destination and Origin of Coal to Electric Plants By State: Total (All Sectors), 2009
(Continued)

Destination Origin	Quantity (thousand tons)	Average Quality				Average Delivered Cost	
		Heat Value (Btu per pound)	Sulfur (percent by weight)	Sulfur (pounds per Million Btu)	Ash (percent by weight)	(cents per million Btu)	(dollars per ton)
Michigan (Continued)							
Kentucky.....	3,600	12,760	1.39	1.09	8.42	263	67.20
Montana.....	10,130	9,329	.36	.39	4.71	137	25.61
Ohio.....	367	11,875	2.32	1.95	10.74	279	65.79
Pennsylvania.....	380	12,975	1.85	1.43	7.18	234	60.68
Utah.....	84	11,599	.84	.72	10.13	--	--
Virginia.....	14	13,380	.72	.54	8.12	--	--
West Virginia.....	2,294	12,655	.95	.75	10.71	400	100.97
Wyoming.....	18,647	8,825	.25	.29	4.92	184	32.43
Unclassified ¹	309	12,010	1.06	.88	8.51	194	48.95
Minnesota.....	17,922	8,878	.46	.51	6.63	164	29.19
Illinois.....	10	10,550	.94	.89	8.50	323	68.14
Indiana.....	3	10,950	.93	.85	8.50	431	94.38
Kentucky.....	38	12,700	.96	.76	8.80	367	93.22
Montana.....	9,725	8,908	.57	.64	7.86	152	27.15
Wyoming.....	7,155	8,789	.29	.33	4.89	181	31.74
Unclassified ¹	991	9,063	.56	.61	7.00	145	25.72
Mississippi.....	8,911	8,541	.53	.62	11.27	W	W
Colorado.....	1,660	11,309	.50	.44	9.23	341	77.16
Kentucky.....	289	11,069	.57	.51	7.56	462	102.26
Mississippi.....	3,744	5,103	.47	.92	15.24	--	--
Virginia.....	906	12,532	.92	.74	10.60	345	86.48
West Virginia.....	197	12,583	1.02	.81	10.29	325	81.74
Wyoming.....	1,366	9,433	.35	.37	5.99	282	53.13
Imported.....	745	11,092	.64	.57	8.08	356	78.98
Unclassified ¹	NM	NM	NM	NM	NM	NM	NM
Missouri.....	42,559	8,802	.38	.44	5.22	W	W
Illinois.....	546	11,085	2.93	2.64	8.66	333	73.09
Kansas.....	198	11,514	3.60	3.13	13.80	236	54.38
Kentucky.....	436	12,128	2.88	2.38	8.78	234	56.71
Missouri.....	24	9,922	3.19	3.21	13.33	198	39.26
Utah.....	326	12,106	1.09	.90	9.49	430	104.21
Wyoming.....	40,820	8,681	.29	.33	5.04	145	25.13
Unclassified ¹	208	11,666	2.53	2.17	9.24	241	56.18
Montana.....	9,901	8,409	.67	.80	9.68	W	W
Montana.....	8,954	8,462	.66	.78	9.17	137	17.80
Wyoming.....	702	8,387	.22	.27	4.38	--	--
Unclassified ¹	245	6,509	2.33	3.58	43.69	--	--
Nebraska.....	14,349	8,544	.31	.36	5.18	W	W
Utah.....	12	11,100	.42	.38	9.40	191	42.31
Wyoming.....	14,244	8,542	.31	.36	5.18	133	22.65
Unclassified ¹	93	8,560	.31	.36	5.16	--	--
Nevada.....	4,061	10,505	.42	.40	8.95	W	W
Colorado.....	468	11,346	.56	.50	10.95	245	55.57
Utah.....	1,771	11,597	.46	.39	10.28	221	51.35
Wyoming.....	1,822	9,227	.34	.37	7.14	204	38.34
New Hampshire.....	1,252	12,849	1.44	1.12	7.41	366	94.15
Pennsylvania.....	548	12,982	1.89	1.46	7.27	370	96.14
Virginia.....	38	13,967	.69	.49	4.83	438	122.28
West Virginia.....	151	13,128	2.59	1.97	7.65	329	86.42
Imported.....	515	12,545	.67	.53	7.67	368	92.26
New Jersey.....	2,336	11,491	.90	.79	5.58	401	92.22
Pennsylvania.....	629	13,047	1.82	1.39	7.02	--	--
Virginia.....	305	13,470	.98	.72	6.91	--	--
West Virginia.....	458	12,701	1.25	.99	9.84	--	--
Wyoming.....	27	8,684	.34	.39	6.72	--	--
Imported.....	917	9,247	.09	.10	1.99	803	207.98
New Mexico.....	16,535	9,226	.77	.83	21.98	190	35.03
New Mexico.....	16,535	9,226	.77	.83	21.98	190	35.03
New York.....	6,573	11,187	1.29	1.16	6.87	273	61.09
Kentucky.....	29	11,735	1.10	.93	12.86	--	--
Montana.....	198	9,339	.32	.34	5.08	--	--
Ohio.....	20	12,491	1.68	1.35	8.82	367	91.78
Pennsylvania.....	890	12,925	2.00	1.55	8.24	351	87.45
West Virginia.....	2,005	13,044	2.64	2.03	8.38	--	--
Wyoming.....	2,550	8,833	.29	.32	5.15	--	--

Table 15. Destination and Origin of Coal to Electric Plants By State: Total (All Sectors), 2009
(Continued)

Destination Origin	Quantity (thousand tons)	Average Quality				Average Delivered Cost	
		Heat Value (Btu per pound)	Sulfur (percent by weight)	Sulfur (pounds per Million Btu)	Ash (percent by weight)	(cents per million Btu)	(dollars per ton)
New York (Continued)							
Imported.....	853	12,375	.59	.48	7.20	--	--
Unclassified ¹	28	12,838	2.08	1.62	8.14	--	--
North Carolina.....	28,787	12,333	1.04	.84	10.90	359	88.53
Kentucky.....	8,873	12,388	1.05	.85	9.97	344	85.01
Ohio.....	1	13,550	.95	.70	7.00	--	--
Pennsylvania.....	38	12,700	1.37	1.08	9.00	318	80.70
Tennessee.....	40	12,571	1.20	.95	10.77	245	61.53
Virginia.....	1,256	12,486	1.16	.93	11.79	371	92.53
West Virginia.....	18,292	12,296	1.03	.83	11.33	372	91.45
Imported.....	90	12,105	.63	.52	5.10	344	83.26
Unclassified ¹	197	12,312	1.04	.84	10.99	--	--
North Dakota.....	25,148	6,672	.73	1.09	9.40	W	W
Montana.....	724	9,375	.35	.37	4.60	109	20.44
North Dakota.....	23,861	6,552	.75	1.14	9.64	113	14.87
Wyoming.....	256	8,059	.36	.44	5.26	157	25.37
Unclassified ¹	307	8,487	.35	.41	5.67	--	--
Ohio.....	51,834	11,768	2.20	1.87	9.52	239	56.36
Colorado.....	7	11,600	1.86	1.60	14.40	236	54.75
Illinois.....	4,727	11,790	2.51	2.13	8.35	232	54.71
Indiana.....	1,278	11,278	3.17	2.81	8.94	179	40.31
Kentucky.....	6,559	11,831	1.47	1.24	12.04	239	56.55
Montana.....	387	9,672	.39	.40	5.34	--	--
Ohio.....	13,572	12,122	3.67	3.03	9.96	232	56.27
Pennsylvania.....	6,280	12,899	2.29	1.77	8.18	252	64.37
Virginia.....	381	14,402	.91	.63	6.89	--	--
West Virginia.....	12,130	12,267	1.75	1.43	11.38	220	53.56
Wyoming.....	6,158	8,818	.26	.29	4.95	201	35.55
Unclassified ¹	356	12,150	2.50	2.06	10.26	235	57.16
Oklahoma.....	21,570	8,668	.34	.39	5.58	W	W
Colorado.....	24	11,701	.49	.41	11.29	175	40.84
Kansas.....	2	12,137	4.00	3.30	12.00	144	34.87
Oklahoma.....	400	9,539	1.62	1.70	29.56	--	--
Wyoming.....	21,144	8,647	.32	.36	5.12	164	28.32
Oregon.....	1,552	8,426	.36	.42	4.83	176	29.57
Montana.....	28	9,447	.33	.35	4.40	175	32.99
Wyoming.....	1,524	8,407	.36	.42	4.83	176	29.51
Pennsylvania.....	51,261	10,940	2.21	2.02	19.11	230	50.23
Alabama.....	95	13,030	1.93	1.48	7.00	--	--
Kentucky.....	125	12,320	1.85	1.50	9.74	--	--
Montana.....	218	9,176	.31	.34	4.45	--	--
Ohio.....	1,547	12,347	2.72	2.20	10.28	--	--
Pennsylvania.....	36,619	10,740	2.09	1.95	21.05	--	--
West Virginia.....	9,529	12,676	2.85	2.25	9.80	--	--
Wyoming.....	1,169	8,816	.27	.30	4.82	--	--
Imported.....	50	12,630	.67	.53	8.50	--	--
Unclassified ¹	1,908	6,241	2.40	3.85	47.34	--	--
South Carolina.....	17,705	12,471	1.43	1.15	10.14	W	W
Kentucky.....	11,574	12,375	1.43	1.16	10.49	374	92.57
Pennsylvania.....	2,912	12,939	1.88	1.45	8.00	320	82.71
Tennessee.....	599	12,630	1.31	1.04	9.85	392	98.99
Virginia.....	186	11,394	1.30	1.14	17.42	298	67.82
West Virginia.....	1,928	12,367	.97	.78	11.49	352	86.99
Imported.....	507	12,558	.69	.55	7.12	439	110.28
Unclassified ¹	NM	NM	NM	NM	NM	NM	NM
South Dakota.....	2,189	8,386	.31	.37	5.35	176	29.45
Wyoming.....	2,189	8,386	.31	.37	5.35	176	29.45
Tennessee.....	21,197	11,057	1.33	1.20	7.93	257	56.81
Colorado.....	1,212	11,507	.52	.45	10.65	301	69.24
Illinois.....	4,688	12,172	2.93	2.41	8.81	220	53.60
Indiana.....	16	11,505	1.30	1.13	6.40	263	60.49
Kentucky.....	3,887	12,108	1.54	1.27	10.29	264	63.32
Pennsylvania.....	549	13,030	2.72	2.09	8.63	276	71.90
Tennessee.....	142	12,594	.92	.73	7.97	487	122.59
Utah.....	525	11,827	.80	.67	11.30	296	70.00
Virginia.....	1,209	13,022	.89	.68	8.85	314	78.76

