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Office of Coal, Nuclear, Electric and Alternate Fuels
U.S. Department of Energy
Washington, DC 20585

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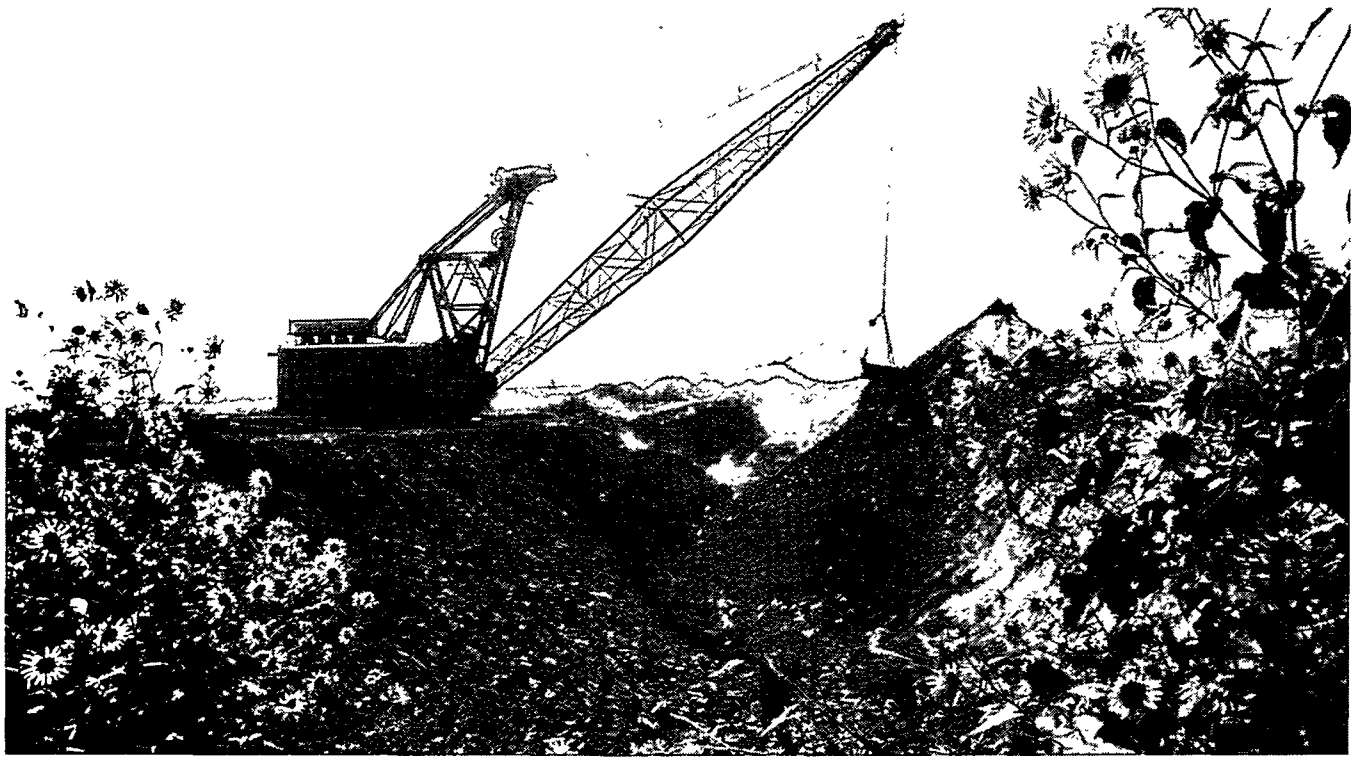
Preface

Coal Industry Annual 1993 replaces the publication *Coal Production* (DOE/EIA-0125). See the Explanatory Notes for a mapping of tables from *Coal Production* to the *Coal Industry Annual.* This report presents additional tables and expanded versions of tables previously presented in *Coal Production*, including production, number of mines, productivity, employment, productive capacity, and recoverable reserves. This report also presents data on coal consumption, coal distribution, coal stocks, coal prices, coal quality, and emissions for a wide audience including the Congress, Federal and State agencies, the coal industry, and the general public. In addition, Appendix A contains a compilation of coal statistics for the major coal-producing States. This report does not include coal consumption data for nonutility power producers who are not in the manufacturing, agriculture, mining, construction, or commercial sectors. This consumption is estimated to be 5 million short tons in 1993.

The data presented in the report were collected and published by the Energy Information Administration (EIA), to fulfill its data collection and dissemination responsibilities, as specified in the Federal Energy Administration Act of 1974 (Public Law 93-275), as amended. The Demonstrated Reserve Base (DRB) data that were previously presented in *Coal Production* are not presented in this report as these data are now reported in *U.S. Coal Reserves: An Update by Heat and Sulfur Content* (DOE/EIA-0529). This report does however present the recoverable portion of the DRB in Table 105.

This report constitutes the 18th annual report on coal production published by EIA and continues the series formerly included as a chapter in the *Minerals Yearbook* published by the Bureau of Mines.

The Office of Coal, Nuclear, Electric and Alternate Fuels gratefully acknowledges the cooperation of the respondents in supplying the information presented in this report and appreciates the valuable assistance of State coal mining agencies, the U.S. Department of the Interior: the Bureau of Land Management, the Minerals Management Service, the U.S. Department of Labor: the Mine Safety and Health Administration, the Bureau of Labor Statistics, The U.S. Department of Commerce: the Bureau of the Census, and the King Publishing Corporation.



A dragline digs into the seam of a large surface mine in the West.

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Executive Summary

Coal's Role in the U.S. Energy Picture

Coal remained a dominant energy source in the United States in 1993, despite events that stemmed its growth. Total U.S. energy production declined in 1993 for the third consecutive year, down 2 percent to 66 quadrillion Btu. Most of the decline was attributed to lower coal production, which fell 1.1 quadrillion Btu from the 1992 level to 20.5 quadrillion Btu, and lower crude oil production, which fell 0.7 quadrillion Btu to 14.5 quadrillion Btu.

U.S. total energy consumption reached a record level of 84 quadrillion Btu in 1993, the second consecutive year of growth (Table ES1). The increase was primarily due to higher consumption of coal and natural gas. Consumption of coal in 1993 rose 4 percent to 926 million short tons, 20 quadrillion Btu. The growth occurred primarily at electric utilities where 88 percent of the coal was consumed. Coal's share of U.S. electricity generation in 1993 was 57 percent, slightly higher than in 1992 (Table ES2). Electric utilities used coal to meet the 4-percent increase in electricity demand and to make up for the loss of generation from nuclear-powered plants that were temporarily out of operation for maintenance.

For the second year in a row, coal exports declined, and, for the first time on record, coal was replaced by crude oil as the primary U.S. energy export. Coal exports dropped 27 percent from the 1993 level to 1.95 quadrillion Btu. U.S. coal imports reached a record level of 0.18 quadrillion Btu up 80 percent from the 1992 level. However, U.S. coal imports represented only about 1 percent of total U.S. energy imports (Table ES3 and Figure ES1). Table ES4 presents national summary level statistics on coal supply, distribution, demand, and prices for 1984 and 1989 through 1993.

Major Events Affecting the Coal Industry

The coal industry was heavily affected in 1993 by two events. The first event was the United Mine Workers of America (UMWA) strike against selected operations of the Bituminous Coal Operators Association (BCOA). The second was the severe flooding along the upper Mississippi and Missouri River Basins.

UMWA Strike

The UMWA strike was the primary reason for the 52-million-short-ton drop in coal production. The first portion of the strike included 7,500 miners in four States who worked for Peabody Holding Company subsidiaries. It began on February 2, 1993, and ended on March 3, 1993, when both sides agreed to extend the 1988 contract for 60 days. This 1-month work stoppage did not affect consumer coal receipts substantially because deliveries continued from coal stockpiled at the mines prior to the start of the work stoppage, and spot market coal was available to make up any shortages.

On May 10, 1993, after unsuccessful negotiations, the UMWA began a "selective strike," targeting individual BCOA operations. The strike was expanded eight times before workers began returning to work on December 16, 1993. Five U.S. producers bore the brunt of the selective strike: the Peabody Holding Company, the Consolidation Coal Company, the Ziegler Coal Holding Company, the Arch Mineral Corporation, and Ashland Coal Inc.

During the main 7-month strike period from May to December 1993, these companies accounted for over 90 percent of the production loss due to the strike. The production loss by these companies ranged between 50 and 60 million short tons based on their 1992 mine level production figures. Other major companies affected by the strike, but to a lesser extent, included AMAX Coal, the Island Creek Coal Company, Keystone Coal Mining Corporation, and the Rochester and Pittsburgh Coal Company.

The EIA has estimated, based on 1992 company reported production for the struck mines, that the 1993 coal production lost by all companies that were struck amounted to approximately 70 million short tons. By State of origin, the approximate losses were 30 million short tons in West Virginia, 17 million short tons in Illinois, 8 million short tons in Kentucky, 6 million short tons in Indiana, 4 million short tons in Pennsylvania, 3 million short tons in Virginia, and 1 million short tons in Ohio. For a majority of the 7 month strike

Table ES1. U.S. Energy Overview, Selected Years, 1984, 1989-1993
(Quadrillion Btu)

Activity and Energy Source	1993[P]	1992	1991	1990	1989	1984	Percent Change 1993-1992	Average Annual Percent Change	
								1989-1993	1984-1993
Production	**65.81**	**66.85**	**67.48**	**67.85**	**66.13**	**65.96**	**-1.6**	**-0.1**	*
Coal	20.49	21.59	21.59	22.46	21.35	19.72	-5.1	-1.0	0.4
Natural Gas (Dry)	18.98	18.38	18.23	18.36	17.85	18.01	3.3	1.5	.6
Crude Oil[1]	14.48	15.22	15.70	15.57	16.12	18.85	-4.9	-2.6	-2.9
Natural Gas Plant Liquids	2.40	2.36	2.31	2.17	2.16	2.27	1.5	2.7	.6
Nuclear Electric Power	6.52	6.61	6.58	6.16	5.68	3.55	-1.4	3.5	7.0
Hydroelectric Power[2]	2.76	2.50	2.88	2.93	2.77	3.39	10.5	*	-2.2
Other[3]	.18	.19	.19	.20	.22	.17	-6.4	-4.7	.3
Imports	**21.19**	**19.65**	**18.58**	**18.99**	**18.95**	**12.77**	**7.8**	**2.8**	**5.8**
Natural Gas	2.29	2.16	1.80	1.55	1.39	.85	5.8	13.3	11.7
Crude Oil[4]	14.63	13.25	12.55	12.77	12.60	7.30	10.4	3.8	8.0
Petroleum Products[5]	3.67	3.71	3.79	4.35	4.57	4.13	-1.2	-5.3	-1.3
Coal	.18	.10	.08	.07	.07	.03	80.0	26.6	22.0
Other[6]	.42	.42	.35	.25	.33	.46	-	6.2	-1.0
Exports	**4.31**	**5.02**	**5.22**	**4.91**	**4.77**	**3.80**	**-14.1**	**-2.5**	**1.4**
Coal	1.95	2.68	2.85	2.77	2.64	2.15	-27.3	-7.3	-1.1
Crude Oil	2.11	2.01	2.13	1.82	1.84	1.54	5.1	3.5	3.5
Other[7]	.25	.33	.24	.31	.29	.11	-23.7	-3.8	9.8
Adjustments[8]	**1.27**	**.66**	**.28**	**-.67**	**1.02**	**-.78**	**-**	**-**	**-**
Consumption	**83.96**	**82.14**	**81.12**	**81.26**	**81.33**	**74.14**	**2.2**	**.8**	**1.4**
Coal	19.63	18.87	18.77	19.10	18.93	17.07	4.0	.9	1.6
Natural Gas[9]	20.79	20.13	19.61	19.30	19.38	18.51	3.3	1.8	1.3
Petroleum[10]	33.77	33.53	32.85	33.55	34.21	31.05	.7	-.3	.9
Nuclear Electric Power	6.52	6.61	6.58	6.16	5.68	3.55	-1.4	3.5	7.0
Hydroelectric Power[11]	3.06	2.79	3.12	2.95	2.88	3.80	9.6	1.5	-2.4
Other[12]	.20	.22	.20	.21	.25	.16	-10.1	-5.6	2.1

[1] Includes lease condensate.
[2] Electric utility and industrial generation.
[3] "Other" production is electricity generated for distribution from wood, waste, geothermal, wind, photovoltaic, and solar thermal energy.
[4] Includes imports of crude oil for the Stategic Petroleum Reserve, which began in 1977.
[5] Includes imports of unfinished oils and natural gas plant liquids.
[6] "Other" imports are electricity and coal coke.
[7] "Other" exports are natural gas, petroleum products, electricity and coal coke.
[8] A balancing item. Includes stock changes, losses, gains, miscellaneous blending components, and unaccounted for supply.
[9] Includes supplemental gaseous fuels.
[10] Petroleum products supplied, including natural gas plant liquids and crude oil burned as fuel.
[11] Electric utility and industrial generation, and net imports of electricity.
[12] "Other" consumption is net imports of coal coke and electricity generated for distribution from wood, waste, geothermal, wind photovoltaic, and solar thermal energy.
* Data round to zero.
P P=Preliminary data.

Notes: Due to lack of consistent historical data, some renewable energy sources are not included. For 1991 consumption, 3.3 quadrillion Btu of renewable energy consumed by U.S. electric utilities to generate electricity for distribution is included, but an estimated 3.4 quadrillion Btu of renewable energy used by other sectors in the United States is not included. Total may not equal sum of components due to independent rounding.

Source: Energy Information Administration, *Annual Energy Review 1993,* DOE/EIA-0384(93), Table 1.1.

Table ES2. Share of U.S. Electric Utility Net Generation of Electricity by Source, 1984, 1989-1993
(Percent)

Energy Source	1993	1992	1991	1990	1989	1984
Coal	56.9	56.3	54.9	55.5	55.8	55.5
Natural Gas	9.0	9.4	9.4	9.4	9.6	12.4
Petroleum[1]	3.5	3.2	3.9	4.2	5.7	5.0
Nuclear Power	21.2	22.1	21.7	20.5	19.0	13.5
Hydroelectric Power	9.2	8.6	9.8	10.0	9.5	13.3
Geothermal and Other[2]	.3	.4	.4	.4	.4	.4
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

[1] Distillate fuel oil, residual fuel oil (including crude oil burned as fuel), jet fuel, and petroleum coke.
[2] Other is wood, waste, wind, photovoltaic, and solar thermal energy used to generate electricity for distribution.
Note: Total may not equal sum of components due to independent rounding.
Source: Energy Information Administration, Form EIA-759, "Monthly Power Plant Report."

period, nearly 17,000 miners were out of work at approximately 100 mining operations. During the strike, some of the lost production was made up for by increased production by other companies and increased coal purchases by the affected companies.

As the prospects for a settlement diminished, the Secretary of Labor appointed a Federal mediator, which eventually resulted in the ratification of a new 5-year contract in December 1993. Terms of the contract included increases in wages and pensions, and agreement that 60 percent of new job openings would be filled by laid-off and active UMWA miners. The companies, in turn, won the right to establish more flexible work rules and scheduling of miners. Some health care benefits were expanded; however, a new health care system was established that was designed to reduce costs. This 7-month strike had a substantial impact on consumer coal receipts, stocks, and prices, particularly at electric utility plants.

Severe Flooding

Severe flooding along the upper Mississippi River and Missouri River Basins from June through August disrupted the delivery of coal to consumers, primarily electric utilities. States affected by the flooding included Iowa, Illinois, Minnesota, Missouri, North Dakota, South Dakota, Wisconsin, Nebraska, and Kansas. However, electric utility plants beyond this area were also affected. Unit coal trains from the Powder River Basin pass through these States on their way to power plants located in the South and the East. Trains were delayed or rerouted around the flooded region. As late as November, some coal train cycle times from the Powder River Basin, Utah, and Colorado were running as much as 30 percent longer than normal.

In addition to the flooding, the demand for western coal increased because electric utilities tried to replace coal lost due to the the coal strike, to rebuild coal stocks, and to switch to low-sulfur coal before the January 1, 1995, deadline set by the Clean Air Act Amendments of 1990.

Some power plants in the flooded region did not receive any coal by train or barge from late June until the waters receded in late August. Fuel-switching from coal to gas occurred at some power plants in order to conserve coal supplies and was necessary at other power plants because coal stocks were wet and coal-handling equipment could not be operated. In addition, some electric utilities purchased power from electric utilities unaffected by the flood.

Supply

Production

U.S. coal production in 1993 totaled 945 million short tons, 52 million short tons less than in 1992, resulting in a corresponding decline in capacity utilization at mines from 80 percent in 1992 to 75 percent in 1993. The strike was one of the primary causes of the declines; however, another significant factor was a 27-percent drop in coal exports. Wyoming was the leading coal-producing State followed by Kentucky and West Virginia.

The UMWA strike primarily affected coal production east of the Mississippi River. Since domestic consumption was strong, particularly in the electric utility sector, consumers and producers/distributors drew down stocks to meet the demand, 43 million short tons and 9 million short tons, respectively. At the end of 1993, producer and distributor stocks totaled 25 million short tons, the lowest end-of-year level since 1981. In addition, coal imports, which were almost twice the 1992 level, filled some of the increase in demand.

Compared with 1992, all States east of the Mississippi River, with the exception of Maryland, produced less coal in 1993, led by West Virginia, Illinois, and Pennsylvania, which produced 32 million short tons, 19 million short tons, and 9 million short tons less coal, respectively. There was a net loss of 265 mines and 8,249 miners in States east of the Mississippi River. Miner productivity in this region, which for the last few years had a gain of from 4 to 7 percent, only went up 1 percent to 3.11 short tons per miner per hour.

Coal production west of the Mississippi River in 1993 rose by 20 million short tons from 1992, primarily due to a 20-million-short ton increase in Wyoming coal output. The number of mines in this region declined by 6 and the number of miners declined by 625, while coal miner productivity rose 10 percent to 12.14 short tons per miner per hour.

Coal Mine Prices

The average mine price of U.S. coal in 1993 was $19.85 per short ton, down 6 percent (8 percent in real terms) from the 1992 level of $21.03 per short ton. The largest decrease in coal prices occurred at mines west of the Mississippi River, 4 percent (6 percent in real terms), while coal prices at mines east of the Mississippi River dropped 2 percent (4 percent in real terms).

Table ES3. Trends in U.S. Coal Production, Imports, Consumption, Exports, and Stocks, 1984, 1989-1993
(Million Short Tons)

Activity	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Production	945	998	996	1,029	981	896	-5.2	-0.9	0.6
Imports	7	4	3	3	3	1	92.2	26.5	21 3
Producer and Distributor Stocks[1]	25	34	33	33	29	34	-25.6	-3.4	-3.3
Consumption	926	892	888	895	890	791	3.8	1.0	1 8
Exports	75	103	109	106	101	81	-27.3	-7.3	-1.0
Consumer Stocks[1]	120	164	168	168	146	197	-26.4	-4.7	-5.3

[1] Reported as of the last day of the quarter.

Sources: • Production: Energy Information Administration (EIA), Form EIA-7A, "Coal Production Report;" U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report;" and State Mining Agency Coal Production Reports. • Imports: U.S. Department of Commerce, Bureau of the Census, "Monthly Report IM 145." • Producer and Distributor Stocks: EIA, Form EIA-6, "Coal Distribution Report." • Exports: U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545."
• Consumption and Consumer Stocks: EIA, Form EIA-759, "Monthly Power Plant Report;" Form EIA-3, Quarterly Coal Consumption Report - Manufacturing Plants;" Form EIA-5, "Coke Plant Report - Quarterly;" and Form EIA-6, "Coal Distribution Report."

Coal Imports

U.S. coal imports reached 7.3 million short tons in 1993, a record level and 92 percent more than in 1992. Most of the increase in coal imports was due to higher shipments to electric utilities from Colombia, Venezuela, and Indonesia and to coke plants from Canada.

Imported coal prices in 1993 dropped 11 percent to $29.89 per short ton. The price of coal imports from South America dropped while those from Indonesia and Canada increased. Coal imports in 1993 were valued at $218 million.

Demand

Coal Consumption

In 1993, domestic coal consumption reached a record level of 926 million short tons, nearly 4 percent higher than in 1992. The increase was primarily due to the 4.3 percent increase in electric utility consumption, which resulted from an increase in electricity demand. The hot summer of 1993 combined with the relatively cool summer of 1992, resulted in a 6-percent increase in residential electricity demand. Electricity demand was also spurred by economic growth. A decrease in U.S. net electricity imports from Canada also boosted electric utility coal consumption as domestic coal-fired generation replaced imported Canadian electricity.

The growth in electric utility coal consumption was concentrated in the Midwest and Southeast, where several nuclear plant outages occurred during the year. Coal use increased in all States within the East North Central Census Division, where the increase in electric utility coal consumption was particularly high in Illinois. Illinois and other States in the region turned to Wyoming and other western States for more of their coal supplies.

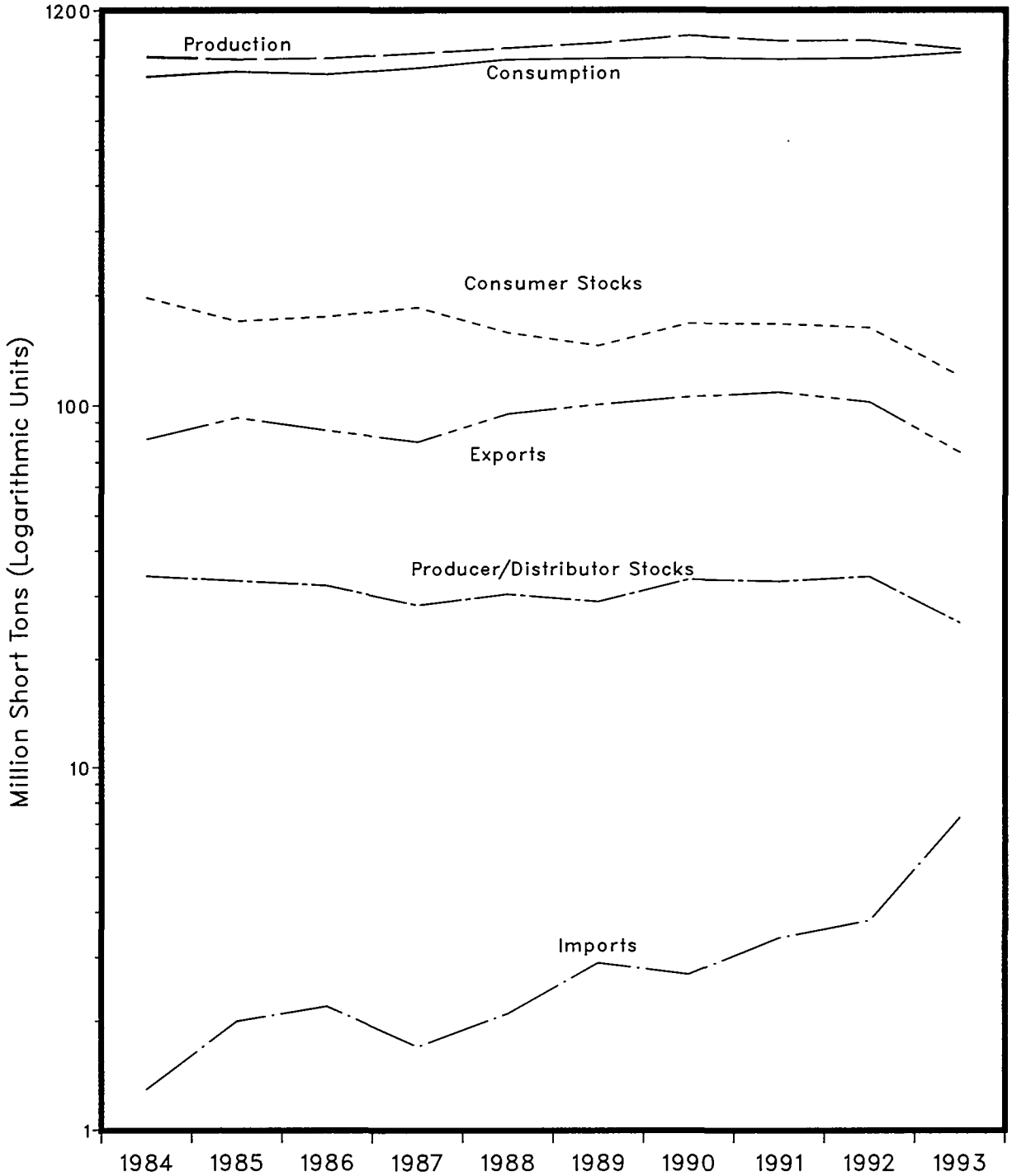
Coal consumption at industrial plants, except coke plants, totaled 75 million short tons, up slightly from the 1992 level. Most of the gain took place in the West South Central Census Division, primarily in Oklahoma and Texas. Coal consumption at manufacturing plants rose 2 percent primarily in the stone, clay, and glass industries

Coal consumption at coke plants in 1993 declined 3 percent to 31 million short tons, primarily because consumption at coke plants in Ohio and Indiana dropped. Although U.S. pig iron production rose slightly in 1993, part of the increased demand for coke was met by drawdowns in coke inventories, rather than by increasing coke production.

Residential and commercial coal consumption in 1993 rose slightly. Most of the gain took place in the South Atlantic, Pacific, and West North Central Census Divisions, which was offset by a large decline in the Middle Atlantic Census Division, particularly in Pennsylvania.

The average sulfur content (measured as percent sulfur by weight) of coal received at electric utilities in 1993 was 1.18 percent, down from 1.29 percent in 1992. The quality of coal received at manufacturing and coke plants in 1993, however, showed an increase in the sulfur content.

Figure ES1. Trends in U.S. Coal Production, Imports, Consumption, Exports, and Stocks, 1984-1993



Sources: • Production: Energy Information Administration (EIA), Form EIA-7A, "Coal Production;" U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report;" and State Mining Agency Coal Production Reports. • Imports: U.S. Department of Commerce, Bureau of the Census, "Monthly Report IM 145." • Producer and Distributor Stocks: EIA, Form EIA-6, "Coal Distribution Report." • Exports: U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545." • Consumption and Consumer Stocks: EIA, Form EIA-759, "Monthly Power Plant Report;" Form EIA-3, "Quarterly Coal Consumption Report - Manufacturing Plants;" Form EIA-5, "Coke Plant Report - Quarterly;" and Form EIA-6, "Coal Distribution Report."

Coal Stocks

Since 1984 there has been a downward trend in the level of coal stocks held by coal consumers, particularly electric utilities. With abundant coal supplies and falling coal prices, many utilities decided to reduce costs by adjusting their stockpiles to the lowest prudent level.

In 1993, the UMWA strike caused consumer coal stocks to reach record low levels. Because of the drop in production that resulted from the strike, electric utilities in particular drew down their stockpiles to help meet the increase in demand.

U.S. consumer coal stocks on December 31, 1993, totaled 120 million short tons, 43 million short tons less than at the end of 1992. Almost all of the decrease was due to a 28-percent drop in coal stocks at electric utilities. Year-end electric utility coal stocks equaled 111 million short tons, the lowest end-of-year level since 1974. Coal stocks at coke plants and other industrial plants also declined by 8 percent and 4 percent, respectively.

Delivered Coal Prices

The price of coal delivered to all domestic consuming sectors declined in 1993. The delivered price of coal to electric utilities declined by 3 percent (5 percent in real terms) to $28.58 per short ton; to industrial plants by 2 percent (4 percent in real terms) to $32.23; and to coke plants by 1 percent (3 percent in real terms) to $47.44.

Coal Exports

U.S. coal exports in 1993 totaled 75 million short tons, a 27-percent decrease from 1992 and the lowest level since 1979. The primary reasons for the decline were a severe recession in Europe; continuing pressures to protect European coal producers from import competition; and greater inroads into European and Asian markets by other major coal-producing countries. Some major U.S. coal exporters were also affected by the coal miners' strike.

Most of the decline in U.S. coal exports was due to a 55-percent fall in steam coal exports to Europe and a 59-percent drop in steam coal exports to Canada. Total U.S. steam coal exports fell by 42 percent. Steam coal accounted for 33 percent of total U.S. coal exports in 1993, down from 42 percent in 1992. However, U.S. steam coal exports to Asia, particularly Japan, increased.

U.S. metallurgical coal exports in 1993 amounted to 50 million short tons, a decrease of 16 percent from 1992, due to a 20-percent decline in exports to Europe. There were no substantial gains of metallurgical coal exports, in tonnage terms, to any of the importing countries.

West Virginia was the major coal-exporting State, shipping 33 million short tons, down 35 percent from 1992 shipments. This level represented 44 percent of total foreign shipments and the lowest level of foreign shipments for the State since 1989. Shipments of West Virginia metallurgical coal declined 8 million short tons, while shipments of steam coal declined 10 million short tons.

The average price of U.S. coal exports in 1993 was $41.41 per short ton, slightly higher than in 1992, but 2 percent lower in real dollars. Metallurgical coal export prices declined 3 percent (5 percent in real terms) to $44.11 per short ton, while steam coal export prices went up 1 percent (2 percent in real terms) to $36.03 per short ton. Coal exports in 1993 were valued at $3 billion.

Company Mergers and Sales

The Cyprus Minerals Company and Amax Incorporated merged on November 12, 1993. The new company, Cyprus AMAX Minerals Company, will have annual sales of $2.8 billion and assets of $5 billion, including coal reserves totaling 3 billion short tons worldwide. The company's U.S. coal mining operations produced 65 million short tons of coal in 1993.

The Occidental Petroleum Corporation sold its coal subsidiary, Island Creek Coal Company, to Consol Energy Inc., in July 1993. Island Creek operations include mines in Kentucky, Virginia, and West Virginia. The addition of Island Creek brought Consol Energy's 1993 production total to 51 million short tons and made Consol the third largest U.S. coal producer in 1993 behind Peabody and Cyprus AMAX. Peabody remained the largest producer with 70 million short tons despite a significant production drop caused by the UMWA strike. Consol's production was also seriously affected by the UMWA strike.

Table ES4. U.S. Coal Statistics, 1984, 1989-1993

Category	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Supply (thousand short tons)									
Recoverable Reserves	21,535,283	21,626,971	21,998,540	22,761,328	22,679,827	24,598,747	-0.4	-1.3	-1.5
Productive Capacity[1]	1,261,873	1,241,054	1,248,479	NA	NA	968,719	1.7	NA	3.0
Production Total	945,424	997,545	995,984	1,029,076	980,729	895,921	-5.2	-.9	.6
Underground	351,053	407,239	407,225	424,546	393,835	352,050	-13.8	-2.8	*
Surface	594,371	590,306	588,759	604,529	586,893	543,870	.7	.3	1.0
Capacity Utilization[2]	74.77	80.20	79.58	NA	NA	91.94	-6.8	NA	-2.3
Ratio of Recoverable Reserves to Production	22.8	21.7	22.1	22.1	23.1	27.5	5.1	-.4	-2.0
Number of Miners	101,322	110,196	120,602	131,310	131,497	177,848	-8.0	-6.3	-6.1
Productivity Total[2]	4.70	4.36	4.09	3.83	3.70	2.64	7.7	6.1	6.6
Underground	2.95	2.93	2.69	2.54	2.46	1.72	.8	4.6	6.2
Surface	7.23	6.59	6.38	5.94	5.61	4.03	9.7	6.5	6.7
Producer/Distributor Stocks	25,284	33,993	32,971	33,418	29,000	34,090	-25.6	-3.4	-3.3
Imports[3]	5,496	1,973	1,967	1,366	1,215	783	178.6	45.8	24.2
Distribution (thousand short tons)									
Distribution Total	959,445	998,647	994,146	1,023,935	981,699	NA	-3.9	-.6	NA
Domestic Distribution Total	883,934	897,267	885,882	919,589	882,034	NA	-1.5	*	NA
Within State	339,034	355,232	345,486	365,065	352,341	NA	-4.6	-1.0	NA
To Other States	544,900	542,035	540,395	554,524	529,692	NA	.5	.7	NA
Foreign Distribution Total	75,510	101,380	108,264	104,346	99,580	NA	-25.5	-6.7	NA
Metallurgical	52,369	62,013	63,003	62,496	57,364	NA	-15.5	-2.3	NA
Steam	23,142	39,367	45,261	41,849	42,216	NA	-41.2	-13.9	NA
Canada Total	7,751	13,919	12,828	13,189	13,650	NA	-44.3	-13.2	NA
Metallurgical	6,666	9,394	8,483	6,215	6,759	NA	-29.0	-.3	NA
Steam	1,085	4,525	4,345	6,975	6,892	NA	-76.0	-37.0	NA
Overseas Total[4]	67,759	87,461	95,436	91,156	85,929	NA	-22.5	-5.8	NA
Metallurgical	45,702	52,619	54,520	56,282	50,605	NA	-13.1	-2 5	NA
Steam	22,057	34,842	40,916	34,875	35,324	NA	-36.7	-11.1	NA
Demand (thousand short tons)									
Consumption Total	925,944	892,421	887,621	895,480	889,699	791,296	3.8	1.0	1.8
Electric Utility	813,508	779,860	772,268	773,549	766,888	664,399	4.3	1.5	2.3
Industrial	74,892	74,042	75,405	76,330	76,134	73,745	1.1	-.4	.2
Coke	31,323	32,366	33,854	38,877	40,508	44,022	-3.2	-6.2	-3.7
Residential/Commercial	6,221	6,153	6,094	6,724	6,167	9,130	1.1	.2	-4.2
Consumer Stocks Total	120,458	163,692	167,711	168,210	146,087	197,211	-26.4	-4.7	-5.3
Electric Utility	111,341	154,130	157,876	156,166	135,860	179,727	-27.8	-4.8	-5.2
All Other	9,117	9,562	9,835	12,044	10,227	17,483	-4.6	-2.8	-7.0
Coal Prices (nominal dollars per short ton)									
Mine Total	$19.85	$21.03	$21.49	$21.76	$21.82	$25.61	-5.6	-2.3	-2.8
Underground	26.92	27.83	28.56	28.58	28.44	33.36	-3.3	-1.4	-2.3
Surface	15.67	16.34	16.60	16.98	17.38	20.59	-4.1	-2.6	-3.0
Consumer									
Electric Utility	28.58	29.36	30.02	30.45	30.15	35.12	-2.6	-1.3	-2.3
Industrial	32.23	32.78	33.54	33.59	33.03	39.30	-1.7	-.6	-2.2
Coke	47.44	47.92	48.88	47.73	47.50	56.58	-1.0	*	-1.9

[1] For 1984, the Form EIA-7A solicited data on "Daily Productive Capacity." To obtain annual productive capacity for a mine in 1984, each mine's daily productive capacity was multiplied by the number of days worked during the year.

[2] Capacity utilization (percent) is the ratio of total production to annual productive capacity as reported by mining companies on Form EIA-7A. Productivity (short tons per miner per hour) is calculated by dividing total coal production by the total direct labor hours worked by all employees engaged in production, preparation, processing, development, maintenance, repair, and shop or yard work at mining operations.

[3] Imports for 1992 and 1993 include imports to electric utilities, manufacturing plants and coke plants. Imports for 1984 through 1991 include only imports to electric utilities.

[4] Includes Mexico.

* Data round to zero.

NA Not available.

Notes: Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration, Form EIA-3, "Quarterly Coal Consumption Report - Manufacturing Plants;" Form EIA-5, "Coke Plant Report - Quarterly;" Form EIA-6, "Coal Distribution Report;" Form EIA-7A, "Coal Production Report;" Form EIA-759, "Monthly Power Plant Report;" and U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545" and "Monthly Report IM 145."

Supply

Production

U.S. coal production in 1993 dropped to its lowest level since 1987, 52 million short tons less than in 1992 (Table 1). Coal production in the Appalachian and Interior coal-producing regions fell 47 million short tons and 28 million short tons, respectively, but production in the Western Region rose by 23 million short tons.

Most of the production decline occurred in Appalachia, which bore the brunt of both the United Mine Workers of America (UMWA) strike and the decline in coal exports. West Virginia and Pennsylvania were the most severely affected with production drops of 20 percent and 13 percent, respectively.

In the Interior Region most of the loss occurred in Illinois, where coal production fell 31 percent, and in western Kentucky, where coal production dropped 13 percent. The 77-percent drop in Missouri coal production was due to the closing of the largest mine in the State.

Coal production in the Western Region in 1993 rose 7 percent above the 1992 level to 369 million short tons. Wyoming accounted for 86 percent of this increase, although there were also production gains in New Mexico and Colorado. Wyoming coal production in 1993 reached 210 million short tons, a new record, and about 22 percent of the U.S. total. Campbell County in Wyoming accounted for 86 percent of the State's coal output (Table 4). The increase in Wyoming coal production was due to higher demand for low-sulfur coal from the Powder River Basin. Much of the additional coal output from Wyoming was shipped to electric utilities in the Midwest, particularly in Illinois displacing indigenous high-sulfur coal, and to Texas. The additional coal produced in New Mexico mines was shipped to power plants in Arizona and Wisconsin. Colorado's coal production increased in response to a general increase in demand.

As a result of the regional changes in coal production in 1993, the Western Region's share of U.S. coal output rose from 35 percent in 1992 to 39 percent in 1993. Appalachia's share of production fell to 43 percent from 46 percent in 1992 and the Interior's share fell to 18 percent from 20 percent in 1992. In 1984 Appalachia's share of total U.S. coal production was 50 percent and the Western Region's share was 28 percent. Over 30 percent of coal output (reported as sales volume) in 1993 came from Federal and Indian lands (Table 12).

The number of U.S. coal mines in 1993 dropped 10 percent from the 1992 level to 2,475 mines (Table 2). The most notable drops were in West Virginia, where the number of mines declined by 102 and in eastern Kentucky, where the number of mines declined by 62. The number of mines in the Western Region fell by 4, while in the Interior Region the number of mines increased by 5 to 219 mines.

Of the 351 million short tons of coal produced in underground mines, 56 percent was mined by continuous mining and 31 percent by longwall mining (Table 5). About two-thirds of the U.S. coal produced in 1993 came from mines producing 1 million short tons or more (Table 6). Bituminous coal accounted for 61 percent of the total coal produced, followed by subbituminous at 29 percent, lignite at 9 percent, and anthracite at less than 1 percent (Table 9). Union mines provided about one-third of the total production, 315 million short tons, and the UMWA mines accounted for nearly three-fourths of the union production (Table 11). Although coal production in 1993 was 5 percent less than in 1991, the share of production by foreign-controlled firms increased by 9 percent (Figure 2).

Productive Capacity

Productive capacity at U.S. coal mines in 1993 was 1.3 billion short tons, 2 percent higher than 1992 (Table 15). As a result, capacity utilization (the ratio of total production to productive capacity) of mines in all regions declined, most notably in Appalachia and the Interior, as a result of the UMWA strike (Table 16). The capacity utilization of mines in Appalachia dropped to 73 percent from 81 percent in 1992, and in the Interior to 74 percent from 83 percent in 1992.

Recoverable Coal Reserves

Recoverable coal reserves at active mines in 1993 totaled 22 billion short tons; 15 billion short tons at surface mines and 7 billion short tons at underground mines. The average coal recovery percentage in 1993 was 79 percent -- 89 percent at surface mines and 56 percent at underground mines. Almost two-thirds of the recoverable coal reserves are located West of the Mississippi River and 93 percent of these reserves are at surface mines, which have an average recovery precentage of 91 percent. Recoverable coal reserves at union mines amounted to 9 billion short tons, 40 percent of the total.

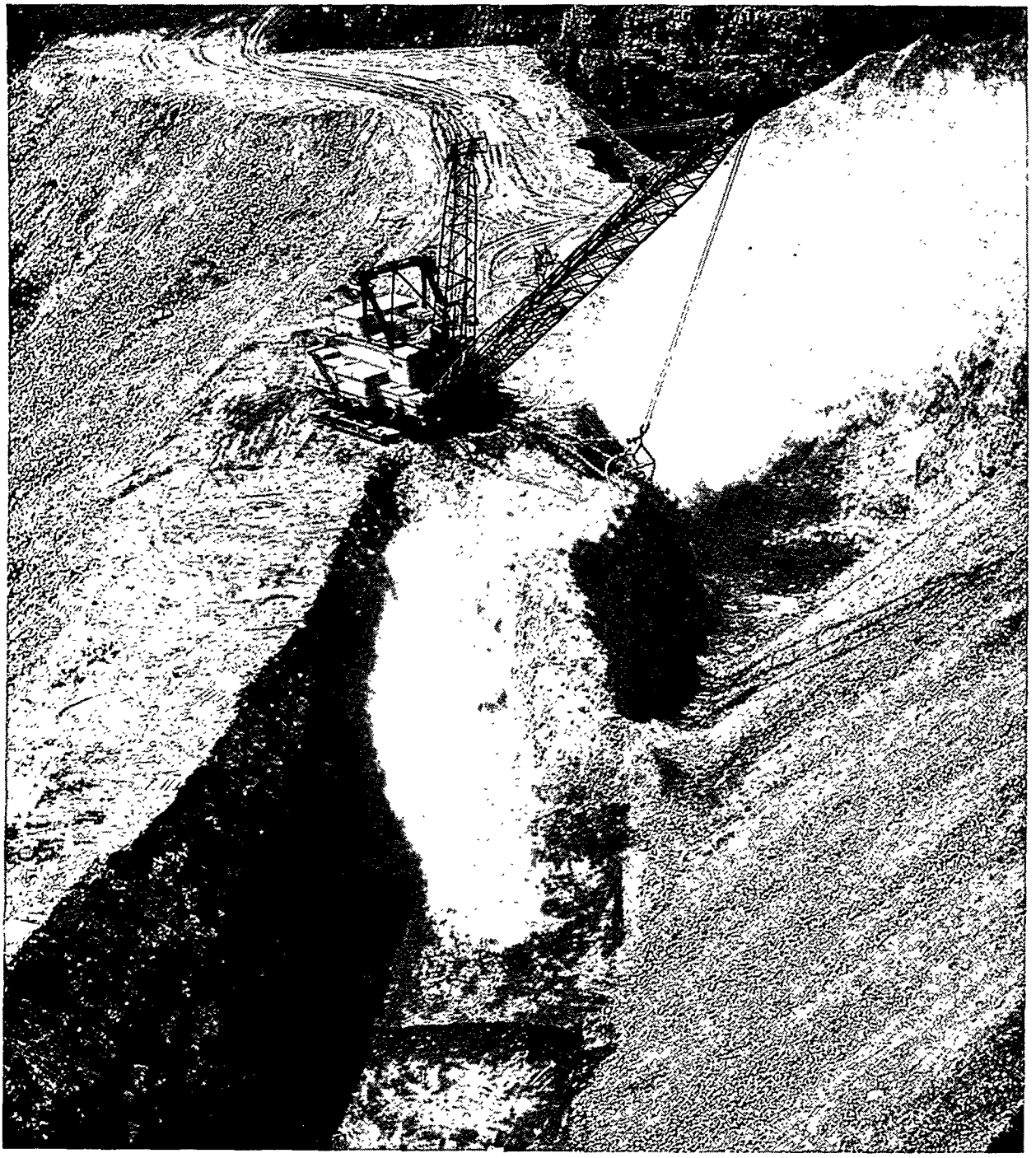
Producers and Distributors Stocks

Due to the increased demand and shortages resulting from the UMWA strike, U.S. producers and distributors drew down coal stocks by 26 percent to 25 million short tons, the lowest year-end-level since 1981 (Table 33).

Coal Imports

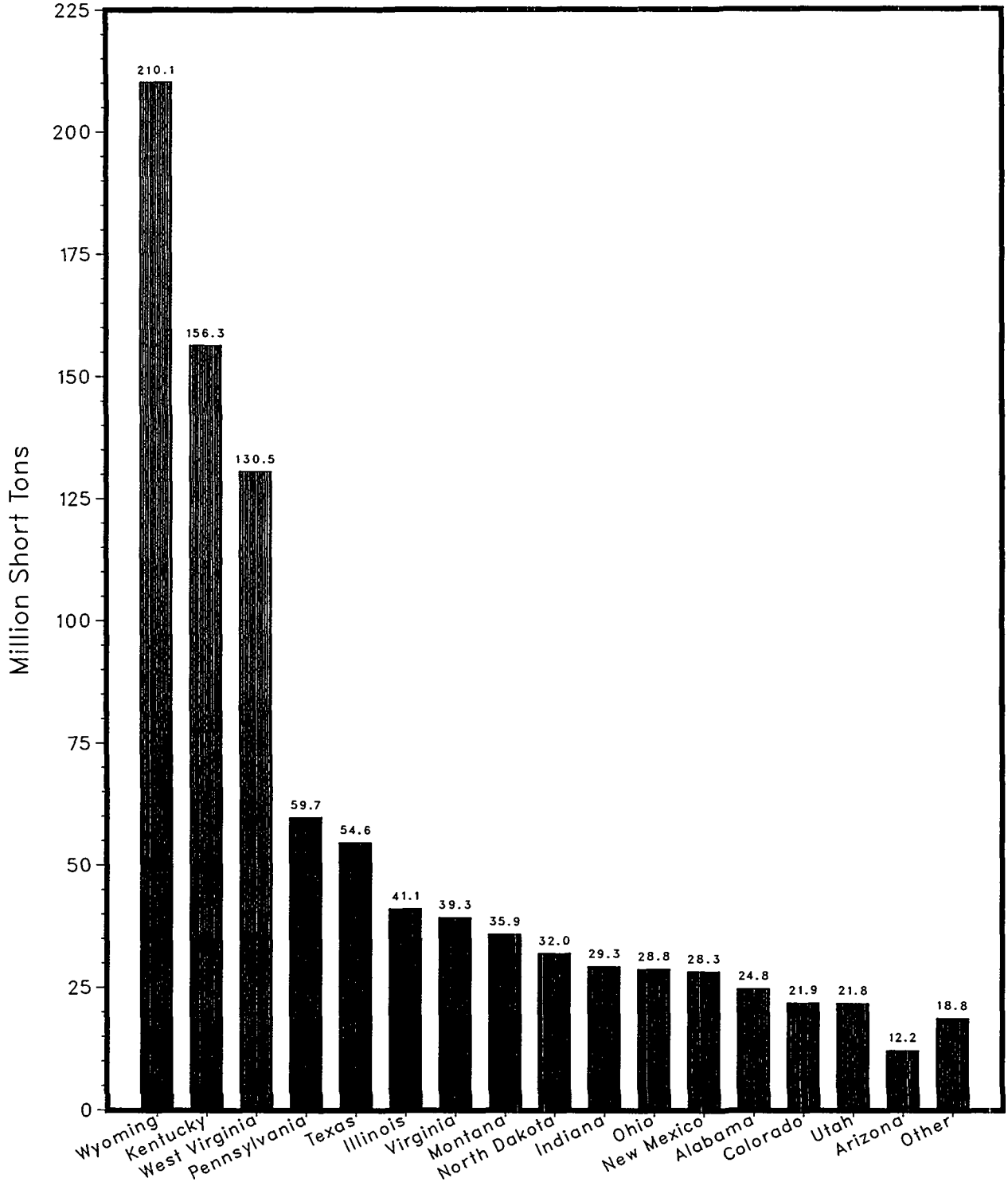
U.S. coal imports reached 7.3 million short tons in 1993 (Table 34), nearly double the 1992 level. Most of the increase was due to increased electric utility demand for coal from Colombia and Venezuela. Some utilities also took the opportunity to use imported coal for test burns. In addition, industrial plants increased their coal imports 420 percent above the 1992 level, reaching nearly 1 million short tons (Table 38). Most of the increase was due to higher shipments from Canada to coke plants in Indiana.

Production



Overburden is removed prior to strip mining at the Big John mine in Kentucky.

Figure 1. U.S. Coal Production by State, 1993



Notes: Other represents States which produced less than 12 million short tons of coal and includes Alaska, Arkansas, Iowa, Kansas, Louisiana, Maryland, Missouri, Oklahoma, Tennessee, and Washington. Coal production excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 1. Coal Production by State, 1984, 1989-1993
(Thousand Short Tons)

Coal-Producing State and Region	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Alabama	24,768	25,796	27,269	29,030	27,992	27,088	-4.0	-3.0	-1.0
Alaska	1,601	1,534	1,436	1,706	1,582	859	4.3	.3	7.2
Arizona	12,173	12,512	13,203	11,304	11,935	11,522	-2.7	.5	.6
Arkansas	44	58	52	59	70	82	-24.1	-10.6	-6.5
California	-	103	57	61	41	-	-100.0	-	-
Colorado	21,886	19,226	17,834	18,910	17,123	17,967	13.8	6.3	2.2
Georgia	-	-	-	-	-	125	-	-	-
Illinois	41,098	59,857	60,258	60,393	59,267	63,769	-31.3	-8.7	-4.8
Indiana	29,295	30,466	31,468	35,907	33,641	37,555	-3.8	-3.4	-2.7
Iowa	175	289	344	381	430	527	-39.4	-20.1	-11.5
Kansas	341	363	416	721	856	1,328	-5.9	-20.5	-14.0
Kentucky Total	156,299	161,068	158,980	173,322	167,389	159,541	-3.0	-1.7	-.2
Eastern	120,191	119,382	117,220	128,396	125,739	117,274	.7	-1.1	.3
Western	36,108	41,686	41,760	44,926	41,649	42,267	-13.4	-3.5	-1.7
Louisiana	3,134	3,240	3,151	3,186	2,983	-	-3.3	1.2	-
Maryland	3,355	3,341	3,773	3,487	3,376	4,103	.4	-.1	-2.2
Missouri	653	2,886	2,304	2,647	3,378	6,733	-77.4	-33.7	-22.8
Montana	35,917	38,889	38,237	37,616	37,742	33,000	-7.6	-1.2	.9
New Mexico	28,268	24,549	21,518	24,292	23,702	21,279	15.1	4.5	3.2
North Dakota	31,973	31,744	29,530	29,213	29,566	22,112	.7	2.0	4.2
Ohio	28,816	30,403	30,569	35,252	33,689	39,256	-5.2	-3.8	-3.4
Oklahoma	1,758	1,741	1,841	1,698	1,753	4,640	1.0	.1	-10.2
Pennsylvania Total	59,700	68,981	65,381	70,514	70,596	77,494	-13.4	-4.1	-2.8
Anthracite	4,306	3,483	3,445	3,506	3,348	4,162	23.6	6.5	.4
Bituminous	55,394	65,498	61,936	67,008	67,248	73,332	-15.4	-4.7	-3.1
Tennessee	3,047	3,476	4,290	6,193	6,480	7,313	-12.3	-17.2	-9.3
Texas	54,567	55,071	53,825	55,755	53,854	41,145	-.9	.3	3.2
Utah	21,847	21,339	21,945	22,058	20,102	12,323	2.4	2.1	6.6
Virginia	39,317	43,024	41,954	46,917	43,006	40,368	-8.6	-2.2	-.3
Washington	4,739	5,251	5,143	5,001	5,039	3,872	-9.7	-1.5	2.3
West Virginia Total	130,525	162,164	167,352	169,205	153,580	131,008	-19.5	-4.0	*
Northern	33,802	50,022	52,155	56,641	56,018	56,009	-32.4	-11.9	-5.4
Southern	96,723	112,142	115,196	112,564	97,562	74,999	-13.7	-.2	2.9
Wyoming	210,129	190,172	193,854	184,249	171,558	130,914	10.5	5.2	5.4
Appalachian Total[1]	**409,718**	**456,565**	**457,808**	**488,993**	**464,457**	**444,029**	**-10.3**	**-3.1**	**-.9**
Interior Total[1]	**167,174**	**195,659**	**195,418**	**205,671**	**197,880**	**198,045**	**-14.5**	**-4.1**	**-1.9**
Western Total[1]	**368,532**	**345,321**	**342,758**	**334,411**	**318,391**	**253,846**	**6.7**	**3.7**	**4.2**
East of Miss. River	**516,219**	**588,575**	**591,294**	**630,218**	**599,015**	**587,620**	**-12.3**	**-3.6**	**-1.4**
West of Miss. River	**429,205**	**408,970**	**404,690**	**398,858**	**381,714**	**308,301**	**4.9**	**3.0**	**3.7**
U.S. Total	**945,424**	**997,545**	**995,984**	**1,029,076**	**980,729**	**895,921**	**-5.2**	**-.9**	**.6**

[1] For a definition of coal-producing regions, see Appendix C.
* Data round to zero.

Notes: Coal production excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 2. Number of Coal Mines by State, 1984, 1989-1993

Coal-Producing State and Region	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Alabama	85	88	96	97	105	126	-3.4	-5.1	-4.3
Alaska	1	2	1	1	1	1	-50.0	-	-
Arizona	2	2	2	2	2	2	-	-	-
Arkansas	6	6	7	7	7	10	-	-3.8	-5.5
California	-	1	1	1	1	-	-100.0	-	-
Colorado	20	21	21	23	23	39	-4.8	-3.4	-7.1
Georgia	-	-	-	-	-	1	-	-	-
Illinois	39	43	51	45	48	55	-9.3	-5.0	-3.7
Indiana	56	51	58	64	60	83	9.8	-1.7	-4.3
Iowa	2	2	3	3	5	6	-	-20.5	-11.5
Kansas	2	2	3	4	5	6	-	-20.5	-11.5
Kentucky Total	696	752	838	987	1,099	2,063	-7.4	-10.8	-11.4
Eastern	622	684	756	902	1,002	1,926	-9.1	-11.2	-11.8
Western	74	68	82	85	97	137	8.8	-6.5	-6.6
Louisiana	2	2	2	2	2	-	-	-	-
Maryland	21	24	26	27	31	48	-12.5	-9.3	-8.8
Missouri	7	5	5	5	9	15	40.0	-6.1	-8.1
Montana	8	8	9	9	9	9	-	-2.9	-1.3
New Mexico	7	7	7	7	8	11	-	-3.3	-4.9
North Dakota	8	8	8	11	13	15	-	-11.4	-6.7
Ohio	135	149	159	172	184	215	-9.4	-7.4	-5.0
Oklahoma	17	20	22	23	21	39	-15.0	-5.1	-8.8
Pennsylvania Total	524	578	608	673	681	722	-9.3	-6.3	-3.5
Anthracite	148	166	176	187	191	149	-10.8	-6.2	-.1
Bituminous	376	412	432	486	490	573	-8.7	-6.4	-4.6
Tennessee	37	50	72	86	98	116	-26.0	-21.6	-11.9
Texas	14	15	15	15	15	13	-6.7	-1.7	.8
Utah	15	15	15	18	21	24	-	-8.1	-5.1
Virginia	237	258	294	340	365	567	-8.1	-10.2	-9.2
Washington	3	3	3	4	4	3	-	-6.9	-
West Virginia Total	502	604	665	771	773	835	-16.9	-10.2	-5.5
Northern	137	166	174	205	240	264	-17.5	-13.1	-7.0
Southern	365	438	491	566	533	571	-16.7	-9.0	-4.8
Wyoming	29	30	31	33	30	27	-3.3	-.8	.8
Appalachian Total[1]	**2,163**	**2,435**	**2,676**	**3,068**	**3,239**	**4,556**	**-11.2**	**-9.6**	**-7.9**
Interior Total[1]	**219**	**214**	**248**	**253**	**269**	**364**	**2.3**	**-5.0**	**-5.5**
Western Total[1]	**93**	**97**	**98**	**109**	**112**	**131**	**-4.1**	**-4.5**	**-3.7**
East of Miss. River	**2,332**	**2,597**	**2,867**	**3,262**	**3,444**	**4,831**	**-10.2**	**-9.3**	**-7.8**
West of Miss. River	**143**	**149**	**155**	**168**	**176**	**220**	**-4.0**	**-5.0**	**-4.7**
U.S. Total	**2,475**	**2,746**	**3,022**	**3,430**	**3,620**	**5,051**	**-9.9**	**-9.1**	**-7.6**

[1] For a definition of coal-producing regions, see Appendix C.

Note: Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 3. Coal Production and Number of Mines by State and Mine Type, 1993
(Thousand Short Tons)

Coal-Producing State and Region	Underground		Surface		Total	
	Number of Mines	Production	Number of Mines	Production	Number of Mines	Production
Alabama	12	15,557	73	9,211	85	24,768
Alaska	-	-	1	1,601	1	1,601
Arizona	-	-	2	12,173	2	12,173
Arkansas	1	2	5	43	6	44
Colorado	13	12,843	7	9,043	20	21,886
Illinois	26	33,096	13	8,002	39	41,098
Indiana	5	2,583	51	26,713	56	29,295
Iowa	-	-	2	175	2	175
Kansas	-	-	2	341	2	341
Kentucky Total	446	92,207	250	64,092	696	156,299
Eastern	425	71,919	197	48,272	622	120,191
Western	21	20,288	53	15,820	74	36,108
Louisiana	-	-	2	3,134	2	3,134
Maryland	4	2,528	17	827	21	3,355
Missouri	-	-	7	653	7	653
Montana	1	10	7	35,907	8	35,917
New Mexico	1	719	6	27,549	7	28,268
North Dakota	-	-	8	31,973	8	31,973
Ohio	9	10,437	126	18,379	135	28,816
Oklahoma	1	98	16	1,661	17	1,758
Pennsylvania Total	116	36,934	408	22,766	524	59,700
Anthracite	52	416	96	3,889	148	4,306
Bituminous	64	36,517	312	18,877	376	55,394
Tennessee	22	1,896	15	1,151	37	3,047
Texas	-	-	14	54,567	14	54,567
Utah	15	21,847	-	-	15	21,847
Virginia	181	30,166	56	9,151	237	39,317
Washington	-	-	3	4,739	3	4,739
West Virginia Total	339	87,997	163	42,528	502	130,525
Northern	73	27,133	64	6,669	137	33,802
Southern	266	60,864	99	35,859	365	96,723
Wyoming	4	2,136	25	207,993	29	210,129
Appalachian Total[1]	**1,108**	**257,433**	**1,055**	**152,285**	**2,163**	**409,718**
Interior Total[1]	**54**	**56,065**	**165**	**111,109**	**219**	**167,174**
Western Total[1]	**34**	**37,555**	**59**	**330,977**	**93**	**368,532**
East of Miss. River	**1,160**	**313,399**	**1,172**	**202,820**	**2,332**	**516,219**
West of Miss. River	**36**	**37,654**	**107**	**391,551**	**143**	**429,205**
U.S. Total	**1,196**	**351,053**	**1,279**	**594,371**	**2,475**	**945,424**

[1] For a definition of coal-producing regions, see Appendix C.