Table 15. Destination and Origin of Coal to Electric Plants By State: Total (All Sectors), 2009
(Continued)

Destination Origin	Quantity (thousand tons)	Average Quality				Average Delivered Cost	
		Heat Value (Btu per pound)	Sulfur (percent by weight)	Sulfur (pounds per Million Btu)	Ash (percent by weight)	(cents per million Btu)	(dollars per ton)
Tennessee (Continued)							
West Virginia.....	1,299	12,762	1.44	1.13	8.87	366	93.25
Wyoming.....	7,341	8,803	.30	.34	5.00	212	37.30
Unclassified ¹	330	12,254	1.88	1.54	9.46	--	--
Texas.....	95,415	7,787	.61	.79	9.38	W	W
Texas.....	33,393	6,434	1.17	1.83	17.13	239	28.27
Wyoming.....	62,022	8,516	.31	.37	5.20	180	30.91
Utah.....	18,097	10,965	.56	.51	12.09	W	W
Colorado.....	2,971	10,044	.53	.53	13.44	189	37.92
Utah.....	13,899	11,345	.56	.49	12.25	141	32.54
Wyoming.....	1,227	8,883	.70	.79	7.00	251	44.56
Virginia.....	13,033	12,501	1.00	.80	9.82	308	76.88
Colorado.....	134	12,114	.53	.43	9.44	362	87.68
Kentucky.....	4,612	12,696	1.26	.99	9.17	326	82.72
Pennsylvania.....	140	13,046	2.02	1.55	7.64	346	90.30
Virginia.....	2,804	12,606	.91	.72	11.55	269	67.64
West Virginia.....	2,270	12,618	.85	.67	10.20	305	76.36
Imported.....	1,619	11,592	.56	.49	8.35	310	71.77
Unclassified ¹	1,455	12,493	1.00	.80	9.85	--	--
Washington.....	5,662	8,403	.33	.39	8.15	W	W
Montana.....	2,586	8,455	.31	.37	11.20	--	--
Wyoming.....	3,076	8,360	.34	.40	5.59	--	--
West Virginia.....	33,441	11,959	2.13	1.78	12.23	254	60.87
Illinois.....	475	11,754	2.37	2.02	8.82	--	--
Kentucky.....	949	12,410	1.44	1.16	10.44	382	94.78
Maryland.....	2,720	12,113	2.12	1.75	14.28	220	53.36
Montana.....	68	9,102	.29	.32	4.45	250	45.63
Ohio.....	5,755	12,329	4.03	3.27	9.54	249	61.42
Pennsylvania.....	1,774	12,637	1.82	1.44	10.24	312	78.94
Virginia.....	207	12,882	.91	.71	9.66	328	84.55
West Virginia.....	20,048	11,975	1.79	1.49	13.65	264	64.35
Wyoming.....	1,419	8,843	.25	.29	4.81	212	37.57
Unclassified ¹	26	12,252	2.22	1.82	11.76	NM	NM
Wisconsin.....	23,686	8,920	.38	.42	5.34	206	36.67
Colorado.....	680	11,567	.48	.42	9.78	391	90.52
Illinois.....	312	11,812	1.78	1.51	7.37	263	63.31
Indiana.....	6	10,900	1.42	1.30	8.60	435	94.80
Kentucky.....	10	13,379	.91	.68	6.10	432	115.46
Montana.....	501	9,367	.32	.34	4.28	219	40.98
Pennsylvania.....	76	12,917	1.85	1.43	7.40	289	74.62
Utah.....	12	12,344	1.13	.92	9.90	290	71.68
West Virginia.....	147	13,051	2.54	1.94	7.90	--	--
Wyoming.....	20,997	8,639	.30	.35	5.04	189	32.59
Unclassified ¹	946	11,009	1.13	1.02	7.91	165	31.82
Wyoming.....	26,290	8,791	.51	.58	7.70	W	W
Wyoming.....	25,439	8,731	.49	.56	7.64	116	20.28
Unclassified ¹	851	10,593	1.23	1.16	9.33	137	24.01
Total.....	981,477	9,902	1.01	1.02	8.94	221	43.74

¹ Represents imputed data. Beginning in 2008, the receipts and cost data are imputed for plants between 1 and 50 megawatts.

NM = Not meaningful due to large relative standard error or excessive percentage change.

W = Withheld to avoid disclosure of individual company data.

Notes: • Includes anthracite, bituminous coal, subbituminous coal, lignite, and waste coal. • Receipts, heat value, sulfur, ash, and average delivered cost of fuel at the destination include data supplied by both regulated and unregulated plants. Average delivered cost of fuel at the origin includes data supplied by regulated plants only. • Totals may not equal sum of components because of independent rounding. • The cost of coal receipts displayed for the States of Virginia, Florida, Ohio, Kentucky, Tennessee, Michigan, and Alabama may not represent the total average delivered cost of coal for these States and their respective Census Divisions. In some instances, coal is delivered to a transfer facility prior to being delivered to the power plant. The costs presented in this table include the initial delivery costs, not any additional costs incurred to deliver the coal from the transfer facility to the power plant site. • Monetary values are expressed in nominal terms

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

Table 16. Origin and Destination of Coal to Electric Plants By State: Total (All Sectors), 2009

Origin Destination	Quantity (thousand tons)	Average Quality			Average Delivered Cost		
		Heat Value (Btu per pound)	Sulfur (percent by weight)	Sulfur (pounds per Million Btu)	Ash (percent by weight)	(cents per million Btu)	(dollars per ton)
Alabama.....	8,750	11,986	1.48	1.24	12.84	325	77.58
Alabama.....	7,959	11,953	1.45	1.21	13.00	326	77.72
Georgia.....	596	12,434	1.64	1.32	12.13	334	82.89
Indiana.....	17	11,510	2.15	1.87	7.30	145	33.40
Kentucky.....	83	10,867	2.91	2.68	9.90	179	38.82
Pennsylvania.....	95	13,030	1.93	1.48	7.00	--	--
Alaska.....	901	8,520	.50	.59	8.91	129	20.38
Alaska.....	901	8,520	.50	.59	8.91	129	20.38
Arizona.....	7,487	10,751	.64	.59	10.56	169	36.24
Arizona.....	7,487	10,751	.64	.59	10.56	169	36.24
Colorado.....	22,914	10,870	.49	.45	9.98	239	51.95
Alabama.....	905	11,278	.62	.55	11.21	308	69.54
Arizona.....	151	10,293	.40	.39	6.28	473	97.27
California.....	75	10,941	.54	.50	10.71	--	--
Colorado.....	10,792	10,614	.45	.43	9.03	175	37.06
Delaware.....	37	12,166	.53	.43	9.47	--	--
Florida.....	1,180	11,327	.60	.53	10.20	429	97.29
Indiana.....	321	11,802	.47	.40	9.99	208	49.09
Iowa.....	25	10,857	.52	.48	13.61	--	--
Kentucky.....	1,760	11,601	.50	.44	9.59	266	61.79
Michigan.....	513	11,614	.52	.45	9.62	354	82.12
Mississippi.....	1,660	11,309	.50	.44	9.23	341	77.16
Nevada.....	468	11,346	.56	.50	10.95	245	55.57
Ohio.....	7	11,600	1.86	1.60	14.40	236	54.75
Oklahoma.....	24	11,701	.49	.41	11.29	175	40.84
Tennessee.....	1,212	11,507	.52	.45	10.65	301	69.24
Utah.....	2,971	10,044	.53	.53	13.44	189	37.92
Virginia.....	134	12,114	.53	.43	9.44	362	87.68
Wisconsin.....	680	11,567	.48	.42	9.78	391	90.52
Illinois.....	25,862	11,471	2.73	2.38	9.03	237	54.79
Alabama.....	411	11,724	1.97	1.68	8.56	305	71.49
Florida.....	2,595	11,537	2.74	2.37	8.82	243	56.15
Illinois.....	4,022	10,574	3.08	2.91	10.87	199	41.37
Indiana.....	4,503	11,097	2.58	2.32	8.99	241	54.30
Iowa.....	821	10,997	3.18	2.89	9.18	267	60.92
Kentucky.....	2,616	11,715	2.70	2.31	8.53	263	61.72
Michigan.....	136	11,184	1.62	1.45	8.08	277	60.17
Minnesota.....	10	10,550	.94	.89	8.50	323	68.14
Missouri.....	546	11,085	2.93	2.64	8.66	333	73.09
Ohio.....	4,727	11,790	2.51	2.13	8.35	232	54.71
Tennessee.....	4,688	12,172	2.93	2.41	8.81	220	53.60
West Virginia.....	475	11,754	2.37	2.02	8.82	--	--
Wisconsin.....	312	11,812	1.78	1.51	7.37	263	63.31
Indiana.....	32,820	11,149	2.56	2.30	9.11	195	43.37
Alabama.....	1,090	11,543	1.12	.97	6.69	334	77.04
Georgia.....	297	11,673	1.11	.95	6.54	393	91.66
Illinois.....	13	11,583	1.27	1.10	7.29	--	--
Indiana.....	28,497	11,128	2.59	2.33	9.22	186	41.33
Iowa.....	55	11,144	.41	.37	8.00	500	111.34
Kentucky.....	1,565	11,051	2.95	2.67	9.46	208	46.06
Minnesota.....	3	10,950	.93	.85	8.50	431	94.38
Ohio.....	1,278	11,278	3.17	2.81	8.94	179	40.31
Tennessee.....	16	11,505	1.30	1.13	6.40	263	60.49
Wisconsin.....	6	10,900	1.42	1.30	8.60	435	94.80
Kansas.....	200	11,521	3.61	3.13	13.78	235	54.15
Missouri.....	198	11,514	3.60	3.13	13.80	236	54.38
Oklahoma.....	2	12,137	4.00	3.30	12.00	144	34.87
Kentucky.....	99,775	12,129	1.77	1.46	10.33	309	74.92
Alabama.....	2,376	11,842	2.47	2.09	11.46	265	62.82
Delaware.....	572	12,488	.71	.57	10.49	--	--
Florida.....	10,123	12,321	1.86	1.51	9.53	335	82.72
Georgia.....	15,861	12,459	1.04	.83	10.51	436	108.53
Illinois.....	115	7,348	2.25	3.06	23.98	131	19.24
Indiana.....	1,572	12,274	1.94	1.58	9.35	353	88.21
Kentucky.....	27,565	11,595	2.75	2.37	10.58	211	49.00

Table 16. Origin and Destination of Coal to Electric Plants By State: Total (All Sectors), 2009
(Continued)

Origin Destination	Quantity (thousand tons)	Average Quality				Average Delivered Cost	
		Heat Value (Btu per pound)	Sulfur (percent by weight)	Sulfur (pounds per Million Btu)	Ash (percent by weight)	(cents per million Btu)	(dollars per ton)
Kentucky (Continued)							
Maryland.....	610	12,648	1.24	.98	9.03	--	--
Michigan.....	3,600	12,760	1.39	1.09	8.42	263	67.20
Minnesota.....	38	12,700	.96	.76	8.80	367	93.22
Mississippi.....	289	11,069	.57	.51	7.56	462	102.26
Missouri.....	436	12,128	2.88	2.38	8.78	234	56.71
New York.....	29	11,735	1.10	.93	12.86	--	--
North Carolina.....	8,873	12,388	1.05	.85	9.97	344	85.01
Ohio.....	6,559	11,831	1.47	1.24	12.04	239	56.55
Pennsylvania.....	125	12,320	1.85	1.50	9.74	--	--
South Carolina.....	11,574	12,375	1.43	1.16	10.49	374	92.57
Tennessee.....	3,887	12,108	1.54	1.27	10.29	264	63.32
Virginia.....	4,612	12,696	1.26	.99	9.17	326	82.72
West Virginia.....	949	12,410	1.44	1.16	10.44	382	94.78
Wisconsin.....	10	13,379	.91	.68	6.10	432	115.46
Louisiana.....	3,657	6,902	.77	1.11	13.65	206	28.43
Louisiana.....	3,657	6,902	.77	1.11	13.65	206	28.43
Maryland.....	3,640	11,956	2.03	1.70	15.32	220	53.36
Maryland.....	920	11,493	1.74	1.52	18.41	--	--
West Virginia.....	2,720	12,113	2.12	1.75	14.28	220	53.36
Mississippi.....	3,744	5,103	.47	.92	15.24	--	--
Mississippi.....	3,744	5,103	.47	.92	15.24	--	--
Missouri.....	289	10,588	3.49	3.29	14.29	199	42.20
Kansas.....	265	10,649	3.52	3.30	14.38	199	42.47
Missouri.....	24	9,922	3.19	3.21	13.33	198	39.26
Montana.....	35,028	8,934	.49	.55	7.19	147	26.69
Arizona.....	634	9,250	.32	.35	4.52	171	31.71
Colorado.....	50	9,982	.43	.43	6.28	228	45.44
Indiana.....	794	9,506	.40	.42	4.16	--	--
Iowa.....	29	10,300	.57	.55	7.50	315	64.89
Michigan.....	10,130	9,329	.36	.39	4.71	137	25.61
Minnesota.....	9,725	8,908	.57	.64	7.86	152	27.15
Montana.....	8,954	8,462	.66	.78	9.17	137	17.80
New York.....	198	9,339	.32	.34	5.08	--	--
North Dakota.....	724	9,375	.35	.37	4.60	109	20.44
Ohio.....	387	9,672	.39	.40	5.34	--	--
Oregon.....	28	9,447	.33	.35	4.40	175	32.99
Pennsylvania.....	218	9,176	.31	.34	4.45	--	--
Washington.....	2,586	8,455	.31	.37	11.20	--	--
West Virginia.....	68	9,102	.29	.32	4.45	250	45.63
Wisconsin.....	501	9,367	.32	.34	4.28	219	40.98
New Mexico.....	25,457	9,276	.79	.85	19.42	191	35.37
Arizona.....	8,922	9,368	.83	.89	14.68	192	36.02
New Mexico.....	16,535	9,225	.77	.83	21.98	190	35.03
North Dakota.....	23,861	6,552	.75	1.14	9.64	113	14.87
North Dakota.....	23,861	6,552	.75	1.14	9.64	113	14.87
Ohio.....	24,009	12,105	3.68	3.04	10.43	231	55.90
Indiana.....	11	11,507	1.83	1.59	9.13	394	90.68
Kentucky.....	2,735	11,442	3.74	3.27	14.66	200	45.72
Michigan.....	367	11,875	2.32	1.95	10.74	279	65.79
New York.....	20	12,491	1.68	1.35	8.82	367	91.78
North Carolina.....	1	13,550	.95	.70	7.00	--	--
Ohio.....	13,572	12,122	3.67	3.03	9.96	232	56.27
Pennsylvania.....	1,547	12,347	2.72	2.20	10.28	--	--
West Virginia.....	5,755	12,329	4.03	3.27	9.54	249	61.42
Oklahoma.....	400	9,539	1.62	1.70	29.56	--	--
Oklahoma.....	400	9,539	1.62	1.70	29.56	--	--
Pennsylvania.....	55,627	11,486	2.08	1.81	16.64	293	75.32
Connecticut.....	29	12,967	1.83	1.41	7.30	--	--
Delaware.....	93	12,784	1.15	.90	11.21	--	--
Florida.....	134	13,034	1.99	1.53	8.32	540	140.84
Georgia.....	29	12,441	.87	.70	9.71	337	83.23
Indiana.....	1,326	13,053	2.23	1.70	7.79	263	68.62
Kentucky.....	267	13,042	2.67	2.05	8.34	284	74.03
Maryland.....	2,915	13,007	1.83	1.40	7.36	--	--
Michigan.....	380	12,975	1.85	1.43	7.18	234	60.68

Table 16. Origin and Destination of Coal to Electric Plants By State: Total (All Sectors), 2009
(Continued)