Notes: Coal production excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 4. Coal Production and Number of Mines by State, County, and Mine Type, 1993
(Thousand Short Tons)

Coal-Producing State and County	Underground		Surface		Total	
	Number of Mines	Production	Number of Mines	Production	Number of Mines	Production
Alabama	**12**	**15,557**	**73**	**9,211**	**85**	**24,768**
Bibb	-	-	2	161	2	161
Blount	-	-	3	20	3	20
Cullman	-	-	3	704	3	704
Fayette	1	2,270	2	33	3	2,302
Jackson	-	-	2	116	2	116
Jefferson	4	4,825	11	1,493	15	6,318
Marion	1	9	5	291	6	300
Shelby	1	347	1	39	2	386
Tuscaloosa	3	5,397	9	1,224	12	6,622
Walker	2	2,708	31	4,572	33	7,280
Winston	-	-	4	559	4	559
Alaska	**-**	**-**	**1**	**1,601**	**1**	**1,601**
Yukon River	-	-	1	1,601	1	1,601
Arizona	**-**	**-**	**2**	**12,173**	**2**	**12,173**
Navajo	-	-	2	12,173	2	12,173
Arkansas	**1**	**2**	**5**	**43**	**6**	**44**
Johnson	-	-	2	25	2	25
Scott	-	-	1	6	1	6
Sebastian	1	2	2	11	3	12
Colorado	**13**	**12,843**	**7**	**9,043**	**20**	**21,886**
Delta	1	1,176	-	-	1	1,176
Fremont	2	318	-	-	2	318
Garfield	1	1	-	-	1	1
Gunnison	3	4,260	-	-	3	4,260
Jackson	-	-	1	4	1	4
La Plata	1	174	-	-	1	174
Las Animas	1	720	-	-	1	720
Mesa	1	299	-	-	1	299
Moffat	1	525	2	6,826	3	7,351
Montrose	-	-	2	290	2	290
Rio Blanco	1	1,490	-	-	1	1,490
Routt	1	3,880	2	1,923	3	5,803
Illinois	**26**	**33,096**	**13**	**8,002**	**39**	**41,098**
Christian	1	1,545	-	-	1	1,545
Clinton	1	1,065	-	-	1	1,065
Franklin	3	4,078	-	-	3	4,078
Fulton	-	-	1	429	1	429
Gallatin	2	1,963	1	275	3	2,238
Jackson	-	-	1	25	1	25
Jefferson	2	2,682	-	-	2	2,682
Logan	1	1,498	-	-	1	1,498
Macoupin	3	4,383	-	-	3	4,383
McDonough	-	-	1	431	1	431
Perry	2	1,731	4	4,512	6	6,242
Randolph	3	2,102	-	-	3	2,102
Saline	4	7,088	2	1,720	6	8,809
Schuyler	-	-	1	584	1	584
St Clair	1	242	-	-	1	242
Wabash	1	2,129	-	-	1	2,129
Washington	1	592	-	-	1	592
White	1	1,996	-	-	1	1,996
Williamson	-	-	2	27	2	27
Indiana	**5**	**2,583**	**51**	**26,713**	**56**	**29,295**
Clay	-	-	7	1,522	7	1,522
Daviess	-	-	10	5,110	10	5,110
Dubois	-	-	1	502	1	502
Gibson	1	1,305	1	489	2	1,794
Greene	1	170	7	3,108	8	3,278
Knox	2	489	2	579	4	1,068
Monroe	-	-	1	41	1	41
Owen	-	-	1	165	1	165
Pike	-	-	5	3,855	5	3,855
Spencer	-	-	5	971	5	971
Sullivan	1	619	3	2,446	4	3,064
Vigo	-	-	1	1,274	1	1,274
Warrick	-	-	7	6,650	7	6,650
Iowa	**-**	**-**	**2**	**175**	**2**	**175**
Marion	-	-	2	175	2	175

See footnotes at end of table.

Table 4. Coal Production and Number of Mines by State, County, and Mine Type, 1993 (Continued)
(Thousand Short Tons)

Coal-Producing State and County	Underground		Surface		Total	
	Number of Mines	Production	Number of Mines	Production	Number of Mines	Production
Kansas	-	-	2	341	2	341
Crawford	-	-	2	341	2	341
Kentucky	446	92,207	250	64,092	696	156,299
Bell	18	3,037	6	1,540	24	4,577
Breathitt	-	-	8	4,596	8	4,596
Butler	-	-	4	60	4	60
Caldwell	-	-	1	183	1	183
Carter	-	-	1	4	1	4
Christian	1	38	2	1,541	3	1,579
Clay	3	324	5	394	8	718
Daviess	-	-	15	1,911	15	1,911
Floyd	50	3,525	12	3,123	62	6,648
Greenup	-	-	1	185	1	185
Harlan	72	9,306	11	1,468	83	10,774
Henderson	1	1,078	2	2,163	3	3,241
Hopkins	6	4,217	10	4,796	16	9,013
Jackson	-	-	3	89	3	89
Johnson	5	1,334	5	45	10	1,379
Knott	37	9,058	18	5,348	55	14,406
Knox	25	591	1	329	26	921
Laurel	-	-	3	195	3	195
Lawrence	-	-	1	3	1	3
Lee	-	-	3	46	3	46
Leslie	7	6,553	5	2,045	12	8,598
Letcher	22	2,827	20	4,152	42	6,980
Magoffin	1	92	3	588	4	680
Martin	23	7,081	9	4,696	32	11,777
McCreary	-	-	1	129	1	129
McLean	-	-	3	152	3	152
Muhlenberg	2	1,456	6	1,666	8	3,122
Ohio	1	246	6	1,968	7	2,213
Owsley	1	63	4	130	5	193
Perry	15	4,825	17	7,700	32	12,525
Pike	138	22,579	46	10,249	184	32,828
Rockcastle	-	-	1	2	1	2
Union	4	3,544	1	133	5	3,677
Webster	6	9,709	3	1,247	9	10,956
Whitley	8	724	11	618	19	1,342
Wolfe	-	-	2	597	2	597
Louisiana	-	-	2	3,134	2	3,134
De Soto	-	-	1	2,674	1	2,674
Red River	-	-	1	460	1	460
Maryland	4	2,528	17	827	21	3,355
Allegany	-	-	10	511	10	511
Garrett	4	2,528	7	316	11	2,844
Missouri	-	-	7	653	7	653
Barton	-	-	1	100	1	100
Bates	-	-	2	116	2	116
Ralls	-	-	2	189	2	189
Randolph	-	-	1	174	1	174
Vernon	-	-	1	73	1	73
Montana	1	10	7	35,907	8	35,917
Big Horn	-	-	4	21,223	4	21,223
Musselshell	1	10	-	-	1	10
Richland	-	-	1	291	1	291
Rosebud	-	-	2	14,393	2	14,393
New Mexico	1	719	6	27,549	7	28,268
Colfax	1	719	1	980	2	1,699
McKinley	-	-	2	11,944	2	11,944
San Juan	-	-	3	14,625	3	14,625
North Dakota	-	-	8	31,973	8	31,973
Bowman	-	-	1	2,165	1	2,165
McLean	-	-	1	7,240	1	7,240
Mercer	-	-	2	16,392	2	16,392
Oliver	-	-	3	6,169	3	6,169
Williams	-	-	1	7	1	7
Ohio	9	10,437	126	18,379	135	28,816
Belmont	1	3,968	14	1,959	15	5,927
Carroll	1	69	6	122	7	191
Columbiana	2	419	12	775	14	1,194

See footnotes at end of table.

Table 4. Coal Production and Number of Mines by State, County, and Mine Type, 1993 (Continued)
(Thousand Short Tons)

Coal-Producing State and County	Underground		Surface		Total	
	Number of Mines	Production	Number of Mines	Production	Number of Mines	Production
Ohio (Continued)						
Coshocton	-	-	6	1,485	6	1,485
Guernsey	-	-	5	406	5	406
Harrison	1	1,153	10	1,511	11	2,664
Hocking	-	-	1	6	1	6
Holmes	-	-	3	196	3	196
Jackson	-	-	4	1,267	4	1,267
Jefferson	1	256	17	1,659	18	1,915
Lawrence	-	-	1	12	1	12
Mahoning	-	-	1	3	1	3
Meigs	2	3,749	-	-	2	3,749
Monroe	1	822	-	-	1	822
Morgan	-	-	1	47	1	47
Muskingum	-	-	7	2,362	7	2,362
Noble	-	-	7	1,096	7	1,096
Perry	-	-	4	424	4	424
Stark	-	-	5	223	5	223
Tuscarawas	-	-	16	2,369	16	2,369
Vinton	-	-	6	2,459	6	2,459
Oklahoma	**1**	**98**	**16**	**1,661**	**17**	**1,758**
Craig	-	-	1	116	1	116
Latimer	-	-	1	407	1	407
Le Flore	-	-	5	946	5	946
Muskogee	-	-	2	6	2	6
Nowata	-	-	2	41	2	41
Okmulgee	1	98	1	7	2	104
Rogers	-	-	2	113	2	113
Wagoner	-	-	2	24	2	24
Pennsylvania	**116**	**36,934**	**408**	**22,766**	**524**	**59,700**
Allegheny	1	1	6	52	7	53
Armstrong	14	3,972	25	859	39	4,831
Beaver	-	-	2	195	2	195
Bedford	-	-	1	9	1	9
Blair	-	-	1	170	1	170
Butler	-	-	14	821	14	821
Cambria	4	1,505	16	2,204	20	3,708
Carbon	-	-	1	191	1	191
Centre	-	-	6	143	6	143
Clarion	-	-	11	1,362	11	1,362
Clearfield	1	61	65	5,050	66	5,111
Clinton	-	-	1	16	1	16
Columbia	2	120	6	107	8	228
Dauphin	1	2	-	-	1	2
Elk	-	-	10	484	10	484
Fayette	-	-	29	737	29	737
Greene	13	22,540	5	163	18	22,703
Indiana	10	2,720	18	854	28	3,575
Jefferson	5	775	25	935	30	1,710
Lackawanna	-	-	7	283	7	283
Lawrence	-	-	7	298	7	298
Luzerne	-	-	20	701	20	701
Lycoming	-	-	1	260	1	260
Mercer	-	-	3	64	3	64
Northumberland	12	44	10	187	22	231
Schuylkill	37	251	51	2,419	88	2,669
Snyder	-	-	1	*	1	*
Somerset	11	2,794	34	2,697	45	5,491
Venango	-	-	2	12	2	12
Washington	5	2,149	8	825	13	2,974
Westmoreland	-	-	22	669	22	669
Tennessee	**22**	**1,896**	**15**	**1,151**	**37**	**3,047**
Anderson	-	-	1	21	1	21
Bledsoe	-	-	1	18	1	18
Campbell	6	976	5	459	11	1,436
Claiborne	2	13	3	234	5	248
Fentress	-	-	1	66	1	66
Marion	1	106	1	13	2	120
Morgan	1	159	-	-	1	159
Scott	1	253	-	-	1	253
Sequatchie	11	387	3	340	14	727

See footnotes at end of table.

Table 4. Coal Production and Number of Mines by State, County, and Mine Type, 1993 (Continued)

(Thousand Short Tons)

Coal-Producing State and County	Underground		Surface		Total	
	Number of Mines	Production	Number of Mines	Production	Number of Mines	Production
Texas	-	-	14	54,567	14	54,567
Atascosa	-	-	1	3,121	1	3,121
Freestone	-	-	1	5,005	1	5,005
Grimes	-	-	1	3,545	1	3,545
Harrison	-	-	2	3,766	2	3,766
Hopkins	-	-	1	2,225	1	2,225
Leon	-	-	1	7,558	1	7,558
Milam	-	-	1	6,819	1	6,819
Panola	-	-	1	8,643	1	8,643
Robertson	-	-	1	1,782	1	1,782
Rusk	-	-	1	3,920	1	3,920
Titus	-	-	1	7,765	1	7,765
Webb	-	-	2	417	2	417
Utah	15	21,847	-	-	15	21,847
Carbon	9	10,239	-	-	9	10,239
Emery	5	8,047	-	-	5	8,047
Sevier	1	3,561	-	-	1	3,561
Virginia	181	30,166	56	9,151	237	39,317
Buchanan	83	12,715	5	1,243	88	13,958
Dickenson	22	3,857	13	1,660	35	5,517
Lee	15	2,291	4	233	19	2,524
Russell	8	859	4	694	12	1,553
Scott	1	53	-	-	1	53
Tazewell	19	2,862	1	1	20	2,862
Wise	33	7,530	29	5,320	62	12,850
Washington	-	-	3	4,739	3	4,739
King	-	-	1	222	1	222
Lewis	-	-	1	1,942	1	1,942
Thurston	-	-	1	2,576	1	2,576
West Virginia	339	87,997	163	42,528	502	130,525
Barbour	6	1,911	7	353	13	2,263
Boone	36	11,220	7	4,612	43	15,832
Braxton	4	572	2	50	6	621
Brooke	1	1,688	1	31	2	1,719
Clay	2	151	2	1,751	4	1,902
Fayette	8	1,780	9	3,698	17	5,478
Gilmer	1	57	-	-	1	57
Grant	1	1,091	3	788	4	1,879
Greenbrier	10	730	10	342	20	1,072
Harrison	7	1,830	7	167	14	1,996
Kanawha	10	2,387	7	4,435	17	6,821
Lewis	1	28	-	-	1	28
Lincoln	-	-	2	1,879	2	1,879
Logan	37	6,208	11	5,546	48	11,754
Marion	2	2,406	4	66	6	2,472
Marshall	3	4,401	-	-	3	4,401
Mason	-	-	1	166	1	166
McDowell	67	4,658	10	727	77	5,385
Mercer	-	-	2	109	2	109
Mineral	1	54	2	148	3	202
Mingo	43	17,333	19	8,408	62	25,741
Monongalia	12	7,516	8	1,126	20	8,642
Nicholas	13	2,201	12	2,483	25	4,684
Ohio	-	-	1	161	1	161
Preston	11	1,818	13	390	24	2,208
Raleigh	19	4,930	5	163	24	5,093
Randolph	9	904	-	-	9	904
Taylor	-	-	1	5	1	5
Tucker	1	34	1	103	2	137
Upshur	6	1,237	6	515	12	1,752
Wayne	4	877	1	1,388	5	2,265
Webster	7	1,586	8	2,768	15	4,354
Wyoming	17	8,389	1	152	18	8,542
Wyoming	4	2,136	25	207,993	29	210,129
Campbell	-	-	16	181,581	16	181,581
Carbon	2	1,673	1	2,614	3	4,288
Converse	-	-	2	10,206	2	10,206
Hot Springs	-	-	1	42	1	42
Lincoln	-	-	2	4,369	2	4,369
Sheridan	-	-	1	89	1	89
Sweetwater	2	463	2	9,091	4	9,554

See footnotes at end of table.

Table 4. Coal Production and Number of Mines by State, County, and Mine Type, 1993 (Continued)
(Thousand Short Tons)

Coal-Producing State and County	Underground		Surface		Total	
	Number of Mines	Production	Number of Mines	Production	Number of Mines	Production
U.S. Total	**1,196**	**351,053**	**1,279**	**594,371**	**2,475**	**945,424**

* Data round to zero.

Notes: Coal production excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 5. Underground Coal Production by State and Mining Method, 1993
(Thousand Short Tons)

Coal-Producing State and Region	Continuous[1]	Conventional[1]	Longwall[1]	Shortwall[1]	Other[1 2]	Unknown[3]	Total
Alabama	6,077	13	9,467	-	-	-	15,557
Arkansas	-	2	-	-	-	-	2
Colorado	5,001	2	7,840	-	-	-	12,843
Illinois	23,309	998	8,539	250	-	-	33,096
Indiana	2,583	-	-	-	-	-	2,583
Kentucky Total	64,843	18,841	7,385	-	1,137	-	92,207
Eastern	52,054	13,774	4,954	-	1,137	-	71,919
Western	12,789	5,067	2,432	-	-	-	20,288
Maryland	518	10	2,000	-	-	-	2,528
Montana	-	10	-	-	-	-	10
New Mexico	-	-	719	-	-	-	719
Ohio	3,096	83	7,258	-	-	-	10,437
Oklahoma	98	-	-	-	-	-	98
Pennsylvania Total	14,171	1,787	20,868	2	103	2	36,934
Anthracite	-	309	-	2	103	2	416
Bituminous	14,171	1,478	20,868	-	-	-	36,517
Tennessee	1,506	390	-	-	-	-	1,896
Utah	6,881	835	14,132	-	-	-	21,847
Virginia	17,793	5,051	7,262	-	60	-	30,166
West Virginia Total	52,067	13,321	22,609	-	-	-	87,997
Northern	8,125	3,879	15,129	-	-	-	27,133
Southern	43,942	9,442	7,480	-	-	-	60,864
Wyoming	363	201	1,573	-	-	-	2,136
Appalachian Total[4]	**147,283**	**34,428**	**74,419**	**2**	**1,300**	**2**	**257,433**
Interior Total[4]	**38,778**	**6,067**	**10,970**	**250**	**-**	**-**	**56,065**
Western Total[4]	**12,244**	**1,048**	**24,264**	**-**	**-**	**-**	**37,555**
East of Miss. River	**185,964**	**40,492**	**85,389**	**252**	**1,300**	**2**	**313,399**
West of Miss. River	**12,342**	**1,049**	**24,264**	**-**	**-**	**-**	**37,654**
U.S. Total	**198,305**	**41,542**	**109,653**	**252**	**1,300**	**2**	**351,053**

[1] Calculated by multiplying reported mining method percentages by the individual mine production.
[2] Includes scoop loading and hand loading.
[3] Calculated by subtracting the sum of the reported mining methods from total underground production.
[4] For a definition of coal-producing regions, see Appendix C.

Note: Totals may not equal sum of components due to independent rounding.

Source: Energy Information Administration, Form EIA-7A, "Coal Production Report."

Table 6. Coal Production and Number of Mines by State, Mine Type, and Mine Production Range, 1993
(Thousand Short Tons)

Coal-Producing State, Region and Type of Mining	Number of Mines						Production					
	Mine Production Range (thousand short tons)											
	1,000 and over	500 to 1,000	200 to 500	100 to 200	10 to 100	Less than 10	1,000 and over	500 to 1,000	200 to 500	100 to 200	10 to 100	Less than 10
Alabama	9	5	6	13	39	13	15,292	4,006	2,007	1,870	1,519	73
Underground	8	1	1	-	-	2	14,291	906	347	-	-	13
Surface	1	4	5	13	39	11	1,002	3,100	1,660	1,870	1,519	61
Alaska	1	-	-	-	-	-	1,601	-	-	-	-	-
Surface	1	-	-	-	-	-	1,601	-	-	-	-	-
Arizona	2	-	-	-	-	-	12,173	-	-	-	-	-
Surface	2	-	-	-	-	-	12,173	-	-	-	-	-
Arkansas	-	-	-	-	1	5	-	-	-	-	17	28
Underground	-	-	-	-	-	1	-	-	-	-	-	2
Surface	-	-	-	-	1	4	-	-	-	-	17	26
Colorado	7	4	3	3	1	2	17,791	2,596	1,016	465	14	5
Underground	4	3	3	1	1	1	9,554	2,083	1,016	174	14	1
Surface	3	1	-	2	-	1	8,237	512	-	290	-	4
Illinois	20	9	6	1	2	1	32,807	6,035	2,030	174	45	7
Underground	17	7	2	-	-	-	27,635	4,890	571	-	-	-
Surface	3	2	4	1	2	1	5,173	1,145	1,459	174	45	7
Indiana	12	9	11	7	13	4	17,424	6,099	4,135	1,014	601	21
Underground	1	1	1	1	1	-	1,305	619	412	170	77	-
Surface	11	8	10	6	12	4	16,120	5,480	3,723	844	525	21
Iowa	-	-	-	1	-	1	-	-	-	168	-	7
Surface	-	-	-	1	-	1	-	-	-	168	-	7
Kansas	-	-	1	-	1	-	-	-	323	-	18	-
Surface	-	-	1	-	1	-	-	-	323	-	18	-
Kentucky Total	33	51	114	111	300	87	54,558	34,596	37,177	16,496	13,056	415
Underground	17	22	72	80	207	48	32,447	14,844	23,157	11,928	9,595	236
Surface	16	29	42	31	93	39	22,112	19,752	14,020	4,568	3,462	179
Eastern	21	40	101	101	276	83	33,454	26,905	32,378	15,075	11,981	398
Underground	10	18	66	79	204	48	17,393	11,927	21,051	11,803	9,510	236
Surface	11	22	35	22	72	35	16,061	14,978	11,327	3,272	2,472	162
Western	12	11	13	10	24	4	21,104	7,691	4,799	1,421	1,075	18
Underground	7	4	6	1	3	-	15,054	2,917	2,106	125	85	-
Surface	5	7	7	9	21	4	6,051	4,774	2,693	1,296	990	18
Louisiana	1	-	1	-	-	-	2,674	-	460	-	-	-
Surface	1	-	1	-	-	-	2,674	-	460	-	-	-
Maryland	1	-	1	1	14	4	2,500	-	219	114	507	16
Underground	1	-	-	-	1	2	2,500	-	-	-	14	14
Surface	-	-	1	1	13	2	-	-	219	114	492	2
Missouri	-	-	-	4	2	1	-	-	-	564	84	5
Surface	-	-	-	4	2	1	-	-	-	564	84	5
Montana	6	-	1	-	1	-	35,615	-	291	-	10	-
Underground	-	-	-	-	1	-	-	-	-	-	10	-
Surface	6	-	1	-	-	-	35,615	-	291	-	-	-
New Mexico	5	2	-	-	-	-	26,569	1,699	-	-	-	-
Underground	-	1	-	-	-	-	-	719	-	-	-	-
Surface	5	1	-	-	-	-	26,569	980	-	-	-	-
North Dakota	6	1	-	-	-	1	31,184	782	-	-	-	7
Surface	6	1	-	-	-	1	31,184	782	-	-	-	7
Ohio	7	8	16	20	55	29	13,500	5,385	4,773	2,645	2,392	120
Underground	4	1	2	-	2	-	8,870	822	593	-	152	-
Surface	3	7	14	20	53	29	4,630	4,563	4,180	2,645	2,240	120
Oklahoma	-	-	3	4	6	4	-	-	905	564	274	15
Underground	-	-	-	-	1	-	-	-	-	-	98	-
Surface	-	-	3	4	5	4	-	-	905	564	176	15
Pennsylvania Total	8	13	36	41	246	180	25,125	8,935	10,673	5,792	8,452	723
Underground	7	6	21	8	29	45	24,070	4,339	6,165	1,152	1,070	138
Surface	1	7	15	33	217	135	1,055	4,596	4,508	4,640	7,382	584
Anthracite	-	1	5	5	48	89	-	540	1,301	700	1,454	311
Underground	-	-	-	1	8	43	-	-	-	119	161	136
Surface	-	1	5	4	40	46	-	540	1,301	582	1,293	175
Bituminous	8	12	31	36	198	91	25,125	8,395	9,372	5,092	6,998	412
Underground	7	6	21	7	21	2	24,070	4,339	6,165	1,033	908	2
Surface	1	6	10	29	177	89	1,055	4,056	3,208	4,059	6,090	410
Tennessee	-	1	3	6	17	10	-	844	735	834	587	47
Underground	-	1	1	3	9	8	-	844	253	443	316	39
Surface	-	-	2	3	8	2	-	-	481	391	272	8

See footnotes at end of table.

Table 6. Coal Production and Number of Mines by State, Mine Type, and Mine Production Range, 1993 (Continued)

(Thousand Short Tons)

Coal-Producing State, Region and Type of Mining	Number of Mines						Production					
	Mine Production Range (thousand short tons)											
	1,000 and over	500 to 1,000	200 to 500	100 to 200	10 to 100	Less than 10	1,000 and over	500 to 1,000	200 to 500	100 to 200	10 to 100	Less than 10
Texas	**11**	**-**	**2**	**-**	**1**	**-**	**53,923**	**-**	**599**	**-**	**45**	**-**
Surface	11	-	2	-	1	-	53,923	-	599	-	45	-
Utah	**6**	**2**	**3**	**2**	**1**	**1**	**18,910**	**1,358**	**1,241**	**319**	**15**	**6**
Underground	6	2	3	2	1	1	18,910	1,358	1,241	319	15	6
Virginia	**3**	**12**	**46**	**44**	**104**	**28**	**4,973**	**8,300**	**14,356**	**6,222**	**5,363**	**103**
Underground	3	9	30	35	85	19	4,973	6,559	9,224	4,883	4,458	69
Surface	-	3	16	9	19	9	-	1,741	5,132	1,339	905	34
Washington	**2**	**-**	**1**	**-**	**-**	**-**	**4,518**	**-**	**222**	**-**	**-**	**-**
Surface	2	-	1	-	-	-	4,518	-	222	-	-	-
West Virginia Total	**36**	**34**	**96**	**80**	**183**	**73**	**56,027**	**23,623**	**30,335**	**11,728**	**8,479**	**332**
Underground	22	17	80	64	122	34	35,397	12,080	25,223	9,232	5,896	170
Surface	14	17	16	16	61	39	20,630	11,543	5,113	2,497	2,583	162
Northern	**15**	**3**	**16**	**17**	**61**	**25**	**21,051**	**2,051**	**5,411**	**2,520**	**2,663**	**106**
Underground	13	1	15	9	29	6	18,556	706	5,158	1,342	1,350	22
Surface	2	2	1	8	32	19	2,495	1,345	253	1,179	1,313	84
Southern	**21**	**31**	**80**	**63**	**122**	**48**	**34,976**	**21,572**	**24,925**	**9,208**	**5,816**	**226**
Underground	9	16	65	55	93	28	16,841	11,374	20,065	7,890	4,546	148
Surface	12	15	15	8	29	20	18,135	10,198	4,860	1,318	1,270	78
Wyoming	**20**	**1**	**2**	**1**	**4**	**1**	**208,536**	**803**	**463**	**112**	**215**	*****
Underground	1	-	2	-	-	1	1,673	-	463	-	-	*
Surface	19	1	-	1	4	-	206,863	803	-	112	215	-
Appalachian Total[1]	**85**	**113**	**305**	**306**	**934**	**420**	**150,871**	**78,000**	**95,474**	**44,280**	**39,280**	**1,812**
Underground	55	53	201	189	452	158	107,494	37,477	62,856	27,512	21,414	679
Surface	30	60	104	117	482	262	43,377	40,522	32,619	16,768	17,866	1,133
Interior Total[1]	**56**	**29**	**37**	**27**	**50**	**20**	**127,933**	**19,825**	**13,252**	**3,905**	**2,158**	**100**
Underground	25	12	9	2	5	1	43,993	8,426	3,090	295	259	2
Surface	31	17	28	25	45	19	83,940	11,399	10,162	3,610	1,899	98
Western Total[1]	**55**	**10**	**10**	**6**	**7**	**5**	**356,896**	**7,237**	**3,232**	**895**	**254**	**18**
Underground	11	6	8	3	3	3	30,137	4,160	2,719	493	39	7
Surface	44	4	2	3	4	2	326,759	3,077	513	402	215	11
East of Miss. River	**129**	**142**	**335**	**324**	**973**	**429**	**222,207**	**97,825**	**106,439**	**46,889**	**41,002**	**1,857**
Underground	80	65	210	191	456	158	151,487	45,903	65,946	27,807	21,576	679
Surface	49	77	125	133	517	271	70,720	51,922	40,493	19,082	19,425	1,178
West of Miss. River	**67**	**10**	**17**	**15**	**18**	**16**	**413,493**	**7,237**	**5,519**	**2,192**	**691**	**73**
Underground	11	6	8	3	4	4	30,137	4,160	2,719	493	137	9
Surface	56	4	9	12	14	12	383,357	3,077	2,800	1,699	554	64
U.S. Total	**196**	**152**	**352**	**339**	**991**	**445**	**635,700**	**105,062**	**111,959**	**49,081**	**41,693**	**1,930**
Underground	91	71	218	194	460	162	181,624	50,063	68,665	28,300	21,713	688
Surface	105	81	134	145	531	283	454,076	54,999	43,293	20,781	19,979	1,242

[1] For a definition of coal-producing regions, see Appendix C.

* Data round to zero.

Notes: Coal production excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 7. U.S. Coal Production by Coalbed Thickness and Mine Type, 1993
(Thousand Short Tons)

Coalbed Thickness (Inches)	Underground	Surface	Total
7-12	-	3,640	3,640
13-18	-	6,724	6,724
19-24	915	23,550	24,466
25-30	4,940	25,124	30,064
31-36	39,425	36,029	75,454
37-42	32,802	22,003	54,804
43-48	40,613	20,935	61,548
49-54	26,091	17,063	43,154
55-60	44,131	19,997	64,128
61-66	38,147	13,621	51,768
67-72	30,290	23,155	53,445
73-78	18,007	7,289	25,295
79-84	21,523	9,952	31,476
85-90	4,592	7,571	12,163
91-96	12,397	5,967	18,363
97-102	4,606	10,219	14,825
103-108	4,573	160	4,733
109-114	4,482	1,117	5,599
115-120	11,209	2,672	13,881
> 120	11,622	336,342	347,964
Unknown[1]	**688**	**1,242**	**1,930**
U.S. Total	**351,053**	**594,371**	**945,424**

[1] Includes mines with production of less than 10,000 short tons, which are required to provide only production data.