Origin Destination	Quantity (thousand tons)	Average Quality				Average Delivered Cost	
		Heat Value (Btu per pound)	Sulfur (percent by weight)	Sulfur (pounds per Million Btu)	Ash (percent by weight)	(cents per million Btu)	(dollars per ton)
Pennsylvania (Continued)							
New Hampshire.....	548	12,982	1.89	1.46	7.27	370	96.14
New Jersey.....	629	13,047	1.82	1.39	7.02	--	--
New York.....	890	12,925	2.00	1.55	8.24	351	87.45
North Carolina.....	38	12,700	1.37	1.08	9.00	318	80.70
Ohio.....	6,280	12,899	2.29	1.77	8.18	252	64.37
Pennsylvania.....	36,619	10,740	2.09	1.95	21.05	--	--
South Carolina.....	2,912	12,939	1.88	1.45	8.00	320	82.71
Tennessee.....	549	13,029	2.72	2.09	8.63	276	71.90
Virginia.....	140	13,046	2.02	1.55	7.64	346	90.30
West Virginia.....	1,774	12,637	1.82	1.44	10.24	312	78.94
Wisconsin.....	76	12,917	1.85	1.43	7.40	289	74.62
Tennessee.....	1,933	12,650	1.25	.98	8.87	405	102.41
Alabama.....	21	12,540	1.00	.80	8.00	515	129.24
Georgia.....	1,078	12,698	1.27	1.00	8.29	413	104.84
Kentucky.....	53	12,138	1.08	.89	10.99	240	58.14
North Carolina.....	40	12,571	1.20	.95	10.77	245	61.53
South Carolina.....	599	12,630	1.31	1.04	9.85	392	98.99
Tennessee.....	142	12,594	.92	.73	7.97	487	122.59
Texas.....	33,393	6,434	1.17	1.83	17.13	239	28.27
Texas.....	33,393	6,434	1.17	1.83	17.13	239	28.27
Utah.....	19,574	11,472	.58	.51	11.62	176	40.74
Alabama.....	653	11,783	.73	.62	11.18	294	69.35
California.....	1,411	11,899	.62	.52	9.67	--	--
Florida.....	421	12,019	1.15	.95	8.65	411	98.82
Kentucky.....	460	11,683	.48	.41	9.24	252	58.94
Michigan.....	84	11,599	.84	.72	10.13	--	--
Missouri.....	326	12,106	1.09	.90	9.49	430	104.21
Nebraska.....	12	11,100	.42	.38	9.40	191	42.31
Nevada.....	1,771	11,597	.46	.39	10.28	221	51.35
Tennessee.....	525	11,827	.80	.67	11.30	296	70.00
Utah.....	13,899	11,345	.56	.49	12.25	141	32.54
Wisconsin.....	12	12,344	1.13	.92	9.90	290	71.68
Virginia.....	9,768	12,688	1.01	.79	10.71	347	86.93
Alabama.....	10	12,500	1.30	1.04	12.00	258	64.48
Delaware.....	311	12,672	1.05	.83	11.28	--	--
Florida.....	329	12,638	.83	.66	9.38	477	120.45
Georgia.....	1,793	12,412	1.22	.98	11.10	436	109.38
Maryland.....	20	12,425	.68	.55	11.40	--	--
Michigan.....	14	13,380	.72	.54	8.12	--	--
Mississippi.....	906	12,532	.92	.74	10.60	345	86.48
New Hampshire.....	38	13,967	.69	.49	4.83	438	122.28
New Jersey.....	305	13,470	.98	.72	6.91	--	--
North Carolina.....	1,256	12,486	1.16	.93	11.79	371	92.53
Ohio.....	381	14,402	.91	.63	6.89	--	--
South Carolina.....	186	11,394	1.30	1.14	17.42	298	67.82
Tennessee.....	1,209	13,022	.89	.68	8.85	314	78.76
Virginia.....	2,804	12,606	.91	.72	11.55	269	67.64
West Virginia.....	207	12,882	.91	.71	9.66	328	84.55
West Virginia.....	89,894	12,310	1.53	1.25	11.56	315	77.10
Alabama.....	329	12,750	.88	.69	9.29	405	103.31
Connecticut.....	629	12,436	1.06	.85	10.79	--	--
Delaware.....	544	12,582	.71	.57	11.05	--	--
Florida.....	4,869	12,137	.90	.74	11.73	397	95.33
Georgia.....	2,098	12,280	.86	.70	11.67	430	105.77
Indiana.....	2,027	12,405	1.45	1.17	10.24	293	72.62
Kentucky.....	2,086	11,824	1.86	1.58	14.29	235	55.52
Maryland.....	5,426	12,507	.92	.74	11.09	--	--
Massachusetts.....	1,138	12,446	.81	.65	10.04	--	--
Michigan.....	2,294	12,655	.95	.75	10.71	400	100.97
Mississippi.....	197	12,583	1.02	.81	10.29	325	81.74
New Hampshire.....	151	13,128	2.59	1.97	7.65	329	86.42
New Jersey.....	458	12,701	1.25	.99	9.84	--	--
New York.....	2,005	13,044	2.64	2.03	8.38	--	--
North Carolina.....	18,292	12,296	1.03	.83	11.33	372	91.45
Ohio.....	12,130	12,267	1.75	1.43	11.38	220	53.56

Table 16. Origin and Destination of Coal to Electric Plants By State: Total (All Sectors), 2009
(Continued)

Origin Destination	Quantity (thousand tons)	Average Quality				Average Delivered Cost	
		Heat Value (Btu per pound)	Sulfur (percent by weight)	Sulfur (pounds per Million Btu)	Ash (percent by weight)	(cents per million Btu)	(dollars per ton)
West Virginia (Continued)							
Pennsylvania.....	9,529	12,676	2.85	2.25	9.80	--	--
South Carolina.....	1,928	12,367	.97	.78	11.49	352	86.99
Tennessee.....	1,299	12,762	1.44	1.13	8.87	366	93.25
Virginia.....	2,270	12,618	.85	.67	10.20	305	76.36
West Virginia.....	20,048	11,975	1.79	1.49	13.65	264	64.35
Wisconsin.....	147	13,051	2.54	1.94	7.90	--	--
Wyoming.....	423,528	8,652	.30	.35	5.17	163	28.27
Alabama.....	12,308	8,721	.32	.37	5.14	176	30.62
Arizona.....	4,996	8,809	.38	.43	5.49	174	30.61
Arkansas.....	14,387	8,673	.26	.30	4.92	167	29.03
Colorado.....	7,976	8,667	.27	.32	4.83	127	22.01
Georgia.....	13,512	8,508	.28	.33	4.58	202	34.39
Illinois.....	50,618	8,732	.25	.28	4.73	162	28.44
Indiana.....	18,648	8,760	.24	.28	4.78	185	32.47
Iowa.....	24,551	8,549	.31	.36	4.96	120	20.41
Kansas.....	20,083	8,498	.35	.42	5.10	142	24.14
Kentucky.....	1,812	8,849	.29	.32	5.16	182	32.17
Louisiana.....	13,273	8,559	.28	.33	4.77	256	44.13
Maryland.....	69	10,354	.52	.51	7.81	--	--
Michigan.....	18,647	8,825	.25	.29	4.92	184	32.43
Minnesota.....	7,155	8,789	.29	.33	4.89	181	31.74
Mississippi.....	1,366	9,433	.35	.37	5.99	282	53.13
Missouri.....	40,820	8,681	.29	.33	5.04	145	25.13
Montana.....	702	8,387	.22	.27	4.38	--	--
Nebraska.....	14,244	8,542	.31	.36	5.18	133	22.65
Nevada.....	1,822	9,227	.34	.37	7.14	204	38.34
New Jersey.....	27	8,684	.34	.39	6.72	--	--
New York.....	2,550	8,833	.29	.32	5.15	--	--
North Dakota.....	256	8,059	.36	.44	5.26	157	25.37
Ohio.....	6,158	8,818	.26	.29	4.95	201	35.55
Oklahoma.....	21,144	8,647	.32	.36	5.12	164	28.32
Oregon.....	1,524	8,407	.36	.42	4.83	176	29.51
Pennsylvania.....	1,169	8,816	.27	.30	4.82	--	--
South Dakota.....	2,189	8,386	.31	.37	5.35	176	29.45
Tennessee.....	7,341	8,803	.30	.34	5.00	212	37.30
Texas.....	62,022	8,516	.31	.37	5.20	180	30.91
Utah.....	1,227	8,883	.70	.79	7.00	251	44.56
Washington.....	3,076	8,360	.34	.40	5.59	--	--
West Virginia.....	1,419	8,843	.25	.29	4.81	212	37.57
Wisconsin.....	20,997	8,639	.30	.35	5.04	189	32.59
Wyoming.....	25,439	8,731	.49	.56	7.64	116	20.28
Imported.....	17,509	11,284	.55	.49	7.00	319	73.09
Alabama.....	3,239	11,383	.59	.52	6.38	319	72.71
Connecticut.....	490	9,130	.09	.10	1.95	--	--
Florida.....	4,118	11,199	.62	.55	8.74	292	65.34
Georgia.....	100	11,330	.46	.41	4.90	348	78.78
Hawaii.....	803	10,640	.65	.61	7.80	--	--
Maine.....	65	12,779	.82	.64	7.42	--	--
Maryland.....	464	11,588	.52	.45	6.44	--	--
Massachusetts.....	2,934	11,458	.49	.43	6.39	--	--
Mississippi.....	745	11,092	.64	.57	8.08	356	78.98
New Hampshire.....	515	12,545	.67	.53	7.67	368	92.26
New Jersey.....	917	9,247	.09	.10	1.99	803	207.98
New York.....	853	12,375	.59	.48	7.20	--	--
North Carolina.....	90	12,105	.63	.52	5.10	344	83.26
Pennsylvania.....	50	12,630	.67	.53	8.50	--	--
South Carolina.....	507	12,558	.69	.55	7.12	439	110.28
Virginia.....	1,619	11,592	.56	.49	8.35	310	71.77
Unclassified¹.....	11,454	10,095	1.48	1.47	15.89	171	33.18
Alabama.....	397	11,759	1.33	1.14	10.74	--	--
Arkansas.....	120	11,949	1.78	1.49	10.59	--	--
California.....	146	11,893	.64	.54	9.74	--	--
Colorado.....	456	10,744	.45	.42	9.02	192	40.74
Delaware.....	NM	NM	NM	NM	NM	NM	NM
Florida.....	142	11,933	1.48	1.24	9.77	--	--