Notes: Coal production excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 8. U.S. Coal Production and Coalbed Thickness by Major Coalbeds and Mine Type, 1993

Coalbed ID Number [1] Coalbed Name [2]	Production (thousand short tons)			Thickness (inches)		
	Underground	Surface	Total	Average[3]	Low	High
1699 Wyodak	-	185,686	185,686	888	360	1,346
0036 Pittsburgh	44,508	4,846	49,354	70	18	180
0489 No. 9	24,951	9,798	34,750	61	30	84
0111 Hazard No. 5-A	11,360	21,057	32,416	74	10	195
0484 No. 6	24,618	6,114	30,732	76	36	100
1569 Beulah-Zap	-	27,661	27,661	181	132	208
0135 Hazard No. 4	21,928	2,524	24,451	45	28	74
0084 Lower Kittanning	6,631	15,941	22,572	66	10	150
0168 Lower Elkhorn	15,936	2,021	17,956	54	22	128
1808 Rosebud	-	16,206	16,206	269	216	276
0071 Upper Freeport	9,162	4,870	14,033	58	12	96
0344 Pocahontas No. 3	13,774	58	13,832	56	36	83
0151 Elkhorn No. 1	10,343	3,112	13,455	44	8	110
0154 Elkhorn No. 2	11,373	1,849	13,222	49	11	72
0157 Elkhorn No. 3	9,687	2,431	12,119	51	14	120
0103 Stockton-Lewiston	3,619	7,901	11,520	70	18	140
0483 No. VI	-	10,012	10,012	58	14	88
Major Coalbeds Total	**207,890**	**322,085**	**529,975**	**364**	**8**	**1,346**
Other Coalbeds	**142,475**	**271,044**	**413,519**	**127**	**7**	**972**
Unknown[4]	**688**	**1,242**	**1,930**	**NA**	**NA**	**NA**
U.S. Total	**351,053**	**594,371**	**945,424**	**260**	**7**	**1,346**

[1] The coalbed ID number is a unique code assigned by EIA to each correlated coalbed or to coal-bearing geologic formations, coal groups, or coal zones.

[2] The coalbed name given is the name most commonly used in the State having the greatest production from that coalbed. The States having the greatest production for each coalbed are: Eastern Kentucky (coalbeds 0111, 0135, 0151, 0154, 0157, 0168); West Virginia (0036, 0084, 0103, 0344); Pennsylvania (0071); Western Kentucky (0489); Indiana (0483); Illinois (0484); North Dakota (1569); Montana (1808); Wyoming (1699). In some other States where these are major producing beds, the following alternate coalbed names are also used: 0084, No. 5 Block (Eastern Kentucky); 0111, Coalburg (West Virginia); 0135, Chilton (West Virginia); 0151, Jellico (Tennesee), Taggert (Virginia), Cedar Grove (West Virginia); 0154, Lower Cedar Grove (West Virginia); 0157, Upper Standiford (Virginia), Alma (West Virginia); 0168, No. 2 Gas (West Virginia); 0483, No. 12 (Western Kentucky); 0484, No. 11 (Western Kentucky); 0489, No. 5 (Illinois and Indiana).

[3] Average thickness is the bed thickness weighted by bed production.

[4] Includes mines with production of less than 10,000 short tons, which are required to provide only production data.

NA Not available.

Notes: Coal production excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. A major coalbed is defined here as a coalbed from which 10 million short tons of coal were produced during the year. The category "Other Coalbeds" includes all coalbeds from which less than 10 million short tons were produced during the year. In some regions coalbeds are characteristically discontinous or uncorrelatable from one location to another, and production is identified by the geological formations, coal groups, or coal zones of the native rock where the coalbeds occur. These types of coalbeds are found primarily in the Rocky Mountain States and in the Gulf Coast lignite belt. Coalbeds of these types are included in "Other Coalbeds," even though production may exceed 10 million short tons, because numerous separate coalbeds contribute to the totals. Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 9. Coal Production and Number of Mines by State and Coal Rank, 1993
(Thousand Short Tons)

Coal-Producing State and Region	Bituminous		Subbituminous		Lignite		Anthracite		Total	
	Number of Mines	Production	Number of Mines	Production	Number of Mines	Production	Number of Mines	Production	Number of Mines	Production
Alabama	85	24,768	-	-	-	-	-	-	85	24,768
Alaska	-	-	1	1,601	-	-	-	-	1	1,601
Arizona	2	12,173	-	-	-	-	-	-	2	12,173
Arkansas	5	28	-	-	-	-	1	17	6	44
Colorado	16	13,645	4	8,240	-	-	-	-	20	21,886
Illinois	39	41,098	-	-	-	-	-	-	39	41,098
Indiana	56	29,295	-	-	-	-	-	-	56	29,295
Iowa	2	175	-	-	-	-	-	-	2	175
Kansas	2	341	-	-	-	-	-	-	2	341
Kentucky Total	696	156,299	-	-	-	-	-	-	696	156,299
Eastern	622	120,191	-	-	-	-	-	-	622	120,191
Western	74	36,108	-	-	-	-	-	-	74	36,108
Louisiana	-	-	-	-	2	3,134	-	-	2	3,134
Maryland	21	3,355	-	-	-	-	-	-	21	3,355
Missouri	7	653	-	-	-	-	-	-	7	653
Montana	-	-	7	35,626	1	291	-	-	8	35,917
New Mexico	4	11,303	3	16,965	-	-	-	-	7	28,268
North Dakota	-	-	-	-	8	31,973	-	-	8	31,973
Ohio	135	28,816	-	-	-	-	-	-	135	28,816
Oklahoma	17	1,758	-	-	-	-	-	-	17	1,758
Pennsylvania Total	376	55,394	-	-	-	-	148	4,306	524	59,700
Anthracite	-	-	-	-	-	-	148	4,306	148	4,306
Bituminous	376	55,394	-	-	-	-	-	-	376	55,394
Tennessee	37	3,047	-	-	-	-	-	-	37	3,047
Texas	2	417	-	-	12	54,150	-	-	14	54,567
Utah	15	21,847	-	-	-	-	-	-	15	21,847
Virginia	237	39,317	-	-	-	-	-	-	237	39,317
Washington	1	222	2	4,518	-	-	-	-	3	4,739
West Virginia Total	502	130,525	-	-	-	-	-	-	502	130,525
Northern	137	33,802	-	-	-	-	-	-	137	33,802
Southern	365	96,723	-	-	-	-	-	-	365	96,723
Wyoming	5	2,178	24	207,951	-	-	-	-	29	210,129
Appalachian Total[1]	**2,015**	**405,412**	-	-	-	-	**148**	**4,306**	**2,163**	**409,718**
Interior Total[1]	**204**	**109,873**	-	-	**14**	**57,285**	**1**	**17**	**219**	**167,174**
Western Total[1]	**43**	**61,367**	**41**	**274,901**	**9**	**32,264**	-	-	**93**	**368,532**
East of Miss. River	**2,184**	**511,913**	-	-	-	-	**148**	**4,306**	**2,332**	**516,219**
West of Miss. River	**78**	**64,739**	**41**	**274,901**	**23**	**89,549**	**1**	**17**	**143**	**429,205**
U.S. Total	**2,262**	**576,652**	**41**	**274,901**	**23**	**89,549**	**149**	**4,322**	**2,475**	**945,424**

[1] For a definition of coal-producing regions, see Appendix C.

Notes: Coal production excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 10. Coal Production by State, Coal Rank, and Group, 1993
(Thousand Short Tons)

Coal-Producing State and Region	Bituminous Low Volatile	Bituminous Medium Volatile	Bituminous High Volatile	Bituminous Total[1]	Subbituminous	Lignite	Anthracite	Total
Alabama	-	10,851	13,899	24,768	-	-	-	24,768
Alaska	-	-	-	-	1,601	-	-	1,601
Arizona	-	-	12,173	12,173	-	-	-	12,173
Arkansas	28	-	-	28	-	-	17	44
Colorado	-	720	12,926	13,645	8,240	-	-	21,886
Illinois	-	-	41,098	41,098	-	-	-	41,098
Indiana	-	-	29,295	29,295	-	-	-	29,295
Iowa	-	-	175	175	-	-	-	175
Kansas	-	-	341	341	-	-	-	341
Kentucky Total	133	447	155,719	156,299	-	-	-	156,299
Eastern	-	447	119,744	120,191	-	-	-	120,191
Western	133	-	35,974	36,108	-	-	-	36,108
Louisiana	-	-	-	-	-	3,134	-	3,134
Maryland	3,355	-	-	3,355	-	-	-	3,355
Missouri	-	-	653	653	-	-	-	653
Montana	-	-	-	-	35,626	291	-	35,917
New Mexico	-	719	10,584	11,303	16,965	-	-	28,268
North Dakota	-	-	-	-	-	31,973	-	31,973
Ohio	-	113	28,703	28,816	-	-	-	28,816
Oklahoma	45	890	823	1,758	-	-	-	1,758
Pennsylvania Total	7,030	13,787	34,577	55,394	-	-	4,306	59,700
Anthracite	-	-	-	-	-	-	4,306	4,306
Bituminous	7,030	13,787	34,577	55,394	-	-	-	55,394
Tennessee	-	543	2,504	3,047	-	-	-	3,047
Texas	-	417	-	417	-	54,150	-	54,567
Utah	-	-	21,847	21,847	-	-	-	21,847
Virginia	1,137	15,854	22,326	39,317	-	-	-	39,317
Washington	-	-	222	222	4,518	-	-	4,739
West Virginia Total	15,141	8,058	107,326	130,525	-	-	-	130,525
Northern	2,322	557	30,923	33,802	-	-	-	33,802
Southern	12,819	7,501	76,403	96,723	-	-	-	96,723
Wyoming	-	-	2,178	2,178	207,951	-	-	210,129
Appalachian Total[2]	**26,663**	**49,652**	**329,079**	**405,412**	**-**	**-**	**4,306**	**409,718**
Interior Total[2]	**206**	**1,307**	**108,359**	**109,873**	**-**	**57,285**	**17**	**167,174**
Western Total[2]	**-**	**1,439**	**59,928**	**61,367**	**274,901**	**32,264**	**-**	**368,532**
East of Miss. River	**26,796**	**49,652**	**435,447**	**511,913**	**-**	**-**	**4,306**	**516,219**
West of Miss. River	**73**	**2,746**	**61,920**	**64,739**	**274,901**	**89,549**	**17**	**429,205**
U.S. Total	**26,869**	**52,398**	**497,367**	**576,652**	**274,901**	**89,549**	**4,322**	**945,424**

[1] Includes bituminous production with volatile content not reported.
[2] For a definition of coal-producing regions, see Appendix C.

Notes: Refer to the *Classification of Coals by Rank* table in Appendix C for Coal Group definitions. Coal production excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 11. Coal Production by State, Mine Type, and Union Type, 1993
(Thousand Short Tons)

Coal-Producing State and Region	UMWA	Other Unions	Union Total	Nonunion	Total
Alabama	**19,810**	-	**19,810**	**4,885**	**24,694**
Underground	15,197	-	15,197	347	15,544
Surface	4,613	-	4,613	4,537	9,150
Alaska	-	**1,601**	**1,601**	-	**1,601**
Surface	-	1,601	1,601	-	1,601
Arizona	**12,173**	-	**12,173**	-	**12,173**
Surface	12,173	-	12,173	-	12,173
Arkansas	-	-	-	**17**	**17**
Surface	-	-	-	17	17
Colorado	**5,171**	**2,061**	**7,232**	**14,649**	**21,881**
Underground	3,148	-	3,148	9,694	12,842
Surface	2,023	2,061	4,084	4,955	9,039
Illinois	**28,436**	**2,966**	**31,401**	**9,690**	**41,091**
Underground	21,518	2,792	24,310	8,786	33,096
Surface	6,918	174	7,092	904	7,996
Indiana	**13,458**	**851**	**14,309**	**14,966**	**29,275**
Underground	1,924	-	1,924	659	2,583
Surface	11,534	851	12,385	14,307	26,692
Iowa	-	-	-	**168**	**168**
Surface	-	-	-	168	168
Kansas	**323**	-	**323**	**18**	**341**
Surface	323	-	323	18	341
Kentucky Total	**10,582**	**1,278**	**11,860**	**144,024**	**155,883**
Underground	8,900	530	9,430	82,541	91,971
Surface	1,682	748	2,430	61,483	63,913
Eastern	**5,103**	**1,278**	**6,381**	**113,412**	**119,793**
Underground	4,883	530	5,414	66,269	71,683
Surface	220	748	968	47,143	48,110
Western	**5,479**	-	**5,479**	**30,612**	**36,090**
Underground	4,016	-	4,016	16,271	20,288
Surface	1,462	-	1,462	14,340	15,802
Louisiana	-	-	-	**3,134**	**3,134**
Surface	-	-	-	3,134	3,134
Maryland	-	-	-	**3,339**	**3,339**
Underground	-	-	-	2,514	2,514
Surface	-	-	-	824	824
Missouri	**174**	-	**174**	**474**	**648**
Surface	174	-	174	474	648
Montana	**13,613**	**15,112**	**28,726**	**7,191**	**35,917**
Underground	-	-	-	10	10
Surface	13,613	15,112	28,726	7,181	35,907
New Mexico	**9,649**	**14,625**	**24,274**	**3,994**	**28,268**
Underground	719	-	719	-	719
Surface	8,930	14,625	23,555	3,994	27,549
North Dakota	**5,552**	**4,137**	**9,689**	**22,277**	**31,966**
Surface	5,552	4,137	9,689	22,277	31,966
Ohio	**11,949**	**236**	**12,184**	**16,511**	**28,695**
Underground	8,539	-	8,539	1,898	10,437
Surface	3,410	236	3,645	14,613	18,258
Oklahoma	-	**100**	**100**	**1,643**	**1,743**
Underground	-	-	-	98	98
Surface	-	100	100	1,545	1,645
Pennsylvania Total	**16,814**	**93**	**16,907**	**42,070**	**58,977**
Underground	15,232	-	15,232	21,563	36,795
Surface	1,582	93	1,675	20,506	22,182
Anthracite	**1,328**	**52**	**1,379**	**2,615**	**3,995**
Underground	-	-	-	280	280
Surface	1,328	52	1,379	2,335	3,715
Bituminous	**15,486**	**42**	**15,528**	**39,454**	**54,982**
Underground	15,232	-	15,232	21,283	36,515
Surface	254	42	296	18,171	18,467
Tennessee	-	-	-	**3,000**	**3,000**
Underground	-	-	-	1,857	1,857
Surface	-	-	-	1,144	1,144
Texas	-	**34,605**	**34,605**	**19,962**	**54,567**
Surface	-	34,605	34,605	19,962	54,567
Utah	**6,889**	**460**	**7,348**	**14,493**	**21,841**
Underground	6,889	460	7,348	14,493	21,841
Virginia	**12,944**	-	**12,944**	**26,270**	**39,214**
Underground	11,847	-	11,847	18,250	30,096
Surface	1,097	-	1,097	8,020	9,118

See footnotes at end of table.

Table 11. Coal Production by State, Mine Type, and Union Type, 1993 (Continued)
(Thousand Short Tons)

Coal-Producing State and Region	UMWA	Other Unions	Union Total	Nonunion	Total
Washington	-	4,518	4,518	222	4,739
Surface	-	4,518	4,518	222	4,739
West Virginia Total	57,653	-	57,653	72,540	130,193
Underground	45,279	-	45,279	42,548	87,827
Surface	12,374	-	12,374	29,992	42,366
Northern	18,743	-	18,743	14,953	33,696
Underground	18,743	-	18,743	8,367	27,111
Surface	-	-	-	6,585	6,585
Southern	38,909	-	38,909	57,588	96,497
Underground	26,535	-	26,535	34,181	60,716
Surface	12,374	-	12,374	23,407	35,781
Wyoming	4,459	2,902	7,361	202,768	210,129
Underground	-	-	-	2,136	2,136
Surface	4,459	2,902	7,361	200,632	207,993
Appalachian Total[1]	124,273	1,607	125,879	282,026	407,906
Underground	100,977	530	101,507	155,247	256,754
Surface	23,296	1,076	24,372	126,780	151,152
Interior Total[1]	47,869	38,521	86,390	80,684	167,074
Underground	27,458	2,792	30,250	25,814	56,063
Surface	20,412	35,729	56,141	54,870	111,011
Western Total[1]	57,505	45,416	102,921	265,593	368,514
Underground	10,755	460	11,215	26,333	37,548
Surface	46,750	44,956	91,706	239,260	330,966
East of Miss. River	171,645	5,423	177,068	337,294	514,362
Underground	128,434	3,322	131,757	180,963	312,720
Surface	43,210	2,101	45,311	156,331	201,642
West of Miss. River	58,002	80,121	138,123	291,009	429,132
Underground	10,755	460	11,215	26,430	37,645
Surface	47,247	79,661	126,908	264,579	391,487
Unknown[2]	NA	NA	NA	NA	1,930
Underground	NA	NA	NA	NA	688
Surface	NA	NA	NA	NA	1,242
U.S. Total	229,647	85,544	315,191	628,303	945,424
Underground	139,190	3,782	142,972	207,393	351,053
Surface	90,457	81,762	172,219	420,910	594,371

[1] For a definition of coal-producing regions, see Appendix C.
[2] Includes mines with production of less than 10,000 short tons, which are required to provide only production data.
NA Not available.

Notes: Coal production excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Totals may not equal sum of components due to independent rounding. See Glossary for listing of other unions.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 12. Coal Mining Acreage, Production and Royalties from Federal and Indian Leases by State, 1993

Coal-Producing State and Region	Federal Leases			Indian Leases		
	Acres Leased	Production (thousand short tons)	Royalties (thousand dollars)	Acres Leased	Production (thousand short tons)	Royalties (thousand dollars)
Alabama	3,456	469	984	-	-	-
Arizona	-	-	-	64,858	12,258	32,999
Colorado	38,399	12,901	24,343	-	-	-
Kentucky	818	106	178	-	-	-
Montana	36,728	25,955	38,665	14,746	3,518	1,786
New Mexico	14,142	4,600	16,827	36,026	12,316	29,965
North Dakota	5,714	2,147	1,063	-	-	-
Oklahoma	2,760	478	532	-	-	-
Utah	51,243	18,856	31,025	-	-	-
Washington	241	686	116	-	-	-
Wyoming	114,529	191,365	150,509	-	-	-
Appalachian Total[1]	**3,456**	**469**	**984**	**-**	**-**	**-**
Interior Total[1]	**3,578**	**584**	**710**	**-**	**-**	**-**
Western Total[1]	**260,996**	**256,511**	**262,548**	**115,630**	**28,092**	**64,750**
East of Miss. River	**4,274**	**575**	**1,162**	**-**	**-**	**-**
West of Miss. River	**263,756**	**256,989**	**263,080**	**115,630**	**28,092**	**64,750**
U.S. Total	**268,030**	**257,564**	**264,242**	**115,630**	**28,092**	**64,750**

[1] For a definition of coal-producing regions, see Appendix C.

Note: This total is different from the production totals in other tables. Output from Federal and Indian Lands is reported as sales volume, the basis for royalties. It is approximately equivalent to production, which includes coal sold and coal added to stockpiles. Totals may not equal sum of components due to independent rounding.

Source: U.S. Department of the Interior, Minerals Management Service (MMS), *Mineral Revenues, 1993, Report on Receipts from Federal and Indian Leases.*

Table 13. Major U.S. Coal Mines, 1993

Rank	Mine Name/Company	Mine Type	State	Production (short tons)
1	Black Thunder/ARCO	Surface	Wyoming	34,305,508
2	Rochelle/Rochelle Coal	Surface	Wyoming	21,184,217
3	Jacobs Ranch/Kerr McGee	Surface	Wyoming	18,387,422
4	Eagle Butte/Amax Coal Co.	Surface	Wyoming	16,837,656
5	Belle Ayr/Amax Coal Co.	Surface	Wyoming	15,588,480
6	Caballo/The Carter Mining Co.	Surface	Wyoming	15,418,125
7	Freedom-Coteau/Coteau Properties Co.	Surface	North Dakota	15,037,192
8	Cordero/Elk River Resources	Surface	Wyoming	12,935,496
9	Rosebud No. 6/Western Energy Co.	Surface	Montana	11,874,457
10	North Antelope/North Antelope Coal Co.	Surface	Wyoming	11,346,989
11	Buckskin/Triton	Surface	Wyoming	11,189,955
12	North Rawhide/The Carter Mining Co.	Surface	Wyoming	9,864,353
13	Navajo/BHP Minerals	Surface	New Mexico	9,082,000
14	Martin Lake/Texas Utilities Mining Co.	Surface	Texas	8,643,189
15	Caballo Rojo/Caballo Rojo Inc.	Surface	Wyoming	8,021,942
16	McKinley/Pittsburg & Midway	Surface	New Mexico	7,949,840
17	West Decker/Decker Coal Co.	Surface	Montana	7,940,085
18	Monticello-Winfield/Texas Utilities	Surface	Texas	7,764,835
19	Kayenta/Peabody Coal Co.	Surface	Arizona	7,574,776
20	Jewett/Northwestern Resources Co.	Surface	Texas	7,557,626
21	Enlow Fork/Consol Energy Inc.	Underground	Pennsylvania	7,436,026
22	Antelope/Antelope Coal Co.	Surface	Wyoming	7,303,813
23	Falkirk/Falkirk Mining Co.	Surface	North Dakota	7,239,622
24	Spring Creek/Spring Creek Coal Co.	Surface	Montana	7,180,885
25	Bailey #1/Consol Energy Inc.	Underground	Pennsylvania	6,872,661
26	Sandow-Rockdale/ALCOA	Surface	Texas	6,819,309
27	Jim Bridger/Bridger Coal Co.	Surface	Wyoming	6,406,149
28	Skyline 01/Coastal States Energy	Underground	Utah	5,159,000
29	Big Brown/Texas Utilities	Surface	Texas	5,004,839
30	Colowyo/Colowyo Coal Co.	Surface	Colorado	4,764,881
31	Black Mesa/Peabody Coal Co.	Surface	Arizona	4,597,963
32	Centralia/Centralia Mining Co.	Surface	Washington	4,517,882
33	Galatia No. 56-1/Kerr McGee Corp.	Underground	Illinois	4,161,704
34	Center/BNI Coal Ltd.	Surface	North Dakota	4,136,979
35	Lee Ranch/Santa Fe Pacific Coal Corp.	Surface	New Mexico	3,994,037
36	Powhatan No. 6/Ohio Valley Coal	Underground	Ohio	3,968,102
37	Mountainer/Mingo Logan Coal Co.	Underground	West Virginia	3,953,981
38	Martin Lake-Oak Hill/Texas Utilities	Surface	Texas	3,920,451
39	No. 9 Wheatcroft/Costain Coal Inc.	Underground	Kentucky	3,894,724
40	San Juan/San Juan Coal	Surface	New Mexico	3,889,177
41	Foidel Creek/Cyprus Yampa Valley	Underground	Colorado	3,879,888
42	U.S. Steel No. 50/USX Corp.	Underground	West Virginia	3,723,755
43	Kemmerer/Pittsburg & Midway	Surface	Wyoming	3,565,842
44	Southern Utah/Coastal States Energy	Underground	Utah	3,561,000
45	Gibbons Creek/Navasota Mining Co.	Surface	Texas	3,545,467
46	South Hallsville No. 1/Sabine Mining	Surface	Texas	3,539,149
47	Dry Fork/Dry Fork Coal	Surface	Wyoming	3,277,905
48	Lynnville/Peabody Coal Co.	Surface	Indiana	3,254,138
49	Absaloka/Westmoreland Resources	Surface	Montana	3,237,915
50	Deer Creek/Pacificorp Electric Oper.	Underground	Utah	3,237,562
51	Emerald No. 1/Cyprus Coal	Underground	Pennsylvania	3,201,858
52	No. 13 Baker/Costain Coal	Underground	Kentucky	3,168,004
53	San Miguel/Atascosa Mining Co.	Surface	Texas	3,121,279
54	Shamrock No. 18/Elk River Resources	Underground	Kentucky	3,064,018
55	Wyodak/Wyodak Resources	Surface	Wyoming	3,027,375
56	Mount Gunnison No. 1/Mountain Coal	Underground	Colorado	3,008,068
	Subtotal			**465,604,447**
	All Other Mines			**479,819,839**
	U.S. Total			**945,424,286**

Notes: Major mines are mines that produced more than 3 million short tons in 1993. The company is the firm owning the mineral rights to the mined coal.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Production Report."

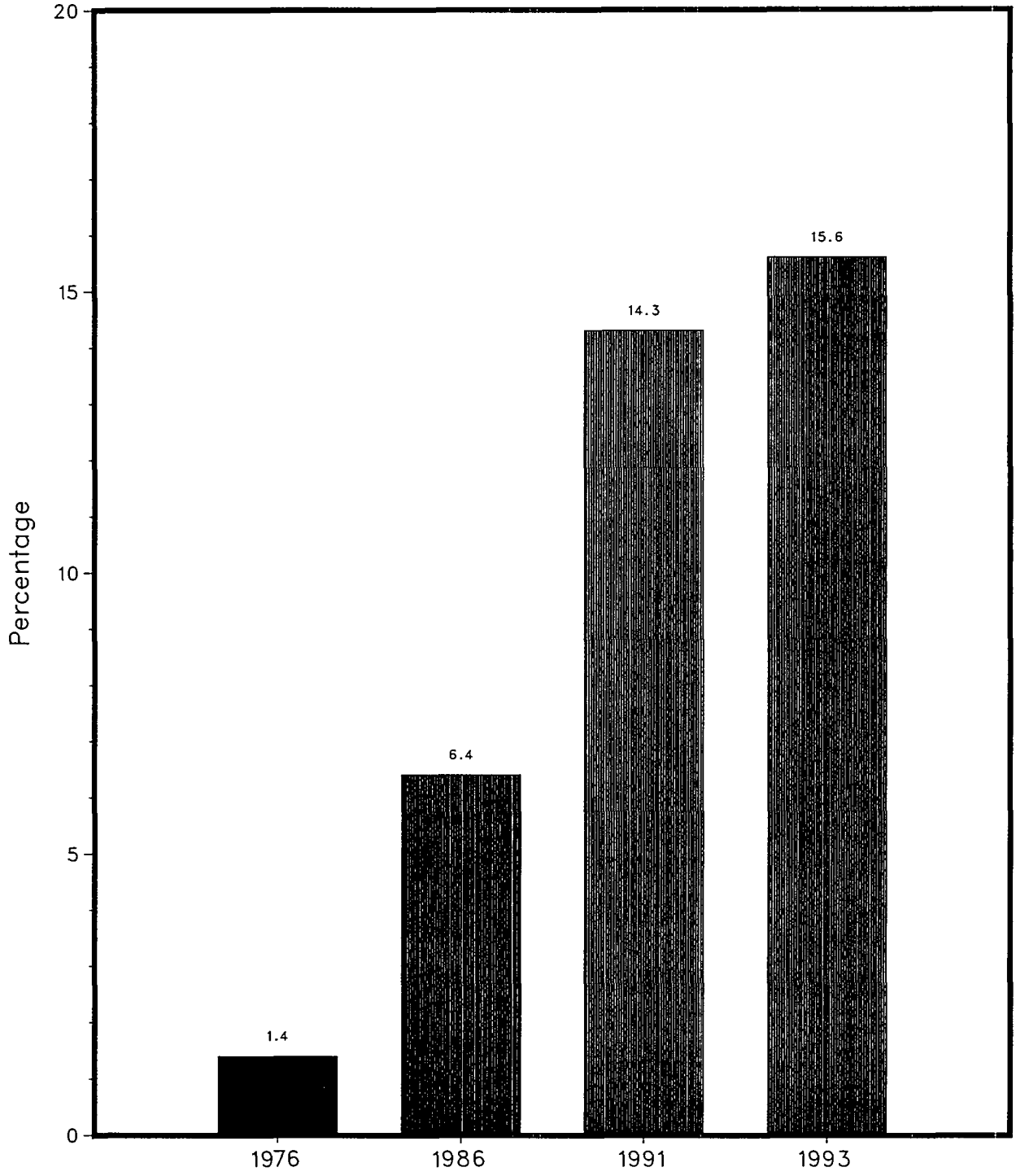
Table 14. Major U.S. Coal Producers, 1993

Rank	Company Name	Production (million short tons)	Percent of Total Production
1	Peabody Holding Co., Inc.	69,716	7.4
2	Cyprus AMAX Minerals Co.	65,284	6.9
3	Consol Energy Inc.	50,733	5.4
4	Zeigler Coal Holding Co.	37,476	4.0
5	ARCO Coal Co.	37,426	4.0
6	Kennecott Energy Co.	36,729	3.9
7	Exxon Coal USA Inc.	28,051	3.0
8	Texas Utilities Co.	27,558	2.9
9	Montana Power Co.	26,396	2.8
10	North American Coal Corp.	26,276	2.8
11	Kerr-McGee Coal Corp.	22,549	2.4
12	Pittsburg & Midway Coal Co.	16,371	1.7
13	Arch Mineral Corp.	15,890	1.7
14	Kiewit Coal Proerties	15,360	1.6
15	A T Massey Coal Co.	14,744	1.6
16	BHP Utah Minerals	14,625	1.5
17	Pittston Coal Group	12,647	1.3
18	Mapco Coal Inc.	12,506	1.3
19	Costain Coal Inc.	12,020	1.3
20	Ashland Coal Inc.	11,966	1.3
21	U.S. Steel Mining Co.	11,432	1.2
22	Coastal Corp.	9,805	1.0
23	Addington Inc.	9,505	1.0
24	Westmoreland Resources	9,385	1.0
25	Marigold Land Co.	8,081	.9
26	Sun Coal Co.	7,862	.8
27	Drummond Co.	7,716	.8
28	Transco Coal Co.	7,089	.7
29	Jim Walters Resources Inc.	6,948	.7
30	ALCOA	6,819	.7
31	Black Beauty Coal Co.	6,735	.7
32	PacifiCorp	6,112	.6
33	MDU Resources Group Inc.	5,062	.5
34	General Dynamics Corp.	4,895	.5
35	W R Grace & Co.	4,765	.5
36	Great Western Resources	4,575	.5
37	Washington Water Power	4,518	.5
38	Reading & Bates Corp.	4,473	.5
39	Minnesota Power & Light	4,137	.4
40	Santa Fe Southern Pacific	3,994	.4
41	Ohio Valley Resources	3,968	.4
42	Andalex Resources Inc.	3,967	.4
43	Anker Energy Corp.	3,909	.4
44	Southern Ohio Coal Co.	3,749	.4
45	Teco Coal Corp.	3,609	.4
46	Texas Municipal Power	3,545	.4
47	Rochester & Pittsburgh Coal	3,350	.4
48	James River Coal Co.	3,311	.4
49	San Miguel Electric CoOp	3,121	.3
50	BethEnergy Mines Inc.	3,073	.3
51	Black Hills Corp.	3,027	.3
52	Sextet Mining Corp.	2,838	.3
53	Dal-Tex Coal Corp.	2,752	.3
54	Dolet Hills Mining	2,674	.3
55	Solar Sources	2,662	.3
56	Peres Processing	2,655	.3
57	Central Ohio Coal Corp.	2,586	.3
58	Electric Fuels Corp.	2,367	.3
59	Dorchester Coal Co.	2,338	.2
60	Brooks Run Coal Co.	2,290	.2
61	Pyramid Mining	2,140	.2
62	United Coal Co.	2,098	.2
63	Williams Fork Mining	2,061	.2
	Subtotal	**768,222**	**81.3**
	All other coal producers	**177,202**	**18.7**
	U.S. Total	**945,424**	**100.0**

Notes: Major coal producers are companies that produced more than 2 million short tons in 1993. The company is the firm owning the mineral rights to the mined coal.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Production Report."

Figure 2. Production by Foreign-Controlled Firms as a Percentage of Total U.S. Coal Production, 1976, 1986, 1991, 1993



Note: Foreign-controlled firms are U.S. coal producers with more than 50 percent of their stock or assets owned by a foreign firm.
Sources: • 1976, 1986, 1991: Energy Information Administration (EIA), "The Changing Structure of the U.S. Coal Industry: An Update."
• 1993: (EIA), Form EIA-7A, "Coal Production Report."

Productive Capacity

A dragline operator carefully maneuvers a bucket from the open face of this strip mine. Sixty-one percent of productive capacity 1993 came from surface mines.

Table 15. Productive Capacity of Coal Mines by State, 1984, 1989-1993
(Thousand Short Tons)

Coal-Producing State and Region	1993	1992	1991	1990	1989	1984[1]	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Alabama	27,916	29,815	30,195	NA	NA	29,670	-6.4	NA	-0.7
Alaska	w	w	w	NA	NA	w	w	NA	w
Arizona	w	w	w	NA	NA	w	w	NA	w
Arkansas	w	w	w	NA	NA	w	w	NA	w
California	-	w	w	NA	NA	-	w	NA	-
Colorado	30,040	25,848	23,593	NA	NA	19,895	16.2	NA	4.7
Georgia	-	-	-	NA	NA	w	-	NA	w
Illinois	69,320	75,787	75,710	NA	NA	70,146	-8.5	NA	-.1
Indiana	43,955	42,990	45,155	NA	NA	39,622	2.2	NA	1.1
Iowa	w	w	w	NA	NA	782	w	NA	w
Kansas	w	w	w	NA	NA	1,395	w	NA	w
Kentucky Total	204,805	195,352	199,282	NA	NA	164,378	4.8	NA	2.5
Eastern	157,318	149,046	145,549	NA	NA	117,931	5.5	NA	3.3
Western	47,486	46,306	53,734	NA	NA	46,447	2.5	NA	.2
Louisiana	w	w	w	NA	NA	-	w	NA	w
Maryland	3,927	3,902	4,248	NA	NA	4,217	.7	NA	-.8
Missouri	w	w	w	NA	NA	7,106	w	NA	w
Montana	50,849	48,582	48,604	NA	NA	36,511	4.7	NA	3.7
New Mexico	33,360	29,512	28,187	NA	NA	23,233	13.0	NA	4.1
North Dakota	36,371	36,986	35,976	NA	NA	26,705	-1.7	NA	3.5
Ohio	42,236	41,329	47,397	NA	NA	42,649	2.2	NA	-.1
Oklahoma	2,422	2,486	2,328	NA	NA	4,814	-2.6	NA	-7.3
Pennsylvania Total	82,148	82,968	80,418	NA	NA	86,959	-1.0	NA	-.6
Anthracite	5,806	4,143	4,043	NA	NA	4,207	40.2	NA	3.6
Bituminous	76,342	78,825	76,375	NA	NA	82,752	-3.1	NA	-.9
Tennessee	3,763	3,932	5,159	NA	NA	7,638	-4.3	NA	-7.6
Texas	57,115	58,541	59,579	NA	NA	42,837	-2.4	NA	3.2
Utah	25,933	25,534	25,482	NA	NA	13,553	1.6	NA	7.5
Virginia	50,879	54,471	55,271	NA	NA	43,069	-6.6	NA	1.9
Washington	w	w	w	NA	NA	w	w	NA	w
West Virginia Total	191,706	198,083	200,114	NA	NA	142,455	-3.2	NA	3.3
Northern	60,015	62,811	64,717	NA	NA	60,377	-4.4	NA	-.1
Southern	131,691	135,271	135,398	NA	NA	82,078	-2.6	NA	5.4
Wyoming	277,875	253,312	250,251	NA	NA	143,143	9.7	NA	7.6
Appalachian Total[2]	**559,893**	**563,545**	**568,350**	**NA**	**NA**	**w**	**-.6**	**NA**	**w**
Interior Total[2]	**225,938**	**235,040**	**245,487**	**NA**	**NA**	**w**	**-3.9**	**NA**	**w**
Western Total[2]	**476,042**	**442,469**	**434,642**	**NA**	**NA**	**280,795**	**7.6**	**NA**	**6.0**
East of Miss. River	**720,654**	**728,628**	**742,949**	**NA**	**NA**	**630,929**	**-1.1**	**NA**	**1.5**
West of Miss. River	**541,219**	**512,426**	**505,529**	**NA**	**NA**	**337,790**	**5.6**	**NA**	**5.4**
U.S. Total	**1,261,873**	**1,241,054**	**1,248,479**	**NA**	**NA**	**968,719**	**1.7**	**NA**	**3.0**

[1] For 1984, the Form EIA-7A solicited data on "Daily Productive Capacity." To obtain annual productive capacity for a mine in 1984, each mine's daily productive capacity was multiplied by the number of days worked during the year.
[2] For a definition of coal-producing regions, see Appendix C.
w Withheld to avoid disclosure of individual company data.
NA Not available.
Notes: Productive capacity is the maximum amount of coal that can be produced annually as reported by mining companies on Form EIA-7A. Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons, which are not required to provide these data. Totals may not equal sum of components due to independent rounding.
Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report."

Table 16. Capacity Utilization of Coal Mines by State, 1984, 1989-1993
(Percent)

Coal-Producing State and Region	1993	1992	1991	1990	1989	1984[1]
Alabama	88.46	86.26	89.97	NA	NA	91.06
Alaska	w	w	w	NA	NA	w
Arizona	w	w	w	NA	NA	w
Arkansas	w	w	w	NA	NA	w
California	-	w	w	NA	NA	-
Colorado	72.84	74.35	75.58	NA	NA	90.21
Georgia	-	-	-	NA	NA	w
Illinois	59.28	78.98	79.58	NA	NA	90.89
Indiana	66.60	70.86	69.66	NA	NA	94.74
Iowa	w	w	w	NA	NA	67.26
Kansas	w	w	w	NA	NA	95.21
Kentucky Total	76.11	82.15	79.45	NA	NA	95.37
Eastern	76.15	79.72	80.12	NA	NA	97.21
Western	76.00	89.95	77.64	NA	NA	90.70
Louisiana	w	w	w	NA	NA	-
Maryland	85.01	84.50	88.12	NA	NA	96.18
Missouri	w	w	w	NA	NA	94.62
Montana	70.64	80.03	78.65	NA	NA	90.38
New Mexico	84.74	83.18	76.34	NA	NA	91.55
North Dakota	87.89	85.83	82.08	NA	NA	82.79
Ohio	67.94	73.19	64.27	NA	NA	91.71
Oklahoma	71.95	69.73	79.08	NA	NA	95.51
Pennsylvania Total	71.79	82.20	80.17	NA	NA	88.16
Anthracite	68.80	75.22	74.44	NA	NA	91.96
Bituminous	72.02	82.57	80.47	NA	NA	87.97
Tennessee	79.73	86.50	81.46	NA	NA	94.40
Texas	95.54	94.07	90.34	NA	NA	96.05
Utah	84.22	83.57	86.12	NA	NA	90.92
Virginia	77.07	78.70	75.65	NA	NA	92.66
Washington	w	w	w	NA	NA	w
West Virginia Total	67.91	81.70	83.42	NA	NA	91.46
Northern	56.15	79.44	80.32	NA	NA	92.35
Southern	73.28	82.75	84.90	NA	NA	90.81
Wyoming	75.62	75.07	77.46	NA	NA	91.46
Appalachian Total[2]	**72.85**	**80.63**	**80.13**	**NA**	**NA**	**w**
Interior Total[2]	**73.95**	**83.22**	**79.57**	**NA**	**NA**	**w**
Western Total[2]	**77.41**	**78.04**	**78.86**	**NA**	**NA**	**90.39**
East of Miss. River	**71.37**	**80.47**	**79.26**	**NA**	**NA**	**92.32**
West of Miss. River	**79.29**	**79.80**	**80.05**	**NA**	**NA**	**91.24**
U.S. Total	**74.77**	**80.20**	**79.58**	**NA**	**NA**	**91.94**

[1] For 1984, the Form EIA-7A solicited data on "Daily Productive Capacity." To obtain annual productive capacity for a mine in 1984, each mine's daily productive capacity was multiplied by the number of days worked during the year.
[2] For a definition of coal-producing regions, see Appendix C.
w Withheld to avoid disclosure of individual company data.
NA Not available.
Notes: Capacity utilization is the ratio of total production to annual productive capacity as reported by mining companies on Form EIA-7A. Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons, which are not required to provide these data.
Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report."

Table 17. Production, Productive Capacity, and Capacity Utilization of Coal Mines by State and Mine Type, 1993
(Thousand Short Tons)

Coal-Producing State and Region	Underground			Surface			Total		
	Production	Productive Capacity	Capacity Utilization (percent)	Production	Productive Capacity	Capacity Utilization (percent)	Production	Productive Capacity	Capacity Utilization (percent)
Alabama	15,544	17,083	90.99	9,150	10,833	84.47	24,694	27,916	88.46
Alaska	-	-	-	1,601	w	w	1,601	w	w
Arizona	-	-	-	12,173	w	w	12,173	w	w
Arkansas	-	-	-	17	w	w	17	w	w
Colorado	12,842	19,375	66.28	9,039	10,665	84.76	21,881	30,040	72.84
Illinois	33,096	53,349	62.04	7,996	15,971	50.06	41,091	69,320	59.28
Indiana	2,583	w	w	26,692	w	w	29,275	43,955	66.60
Iowa	-	-	-	168	w	w	168	w	w
Kansas	-	-	-	341	w	w	341	w	w
Kentucky Total	91,971	125,749	73.14	63,913	79,055	80.85	155,883	204,805	76.11
Eastern	71,683	98,317	72.91	48,110	59,001	81.54	119,793	157,318	76.15
Western	20,288	27,433	73.95	15,802	20,054	78.80	36,090	47,486	76.00
Louisiana	-	-	-	3,134	w	w	3,134	w	w
Maryland	2,514	w	w	824	w	w	3,339	3,927	85.01
Missouri	-	-	-	648	w	w	648	w	w
Montana	10	w	w	35,907	w	w	35,917	50,849	70.64
New Mexico	719	w	w	27,549	w	w	28,268	33,360	84.74
North Dakota	-	-	-	31,966	36,371	87.89	31,966	36,371	87.89
Ohio	10,437	14,732	70.84	18,258	27,504	66.39	28,695	42,236	67.94
Oklahoma	98	w	w	1,645	w	w	1,743	2,422	71.95
Pennsylvania Total	36,795	52,819	69.66	22,182	29,329	75.63	58,977	82,148	71.79
Anthracite	280	715	39.18	3,715	5,092	72.96	3,995	5,806	68.80
Bituminous	36,515	52,105	70.08	18,467	24,237	76.19	54,982	76,342	72.02
Tennessee	1,857	w	w	1,144	w	w	3,000	3,763	79.73
Texas	-	-	-	54,567	57,115	95.54	54,567	57,115	95.54
Utah	21,841	25,933	84.22	-	-	-	21,841	25,933	84.22
Virginia	30,096	39,141	76.89	9,118	11,738	77.67	39,214	50,879	77.07
Washington	-	-	-	4,739	w	w	4,739	w	w
West Virginia Total	87,827	133,275	65.90	42,366	58,432	72.50	130,193	191,706	67.91
Northern	27,111	51,468	52.67	6,585	8,547	77.05	33,696	60,015	56.15
Southern	60,716	81,806	74.22	35,781	49,885	71.73	96,497	131,691	73.28
Wyoming	2,136	w	w	207,993	w	w	210,129	277,875	75.62
Appalachian Total[1]	**256,754**	**360,073**	**71.31**	**151,152**	**199,821**	**75.64**	**407,906**	**559,893**	**72.85**
Interior Total[1]	**56,063**	**87,288**	**64.23**	**111,011**	**138,650**	**80.07**	**167,074**	**225,938**	**73.95**
Western Total[1]	**37,548**	**50,511**	**74.34**	**330,966**	**425,531**	**77.78**	**368,514**	**476,042**	**77.41**
East of Miss. River	**312,720**	**447,121**	**69.94**	**201,642**	**273,533**	**73.72**	**514,362**	**720,654**	**71.37**
West of Miss. River	**37,645**	**50,751**	**74.18**	**391,487**	**490,468**	**79.82**	**429,132**	**541,219**	**79.29**
Unknown[2]	**688**	**NA**	**NA**	**1,242**	**NA**	**NA**	**1,930**	**NA**	**NA**
U.S. Total	**351,053**	**497,872**	**70.37**	**594,371**	**764,002**	**77.63**	**945,424**	**1,261,873**	**74.77**

[1] For a definition of coal-producing regions, see Appendix C.
[2] Includes mines with production of less than 10,000 short tons, which are required to provide only production data.
w Withheld to avoid disclosure of individual company data.
NA Not available.

Notes: Productive capacity is the maximum amount of coal that can be produced annually as reported by mining companies on Form EIA-7A. Capacity utilization is the ratio of total production to annual productive capacity as reported by mining companies on Form EIA-7A. Coal production excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 18. Productive Capacity and Capacity Utilization of Underground Coal Mines by State and Mining Method, 1993
(Thousand Short Tons)

Coal-Producing State and Region	Continuous[1]		Conventional[1]		Longwall[1]		Other[1 2]	
	Productive Capacity	Capacity Utilization (percent)	Productive Capacity	Capacity Utilization (percent)	Productive Capacity	Capacity Utilization (percent)	Productive Capacity	Capacity Utilization (percent)
Alabama	6,691	90.82	-	-	10,392	91.10	-	-
Colorado	7,406	67.52	4	17.75	11,965	65.53	-	-
Illinois	37,603	61.99	1,250	79.83	13,736	62.17	760	32.89
Indiana	w	w	-	-	-	-	-	-
Kentucky Total	91,691	70.65	22,454	83.26	10,316	71.59	1,289	86.08
Eastern	72,608	71.61	16,832	80.97	7,587	65.29	1,289	86.08
Western	19,082	67.02	5,621	90.14	2,729	89.10	-	-
Maryland	w	w	-	-	w	w	-	-
Montana	-	-	w	w	-	-	-	-
New Mexico	-	-	-	-	w	w	-	-
Ohio	3,684	84.04	83	100.00	10,965	66.19	-	-
Oklahoma	w	w	-	-	-	-	-	-
Pennsylvania Total	21,125	67.08	2,787	61.49	28,707	72.69	200	21.10
Anthracite	-	-	515	46.21	-	-	200	21.10
Bituminous	21,125	67.08	2,273	64.95	28,707	72.69	-	-
Tennessee	w	w	w	w	-	-	-	-
Utah	9,077	75.73	960	86.95	15,896	88.90	-	-
Virginia	21,431	82.94	6,468	77.42	11,182	64.95	60	88.53
West Virginia Total	71,254	73.04	16,336	80.65	45,685	49.49	-	-
Northern	13,388	60.69	4,331	89.04	33,749	44.83	-	-
Southern	57,865	75.90	12,004	77.62	11,936	62.67	-	-
Wyoming	w	w	w	w	w	w	-	-
Appalachian Total[3]	**199,051**	**73.93**	**42,949**	**79.10**	**116,524**	**63.87**	**1,549**	**77.78**
Interior Total[3]	**63,192**	**61.37**	**6,871**	**88.26**	**16,465**	**66.63**	**760**	**32.89**
Western Total[3]	**17,364**	**70.48**	**1,714**	**61.04**	**31,433**	**77.19**	**-**	**-**
East of Miss. River	**262,003**	**70.93**	**49,820**	**80.36**	**132,989**	**64.21**	**2,309**	**63.01**
West of Miss. River	**17,604**	**70.07**	**1,714**	**61.04**	**31,433**	**77.19**	**-**	**-**
U.S. Total	**279,607**	**70.88**	**51,534**	**79.72**	**164,422**	**66.69**	**2,309**	**63.01**

[1] Calculated by multiplying reported mining method percentages by the individual mine capacity.
[2] Includes shortwall, scoop loading, hand loading and unknown.
[3] For a definition of coal-producing regions, see Appendix C.
[w] Withheld to avoid disclosure of individual company data.

Notes: Productive capacity is the maximum amount of coal that can be produced annually as reported by mining companies on Form EIA-7A. Capacity utilization is the ratio of total production to annual productive capacity as reported by mining companies on Form EIA-7A. Excludes mines producing less than 10,000 short tons, which are not required to provide these data. Totals may not equal sum of components due to independent rounding.

Source: Energy Information Administration, Form EIA-7A, "Coal Production Report."

Table 19. Productive Capacity and Capacity Utilization of Coal Mines by State and Coal Rank, 1993
(Thousand Short Tons)

Coal-Producing State and Region	Bituminous		Subbituminous		Lignite		Anthracite	
	Productive Capacity	Capacity Utilization (percent)	Productive Capacity	Capacity Utilization (percent)	Productive Capacity	Capacity Utilization (percent)	Productive Capacity	Capacity Utilization (percent)
Alabama	27,916	88.46	-	-	-	-	-	-
Alaska	-	-	w	w	-	-	-	-
Arizona	w	w	-	-	-	-	-	-
Arkansas	-	-	-	-	-	-	w	w
Colorado	20,875	65.36	9,165	89.87	-	-	-	-
Illinois	69,320	59.28	-	-	-	-	-	-
Indiana	43,955	66.60	-	-	-	-	-	-
Iowa	w	w	-	-	-	-	-	-
Kansas	w	w	-	-	-	-	-	-
Kentucky Total	204,805	76.11	-	-	-	-	-	-
Eastern	157,318	76.15	-	-	-	-	-	-
Western	47,486	76.00	-	-	-	-	-	-
Louisiana	-	-	-	-	w	w	-	-
Maryland	3,927	85.01	-	-	-	-	-	-
Missouri	w	w	-	-	-	-	-	-
Montana	-	-	w	w	w	w	-	-
New Mexico	14,100	80.16	19,260	88.09	-	-	-	-
North Dakota	-	-	-	-	36,371	87.89	-	-
Ohio	42,236	67.94	-	-	-	-	-	-
Oklahoma	2,422	71.95	-	-	-	-	-	-
Pennsylvania Total	76,342	72.02	-	-	-	-	5,806	68.80
Anthracite	-	-	-	-	-	-	5,806	68.80
Bituminous	76,342	72.02	-	-	-	-	-	-
Tennessee	3,763	79.73	-	-	-	-	-	-
Texas	550	75.78	-	-	56,565	95.73	-	-
Utah	25,933	84.22	-	-	-	-	-	-
Virginia	50,879	77.07	-	-	-	-	-	-
Washington	w	w	w	w	-	-	-	-
West Virginia Total	191,706	67.91	-	-	-	-	-	-
Northern	60,015	56.15	-	-	-	-	-	-
Southern	131,691	73.28	-	-	-	-	-	-
Wyoming	w	w	w	w	-	-	-	-
Appalachian Total[1]	**554,087**	**72.90**	-	-	-	-	**5,806**	**68.80**
Interior Total[1]	**165,607**	**66.29**	-	-	**60,315**	**94.98**	**w**	**w**
Western Total[1]	**78,053**	**78.61**	**361,175**	**76.11**	**36,814**	**87.62**	-	-
East of Miss. River	**714,848**	**71.40**	-	-	-	-	**5,806**	**68.80**
West of Miss. River	**82,899**	**78.02**	**361,175**	**76.11**	**97,129**	**92.19**	**w**	**w**
U.S. Total	**797,746**	**72.08**	**361,175**	**76.11**	**97,129**	**92.19**	**[2] 5,806**	**[2] 68.80**

[1] For a definition of coal-producing regions, see Appendix C.
[2] Does not include Arkansas.
w Withheld to avoid disclosure of individual company data.

Notes: Refer to the *Classification of Coals by Rank* table in Appendix C for Coal Rank definitions. Productive capacity is the maximum amount of coal that can be produced annually as reported by mining companies on Form EIA-7A. Capacity utilization is the ratio of total production to annual productive capacity as reported by mining companies on Form EIA-7A. Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons, which are not required to provide these data. Totals may not equal sum of components due to independent rounding.

Source: Energy Information Administration, Form EIA-7A, "Coal Production Report."

Table 20. Productive Capacity and Capacity Utilization of Coal Mines by State and Mine Production Range, 1993

(Thousand Short Tons, Percent)

Coal-Producing State and Region	Productive Capacity					Capacity Utilization (percent)				
	Mine Production Range (thousand short tons)									
	1,000 and over	500 to 1,000	200 to 500	100 to 200	10 to 100	1,000 and over	500 to 1,000	200 to 500	100 to 200	10 to 100
Alabama	16,852	4,634	2,175	2,170	2,084	90.74	86.46	92.26	86.19	72.88
Alaska	w	-	-	-	-	w	-	-	-	-
Arizona	w	-	-	-	-	w	-	-	-	-
Arkansas	-	-	-	-	w	-	-	-	-	w
Colorado	19,865	7,450	1,720	w	w	89.56	34.84	59.06	w	w
Illinois	48,978	13,963	5,634	600	145	66.98	43.22	36.04	28.96	31.02
Indiana	27,386	8,073	6,039	1,691	765	63.63	75.55	68.47	59.98	78.57
Iowa	-	-	-	w	-	-	-	-	w	-
Kansas	-	-	w	-	w	-	-	w	-	w
Kentucky Total	68,564	42,750	47,019	22,386	24,086	79.57	80.93	79.07	73.69	54.21
Eastern	41,801	32,091	41,508	20,195	21,723	80.03	83.84	78.00	74.65	55.16
Western	26,763	10,659	5,511	2,190	2,363	78.86	72.15	87.09	64.87	45.49
Louisiana	w	-	w	-	-	w	-	w	-	-
Maryland	w	-	w	w	920	w	-	w	w	55.05
Missouri	-	-	-	w	w	-	-	-	w	w
Montana	50,156	-	w	-	w	71.01	-	w	-	w
New Mexico	w	w	-	-	-	w	w	-	-	-
North Dakota	35,590	782	-	-	-	87.62	100.00	-	-	-
Ohio	16,267	8,601	7,026	3,969	6,372	82.99	62.61	67.93	66.64	37.54
Oklahoma	-	-	998	720	704	-	-	90.69	78.35	38.85
Pennsylvania Total	30,965	11,186	15,198	7,326	17,473	81.14	79.88	70.22	79.06	48.37
Anthracite	-	600	1,512	836	2,858	-	89.98	85.99	83.78	50.87
Bituminous	30,965	10,586	13,686	6,490	14,615	81.14	79.31	68.48	78.45	47.88
Tennessee	-	w	w	w	846	-	w	w	w	69.46
Texas	56,283	-	682	-	150	95.81	-	87.87	-	29.70
Utah	20,238	2,300	2,153	763	480	93.44	59.02	57.62	41.78	3.09
Virginia	w	w	16,074	7,912	8,343	w	w	89.31	78.64	64.29
Washington	w	-	w	-	-	w	-	w	-	-
West Virginia Total	85,404	34,529	38,031	18,091	15,652	65.60	68.42	79.77	64.83	54.17
Northern	42,579	3,210	6,449	3,396	4,382	49.44	63.89	83.90	74.22	60.77
Southern	42,825	31,319	31,582	14,695	11,270	81.67	68.88	78.92	62.66	51.61
Wyoming	267,929	w	w	w	w	77.83	w	w	w	w
Appalachian Total[1]	**199,019**	**105,219**	**121,101**	**61,142**	**73,413**	**75.81**	**74.13**	**78.84**	**72.42**	**53.51**
Interior Total[1]	**162,310**	**32,695**	**20,114**	**6,436**	**4,384**	**78.82**	**60.64**	**65.89**	**60.68**	**49.23**
Western Total[1]	**444,900**	**15,332**	**5,946**	**7,688**	**2,177**	**80.22**	**47.20**	**54.36**	**11.64**	**11.68**
East of Miss. River	**302,146**	**137,914**	**138,285**	**65,623**	**76,686**	**73.54**	**70.93**	**76.97**	**71.45**	**53.47**
West of Miss. River	**504,083**	**15,332**	**8,876**	**9,642**	**3,287**	**82.03**	**47.20**	**62.19**	**22.73**	**21.02**
U.S. Total	**806,229**	**153,246**	**147,161**	**75,265**	**79,973**	**78.85**	**68.56**	**76.08**	**65.21**	**52.13**

[1] For a definition of coal-producing regions, see Appendix C.

w Withheld to avoid disclosure of individual company data.

Notes: Productive capacity is the maximum amount of coal that can be produced annually as reported by mining companies on Form EIA-7A. Capacity utilization is the ratio of total production to annual productive capacity as reported by mining companies on Form EIA-7A. Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons, which are not required to provide these data. Totals may not equal sum of components due to independent rounding.

Source: Energy Information Administration, Form EIA-7A, "Coal Production Report."