Table 16. Origin and Destination of Coal to Electric Plants By State: Total (All Sectors), 2009
(Continued)

Origin Destination	Quantity (thousand tons)	Average Quality				Average Delivered Cost	
		Heat Value (Btu per pound)	Sulfur (percent by weight)	Sulfur (pounds per Million Btu)	Ash (percent by weight)	(cents per million Btu)	(dollars per ton)
Unclassified (Continued)¹							
Georgia	NM	NM	NM	NM	NM	NM	NM
Idaho	177	10,963	1.34	1.22	9.14	--	--
Illinois	318	10,803	3.12	2.88	9.61	241	52.05
Indiana	565	11,313	2.49	2.20	9.22	241	54.57
Iowa	819	9,252	1.20	1.30	6.25	145	24.79
Louisiana	NM	NM	NM	NM	NM	NM	NM
Massachusetts	50	11,775	.58	.49	7.43	--	--
Michigan	309	12,010	1.06	.88	8.51	194	48.95
Minnesota	991	9,063	.56	.61	7.00	145	25.72
Mississippi	NM	NM	NM	NM	NM	NM	NM
Missouri	208	11,666	2.53	2.17	9.24	241	56.18
Montana	245	6,509	2.33	3.58	43.69	--	--
Nebraska	93	8,560	.31	.36	5.16	--	--
New York	28	12,838	2.08	1.62	8.14	--	--
North Carolina	197	12,312	1.04	.84	10.99	--	--
North Dakota	307	8,487	.35	.41	5.67	--	--
Ohio	356	12,150	2.50	2.06	10.26	235	57.16
Pennsylvania	1,908	6,241	2.40	3.85	47.34	--	--
South Carolina	NM	NM	NM	NM	NM	NM	NM
Tennessee	330	12,254	1.88	1.54	9.46	--	--
Virginia	1,455	12,493	1.00	.80	9.85	--	--
West Virginia	26	12,252	2.22	1.82	11.76	NM	NM
Wisconsin	946	11,009	1.13	1.02	7.91	165	31.82
Wyoming	851	10,593	1.23	1.16	9.33	137	24.01
Total	981,477	9,902	1.01	1.02	8.94	222	44.47

¹ Represents imputed data. Beginning in 2008, the receipts and cost data are imputed for plants between 1 and 50 megawatts.

NM = Not meaningful due to large relative standard error or excessive percentage change.

Notes: • Includes anthracite, bituminous coal, subbituminous coal, lignite, and waste coal. • Receipts, heat value, sulfur, ash, and average delivered cost of fuel at the origin include data supplied by both regulated and unregulated plants. Average delivered cost of fuel at the destination includes data supplied by regulated plants only. • Totals may not equal sum of components because of independent rounding. • The cost of coal receipts displayed for the States of Virginia, Florida, Ohio, Kentucky, Tennessee, Michigan, and Alabama may not represent the total average delivered cost of coal for these States and their respective Census Divisions. In some instances, coal is delivered to a transfer facility prior to being delivered to the power plant. The costs presented in this table include the initial delivery costs, not any additional costs incurred to deliver the coal from the transfer facility to the power plant site. • Monetary values are expressed in nominal terms.

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

Appendices

A. Relative Standard Error

Table A1. Relative Standard Error for Receipts and Average Delivered Cost by Fuel Type: Total (All Sectors) by Census Division and State, 2009

Census Division and State	Coal		Distillate Fuel Oil		Residual Fuel Oil		Petroleum Liquids		Petroleum Coke		Natural Gas	
	Receipts	Cost	Receipts	Cost	Receipts	Cost	Receipts	Cost	Receipts	Cost	Receipts	Cost
New England.....	*	*	6	6	4	3	3	2	--	--	*	*
Connecticut.....	--	--	12	12	5	4	4	4	--	--	1	1
Maine.....	--	--	29	21	10	6	9	5	--	--	*	1
Massachusetts.....	*	*	6	6	3	2	2	2	--	--	*	*
New Hampshire.....	--	--	30	30	10	9	10	9	--	--	*	1
Rhode Island.....	--	--	49	34	33	30	28	24	--	--	1	1
Vermont.....	--	--	95	83	241	220	75	70	--	--	--	--
Middle Atlantic.....	*	*	3	3	1	1	1	1	3	3	*	*
New Jersey.....	--	--	18	18	--	--	4	3	--	--	*	*
New York.....	*	*	4	4	1	1	1	1	--	--	*	*
Pennsylvania.....	*	*	3	3	2	2	2	2	15	15	*	*
East North Central.....	*	*	6	2	14	8	6	2	12	7	*	*
Illinois.....	*	*	2	2	--	--	2	2	--	--	1	1
Indiana.....	*	*	2	2	5	2	2	2	--	--	1	1
Michigan.....	*	*	24	8	12	8	13	5	3	17	*	1
Ohio.....	*	*	1	1	75	31	11	4	34	17	1	1
Wisconsin.....	*	1	23	8	75	67	26	18	10	4	1	1
West North Central.....	*	*	6	3	47	28	8	4	4	11	1	1
Iowa.....	*	1	15	7	--	--	16	7	30	86	1	1
Kansas.....	--	--	9	8	--	--	9	8	--	--	*	1
Minnesota.....	*	1	16	9	64	34	18	9	--	--	1	1
Missouri.....	*	*	5	5	--	--	5	5	--	--	5	3
Nebraska.....	*	*	29	15	--	--	19	9	--	--	1	1
North Dakota.....	*	1	6	4	123	51	33	13	--	--	12	18
South Dakota.....	--	--	79	28	--	--	79	28	--	--	6	7
South Atlantic.....	*	*	1	1	1	1	1	1	--	--	*	*
Delaware.....	*	*	1	1	490	209	2	1	--	--	2	1
District of Columbia.....	--	--	--	--	--	--	--	--	--	--	--	--
Florida.....	*	*	2	1	1	1	1	1	--	--	*	*
Georgia.....	*	*	5	3	14	14	8	8	--	--	*	1
Maryland.....	--	--	2	2	4	4	2	1	--	--	2	3
North Carolina.....	*	*	3	2	20	20	12	12	--	--	*	*
South Carolina.....	*	*	7	3	--	--	2	1	--	--	*	1
Virginia.....	*	1	2	1	6	5	3	3	--	--	1	*
West Virginia.....	*	*	--	--	--	--	--	--	--	--	9	10
East South Central.....	*	*	5	2	39	10	6	2	--	--	*	*
Alabama.....	*	*	7	2	23	18	7	3	--	--	*	*
Kentucky.....	--	--	1	1	--	--	1	1	--	--	3	3
Mississippi.....	*	*	23	5	--	--	18	4	--	--	*	1
Tennessee.....	*	*	3	2	89	16	18	5	--	--	6	6
West South Central.....	*	*	6	3	19	9	9	4	1	1	*	*
Arkansas.....	*	*	16	14	26	27	17	14	--	--	1	1
Louisiana.....	*	*	12	3	29	8	14	5	1	2	*	*
Oklahoma.....	--	--	15	15	--	--	11	11	--	--	*	*
Texas.....	--	--	5	5	51	16	17	7	4	3	*	*
Mountain.....	*	*	10	3	103	54	9	3	--	--	*	2
Arizona.....	--	--	8	3	--	--	7	3	--	--	*	4
Colorado.....	*	1	47	15	--	--	38	11	--	--	*	1
Idaho.....	20	20	4,031	1,342	--	--	4,031	1,342	--	--	1	2
Montana.....	1	1	7	7	471	200	21	9	--	--	7	15
Nevada.....	--	--	5	5	--	--	5	5	--	--	*	1
New Mexico.....	--	--	5	2	--	--	5	2	--	--	*	14
Utah.....	--	--	63	21	--	--	63	21	--	--	1	7
Wyoming.....	*	1	3	4	51	52	5	5	--	--	2	7
Pacific Contiguous.....	*	*	9	4	61	11	14	5	9	10	*	*
California.....	1	2	20	9	--	--	7	3	9	10	*	*
Oregon.....	--	--	--	--	196	33	34	10	--	--	*	*
Washington.....	--	--	10	7	54	14	28	10	--	--	*	*
Pacific Noncontiguous.....	4	5	6	2	2	2	3	1	--	--	1	1
Alaska.....	8	15	15	6	2	2	7	3	--	--	1	1
Hawaii.....	2	3	6	2	3	2	3	1	--	--	--	--
U.S. Total.....	*	*	2	1	1	1	1	1	2	2	*	*

* = Value is less than half of the smallest unit of measure (e.g., for values with no decimals, the smallest unit is "1" and values under 0.5 are shown as "*.")
 Notes: • Relative Standard Error is designed to indicate error due to sampling. However, nonsampling error is important for all surveys, census or sample. See Technical Notes for further information. • Beginning in 2008, receipts and average delivered costs are imputed for plants under 50 MW. Purchase type, mine type, and coal origin state are unavailable for these data.
 Sources: U.S. Energy Information Administration, Form EIA-923, "Power Plant Report;"

Table A2. Relative Standard Error for Receipts and Average Delivered Cost with Unclassified Purchase Type: Total (All Sectors) by Census Division and State, 2009

Census Division and State	Coal		Distillate Fuel Oil		Residual Fuel Oil		Petroleum Coke		Natural Gas	
	Receipts	Cost	Receipts	Cost	Receipts	Cost	Receipts	Cost	Receipts	Cost
New England.....	21	36	16	15	12	8	--	--	5	5
Connecticut	--	--	113	112	41	35	--	--	8	8
Maine	--	--	44	32	21	13	--	--	27	32
Massachusetts.....	21	36	19	19	13	12	--	--	7	7
New Hampshire.....	--	--	70	70	27	25	--	--	34	32
Rhode Island	--	--	51	35	33	30	--	--	11	11
Vermont.....	--	--	95	83	241	220	--	--	--	--
Middle Atlantic.....	9	9	16	16	24	23	13	72	5	4
New Jersey	--	--	42	42	--	--	--	--	6	6
New York.....	16	37	21	21	28	27	--	--	8	6
Pennsylvania	9	10	28	28	30	27	13	72	12	11
East North Central.....	4	5	48	17	23	12	29	15	3	4
Illinois	10	14	53	49	--	--	--	--	16	13
Indiana.....	5	10	61	61	1,223	520	--	--	9	8
Michigan	16	16	57	20	20	11	4	22	4	6
Ohio.....	12	14	154	141	75	31	50	21	9	9
Wisconsin.....	6	8	183	71	75	67	118	58	4	7
West North Central.....	6	7	29	16	81	35	30	86	11	8
Iowa.....	9	11	144	70	--	--	30	86	17	25
Kansas	--	--	50	46	--	--	--	--	8	26
Minnesota.....	9	13	52	30	95	46	--	--	5	7
Missouri.....	10	18	25	23	--	--	--	--	51	27
Nebraska.....	15	46	161	83	--	--	--	--	46	71
North Dakota.....	21	24	115	74	123	51	--	--	12	18
South Dakota.....	--	--	164	65	--	--	--	--	32	43
South Atlantic.....	3	5	13	8	11	10	--	--	5	4
Delaware	61	101	81	69	490	209	--	--	94	54
District of Columbia.....	--	--	--	--	--	--	--	--	--	--
Florida.....	13	16	47	21	9	8	--	--	8	7
Georgia.....	136	207	14	9	55	57	--	--	14	11
Maryland.....	--	--	61	50	109	108	--	--	7	7
North Carolina.....	8	16	87	53	28	28	--	--	44	39
South Carolina.....	1,607	1,761	127	47	--	--	--	--	71	229
Virginia	4	6	23	17	32	25	--	--	14	12
West Virginia.....	29	50	--	--	--	--	--	--	20	17
East South Central.....	8	8	8	3	46	12	--	--	6	5
Alabama	10	11	9	3	27	21	--	--	10	9
Kentucky	--	--	89	90	--	--	--	--	10	10
Mississippi	143	105	47	10	--	--	--	--	14	12
Tennessee.....	12	11	52	32	89	16	--	--	13	12
West South Central.....	9	18	15	8	32	15	46	38	3	3
Arkansas.....	5	18	67	57	99	98	--	--	10	8
Louisiana.....	245	142	18	5	45	13	28	40	7	6
Oklahoma.....	--	--	49	47	--	--	--	--	22	19
Texas.....	--	--	28	28	51	16	222	102	4	3
Mountain.....	6	7	153	54	103	54	--	--	5	19
Arizona.....	--	--	362	145	--	--	--	--	31	18
Colorado.....	9	14	355	130	--	--	--	--	18	38
Idaho.....	20	20	4,031	1,342	--	--	--	--	6	11
Montana.....	25	28	81	82	471	200	--	--	16	26
Nevada.....	--	--	161	163	--	--	--	--	359	5,315
New Mexico.....	--	--	2,634	970	--	--	--	--	15	97
Utah.....	--	--	339	116	--	--	--	--	10	57
Wyoming.....	8	10	62	63	51	52	--	--	5	9
Pacific Contiguous.....	9	19	22	10	295	78	10	11	3	3
California.....	9	19	24	10	--	--	10	11	3	3
Oregon.....	--	--	--	--	316	46	--	--	9	15
Washington.....	--	--	53	40	737	149	--	--	8	12
Pacific Noncontiguous.....	7	13	18	7	6	4	--	--	5	8
Alaska.....	8	15	15	7	22	21	--	--	5	8
Hawaii.....	14	26	46	16	6	4	--	--	--	--
U.S. Total.....	2	3	7	3	5	4	11	9	2	2

Notes: • Relative Standard Error is designed to indicate error due to sampling. However, nonsampling error is important for all surveys, census or sample. See Technical Notes for further information. • Beginning in 2008, receipts and average delivered costs are imputed for plants under 50 MW. Purchase type, mine type, and coal origin state are unavailable for these data. Sources: U.S. Energy Information Administration, Form EIA-923, "Power Plant Report;"

Table A3. Relative Standard Error for Receipts and Average Delivered Cost of Coal: Total (All Sectors) by Census Division and State, 2009

Census Division and State	Unclassified Origin State		Unclassified Mine Type	
	Receipts	Cost	Receipts	Cost
New England.....	21	36	21	36
Connecticut	--	--	--	--
Maine.....	--	--	--	--
Massachusetts.....	21	36	21	36
New Hampshire.....	--	--	--	--
Rhode Island	--	--	--	--
Vermont.....	--	--	--	--
Middle Atlantic.....	9	9	3	2
New Jersey	--	--	--	--
New York.....	16	37	16	37
Pennsylvania	9	10	4	2
East North Central.....	4	5	4	5
Illinois	10	14	10	14
Indiana.....	5	10	5	10
Michigan	16	16	16	16
Ohio.....	12	14	12	14
Wisconsin.....	6	8	6	8
West North Central.....	6	7	6	7
Iowa.....	9	11	9	11
Kansas	--	--	--	--
Minnesota.....	9	13	9	13
Missouri.....	10	18	10	18
Nebraska.....	15	46	15	46
North Dakota.....	21	24	21	24
South Dakota.....	--	--	--	--
South Atlantic.....	3	5	3	5
Delaware	61	101	61	101
District of Columbia.....	--	--	--	--
Florida	13	16	13	16
Georgia.....	136	207	136	207
Maryland	--	--	--	--
North Carolina.....	8	16	8	16
South Carolina.....	1,607	1,761	1,607	1,761
Virginia	4	6	4	6
West Virginia.....	29	50	29	50
East South Central.....	8	8	8	8
Alabama	10	11	10	11
Kentucky	--	--	--	--
Mississippi	143	105	143	105
Tennessee.....	12	11	12	11
West South Central.....	9	18	9	18
Arkansas.....	5	18	5	18
Louisiana	245	142	245	142
Oklahoma	--	--	--	--
Texas	--	--	--	--
Mountain.....	6	7	6	7
Arizona.....	--	--	--	--
Colorado.....	9	14	9	14
Idaho.....	20	20	20	20
Montana.....	25	28	25	28
Nevada.....	--	--	--	--
New Mexico.....	--	--	--	--
Utah.....	--	--	--	--
Wyoming.....	8	10	8	10
Pacific Contiguous.....	9	19	9	19
California.....	9	19	9	19
Oregon.....	--	--	--	--
Washington	--	--	--	--
Pacific Noncontiguous.....	14	26	7	13
Alaska.....	--	--	8	15
Hawaii	14	26	14	26
U.S. Total.....	2	3	2	2

Notes: • Relative Standard Error is designed to indicate error due to sampling. However, nonsampling error is important for all surveys, census or sample. See Technical Notes for further information. • Beginning in 2008, receipts and average delivered costs are imputed for plants under 50 MW. Purchase type, mine type, and coal origin state are unavailable for these data. Sources: U.S. Energy Information Administration, Form EIA-923, "Power Plant Report;"

Table A4. Relative Standard Error for Receipts and Average Delivered Cost of Natural Gas by Type of Delivery: Total (All Sectors) by Census Division and State, 2009