Table 21. Productive Capacity and Productivity of Coal Mines by State and Capacity Utilization Range, 1993

(Thousand Short Tons, Short Tons per Miner per Hour)

Coal-Producing State and Region	Productive Capacity						Productivity					
	Capacity Utilization Range (percent)											
	90 and over	80 to 90	70 to 80	60 to 70	Less than 60	Total	90 and over	80 to 90	70 to 80	60 to 70	Less than 60	Total
Alabama	14,257	9,167	3,440	344	708	27,916	2.78	1.99	2.11	4.38	0.75	2.35
Alaska	-	-	-	w	-	w	-	-	-	7.40	-	7.40
Arizona	w	w	-	-	-	w	6.53	6.24	-	-	-	6.21
Arkansas	w	-	-	-	-	w	1.39	-	-	-	-	1.39
Colorado	8,940	5,200	6,820	1,950	7,130	30,040	7.24	6.07	5.87	5.27	3.01	5.85
Illinois	10,708	7,410	8,000	7,754	35,447	69,320	3.64	3.23	3.35	3.28	2.92	3.23
Indiana	11,912	7,095	w	w	16,089	43,955	4.92	6.40	3.93	3.13	3.56	4.46
Iowa	-	-	-	-	w	w	-	-	-	-	.72	.72
Kansas	w	w	-	-	-	w	4.70	2.24	-	-	-	2.30
Kentucky Total	89,935	28,111	10,062	29,401	47,295	204,805	3.93	3.42	3.10	3.79	1.52	3.25
Eastern	71,563	17,523	8,962	23,201	36,069	157,318	3.81	3.39	3.12	3.86	1.45	3.18
Western	18,372	10,588	1,100	6,200	11,227	47,486	4.43	3.48	3.00	3.57	1.78	3.49
Louisiana	w	-	-	-	w	w	13.10	-	-	-	8.52	12.14
Maryland	w	w	w	w	495	3,927	4.98	1.94	2.97	1.87	.98	3.41
Missouri	w	-	w	-	w	w	.76	-	3.25	-	5.30	1.84
Montana	-	-	40,156	w	w	50,849	-	-	19.12	17.59	26.74	19.49
New Mexico	w	w	w	w	w	33,360	8.57	9.00	5.50	4.13	1.57	6.68
North Dakota	23,835	4,600	-	3,984	3,952	36,371	18.05	15.71	-	14.66	23.77	17.66
Ohio	w	4,340	w	1,087	17,802	42,236	3.93	3.73	5.39	3.38	2.45	3.46
Oklahoma	972	500	-	-	950	2,422	3.54	3.03	-	-	1.72	2.80
Pennsylvania Total	29,820	10,935	9,690	6,142	25,561	82,148	4.25	3.02	2.24	2.38	1.47	2.80
Anthracite	1,520	1,225	606	741	1,714	5,806	4.50	5.44	1.71	2.15	.40	1.85
Bituminous	28,299	9,710	9,084	5,401	23,847	76,342	4.24	2.85	2.29	2.41	1.71	2.91
Tennessee	2,223	w	-	w	940	3,763	2.97	2.16	-	2.61	1.25	2.47
Texas	50,533	3,782	-	w	w	57,115	8.30	10.67	-	8.72	3.17	8.42
Utah	14,525	7,528	-	-	3,880	25,933	6.81	6.33	-	-	2.20	5.96
Virginia	26,120	3,790	3,258	3,973	13,737	50,879	3.06	2.61	2.54	2.46	1.18	2.41
Washington	w	-	-	w	-	w	4.08	-	-	2.76	-	4.00
West Virginia Total	63,185	23,074	12,255	8,770	84,422	191,706	3.76	4.55	3.78	4.53	2.20	3.27
Northern	10,083	4,677	4,146	477	40,632	60,015	3.29	4.09	4.56	2.16	2.52	2.98
Southern	53,102	18,397	8,108	8,293	43,790	131,691	3.87	4.68	3.46	4.84	1.96	3.39
Wyoming	84,295	66,000	w	w	59,780	277,875	24.44	24.64	37.35	24.70	16.52	24.46
Appalachian Total[1]	**227,204**	**69,220**	**39,304**	**44,432**	**179,734**	**559,893**	**3.67**	**3.25**	**2.87**	**3.42**	**1.78**	**3.00**
Interior Total[1]	**95,617**	**29,775**	**14,159**	**20,654**	**65,733**	**225,938**	**5.84**	**4.19**	**3.49**	**3.65**	**2.71**	**4.43**
Western Total[1]	**162,496**	**93,328**	**94,736**	**42,491**	**82,992**	**476,042**	**12.91**	**14.44**	**17.66**	**12.59**	**9.91**	**13.53**
East of Miss. River	**268,196**	**94,313**	**53,213**	**62,436**	**242,496**	**720,654**	**3.75**	**3.40**	**3.01**	**3.40**	**1.95**	**3.11**
West of Miss. River	**217,121**	**98,010**	**94,986**	**45,141**	**85,962**	**541,219**	**11.16**	**13.71**	**17.46**	**12.26**	**8.81**	**12.14**
U.S. Total	**485,317**	**192,323**	**148,198**	**107,577**	**328,458**	**1,261,873**	**5.32**	**5.51**	**6.45**	**4.89**	**2.48**	**4.70**

[1] For a definition of coal-producing regions, see Appendix C.

w Withheld to avoid disclosure of individual company data.

Notes: Productivity is calculated by dividing total coal production by the total direct labor hours worked by all employees engaged in production, preparation, processing, development, maintenance, repair, and shop or yard work at mining operations. Excludes office workers. Includes mining operations management and all technical and engineering personnel. Productive capacity is the maximum amount of coal that can be produced annually as reported by mining companies on Form EIA-7A. Capacity utilization is the ratio of total production to annual productive capacity as reported by mining companies on Form EIA-7A. Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons and preparation plants with less than 5,000 employee hours, which are not required to provide these data. Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 22. Productive Capacity and Capacity Utilization of Coal Mines by State and Recoverable Reserves Range, 1993
(Thousand Short Tons)

Coal-Producing State and Region	Recoverable Reserves Range (million short tons)							
	50 and over		10 to 50		0 to 10		Total	
	Productive Capacity	Capacity Utilization (percent)	Productive Capacity	Capacity Utilization (percent)	Productive Capacity	Capacity Utilization (percent)	Productive Capacity	Capacity Utilization (percent)
Alabama	11,227	91.69	6,441	85.44	10,248	86.82	27,916	88.46
Alaska	w	w	-	-	-	-	w	w
Arizona	w	w	-	-	-	-	w	w
Arkansas	-	-	-	-	w	w	w	w
Colorado	12,440	95.07	13,600	54.00	4,000	67.73	30,040	72.84
Illinois	17,160	76.36	31,328	56.67	20,832	49.12	69,320	59.28
Indiana	w	w	w	w	22,502	71.67	43,955	66.60
Iowa	-	-	w	w	-	-	w	w
Kansas	-	-	-	-	w	w	w	w
Kentucky Total	16,681	73.64	43,093	68.75	145,031	78.59	204,805	76.11
Eastern	3,515	81.34	34,632	66.36	119,172	78.84	157,318	76.15
Western	13,166	71.58	8,462	78.56	25,859	77.41	47,486	76.00
Louisiana	w	w	-	-	w	w	w	w
Maryland	-	-	w	w	w	w	3,927	85.01
Missouri	w	w	w	w	w	w	w	w
Montana	50,156	71.01	w	w	w	w	50,849	70.64
New Mexico	29,860	88.98	w	w	w	w	33,360	84.74
North Dakota	w	w	-	-	w	w	36,371	87.89
Ohio	w	w	w	w	23,162	68.19	42,236	67.94
Oklahoma	-	-	w	w	w	w	2,422	71.95
Pennsylvania Total	18,300	85.55	23,781	63.35	40,067	70.52	82,148	71.79
Anthracite	-	-	w	w	w	w	5,806	68.80
Bituminous	18,300	85.55	w	w	w	w	76,342	72.02
Tennessee	-	-	-	-	3,763	79.73	3,763	79.73
Texas	50,158	96.02	w	w	w	w	57,115	95.54
Utah	15,738	94.21	5,753	69.79	4,443	67.53	25,933	84.22
Virginia	-	-	12,103	61.71	38,776	81.87	50,879	77.07
Washington	-	-	w	w	w	w	w	w
West Virginia Total	29,582	43.71	59,729	67.66	102,395	75.05	191,706	67.91
Northern	24,132	39.50	16,404	64.44	19,480	69.77	60,015	56.15
Southern	5,450	62.35	43,326	68.88	82,915	76.29	131,691	73.28
Wyoming	269,481	75.87	w	w	w	w	277,875	75.62
Appalachian Total[1]	**72,166**	**68.53**	**148,724**	**66.64**	**339,002**	**76.50**	**559,893**	**72.85**
Interior Total[1]	**90,258**	**86.49**	**61,267**	**63.74**	**74,413**	**67.14**	**225,938**	**73.95**
Western Total[1]	**429,528**	**78.75**	**34,549**	**64.37**	**11,966**	**67.14**	**476,042**	**77.41**
East of Miss. River	**109,193**	**70.07**	**203,266**	**65.01**	**408,195**	**74.89**	**720,654**	**71.37**
West of Miss. River	**482,759**	**80.63**	**41,274**	**68.49**	**17,186**	**67.58**	**541,219**	**79.29**
U.S. Total	**591,952**	**78.68**	**244,540**	**65.60**	**425,381**	**74.60**	**1,261,873**	**74.77**

[1] For a definition of coal-producing regions, see Appendix C.
w Withheld to avoid disclosure of individual company data.
Notes: Recoverable reserves represent the quantity of coal that can be recovered (i.e., mined) from existing coal reserves at reporting mines. Productive capacity is the maximum amount of coal that can be produced annually as reported by mining companies on Form EIA-7A. Capacity utilization is the ratio of total production to productive capacity as reported by mining companies on Form EIA-7A. Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons, which are not required to provide these data. Totals may not equal sum of components due to independent rounding.
Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 23. Productive Capacity and Capacity Utilization of Coal Mines by State, Mine Type, and Union Type, 1993
(Thousand Short Tons)

Coal-Producing State and Region	UMWA		Other Unions		Nonunion		Total	
	Productive Capacity	Capacity Utilization (percent)	Productive Capacity	Capacity Utilization (percent)	Productive Capacity	Capacity Utilization (percent)	Productive Capacity	Capacity Utilization (percent)
Alabama	**22,089**	**89.68**	-	-	**5,827**	**83.82**	**27,916**	**88.46**
Underground	16,736	90.80	-	-	347	100.00	17,083	90.99
Surface	5,353	86.18	-	-	5,480	82.80	10,833	84.47
Alaska	-	-	w	w	-	-	w	w
Surface	-	-	w	w	-	-	w	w
Arizona	w	w	-	-	-	-	w	w
Surface	w	w	-	-	-	-	w	w
Arkansas	-	-	-	-	w	w	w	w
Surface	-	-	-	-	w	w	w	w
Colorado	**10,670**	**48.46**	**2,600**	**79.27**	**16,770**	**87.35**	**30,040**	**72.84**
Underground	7,720	40.77	-	-	11,655	83.17	19,375	66.28
Surface	2,950	68.59	2,600	79.27	5,115	96.87	10,665	84.76
Illinois	**53,875**	**52.78**	**4,064**	**72.98**	**11,381**	**85.14**	**69,320**	**59.28**
Underground	39,544	54.41	3,464	80.60	10,341	84.96	53,349	62.04
Surface	14,331	48.27	600	28.96	1,040	86.93	15,971	50.06
Indiana	**24,878**	**54.10**	**1,300**	**65.43**	**17,777**	**84.19**	**43,955**	**66.60**
Underground	w	w	-	-	w	w	w	w
Surface	w	w	w	w	w	w	w	w
Iowa	-	-	-	-	w	w	w	w
Surface	-	-	-	-	w	w	w	w
Kansas	w	w	-	-	w	w	w	w
Surface	w	w	-	-	w	w	w	w
Kentucky Total	**20,261**	**52.23**	**1,335**	**95.72**	**183,208**	**78.61**	**204,805**	**76.11**
Underground	17,085	52.09	535	99.12	108,130	76.33	125,749	73.14
Surface	3,177	52.95	800	93.44	75,079	81.89	79,055	80.85
Eastern	**8,325**	**61.30**	**1,335**	**95.72**	**147,659**	**76.81**	**157,318**	**76.15**
Underground	8,025	60.85	535	99.12	89,757	73.83	98,317	72.91
Surface	300	73.33	800	93.44	57,901	81.42	59,001	81.54
Western	**11,937**	**45.90**	-	-	**35,550**	**86.11**	**47,486**	**76.00**
Underground	9,060	44.33	-	-	18,373	88.56	27,433	73.95
Surface	2,877	50.82	-	-	17,177	83.49	20,054	78.80
Louisiana	-	-	-	-	w	w	w	w
Surface	-	-	-	-	w	w	w	w
Maryland	-	-	-	-	**3,927**	**85.01**	**3,927**	**85.01**
Underground	-	-	-	-	w	w	w	w
Surface	-	-	-	-	w	w	w	w
Missouri	w	w	-	-	w	w	w	w
Surface	w	w	-	-	w	w	w	w
Montana	w	w	w	w	**10,250**	**70.16**	**50,849**	**70.64**
Underground	-	-	-	-	w	w	w	w
Surface	w	w	w	w	w	w	w	w
New Mexico	**11,600**	**83.18**	**17,260**	**84.73**	**4,500**	**88.76**	**33,360**	**84.74**
Underground	w	w	-	-	-	-	w	w
Surface	w	w	w	w	w	w	w	w
North Dakota	**8,718**	**63.69**	**4,600**	**89.93**	**23,054**	**96.63**	**36,371**	**87.89**
Surface	8,718	63.69	4,600	89.93	23,054	96.63	36,371	87.89
Ohio	**18,732**	**63.79**	**349**	**67.44**	**23,154**	**71.31**	**42,236**	**67.94**
Underground	12,743	67.01	-	-	1,989	95.39	14,732	70.84
Surface	5,990	56.92	349	67.44	21,165	69.05	27,504	66.39
Oklahoma	-	-	w	w	w	w	**2,422**	**71.95**
Underground	-	-	-	-	w	w	w	w
Surface	-	-	w	w	w	w	w	w
Pennsylvania Total	**29,730**	**56.56**	**207**	**44.90**	**52,211**	**80.58**	**82,148**	**71.79**
Underground	27,630	55.13	-	-	25,189	85.61	52,819	69.66
Surface	2,100	75.35	207	44.90	27,022	75.89	29,329	75.63
Anthracite	**1,763**	**75.30**	**104**	**49.59**	**3,939**	**66.40**	**5,806**	**68.80**
Underground	-	-	-	-	715	39.18	715	39.18
Surface	1,763	75.30	104	49.59	3,224	72.43	5,092	72.96
Bituminous	**27,966**	**55.38**	**103**	**40.19**	**48,272**	**81.73**	**76,342**	**72.02**
Underground	27,630	55.13	-	-	24,475	86.96	52,105	70.08
Surface	336	75.64	103	40.19	23,798	76.36	24,237	76.19
Tennessee	-	-	-	-	**3,763**	**79.73**	**3,763**	**79.73**
Underground	-	-	-	-	w	w	w	w
Surface	-	-	-	-	w	w	w	w
Texas	-	-	**34,660**	**99.84**	**22,455**	**88.90**	**57,115**	**95.54**
Surface	-	-	34,660	99.84	22,455	88.90	57,115	95.54

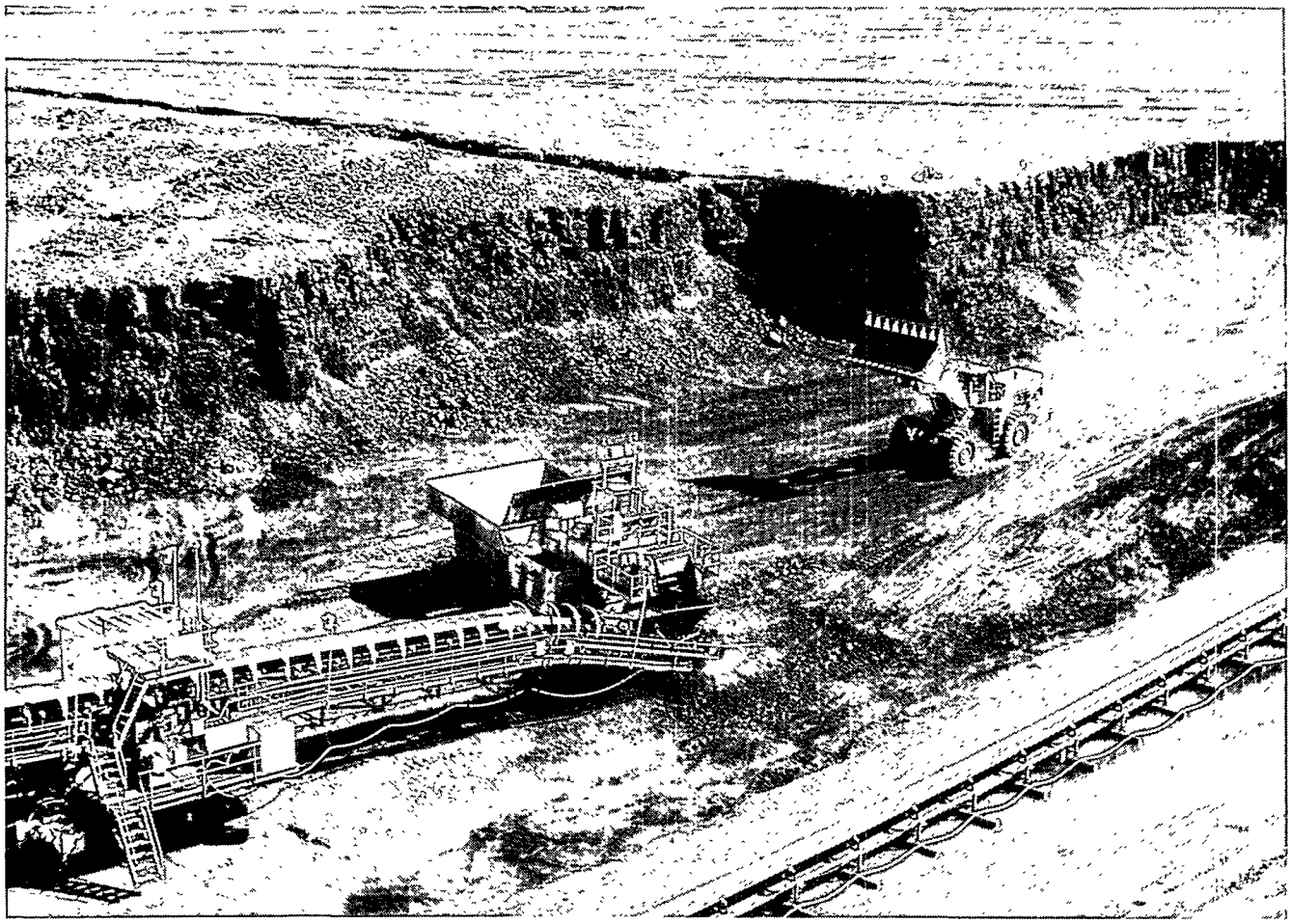
See footnotes at end of table.

Table 23. Productive Capacity and Capacity Utilization of Coal Mines by State, Mine Type, and Union Type, 1993 (Continued)
(Thousand Short Tons)

Coal-Producing State and Region	UMWA		Other Unions		Nonunion		Total	
	Productive Capacity	Capacity Utilization (percent)	Productive Capacity	Capacity Utilization (percent)	Productive Capacity	Capacity Utilization (percent)	Productive Capacity	Capacity Utilization (percent)
Utah	8,818	78.12	528	87.08	16,588	87.37	25,933	84.22
Underground	8,818	78.12	528	87.08	16,588	87.37	25,933	84.22
Virginia	18,685	69.27	-	-	32,194	81.60	50,879	77.07
Underground	17,333	68.35	-	-	21,808	83.68	39,141	76.89
Surface	1,352	81.14	-	-	10,386	77.22	11,738	77.67
Washington	-	-	w	w	w	w	w	w
Surface	-	-	w	w	w	w	w	w
West Virginia Total	102,801	56.08	-	-	88,906	81.59	191,706	67.91
Underground	80,805	56.03	-	-	52,469	81.09	133,275	65.90
Surface	21,995	56.26	-	-	36,436	82.31	58,432	72.50
Northern	40,838	45.90	-	-	19,178	77.97	60,015	56.15
Underground	40,838	45.90	-	-	10,631	78.71	51,468	52.67
Surface	-	-	-	-	8,547	77.05	8,547	77.05
Southern	61,963	62.79	-	-	69,728	82.59	131,691	73.28
Underground	39,967	66.39	-	-	41,839	81.70	81,806	74.22
Surface	21,995	56.26	-	-	27,889	83.93	49,885	71.73
Wyoming	w	w	w	w	269,325	75.29	277,875	75.62
Underground	-	-	-	-	w	w	w	w
Surface	w	w	w	w	w	w	w	w
Appalachian Total[1]	200,360	62.02	1,892	84.92	357,641	78.86	559,893	72.85
Underground	163,271	61.85	535	99.12	196,267	79.10	360,073	71.31
Surface	37,090	62.81	1,357	79.32	161,374	78.56	199,821	75.64
Interior Total[1]	91,264	52.45	40,373	95.41	94,301	85.56	225,938	73.95
Underground	52,694	52.11	3,464	80.60	31,131	82.92	87,288	64.23
Surface	38,570	52.92	36,910	96.80	63,170	86.86	138,650	80.07
Western Total[1]	77,648	74.06	57,558	78.91	340,836	77.92	476,042	77.41
Underground	18,538	58.02	528	87.08	31,446	83.74	50,511	74.34
Surface	59,110	79.09	57,030	78.83	309,391	77.33	425,531	77.78
East of Miss. River	291,050	58.97	7,255	74.74	422,349	79.86	720,654	71.37
Underground	215,965	59.47	3,999	83.08	227,157	79.66	447,121	69.94
Surface	75,086	57.55	3,257	64.50	195,191	80.09	273,533	73.72
West of Miss. River	78,222	74.15	92,567	86.55	370,430	78.56	541,219	79.29
Underground	18,538	58.02	528	87.08	31,686	83.41	50,751	74.18
Surface	59,685	79.16	92,039	86.55	338,744	78.11	490,468	79.82
U.S. Total	369,272	62.19	99,823	85.70	792,778	79.25	1,261,873	74.77
Underground	234,502	59.36	4,527	83.55	258,843	80.12	497,872	70.37
Surface	134,770	67.12	95,296	85.80	533,935	78.83	764,002	77.63

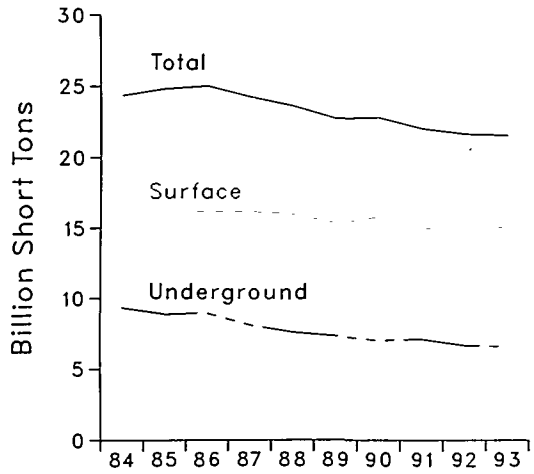
[1] For a definition of coal-producing regions, see Appendix C.
w Withheld to avoid disclosure of individual company data.
Notes: Productive capacity is the maximum amount of coal that can be produced annually as reported by mining companies on Form EIA-7A. Capacity utilization is the ratio of total production to annual productive capacity as reported by mining companies on Form EIA-7A. Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons, which are not required to provide these data. Totals may not equal sum of components due to independent rounding. See Glossary for listing of other unions.
Source: Energy Information Administration, Form EIA-7A, "Coal Production Report."

Recoverable Coal Reserves at Mines



Operations at the Antelope surface mine in Converse County, Wyoming. After the coal is removed, the front-end loader fills the in-pit crusher and an overland conveyor system transports the coal from the mine to the storage facilities.

Figure 3. Recoverable Coal Reserves at U.S. Coal Mines by Mine Type and by Region, 1984-1993



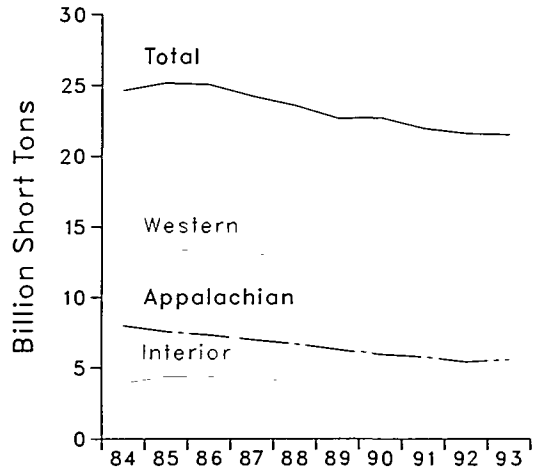
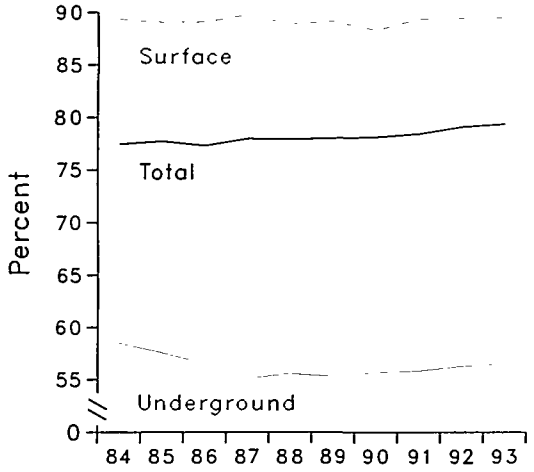
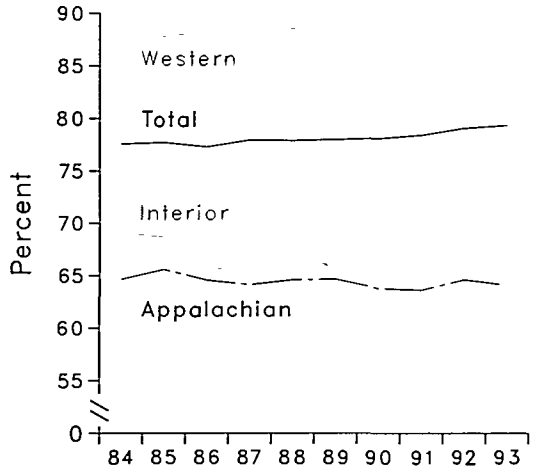


Figure 4. Average Recovery Percentage at U.S. Coal Mines by Mine Type and by Region, 1984-1993





Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 24. Recoverable Coal Reserves by State, 1984, 1989-1993
(Million Short Tons)

Coal-Producing State and Region	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Alabama	427	468	470	489	508	659	-8.8	-4.3	-4.7
Alaska	w	w	w	w	w	w	w	w	w
Arizona	w	w	w	w	w	w	w	w	w
Arkansas	w	w	w	w	w	w	w	w	w
California	-	w	w	w	w	-	w	w	-
Colorado	609	608	618	546	662	864	.1	-2.1	-3.8
Georgia	-	-	-	-	-	w	-	-	w
Illinois	1,064	1,199	1,257	1,174	1,381	1,396	-11.3	-6.3	-3.0
Indiana	379	405	420	444	475	497	-6.2	-5.5	-2.9
Iowa	w	w	w	w	w	8	w	w	w
Kansas	w	w	w	w	28	39	w	w	w
Kentucky Total	1,828	1,453	1,632	1,585	1,513	1,886	25.8	4.8	-.3
Eastern	1,347	955	1,084	994	933	1,256	41.1	9.6	.8
Western	481	498	548	591	580	630	-3.5	-4.6	-2.9
Louisiana	w	w	w	w	w	-	w	w	w
Maryland	66	59	86	85	87	68	12.1	-6.6	-.3
Missouri	w	w	w	w	w	343	w	w	w
Montana	1,285	1,352	1,393	1,872	1,514	1,807	-4.9	-4.0	-3.7
New Mexico	1,473	1,495	1,608	1,527	1,411	1,521	-1.4	1.1	-.3
North Dakota	1,411	1,335	1,386	1,414	1,361	1,622	5.7	.9	-1.5
Ohio	520	576	591	692	815	891	-9.8	-10.6	-5.8
Oklahoma	46	48	40	38	24	59	-4.3	18.1	-2.8
Pennsylvania Total	940	937	986	1,126	1,184	1,451	.2	-5.6	-4 7
Anthracite	65	70	76	77	60	67	-7.0	2.1	-.2
Bituminous	874	867	910	1,050	1,124	1,385	.8	-6.1	-5.0
Tennessee	29	43	56	63	72	107	-31.4	-19.9	-13.3
Texas	1,105	1,188	1,225	1,209	1,135	877	-7.0	-.7	2.6
Utah	447	488	509	505	519	533	-8.5	-3.7	-1.9
Virginia	336	366	412	424	420	612	-8.2	-5.4	-6.4
Washington	w	w	w	w	w	w	w	w	w
West Virginia Total	1,931	2,043	2,122	2,115	2,313	2,935	-5.5	-4.4	-4.5
Northern	824	960	1,035	1,018	1,183	1,521	-14.3	-8.6	-6.6
Southern	1,107	1,083	1,087	1,097	1,131	1,414	2.3	-.5	-2.7
Wyoming	6,831	6,751	6,336	6,564	6,288	5,927	1.2	2.1	1.6
Appalachian Total[1]	**5,596**	**5,446**	**5,807**	**5,989**	**6,331**	**w**	**2.7**	**-3.0**	**w**
Interior Total[1]	**3,300**	**3,559**	**3,715**	**3,682**	**3,907**	**w**	**-7.3**	**-4.1**	**w**
Western Total[1]	**12,639**	**12,622**	**12,477**	**13,091**	**12,442**	**12,768**	**.1**	**.4**	**-.1**
East of Miss. River	**7,520**	**7,549**	**8,031**	**8,197**	**8,767**	**10,502**	**-.4**	**-3.8**	**-3.6**
West of Miss. River	**14,016**	**14,078**	**13,968**	**14,564**	**13,913**	**14,097**	**-.4**	**.2**	**-.1**
U.S. Total	**21,535**	**21,627**	**21,999**	**22,761**	**22,680**	**24,599**	**-.4**	**-1.3**	**-1.5**

[1] For a definition of coal-producing regions, see Appendix C.
[w] Withheld to avoid disclosure of individual company data.
Notes: Recoverable reserves represent the quantity of coal that can be recovered (i.e., mined) from existing coal reserves at reporting mines. Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons, which are not required to provide these data. Totals may not equal sum of components due to independent rounding.
Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 25. Average Recovery Percentage at Coal Mines by State, 1984, 1989-1993

Coal-Producing State and Region	1993	1992	1991	1990	1989	1984
Alabama	63.16	61.97	60.51	60.40	62.84	65.75
Alaska	w	w	w	w	w	w
Arizona	w	w	w	w	w	w
Arkansas	w	w	w	w	w	w
California	-	w	w	w	w	-
Colorado	71.99	71.56	69.09	68.55	67.16	68.05
Georgia	-	-	-	-	-	w
Illinois	51.19	51.53	51.57	52.15	49.37	51.48
Indiana	73.12	74.48	72.48	71.24	71.23	71.25
Iowa	w	w	w	w	w	67.20
Kansas	w	w	w	w	76.55	81.81
Kentucky Total	62.26	63.24	62.87	63.21	64.81	69.43
Eastern	64.00	66.84	65.98	66.97	68.19	68.99
Western	57.38	56.36	56.71	56.88	59.39	70.31
Louisiana	w	w	w	w	w	-
Maryland	67.82	66.16	72.32	73.17	71.53	75.75
Missouri	w	w	w	w	w	85.42
Montana	90.43	89.70	89.89	82.47	89.97	93.32
New Mexico	92.28	91.92	92.21	92.31	93.66	91.28
North Dakota	90.96	90.62	90.99	90.91	90.04	89.59
Ohio	68.86	69.15	67.58	69.79	69.34	64.62
Oklahoma	66.11	66.73	70.48	72.35	86.63	85.32
Pennsylvania Total	67.95	66.12	63.77	67.12	68.30	68.08
Anthracite	61.04	62.62	62.85	51.38	50.76	61.23
Bituminous	68.47	66.41	63.85	68.26	69.24	68.41
Tennessee	68.92	69.80	73.50	68.12	65.64	68.20
Texas	84.23	85.39	84.02	83.22	81.38	86.53
Utah	47.51	49.04	52.71	52.41	54.09	56.61
Virginia	62.72	64.78	63.61	66.21	65.64	68.97
Washington	w	w	w	w	w	w
West Virginia Total	61.30	62.05	61.38	58.36	59.69	59.59
Northern	52.17	54.04	51.92	50.54	50.62	53.46
Southern	68.09	69.15	70.40	65.62	69.17	66.18
Wyoming	91.94	91.19	91.67	91.57	92.10	91.86
Appalachian Total[1]	**64.11**	**64.62**	**63.64**	**63.79**	**64.67**	**w**
Interior Total[1]	**68.27**	**68.46**	**67.57**	**67.70**	**65.91**	**w**
Western Total[1]	**88.98**	**88.31**	**88.53**	**87.59**	**88.59**	**88.28**
East of Miss. River	**62.31**	**62.52**	**61.74**	**62.03**	**62.27**	**63.56**
West of Miss. River	**88.48**	**87.96**	**88.01**	**87.16**	**87.92**	**88.05**
U.S. Total	**79.34**	**79.08**	**78.42**	**78.11**	**78.00**	**77.59**

[1] For a definition of coal-producing regions, see Appendix C.

w Withheld to avoid disclosure of individual company data.