Census Division and State	Unclassified Delivery Type	
	Receipts	Cost
New England.....	5	5
Connecticut	8	8
Maine.....	27	32
Massachusetts.....	7	7
New Hampshire.....	34	32
Rhode Island	11	11
Vermont.....	--	--
Middle Atlantic.....	5	4
New Jersey	6	6
New York.....	8	6
Pennsylvania	12	11
East North Central.....	3	4
Illinois	16	13
Indiana.....	9	8
Michigan	4	6
Ohio.....	9	9
Wisconsin.....	4	7
West North Central.....	11	8
Iowa.....	17	25
Kansas	8	26
Minnesota.....	5	7
Missouri.....	51	27
Nebraska.....	46	71
North Dakota.....	12	18
South Dakota.....	32	43
South Atlantic.....	5	4
Delaware.....	94	54
District of Columbia.....	--	--
Florida	8	7
Georgia.....	14	11
Maryland	7	7
North Carolina.....	44	39
South Carolina.....	71	229
Virginia	14	12
West Virginia.....	20	17
East South Central.....	6	5
Alabama	10	9
Kentucky.....	10	10
Mississippi	14	12
Tennessee.....	13	12
West South Central.....	3	3
Arkansas.....	10	8
Louisiana.....	7	6
Oklahoma.....	22	19
Texas.....	4	3
Mountain.....	5	19
Arizona.....	31	18
Colorado.....	18	38
Idaho.....	6	11
Montana.....	16	26
Nevada.....	359	5,315
New Mexico.....	15	97
Utah.....	10	57
Wyoming.....	5	9
Pacific Contiguous.....	3	3
California.....	3	3
Oregon.....	9	15
Washington.....	8	12
Pacific Noncontiguous.....	5	8
Alaska.....	5	8
Hawaii	--	--
U.S. Total.....	2	2

Note:

B. Technical Notes

This appendix describes how the U.S. Energy Information Administration (EIA) collects, estimates, and reports electric power data in the *Cost and Quality of Fossil Fuels for Electric Plants* reports. Following is a description of the ongoing data quality efforts and sources of data.

Data Quality

The *Cost and Quality of Fuels for Electric Plants* reports have been prepared in the past by the Electric Power Division (EPD) within the Office of Coal, Nuclear, Electric and Alternate Fuels (CNEAF), U.S. Energy Information Administration (EIA), U.S. Department of Energy (DOE). Due to reorganization within EIA, the 2010 edition (which includes 2009 data) and subsequent reports are being prepared by the Electric Power Operations Team within the Office of Electricity, Renewables, and Uranium Statistics (ERUS) under the Assistant Administrator for Energy Statistics, EIA. The ERUS office performs routine reviews of the data collected and the forms on which they are collected. Additionally, to assure that the data are collected from the complete set of respondents, ERUS routinely reviews the frames for each data collection.

Unified Data Submission Process

Data submitted to EIA are either received on paper forms or entered directly by respondents into CNEAF's Internet Data Collection (IDC) System. Hard copy forms are keyed by EIA into the IDC. All data are subject to review via edits built into the IDC, additional quality assurance reports, and review by subject matter experts. Questionable data values are verified through contacts with respondents. Also, survey non-respondents are identified and contacted.

Initial edit checks of the data are performed through the IDC by the respondent. Other program edits include both deterministic checks, in which records are checked for the presence of data in required fields, and statistical checks, in which the data are checked against a range of values based on historical data values and for logical or mathematical consistency with data elements reported in the survey. Discrepancies found in the data, as a result of these checks, are resolved either by the processing staff or by further information obtained from a telephone call to the respondent.

Those respondents unable to use the electronic reporting method provide the data in hard copy, typically via fax and email. These data are manually entered into the computerized database and are subjected to the same data edits as those that are electronically submitted. Resolution of questionable data is accomplished via telephone or email contact with the respondents.

Reliability of Data

Survey data have non-sampling errors. Non-sampling errors can be attributed to many sources: (1) inability to obtain complete information about all cases in the sample (i.e., nonresponse); (2) response errors; (3) definitional difficulties; (4) differences in the interpretation of questions; (5) mistakes in recording or coding the data; and (6) other errors of collection, response, coverage, and estimation for missing data. Although no direct measurement of the biases due to non-sampling errors can be obtained, precautionary steps are taken in all phases of the frame development and data collection, processing, and tabulation processes, in an effort to minimize their influence.

Data Revision Procedure

ERUS has adopted the following procedures with respect to the revision of data disseminated in energy data products:

- Annual survey data are disseminated either as preliminary or final when first appearing in a data product. Data initially released as preliminary will be so noted in the data product. These data are typically released as final by the next dissemination of the same product; however, if final data are available at an earlier interval they may be released in another product.
- After data are disseminated as final, further revisions will be considered if they make a difference of 1 percent or greater at the national level. Revisions for differences that do not meet the 1 percent or greater threshold will be determined by the Office Director. In either case, the proposed revision will be subject to the EIA revision policy concerning how it affects other EIA products.
- The magnitudes of changes due to revisions experienced in the past will be included periodically in the data products, so that the reader can assess the accuracy of the data.

The *Cost and Quality of Fossil Fuels for Electric Plants 2009* presents the most current annual data available to the EIA, and will be consistent with the *Electric Power Annual 2009*. Previous reports have included 2 years of data, i.e. the most current year and the preceding year. Data comparisons to prior years can be made by accessing back issue of the *Cost and Quality of Fossil Fuels for Electric Plants* reports.

Rounding and Percent Change Calculations

Rounding Rules for Data. To round a number to n digits (decimal places), add one unit to the n th digit if the $(n+1)$ digit is 5 or larger and keep the n th digit unchanged if the $(n+1)$ digit is less than 5. The symbol for a number rounded to zero is (*).

Percent Change. The following formula is used to calculate percent differences:

$$\text{Percent Change} = \left(\frac{x(t_2) - x(t_1)}{x(t_1)} \right) \times 100,$$

where $x(t_1)$ and $x(t_2)$ denote the quantity at year t_1 and subsequent year t_2 .

Data Sources for the Cost and Quality of Fossil Fuels for Electric Plants

Data published in the report are compiled from forms filed monthly and annually by electric utilities and electricity generators. The current applicable EIA form is Form EIA-923, "Power Plant Operations Report", which began collection in 2008. Previously, cost and quality of fuels data at nonutility plants were collected on Form EIA-423, "Monthly Cost and Quality of Fuels for Electric Plants Report."

Cost and quality of fuel data at utility plants were collected by the Federal Energy Regulatory Commission (FERC) on FERC Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants."

Understanding the effect of the restructuring of the electricity industry is important when reviewing data presented in previous *Cost and Quality of Fossil Fuels for Electric Plants* reports. FERC's predecessor agency, the Federal Power Commission, began collecting these data in July of 1972 from each electric power producer for each of its electric generating plants whose total steam turbine electric generating capacity and/or combined-cycle (gas turbine with associated steam turbine) generating capacity was 25 or more megawatts. (In 1983 the threshold was changed to 50 or more megawatts.) Only fuel delivered for use in steam-turbine and combined-cycle units was to be reported. Fuel received for use in gas turbine or internal combustion units that were not associated with a combined-cycle operation were not reported.

In the mid- to late-1990s, many electric utilities sold their plants to nonutility entities or created subsidiaries whose assets were not regulated by State public utility commissions. Once a plant became the property of such an entity, it was no longer required to file on the FERC Form 423. In 2002, EIA initiated the Form EIA-423 to capture the data from these plants. The respondents from both the FERC Form 423 and the Form EIA-423 now

submit their cost and quality of fuels data on Schedule 2 of the Form EIA-923.

Form EIA-923

Form EIA-923, "Power Plant Operations Report," is used to collect information on receipts and cost of fossil fuels, fuel stocks, electric power generation, fuel consumption, and environmental data (e.g., emission controls and cooling systems). Data are collected from a monthly sample of approximately 1,800 plants, which includes a census of nuclear and pumped storage hydroelectric plants. The plants in the monthly sample report their receipts, cost and stocks of fossil fuels, electric power generation, and the total consumption of fuels for both electric power generation and, if a combined heat and power plant, useful thermal output. At the end of the year, the monthly respondents report their annual source and disposition of electric power (nonutilities only), and if applicable, the environmental data on the Form EIA-923 Supplemental Form (Schedules 6, 7, and 8A to 8F). Approximately 3,400 plants, representing all generators not included in the monthly sample and with a nameplate capacity of 1 MW or more, report data on the entire form (Schedules 1 to 8F, as applicable) annually. In addition to electric power generating plants, respondents include fuel storage terminals without generating capacity that receive shipments of fossil fuels for eventual use in electric power generation. The monthly data are due by the last day of the month following the reporting period.