Notes: Average recovery percentage represents the percentage of coal that can be recovered from coal reserves at reporting mines, weighted for all mines in the geographic area. Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons, which are not required to provide these data.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 26. Recoverable Coal Reserves and Average Recovery Percentage at Mines by State and Mine Type, 1993
(Million Short Tons)

Coal-Producing State and Region	Underground		Surface		Total	
	Recoverable Coal Reserves	Average Recovery Percentage	Recoverable Coal Reserves	Average Recovery Percentage	Recoverable Coal Reserves	Average Recovery Percentage
Alabama	359	58.42	68	88.26	427	63.16
Alaska	-	-	w	w	w	w
Arizona	-	-	w	w	w	w
Arkansas	-	-	w	w	w	w
Colorado	409	63.37	200	89.61	609	71.99
Illinois	1,012	49.96	52	75.20	1,064	51.19
Indiana	w	w	w	w	379	73.12
Iowa	-	-	w	w	w	w
Kansas	-	-	w	w	w	w
Kentucky Total	1,287	55.08	541	79.34	1,828	62.26
Eastern	940	57.73	407	78.49	1,347	64.00
Western	347	47.87	134	81.92	481	57.38
Louisiana	-	-	w	w	w	w
Maryland	w	w	w	w	66	67.82
Missouri	-	-	w	w	w	w
Montana	w	w	w	w	1,285	90.43
New Mexico	w	w	w	w	1,473	92.28
North Dakota	-	-	1,411	90.96	1,411	90.96
Ohio	295	57.91	225	83.23	520	68.86
Oklahoma	w	w	w	w	46	66.11
Pennsylvania Total	772	65.03	168	81.42	940	67.95
Anthracite	53	63.19	13	52.04	65	61.04
Bituminous	719	65.16	155	83.81	874	68.47
Tennessee	w	w	w	w	29	68.92
Texas	-	-	1,105	84.23	1,105	84.23
Utah	447	47.51	-	-	447	47.51
Virginia	294	58.89	41	89.90	336	62.72
Washington	-	-	w	w	w	w
West Virginia Total	1,442	56.22	489	76.27	1,931	61.30
Northern	776	51.05	47	70.47	824	52.17
Southern	666	62.24	442	76.90	1,107	68.09
Wyoming	w	w	w	w	6,831	91.94
Appalachian Total[1]	**4,179**	**58.86**	**1,417**	**79.60**	**5,596**	**64.11**
Interior Total[1]	**1,452**	**49.71**	**1,848**	**82.85**	**3,300**	**68.27**
Western Total[1]	**928**	**55.80**	**11,712**	**91.61**	**12,639**	**88.98**
East of Miss. River	**5,597**	**56.48**	**1,922**	**79.27**	**7,520**	**62.31**
West of Miss. River	**962**	**55.95**	**13,054**	**90.88**	**14,016**	**88.48**
U.S. Total	**6,559**	**56.40**	**14,977**	**89.39**	**21,535**	**79.34**

[1] For a definition of coal-producing regions, see Appendix C.
w Withheld to avoid disclosure of individual company data.
Notes: Recoverable reserves represent the quantity of coal that can be recovered (i.e., mined) from existing coal reserves at reporting mines. Average recovery percentage represents the percentage of coal that can be recovered from coal reserves at reporting mines, weighted for all mines in the reported geographic area. Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons, which are not required to provide these data. Totals may not equal sum of components due to independent rounding.
Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 27. Recoverable Coal Reserves at Underground Coal Mines by State and Mining Method, 1993
(Million Short Tons)

Coal-Producing State and Region	Continuous[1]	Conventional[1]	Longwall[1]	Shortwall[1]	Other[1 2]	Unknown[3]	Total
Alabama	88	-	271	-	-	-	359
Colorado	162	*	247	-	-	-	409
Illinois	719	36	257	-	-	-	1,012
Indiana	w	-	-	-	-	-	w
Kentucky Total	1,021	159	103	-	4	-	1,287
Eastern	750	130	56	-	4	-	940
Western	271	29	47	-	-	-	347
Maryland	w	-	w	-	-	-	w
Montana	-	w	-	-	-	-	w
New Mexico	-	-	w	-	-	-	w
Ohio	63	-	232	-	-	-	295
Oklahoma	w	-	-	-	-	-	w
Pennsylvania Total	300	38	412	-	21	-	772
Anthracite	-	32	-	-	21	-	53
Bituminous	300	7	412	-	-	-	719
Tennessee	w	w	-	-	-	-	w
Utah	189	5	252	-	-	-	447
Virginia	138	19	137	-	1	-	294
West Virginia Total	703	67	672	-	-	-	1,442
Northern	173	36	567	-	-	-	776
Southern	531	30	105	-	-	-	666
Wyoming	w	w	w	-	-	-	w
Appalachian Total[4]	**2,069**	**264**	**1,820**	-	**26**	-	**4,179**
Interior Total[4]	**1,084**	**65**	**303**	-	-	-	**1,452**
Western Total[4]	**382**	**13**	**533**	-	-	-	**928**
East of Miss. River	**3,119**	**328**	**2,123**	-	**26**	-	**5,597**
West of Miss. River	**416**	**13**	**533**	-	-	-	**962**
U.S. Total	**3,535**	**342**	**2,656**	-	**26**	-	**6,559**

[1] Calculated by multiplying reported mining method percentages by the individual mine reserves.
[2] Includes scoop loading and hand loading.
[3] Calculated by subtracting the sum of the reported mining methods from total received underground reserves.
[4] For a definition of coal-producing regions, see Appendix C.
* Data round to zero.
w Withheld to avoid disclosure of individual company data.

Notes: Recoverable reserves represent the quantity of coal that can be recovered (i.e., mined) from existing coal reserves at reporting mines. Excludes mines producing less than 10,000 short tons, which are not required to provide these data. Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 28. Average Recovery Percentage at Underground Coal Mines by State and Mining Method, 1993

Coal-Producing State and Region	Continuous[1]	Conventional[1]	Longwall[1]	Shortwall[1]	Other[1 2]	Unknown[3]	Total
Alabama	57.17	-	58.82	-	-	-	58.42
Colorado	60.71	70.00	65.10	-	-	-	63.37
Illinois	46.52	45.00	60.28	-	-	-	49.96
Indiana	w	-	-	-	-	-	w
Kentucky Total	54.47	61.37	50.72	-	69.94	-	55.08
Eastern	56.98	64.43	51.31	-	69.94	-	57.73
Western	47.55	47.46	50.00	-	-	-	47.87
Maryland	w	-	w	-	-	-	w
Montana	-	w	-	-	-	-	w
New Mexico	-	-	w	-	-	-	w
Ohio	56.40	-	58.32	-	-	-	57.91
Oklahoma	w	-	-	-	-	-	w
Pennsylvania Total	66.26	55.80	64.46	-	75.14	-	65.03
Anthracite	-	55.19	-	-	75.14	-	63.19
Bituminous	66.26	58.75	64.46	-	-	-	65.16
Tennessee	w	w	-	-	-	-	w
Utah	47.85	46.00	47.29	-	-	-	47.51
Virginia	59.66	57.41	58.29	-	65.00	-	58.89
West Virginia Total	58.98	64.30	52.53	-	-	-	56.22
Northern	52.91	71.09	49.20	-	-	-	51.05
Southern	60.95	56.08	70.52	-	-	-	62.24
Wyoming	w	w	w	-	-	-	w
Appalachian Total[4]	**59.29**	**63.16**	**57.53**	**-**	**73.99**	**-**	**58.86**
Interior Total[4]	**47.42**	**46.08**	**58.70**	**-**	**-**	**-**	**49.71**
Western Total[4]	**54.82**	**59.77**	**56.40**	**-**	**-**	**-**	**55.80**
East of Miss. River	**55.16**	**59.78**	**57.70**	**-**	**73.99**	**-**	**56.48**
West of Miss. River	**55.24**	**59.77**	**56.40**	**-**	**-**	**-**	**55.95**
U.S. Total	**55.17**	**59.78**	**57.44**	**-**	**73.99**	**-**	**56.40**

[1] Calculated by multiplying reported mining method percentages by the individual mine recovery percentage.
[2] Includes scoop loading and hand loading.
[3] Calculated by subtracting the sum of the reported mining methods from total received underground percentage.
[4] For a definition of coal-producing regions, see Appendix C.
[w] Withheld to avoid disclosure of individual company data.

Notes: Average recovery percentage represents the percentage of coal that can be recovered from coal reserves at reporting mines, weighted for all mines in the reported geographic area. Excludes mines producing less than 10,000 short tons, which are not required to provide these data.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 29. Recoverable Coal Reserves and Average Recovery Percentage at U.S. Mines by Mine Production Range and Mine Type, 1993
(Million Short Tons)

Mine Production Range (thousand short tons)	Underground		Surface		Total	
	Recoverable Coal Reserves	Average Recovery Percentage	Recoverable Coal Reserves	Average Recovery Percentage	Recoverable Coal Reserves	Average Recovery Percentage
Over 1,000	3,878	54.43	13,083	90.23	16,960	82.05
500 to 1,000	1,054	58.18	422	84.07	1,476	65.58
200 to 500	731	57.21	385	81.74	1,116	65.67
100 to 200	373	60.93	479	86.60	852	75.35
50 to 100	299	61.97	325	78.56	624	70.61
10 to 50	224	64.68	283	85.91	507	76.53
U.S. Total	**6,559**	**56.40**	**14,977**	**89.39**	**21,535**	**79.34**

Notes: Recoverable reserves represent the quantity of coal that can be recovered (i.e., mined) from existing coal reserves at reporting mines. Average recovery percentage represents the percentage of coal that can be recovered from coal reserves at reporting mines, weighted for all mines in the reported geographic area. Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons, which are not required to provide these data. Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 30. Recoverable Coal Reserves and Average Recovery Percentage at U.S. Mines by Coalbed Thickness and Mine Type, 1993
(Million Short Tons)

Coalbed Thickness (Inches)	Underground		Surface		Total	
	Recoverable Coal Reserves	Average Recovery Percentage	Recoverable Coal Reserves	Average Recovery Percentage	Recoverable Coal Reserves	Average Recovery Percentage
7-12	-	-	37	82.64	37	82.64
13-18	-	-	55	85.73	55	85.73
19-24	15	45.38	302	72.65	317	71.35
25-30	53	58.10	206	81.57	259	76.78
31-36	230	60.96	352	77.24	582	70.81
37-42	398	59.29	351	78.93	748	68.49
43-48	630	64.43	368	86.87	998	72.71
49-54	337	55.53	358	91.60	695	74.10
55-60	959	58.61	284	79.17	1,243	63.31
61-66	990	54.29	321	84.15	1,311	61.60
67-72	623	57.12	286	81.58	909	64.82
73-78	359	48.44	182	85.67	541	60.97
79-84	641	54.34	362	93.43	1,003	68.44
85-90	150	48.25	64	86.60	214	59.66
91-96	354	55.29	135	85.95	489	63.75
97-102	88	51.14	256	88.21	344	78.70
103-108	83	50.86	1	88.63	84	51.15
109-114	93	61.72	39	75.19	132	65.66
115-120	301	60.13	23	78.83	324	61.46
> 120	254	47.58	10,996	91.48	11,249	90.49
U.S. Total	**6,559**	**56.40**	**14,977**	**89.39**	**21,535**	**79.34**

Notes: Recoverable reserves represent the quantity of coal that can be recovered (i.e., mined) from existing coal reserves at reporting mines. Average recovery percentage represents thet percentage of coal that can be recovered from coal reserves at reporting mines, weighted for all mines in the reported geographic area. Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons, which are not required to provide these data. Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 31. Recoverable Coal Reserves and Average Recovery Percentage at Mines by State, Mine Type, and Union Type, 1993
(Million Short Tons)

Coal-Producing State and Region	UMWA		Other Unions		Nonunion		Total	
	Recoverable Coal Reserves	Average Recovery Percentage	Recoverable Coal Reserves	Average Recovery Percentage	Recoverable Coal Reserves	Average Recovery Percentage	Recoverable Coal Reserves	Average Recovery Percentage
Alabama	413	62.55	-	-	14	80.84	427	63.16
Underground	355	58.30	-	-	4	70.00	359	58.42
Surface	57	88.92	-	-	10	84.65	68	88.26
Alaska	-	-	w	w	-	-	w	w
Surface	-	-	w	w	-	-	w	w
Arizona	w	w	-	-	-	-	w	w
Surface	w	w	-	-	-	-	w	w
Arkansas	-	-	-	-	w	w	w	w
Surface	-	-	-	-	w	w	w	w
Colorado	136	73.28	48	90.00	424	69.54	609	71.99
Underground	105	67.91	-	-	304	61.79	409	63.37
Surface	31	91.39	48	90.00	121	89.00	200	89.61
Illinois	631	49.44	22	61.66	411	53.34	1,064	51.19
Underground	587	47.55	22	61.66	403	52.83	1,012	49.96
Surface	44	74.47	-	-	8	79.31	52	75.20
Indiana	281	73.21	1	68.00	97	72.93	379	73.12
Underground	w	w	-	-	w	w	w	w
Surface	w	w	w	w	w	w	w	w
Iowa	-	-	-	-	w	w	w	w
Surface	-	-	-	-	w	w	w	w
Kansas	w	w	-	-	-	-	w	w
Surface	w	w	-	-	-	-	w	w
Kentucky Total	296	53.49	8	72.44	1,524	63.91	1,828	62.26
Underground	291	52.93	4	60.00	992	55.69	1,287	55.08
Surface	5	83.66	4	85.00	532	79.25	541	79.34
Eastern	156	61.04	8	72.44	1,183	64.34	1,347	64.00
Underground	156	60.98	4	60.00	780	57.07	940	57.73
Surface	*	90.00	4	85.00	403	78.41	407	78.49
Western	140	45.04	-	-	341	62.44	481	57.38
Underground	135	43.61	-	-	212	50.59	347	47.87
Surface	5	83.28	-	-	129	81.87	134	81.92
Louisiana	-	-	-	-	w	w	w	w
Surface	-	-	-	-	w	w	w	w
Maryland	-	-	-	-	66	67.82	66	67.82
Underground	-	-	-	-	w	w	w	w
Surface	-	-	-	-	w	w	w	w
Missouri	w	w	-	-	w	w	w	w
Surface	w	w	-	-	w	w	w	w
Montana	w	w	w	w	191	94.69	1,285	90.43
Underground	-	-	-	-	w	w	w	w
Surface	w	w	w	w	w	w	w	w
New Mexico	130	79.36	1,133	94.93	211	86.00	1,473	92.28
Underground	w	w	-	-	-	-	w	w
Surface	w	w	w	w	w	w	w	w
North Dakota	403	90.00	208	90.00	800	91.69	1,411	90.96
Surface	403	90.00	208	90.00	800	91.69	1,411	90.96
Ohio	369	63.98	*	61.90	151	80.82	520	68.86
Underground	277	58.37	-	-	18	50.83	295	57.91
Surface	92	80.84	*	61.90	133	84.91	225	83.23
Oklahoma	-	-	w	w	w	w	46	66.11
Underground	-	-	-	-	w	w	w	w
Surface	-	-	w	w	w	w	w	w
Pennsylvania Total	390	61.27	1	96.02	549	72.66	940	67.95
Underground	382	60.84	-	-	390	69.13	772	65.03
Surface	8	82.83	1	96.02	159	81.28	168	81.42
Anthracite	3	79.06	1	99.00	62	59.80	65	61.04
Underground	-	-	-	-	53	63.19	53	63.19
Surface	3	79.06	1	99.00	9	40.34	13	52.04
Bituminous	387	61.14	*	46.00	487	74.29	874	68.47
Underground	382	60.84	-	-	337	70.06	719	65.16
Surface	5	84.99	*	46.00	150	83.78	155	83.81
Tennessee	-	-	-	-	29	68.92	29	68.92
Underground	-	-	-	-	w	w	w	w
Surface	-	-	-	-	w	w	w	w
Texas	-	-	572	89.33	532	78.75	1,105	84.23
Surface	-	-	572	89.33	532	78.75	1,105	84.23

See footnotes at end of table.

Table 31. Recoverable Coal Reserves and Average Recovery Percentage at Mines by State, Mine Type, and Union Type, 1993 (Continued)
(Million Short Tons)

Coal-Producing State and Region	UMWA		Other Unions		Nonunion		Total	
	Recoverable Coal Reserves	Average Recovery Percentage	Recoverable Coal Reserves	Average Recovery Percentage	Recoverable Coal Reserves	Average Recovery Percentage	Recoverable Coal Reserves	Average Recovery Percentage
Utah	189	43.45	13	59.00	244	50.04	447	47.51
Underground	189	43.45	13	59.00	244	50.04	447	47.51
Virginia	173	56.73	-	-	163	69.07	336	62.72
Underground	170	56.12	-	-	125	62.68	294	58.89
Surface	3	92.36	-	-	39	89.72	41	89.90
Washington	-	-	w	w	w	w	w	w
Surface	-	-	w	w	w	w	w	w
West Virginia Total	1,302	57.90	-	-	629	68.33	1,931	61.30
Underground	1,021	52.87	-	-	421	64.33	1,442	56.22
Surface	281	76.13	-	-	207	76.47	489	76.27
Northern	684	49.22	-	-	139	66.61	824	52.17
Underground	684	49.22	-	-	92	64.63	776	51.05
Surface	-	-	-	-	47	70.47	47	70.47
Southern	618	67.50	-	-	489	68.82	1,107	68.09
Underground	337	60.28	-	-	329	64.25	666	62.24
Surface	281	76.13	-	-	160	78.23	442	76.90
Wyoming	w	w	w	w	6,619	91.91	6,831	91.94
Underground	-	-	-	-	w	w	w	w
Surface	w	w	w	w	w	w	w	w
Appalachian Total[1]	2,802	59.96	9	74.21	2,784	68.26	5,596	64.11
Underground	2,361	56.39	4	60.00	1,814	62.07	4,179	58.86
Surface	441	79.01	5	85.84	970	79.84	1,417	79.60
Interior Total[1]	1,107	56.87	595	88.28	1,598	68.71	3,300	68.27
Underground	751	46.94	22	61.66	679	52.40	1,452	49.71
Surface	356	77.82	574	89.28	919	80.78	1,848	82.85
Western Total[1]	1,689	82.90	2,456	91.40	8,494	89.49	12,639	88.98
Underground	315	52.70	13	59.00	599	57.36	928	55.80
Surface	1,374	89.83	2,443	91.58	7,895	91.93	11,712	91.61
East of Miss. River	3,854	58.66	32	65.46	3,634	66.15	7,520	62.31
Underground	3,112	54.11	26	61.40	2,459	59.43	5,597	56.48
Surface	742	77.73	6	82.27	1,174	80.24	1,922	79.27
West of Miss. River	1,744	83.08	3,029	91.01	9,243	88.68	14,016	88.48
Underground	315	52.70	13	59.00	633	57.50	962	55.95
Surface	1,429	89.78	3,015	91.15	8,610	90.97	13,054	90.88
U.S. Total	5,598	66.27	3,060	90.75	12,877	82.32	21,535	79.34
Underground	3,427	53.98	39	60.59	3,093	59.03	6,559	56.40
Surface	2,171	85.66	3,022	91.13	9,784	89.68	14,977	89.39

[1] For a definition of coal-producing regions, see Appendix C.
* Data round to zero.
w Withheld to avoid disclosure of individual company data.

Notes: Recoverable reserves represent the quantity of coal that can be recovered (i.e., mined) from existing coal reserves at reporting mines. Average recovery percentage represents the percentage of coal that can be recovered from coal reserves at reporting mines, weighted for all mines in the reported geographic area. Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons, which are not required to provide these data. Totals may not equal sum of components due to independent rounding. See Glossary for listing of other unions.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

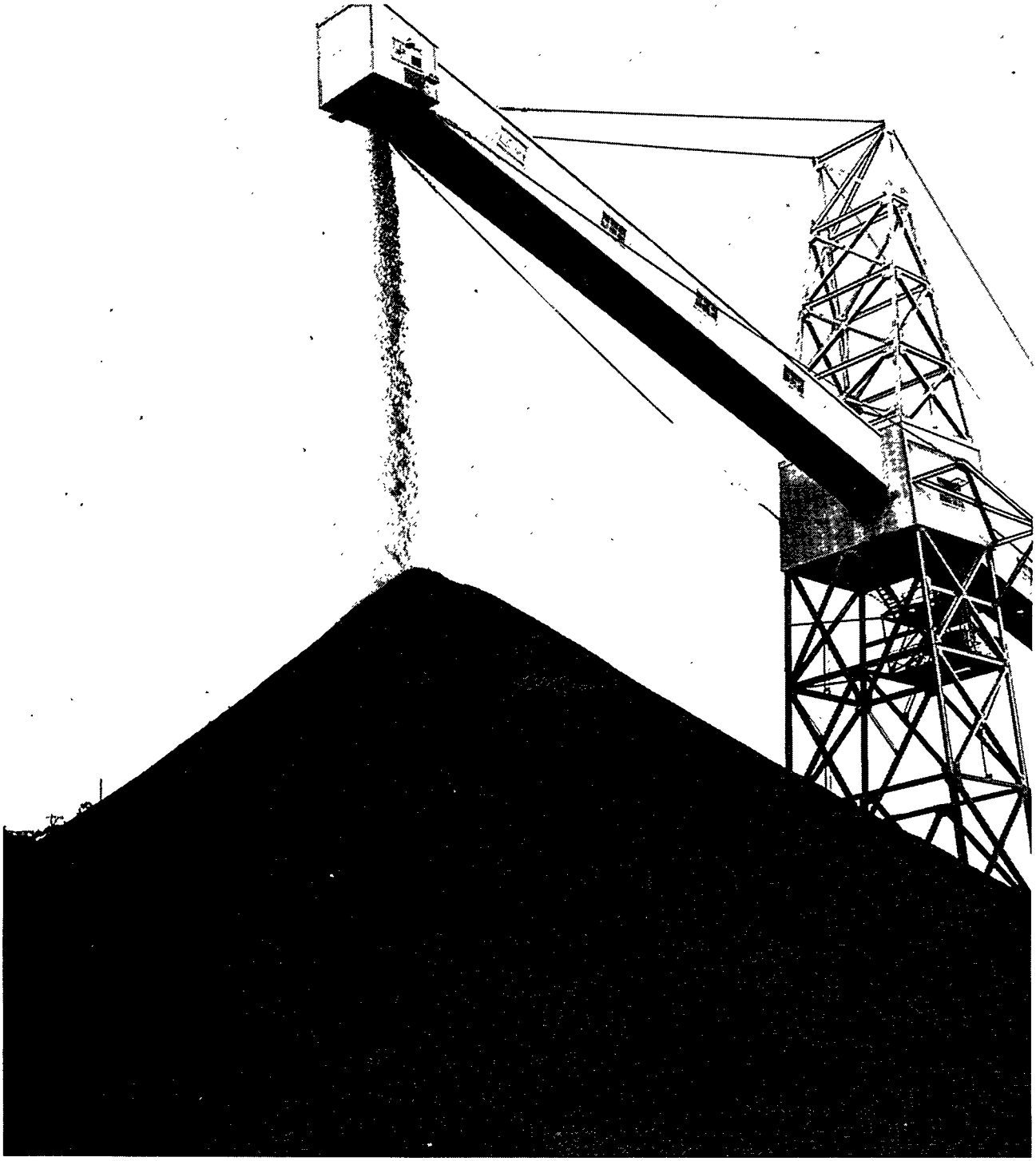
Table 32. Status of Recoverable Coal Reserves and Coal Production from Producing Federal Coal Leases by State, Fiscal Year 1993
(Million Short Tons)

Coal-Producing State	Number of Leases	Recoverable Coal Reserves	Production
Alabama	2	30	0.4
Alaska	-	20	-
Colorado	28	1,560	13.2
Kentucky	1	10	.1
Montana	13	970	26.6
New Mexico	8	280	4.0
North Dakota	5	150	2.9
Oklahoma	3	50	.5
Utah	35	3,060	19.0
Washington	1	-	.8
Wyoming	35	6,880	178.5
U.S. Total	**131**	**13,010**	**246.0**

Note: Fiscal year 1993 is the period from July 1, 1992 to June 30, 1993. Output from Federal Lands is reported as sales volume, the basis for royalties. It is approximately equivalent to production, which includes coal sold and coal added to stockpiles. Totals may not equal sum of components because of independent rounding.

Source: U.S. Department of the Interior, Bureau of Land Management, *Federal Coal Management Report for Fiscal Year 1993, Production and Royalties of Federal Coal Leases.*

Producer/Distributor Stocks



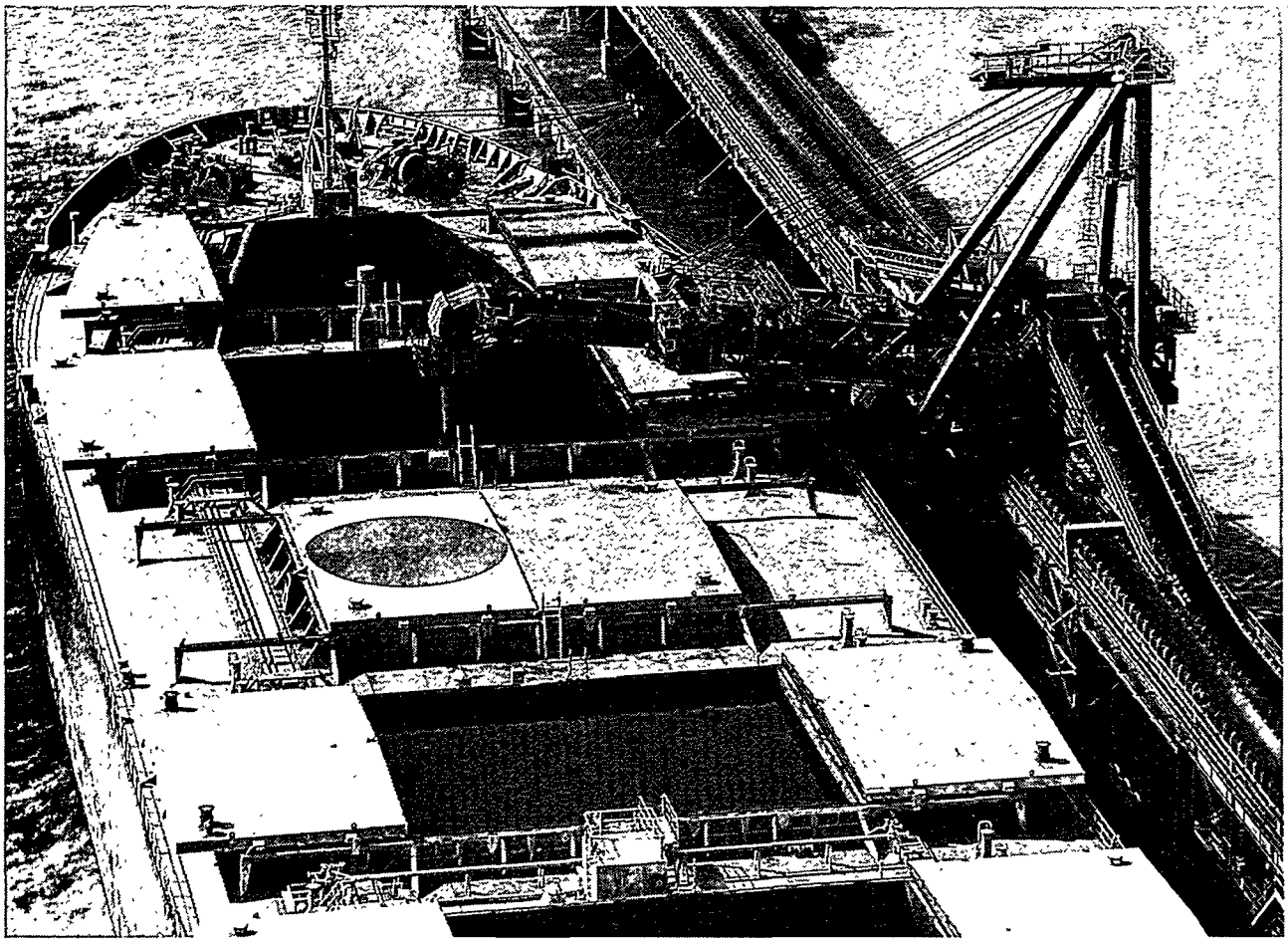
U.S. producer and distributor stocks at the end of 1993 totaled 25 million short tons, the lowest year-end level since 1981.