Receipts of fossil fuels, fuel cost and quality information, and fuel stocks at the end of the reporting period are all reported at the plant level. Fuel receipts and costs are collected from plants with a nameplate capacity of 50 MW or more and burn fossil fuels. Plants that burn organic fuels and have a steam-turbine capacity of at least 10 megawatts report consumption at the boiler level and generation at the generator level for each month, regardless of whether the plant reports in the monthly sample or reports once a year (annually). For all other plants, consumption is reported at the prime-mover level. For these plants, generation is reported either at the prime-mover level or, for noncombustible sources (e.g., wind, nuclear), at the prime-move and energy source level (including generating unit for nuclear only). The source and disposition of electricity is reported annually for nonutilities at the plant level, as is revenue from sales for resale. Additional operational data, including environmental data, are collected annually from facilities that have a steam-turbine capacity of at least 10 megawatts.

Instrument and Design History: On July 7, 1972, the Federal Power Commission (FPC) issued Order Number 453 enacting the New Code of Federal Regulations, Section 141.61, legally creating the FPC Form 423. Originally, the form was used to collect data only on

fossil-steam plants, but was amended in 1974 to include data on internal-combustion and combustion-turbine units. The FERC Form 423 replaced the FPC Form 423 in January 1983. The FERC Form 423 eliminated peaking units, for which data were previously collected on the FPC Form 423. In addition, the generator nameplate capacity threshold was changed from 25 megawatts to 50 megawatts. This reduction in coverage eliminated approximately 50 utilities and 250 plants. All historical FPC Form 423 data in this publication were revised to reflect the new generator-nameplate-capacity threshold of 50 or more megawatts reported on the FERC Form 423. In January 1991, the collection of data on the FERC Form 423 was extended to include combined-cycle units. Historical data have not been revised to include these units. Starting with the January 1993 data, the FERC began to collect the data directly from the respondents.

The Form EIA-423 was originally implemented in January 2002 to collect monthly cost and quality data for fossil fuel receipts from owners or operators of nonutility electricity generating plants. Due to the restructuring of the electric power industry, many plants which had historically submitted this information for utility plants on the FERC Form 423 (see above) were being transferred to the nonutility sector. As a result, a large percentage of fossil fuel receipts were no longer being reported. The Form EIA-423 was implemented to fill this void and to capture the data associated with existing non-regulated power producers. Its design closely followed that of the FERC Form 423. Understanding the effect of the restructuring of the electricity industry is important when reviewing data presented in previous *Cost and Quality of Fossil Fuels for Electric Plants* reports.

Both the Form EIA-423 and FERC-423 were superseded by Form EIA-923 (Schedule 2) in January of 2008. The EIA-923 maintains the same 50 megawatt threshold for these data. However, not all data are collected monthly on the new form. Beginning with 2008 data, a sample of the respondents reported monthly, with the remainder reporting annually (monthly values are imputed via regression). For 2007, Schedule 2 annual data were not be collected or imputed, as most of the plants required to report on Schedule 2 already submitted their 2007 receipts data on a monthly basis via the FERC Form 423 or the Form EIA-423.

Data Processing and Data System Editing:

Respondents are encouraged to enter data directly into a computerized database via the e-filing system. A variety of automated quality control mechanisms are run during this process, such as range checks and comparisons with historical data. These edit checks are performed as the data are provided, and many problems that are encountered are resolved during the reporting process. Those plants that are unable to use the electronic reporting medium provide the data in hard copy, typically via fax. These data are manually entered into the computerized database, and are subjected to the same edits as those that were electronically submitted.

If the reported data appeared to be in error and the data issue could not be resolved by follow up contact with the respondent, or if a facility was a nonrespondent, a regression methodology was used to impute for the facility.

Issues within Historical Data Series: Beginning with 2008 data, tables for total receipts will include imputed quantities for plants with capacity one megawatt or more, to be consistent with other electric power data. Previously published receipts data were from plants over a 50-megawatt threshold, which was a legacy of their original collection as information for a regulatory agency (FERC), not as a survey to provide more meaningful estimates of totals for statistical purposes. Totals appeared to become smaller as more electric production came from unregulated plants, until the Form EIA-423 was created to help fill that gap. As a further improvement, the Form EIA-923 collects data from the universe of power plants depicted in the Electric Power Annual (*i.e.*, one megawatt and above), provides estimates for plants not required to report fuel cost and quality data (*i.e.*, plants under 50 MW) and provides associated relative standard errors, thus portraying a more complete assessment of the market.

Imputation: Estimation by regression prediction, or imputation, is done for all missing data including non-sampled plants, nonrespondents, and plants not required to report Schedule 2 (under 50 MW). Fossil fuel receipts at electric generating plants not required to report this data element are imputed using a weighted least squares regression model stratified by fuel, plant type, and geographic region. The model uses the current annual consumption as the sole regressor. The amount of imputed receipts data for 2009 is summarized in the table at the end of this appendix.

Receipts of Fossil Fuels: Receipts data, including cost and quality of fuels, are collected at the plant level from selected electric generating plants and fossil-fuel storage terminals in the United States. These plants include independent power producers, electric utilities, and commercial and industrial combined heat and power producers whose total fossil-fueled nameplate capacity is 50 megawatts or more (excluding storage terminals, which do not produce electricity). The data on receipts include imported coal as well as domestic production. The data on cost and quality of fuel shipments are used in the following formulas to produce aggregates and averages for each fuel type at the State, Census Division, and U.S. levels. For these formulas, receipts and average heat content are at the plant level. For each geographic region, the summation sign, Σ , represents the sum of all facilities in that geographic region.

For coal, units for receipts are in tons and units for average heat contents (A) are in million Btu per ton.

For petroleum, units for receipts are in barrels and units for average heat contents (A) are in million Btu per barrel.

For gas, units for receipts are in thousand cubic feet (Mcf) and units for average heat contents (A) are in million Btu per thousand cubic foot.

For each of the above fossil fuels:

$$\text{Total Btu} = \sum_i (R_i \times A_i),$$

where i denotes a facility; R_i = receipts for facility i ; A_i = average heat content for receipts at facility i ;

$$\text{Weighted Average Btu} = \frac{\sum_i (R_i \times A_i)}{\sum_i R_i},$$

where i denotes a facility; R_i = receipts for facility i ; and, A_i = average heat content for receipts at facility i .

The weighted average cost in cents per million Btu is calculated using the following formula:

$$\text{Weighted Average Cost} = \frac{\sum_i (R_i \times A_i \times C_i)}{\sum_i (R_i \times A_i)},$$

where i denotes a facility; R_i = receipts for facility i ; A_i = average heat content for receipts at facility i ; and C_i = cost in cents per million Btu for facility i .

The weighted average cost in dollars per physical unit (i.e., tons, barrels, or Mcf) is calculated using the following formula:

$$\text{Weighted Average Cost} = \frac{\sum_i (R_i \times A_i \times C_i)}{10^2 \sum_i R_i},$$

where i denotes a facility; R_i = receipts for facility i ; A_i = average heat content for receipts at facility i ; and, C_i = cost in cents per million Btu for facility i .

Relative Standard Error

The relative standard error (RSE) statistic, usually given as a percent, describes the magnitude of sampling error that might reasonably be incurred. The estimated RSEs here are the square root of the estimated variance, divided by a statistic for the variable(s) of interest, expressed as a percent. This statistic may be the estimated ratio of two variables, say a price, or an estimated total for a single variable.

The sampling error may be less than the nonsampling error. In fact, large RSE estimates found in preliminary work with these data have often indicated nonsampling errors, which were then identified and corrected. Nonsampling errors may be attributed to many sources, including the response errors, definitional difficulties, differences in the interpretation of questions, mistakes in recording or coding data obtained, and other errors of collection, response, or coverage. These nonsampling errors also occur in complete censuses. In a complete census, this problem may become unmanageable.

Using the Central Limit Theorem, which applies to sums and means such as are applicable here, there is approximately a 68-percent chance that the true total or mean is within one RSE of the estimated total. Note that reported RSEs are always estimates, themselves, and are usually, as here, reported as percents. As an example, suppose that a net generation from coal value is estimated to be 1,507 total million kilowatthours with an estimated RSE of 4.9 percent. This means that, ignoring any nonsampling error, there is approximately a 68-percent chance that the true million kilowatthour value is within approximately 4.9 percent of 1,507 million kilowatthours (that is, between 1,433 and 1,581 million kilowatthours). Also under the Central Limit Theorem, there is approximately a 95-percent chance that the true mean or total is within 2 RSEs of the estimated mean or total.

Note that there are times when a model may not apply, such as in the case of a substantial reclassification of sales, when the relationship between the variable of interest and the regressor data does not hold. In such a case, the new information represents only itself, and such numbers are added to model results when estimating totals. Further, there are times when sample data may be known to be in error, or are not reported. Such cases are treated as if they were never part of the model-based sample, and values are imputed.

Imputed Receipts Quantities, 2009

	Coal (thousand tons)	Natural Gas (thousand mcf)	Petroleum Liquids (thousand barrels)
Total Receipts	973,140	8,123,487	55,088
All Imputed Receipts	12,459	412,399	10,942
Under 50 MW	12,459	411,723	10,938
Over 50 MW	0	676	4

Glossary

**The Office of Electricity, Renewables,
and Uranium Statistics'
Master Glossary
contains all references used in this publication.**

Please use this URL:

<http://www.eia.gov/cneaf/electricity/page/glossary.html>