Table 33. Year-End Producer and Distributor Coal Stocks by State, 1989-1993
(Thousand Short Tons)

Coal-Producing State and Region	1993	1992	1991	1990	1989	Percent Change 1992-1993	Average Annual Percent Change 1989-1993
Alabama	1,698	2,185	2,233	2,764	2,802	-22.3	-11.8
Alaska	19	71	75	124	128	-72.9	-37.8
Arizona	1,590	1,555	1,461	1,191	1,333	2.2	4.5
Arkansas	5	6	-	-	-	-18.8	-
California	-	36	127	108	110	-100.0	-
Colorado	1,155	955	850	1,274	817	21.0	9.0
Illinois	713	1,969	1,418	1,955	2,385	-63.8	-26.0
Indiana	527	1,016	525	559	360	-48.1	9.9
Iowa	-	-	*	*	*	-	-
Kansas	25	28	20	33	16	-13.8	11.3
Kentucky Total	3,216	3,796	4,646	4,114	4,509	-15.3	-8.1
Eastern	2,558	2,809	3,266	3,188	3,465	-8.9	-7.3
Western	658	987	1,379	926	1,044	-33.4	-10.9
Louisiana	12	2	3	12	9	399.5	7.6
Maryland	123	59	169	127	175	110.2	-8.4
Missouri	2	-	5	-	*	-	134.0
Montana	876	694	571	613	586	26.3	10.6
New Mexico	2,343	1,648	1,760	2,401	2,119	42.2	2.5
North Dakota	1,607	1,614	1,619	1,830	1,752	-.5	-2.1
Ohio	550	1,087	821	887	377	-49.3	9.9
Oklahoma	5	19	41	52	25	-75.1	-34.5
Pennsylvania Total	1,826	2,903	2,844	2,558	2,146	-37.1	-3.9
Anthracite	234	198	196	200	316	18.4	-7.2
Bituminous	1,592	2,706	2,647	2,358	1,830	-41.1	-3.4
Tennessee	35	21	94	97	71	67.2	-16.1
Texas	1,237	543	400	930	514	128.0	24.5
Utah	1,203	1,827	1,676	1,484	883	-34.2	8.0
Virginia	1,389	1,714	2,154	1,844	1,095	-19.0	6.1
Washington	72	47	79	27	26	52.7	29.1
West Virginia Total	4,059	7,405	6,464	5,250	3,251	-45.2	5.7
Northern	685	3,222	3,083	1,470	1,205	-78.8	-13.2
Southern	3,374	4,183	3,382	3,779	2,047	-19.3	13.3
Wyoming	998	2,794	2,918	3,185	3,001	-64.3	-24.1
Unknown State	-	-	-	-	509	-	-
Appalachian Total[1]	**12,239**	**18,183**	**18,045**	**16,715**	**13,891**	**-32.7**	**-3.1**
Interior Total[1]	**3,182**	**4,570**	**3,791**	**4,467**	**4,354**	**-30.4**	**-7.5**
Western Total[1]	**9,863**	**11,241**	**11,135**	**12,237**	**10,755**	**-12.3**	**-2.1**
East of Miss. River	**14,137**	**22,155**	**21,367**	**20,154**	**17,680**	**-36.2**	**-5.4**
West of Miss. River	**11,147**	**11,838**	**11,604**	**13,264**	**11,320**	**-5.8**	**-.4**
U.S. Total	**25,284**	**33,993**	**32,971**	**33,418**	**29,000**	**-25.6**	**-3.4**

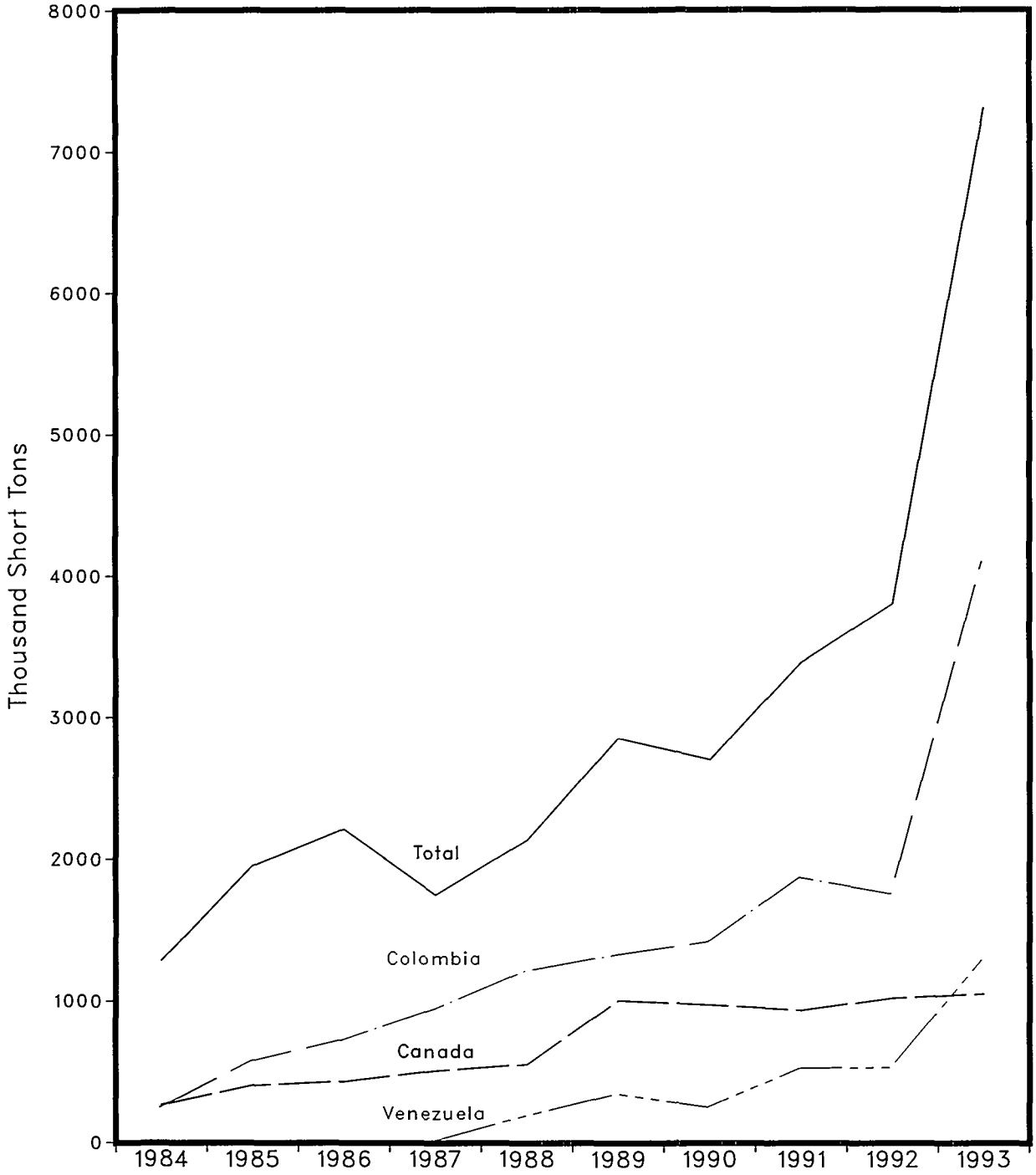
[1] For a definition of coal-producing regions, see Appendix C.
* Data round to zero.
Note: Totals may not equal sum of components due to independent rounding.
Source: Energy Information Administration, Form EIA-6, "Coal Distribution Report."

Imports



Coal from overseas is off-loaded by a traveling shiploader at the dock of Electro-Coal Transfer's Davat, Louisiana facilities.

Figure 5. U.S. Coal Imports, 1984-1993



Source: U.S. Department of Commerce, Bureau of the Census, "Monthly Report IM 145."

Table 34. U.S. Coal Imports by Continent and Country of Origin, 1984, 1989-1993
(Short Tons)

Continent and Country of Origin	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
North America Total	**1,053,576**	**1,020,852**	**935,477**	**979,220**	**1,061,668**	**266,306**	**3.2**	**-0.2**	**16.5**
Canada	1,051,273	1,020,852	935,477	973,016	1,004,371	266,306	3.0	1.1	16.5
Guatemala	4	-	-	-	-	-	-	-	-
Mexico	2,299	-	-	6,204	57,297	-	-	-55.2	-
South America Total	**5,415,318**	**2,301,933**	**2,416,309**	**1,690,987**	**1,695,495**	**269,140**	**135.3**	**33.7**	**39.6**
Argentina	-	-	-	-	265	-	-	-100.0	-
Colombia	4,117,036	1,763,150	1,881,439	1,428,147	1,338,562	269,139	133.5	32.4	35.4
Venezuela	1,298,282	538,783	534,870	262,840	356,668	-	141.0	38.1	-
Europe Total	**62**	**89**	**6**	**5,392**	**11,539**	**109,391**	**-30.3**	**-72.9**	**-56.4**
Czechoslovakia	-	-	6	-	-	-	-	-	-
Denmark	60	-	-	130	-	-	-	-	-
France	-	-	-	-	10	-	-	-100.0	-
Germany	-	-	-	1	331	-	-	-100.0	-
Italy	-	-	-	-	-	11	-	-	-100.0
Netherlands	-	-	-	-	11,198	17	-	-100.0	-100.0
Norway	-	-	-	46	-	-	-	-	-
Poland	2	-	-	-	-	109,321	-	-	-70.2
United Kingdom	-	89	-	5,215	-	42	-100.0	-	-100.0
Asia Total	**708,080**	**373,145**	**6,894**	**2**	**47,786**	**17**	**89.8**	**96.2**	**226.0**
China (Mainland)	-	284	202	-	47,694	2	-100.0	-100.0	-100.0
Hong Kong	-	1	-	-	41	-	-100.0	-100.0	-
India	-	66,154	-	-	-	-	-100.0	-	-
Indonesia	708,080	253,287	6,641	-	-	7	179.5	-	259.8
Japan	-	-	1	2	-	8	-	-	-100.0
Korea, Republic of	-	-	-	-	51	-	-	-100.0	-
Malaysia	-	53,419	-	-	-	-	-100.0	-	-
Thailand	-	-	50	-	-	-	-	-	-
Oceania & Australia Total	**105,452**	**100,986**	**31,106**	**23,794**	**34,645**	**28,240**	**4.4**	**32.1**	**15.8**
Australia	100,076	100,986	31,106	23,794	34,645	28,240	-.9	30.4	15.1
New Zealand	5,376	-	-	-	-	-	-	-	-
Africa Total	**26,419**	**5,762**	**-**	**-**	**-**	**612,447**	**358.5**	**-**	**-29.5**
South Africa, Rep of	20,319	5,762	-	-	-	612,447	252.6	-	-31.5
Swaziland	6,100	-	-	-	-	-	-	-	-
Total	**7,308,907**	**3,802,767**	**3,389,792**	**2,699,395**	**2,851,133**	**1,285,541**	**92.2**	**26.5**	**21.3**

Note: Coal imports include coal to Puerto Rico and the Virgin Islands.
Source: U.S. Department of Commerce, Bureau of the Census, "Monthly Report IM 145."

Table 35. Coal Imports by Customs District, 1984, 1989-1993
(Short Tons)

Customs District	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Eastern Total	**1,275,919**	**340,317**	**361,097**	**351,348**	**461,348**	**41,084**	**274.9**	**28.9**	**46.5**
Boston, MA	674,086	128,667	84,310	139,771	27,669	40,040	423.9	122.2	36.8
Baltimore, MD	224,579	-	-	-	258,615	-	-	-3.5	-
Portland, ME	236,473	108,863	207,152	143,868	33	280	117.2	NM	111.4
Buffalo, NY	-	-	134	69	26,849	708	-	-100.0	-100.0
New York City, NY	2	-	-	1	41	37	-	-53.0	-27.7
Ogdensburg, NY	-	-	-	45	219	-	-	-100.0	-
Philadelphia, PA	140,779	102,787	69,501	67,594	147,922	19	37.0	-1.2	169.1
Southern Total	**4,321,336**	**2,053,672**	**2,061,987**	**1,384,974**	**1,363,389**	**990,917**	**110.4**	**33.4**	**17.8**
Mobile, AL	935,232	-	-	-	34,004	612,447	-	129.0	4.8
Savannah, GA	-	-	-	-	-	8	-	-	-100.0
Tampa, FL	2,263,893	1,419,581	1,680,398	1,058,354	900,188	163	59.5	25.9	188.6
New Orleans, LA	675,827	154,600	23,731	-	28,660	167,571	337.1	120.4	16.8
Wilmington, NC	-	-	-	46	-	-	-	-	-
San Juan, PR	107,506	169,707	211,313	234,989	328,849	210,726	-36.6	-24.4	-7.2
El Paso, TX	-	-	-	-	-	2	-	-	-100.0
Houston-Galveston, TX	121,505	83,466	11,023	5,215	15,910	-	45.6	66.2	-
Laredo, TX	2,299	-	-	6,204	55,778	-	-	-54.9	-
Virgin Islands	215,074	226,318	135,522	80,166	-	-	-5.0	-	-
Western Total	**730,662**	**461,675**	**116,420**	**96,480**	**169,054**	**228,957**	**58.3**	**44.2**	**13.8**
Los Angeles, CA	-	-	877	2	-	178	-	-	-100.0
San Diego, CA	-	-	-	-	19	-	-	-100.0	-
San Francisco, CA	-	284	-	-	47,745	8,100	-100.0	-100.0	-100.0
Honolulu, HI	660,379	407,692	31,106	23,794	34,645	62,525	62.0	108.9	29.9
Great Falls, MT	41,580	36,237	57,916	42,017	75,579	67,507	14.7	-13.9	-5.2
Seattle, WA	28,703	17,462	26,521	30,667	11,066	90,647	64.4	26.9	-12.0
Northern Total	**980,990**	**947,103**	**850,288**	**866,593**	**857,342**	**24,583**	**3.6**	**3.4**	**50.6**
Chicago, IL	134,485	230,677	208,021	316,534	476,060	-	-41.7	-27.1	-
Detroit, MI	203,067	58,937	275	-	-	-	244.5	-	-
Duluth, MN	12,811	-	211	-	431	583	-	133.5	41.0
Pembina, ND	630,627	657,400	641,781	550,059	364,237	24,000	-4.1	14.7	43.8
Cleveland, OH	-	89	-	-	16,614	-	-100.0	-100.0	-
Total	**7,308,907**	**3,802,767**	**3,389,792**	**2,699,395**	**2,851,133**	**1,285,541**	**92.2**	**26.5**	**21.3**

NM Not meaningful as value is greater than 500.
Source: U.S. Department of Commerce, Bureau of the Census, "Monthly Report IM 145."

Table 36. U.S. Receipts of Imported Coal by Country of Origin and Destination State, 1984, 1989-1993
(Short Tons)

Country of Origin and Destination State	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993
Australia Total	**98,947**	**111,097**	-	-	-	-	**-10.9**
Hawaii	64,594	65,583	-	-	-	-	-1.5
Virginia	34,353	45,514	-	-	-	-	-24.5
Canada Total	**664,835**	**103,943**	**26,920**	**33,600**	-	**40,000**	**NM**
Illinois	50,936	54,025	-	-	-	-	-5.7
Indiana	582,689	-	-	-	-	-	-
Massachusetts	-	32,800	-	-	-	40,000	-100.0
New Hampshire	-	-	-	33,600	-	-	-
Ohio	2,000	1,828	-	-	-	-	9.4
Washington	29,210	15,290	26,920	-	-	-	91.0
Colombia Total	**3,642,728**	**1,504,138**	**1,582,600**	**1,112,470**	**1,148,836**	**17,720**	**142.2**
Alabama	57,602	-	-	-	-	-	-
Florida	2,999,303	1,418,580	1,582,600	1,007,670	803,500	17,720	111.4
Georgia	-	-	-	-	23,136	-	-
Maryland	224,000	-	-	-	247,000	-	-
Massachusetts	187,200	-	-	104,800	62,800	-	-
New Hampshire	52,143	48,400	-	-	-	-	7.7
New Jersey	-	-	-	-	12,400	-	-
Texas	122,480	37,158	-	-	-	-	229.6
Indonesia Total	**118,981**	**13,100**	**24,253**	-	-	-	**NM**
Florida	-	-	24,253	-	-	-	-
Indiana	11,100	-	-	-	-	-	-
Maine	3,135	-	-	-	-	-	-
Mississippi	67,547	-	-	-	-	-	-
New Hampshire	37,199	-	-	-	-	-	-
Ohio	-	13,100	-	-	-	-	-100.0
Mexico Total	**33,520**	-	-	-	-	-	-
Texas	33,520	-	-	-	-	-	-
Poland Total	-	-	-	-	-	**109,262**	-
Florida	-	-	-	-	-	109,262	-
South Africa Total	-	-	-	-	-	**616,400**	-
Florida	-	-	-	-	-	616,400	-
Venezuela Total	**936,945**	**240,584**	**333,027**	**220,100**	**65,750**	-	**289.4**
Alabama	30,278	-	-	-	-	-	-
Florida	312,193	-	42,200	40,100	37,150	-	-
Maine	9,123	-	-	-	-	-	-
Massachusetts	476,100	163,800	83,700	69,800	-	-	190.6
New Hampshire	109,251	34,300	207,127	110,200	-	-	218.5
New Jersey	-	-	-	-	28,600	-	-
Texas	-	42,484	-	-	-	-	-100.0
Total	**5,495,956**	**1,972,862**	**1,966,800**	**1,366,170**	**1,214,586**	**783,382**	**178.6**
Alabama	87,880	-	-	-	-	-	-
Florida	3,311,496	1,418,580	1,649,053	1,047,770	840,650	743,382	133.4
Georgia	-	-	-	-	23,136	-	-
Hawaii	64,594	65,583	-	-	-	-	-1.5
Illinois	50,936	54,025	-	-	-	-	-5.7
Indiana	593,789	-	-	-	-	-	-
Maine	12,258	-	-	-	-	-	-
Maryland	224,000	-	-	-	247,000	-	-
Massachusetts	663,300	196,600	83,700	174,600	62,800	40,000	237.4
Mississippi	67,547	-	-	-	-	-	-
New Hampshire	198,593	82,700	207,127	143,800	-	-	140.1
New Jersey	-	-	-	-	41,000	-	-
Ohio	2,000	14,928	-	-	-	-	-86.6
Texas	156,000	79,642	-	-	-	-	95.9
Virginia	34,353	45,514	-	-	-	-	-24.5
Washington	29,210	15,290	26,920	-	-	-	91.0

NM Not meaningful as value is greater than 500.

Notes: Data for 1984 through 1991 are only for receipts at electric utilities. Data for 1992 and 1993 are for receipts at electric utilities, manufacturing plants and coke plants. See Table 37 and Table 38 for related data. See Technical Note 1 for the difference between receipts of imported coal and U.S. coal imports.

Sources: • 1984-1991: Federal Energy Regulatory Commission (FERC), FERC Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants." • 1992-1993: Energy Information Administration, Form EIA-3A, "Annual Coal Quality Report - Manufacturing Plants;" Form EIA-5A, "Annual Coal Quality Report - Coke Plants;" and FERC, FERC Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants."

Table 37. Imported Coal Received at Electric Utilities by Country of Origin and Destination State, 1984, 1989-1993
(Short Tons)

Country of Origin and Destination State	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Canada Total	**29,210**	**48,090**	**26,920**	**33,600**	**-**	**40,000**	**-39.3**	**-**	**-3.4**
Massachusetts	-	32,800	-	-	-	40,000	-100.0	-	-100.0
New Hampshire	-	-	-	33,600	-	-	-	-	-
Washington	29,210	15,290	26,920	-	-	-	91.0	-	-
Colombia Total	**3,585,126**	**1,504,138**	**1,582,600**	**1,112,470**	**1,148,836**	**17,720**	**138.3**	**32.9**	**80.4**
Florida	2,999,303	1,418,580	1,582,600	1,007,670	803,500	17,720	111.4	39.0	76.8
Georgia	-	-	-	-	23,136	-	-	-100.0	-
Maryland	224,000	-	-	-	247,000	-	-	-2.4	-
Massachusetts	187,200	-	-	104,800	62,800	-	-	31.4	-
New Hampshire	52,143	48,400	-	-	-	-	7.7	-	-
New Jersey	-	-	-	-	12,400	-	-	-100.0	-
Texas	122,480	37,158	-	-	-	-	229.6	-	-
Indonesia Total	**115,846**	**13,100**	**24,253**	**-**	**-**	**-**	**NM**	**-**	**-**
Florida	-	-	24,253	-	-	-	-	-	-
Indiana	11,100	-	-	-	-	-	-	-	-
Mississippi	67,547	-	-	-	-	-	-	-	-
New Hampshire	37,199	-	-	-	-	-	-	-	-
Ohio	-	13,100	-	-	-	-	-100.0	-	-
Poland Total	**-**	**-**	**-**	**-**	**-**	**109,262**	**-**	**-**	**-100.0**
Florida	-	-	-	-	-	109,262	-	-	-100.0
South Africa Total	**-**	**-**	**-**	**-**	**-**	**616,400**	**-**	**-**	**-100.0**
Florida	-	-	-	-	-	616,400	-	-	-100.0
Venezuela Total	**897,544**	**240,584**	**333,027**	**220,100**	**65,750**	**-**	**273.1**	**92.2**	**-**
Florida	312,193	-	42,200	40,100	37,150	-	-	70.3	-
Massachusetts	476,100	163,800	83,700	69,800	-	-	190.6	-	-
New Hampshire	109,251	34,300	207,127	110,200	-	-	218.5	-	-
New Jersey	-	-	-	-	28,600	-	-	-100.0	-
Texas	-	42,484	-	-	-	-	-100.0	-	-
Total	**4,627,726**	**1,805,912**	**1,966,800**	**1,366,170**	**1,214,586**	**783,382**	**156.3**	**39.7**	**21.8**
Florida	3,311,496	1,418,580	1,649,053	1,047,770	840,650	743,382	133.4	40.9	18.0
Georgia	-	-	-	-	23,136	-	-	-100.0	-
Indiana	11,100	-	-	-	-	-	-	-	-
Maryland	224,000	-	-	-	247,000	-	-	-2.4	-
Massachusetts	663,300	196,600	83,700	174,600	62,800	40,000	237.4	80.3	36.6
Mississippi	67,547	-	-	-	-	-	-	-	-
New Hampshire	198,593	82,700	207,127	143,800	-	-	140.1	-	-
New Jersey	-	-	-	-	41,000	-	-	-100.0	-
Ohio	-	13,100	-	-	-	-	-100.0	-	-
Texas	122,480	79,642	-	-	-	-	53.8	-	-
Washington	29,210	15,290	26,920	-	-	-	91.0	-	-

NM Not meaningful as value is greater than 500.
Source: Federal Energy Regulatory Commission, FERC Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants."

Table 38. Imported Coal Received at Manufacturing and Coke Plants by Country of Origin and Destination State, 1992-1993
(Short Tons)

Country of Origin and Destination State	Manufacturing			Coke Plants			Total		
	1993	1992	Percent Change 1992-1993	1993	1992	Percent Change 1992-1993	1993	1992	Percent Change 1992-1993
Australia Total	**98,947**	**111,097**	**-10.9**	**-**	**-**	**-**	**98,947**	**111,097**	**-10.9**
Hawaii	64,594	65,583	-1.5	-	-	-	64,594	65,583	-1.5
Virginia	34,353	45,514	-24.5	-	-	-	34,353	45,514	-24.5
Canada Total	**2,000**	**1,828**	**9.4**	**633,625**	**54,025**	**NM**	**635,625**	**55,853**	**NM**
Illinois	-	-	-	50,936	54,025	-5.7	50,936	54,025	-5.7
Indiana	-	-	-	582,689	-	-	582,689	-	-
Ohio	2,000	1,828	9.4	-	-	-	2,000	1,828	9.4
Colombia Total	**57,602**	**-**	**-**	**-**	**-**	**-**	**57,602**	**-**	**-**
Alabama	57,602	-	-	-	-	-	57,602	-	-
Indonesia Total	**3,135**	**-**	**-**	**-**	**-**	**-**	**3,135**	**-**	**-**
Maine	3,135	-	-	-	-	-	3,135	-	-
Mexico Total	**33,520**	**-**	**-**	**-**	**-**	**-**	**33,520**	**-**	**-**
Texas	33,520	-	-	-	-	-	33,520	-	-
Venezuela Total	**39,401**	**-**	**-**	**-**	**-**	**-**	**39,401**	**-**	**-**
Alabama	30,278	-	-	-	-	-	30,278	-	-
Maine	9,123	-	-	-	-	-	9,123	-	-
Total	**234,605**	**112,925**	**107.8**	**633,625**	**54,025**	**NM**	**868,230**	**166,950**	**420.1**
Alabama	87,880	-	-	-	-	-	87,880	-	-
Hawaii	64,594	65,583	-1.5	-	-	-	64,594	65,583	-1.5
Illinois	-	-	-	50,936	54,025	-5.7	50,936	54,025	-5.7
Indiana	-	-	-	582,689	-	-	582,689	-	-
Maine	12,258	-	-	-	-	-	12,258	-	-
Ohio	2,000	1,828	9.4	-	-	-	2,000	1,828	9.4
Texas	33,520	-	-	-	-	-	33,520	-	-
Virginia	34,353	45,514	-24.5	-	-	-	34,353	45,514	-24.5

NM Not meaningful as value is greater than 500.

Sources: Energy Information Administration, Form EIA-3A, "Annual Coal Quality Report - Manufacturing Plants;" and Form EIA-5A, "Annual Coal Quality Report - Coke Plants."

Employment and Productivity

Employment

In 1993, the average number of miners working daily at mines and/or preparation plants producing or processing 10 thousand or more short tons of coal, dropped 8 percent from the 1992 level (Table 39), to 101 thousand miners. Employment declined in all States except Alabama, Colorado, Louisiana, Maryland, New Mexico, and North Dakota. All three coal-producing regions experienced a decline in employment, the largest occurring in Appalachia which had a 9 percent decline, and in the Interior Region which had an 8 percent drop. In both of these regions, 1993 employment was affected by the coal strike.

The average number of miners at underground mines in 1993 totaled 65 thousand miners and represented 64 percent of all U.S. miners (Table 40). Employment at underground mines declined 9 percent from the 1992 total. Most of the decline occurred in Appalachia which experienced a 10-percent drop in employment.

In 1993, the average number of miners at surface mines dropped by 7 percent from the 1992 level to 37 thousand miners (Table 41). Less employment in the Appalachian and the Interior Regions accounted for most of the decline in surface miners.

Forty (40) percent of the miners worked in the 196 mines that produced 1 million short tons or more in 1993, and those miners accounted for 67 percent of total production (Table 42). In 1993, 46 thousand miners, or 45 percent of the U.S. total belonged to a union. Ninety one (91) percent of the union workers were affiliated with the United Mine Workers of America (UMWA) (Table 45).

U.S. coal mine nonfatal, disabling injuries in 1993 totaled 10,364, a 3-percent drop from the 1992 level. Of those injuries, 47 were fatal, 13 percent less than in 1992 (Table 46). Since 1989, fatal injuries have dropped at an average annual rate of 10 percent.

Productivity

In 1993, productivity at U.S. coal mines producing 10 thousand or more short tons of coal increased 8 percent to 4.7 short tons per miner hour from 4.4 short tons per miner hour in 1992 (Table 48). Regionally, most of the increase occurred in States west of the Mississippi River. Over the last decade (1984-1993), productivity at U.S. coal mines has increased at an average annual rate of almost 7 percent, due to an average annual productivity gain of between 6 and 7 percent at both U.S. underground and surface mines (Tables 49 and 50). During the past 5 years, the average annual productivity gain at underground mines has slowed somewhat. Over the same period, the growth rate at surface mines has stayed at nearly 7 percent. In 1993 surface mining productivity rose 10 percent from 6.6 tons per hour to 7.2 tons per hour.

Tables 54 through 57 present new data on productivity by mining method, seam thickness, mine production range, and union type. Because the 1993 selective coal strike by the UMWA negatively affected some of the more productive unionized mines, UMWA productivity figures for 1993, as reported in Table 57, should not be considered as representing a level playing field comparison of union versus nonunion productivity.

Employment

Roof supports shield a miner as he operates a longwall machine at an underground mine in Illinois.

Figure 6. Average Number of U.S. Miners by Mine Type and by Region, 1984-1993

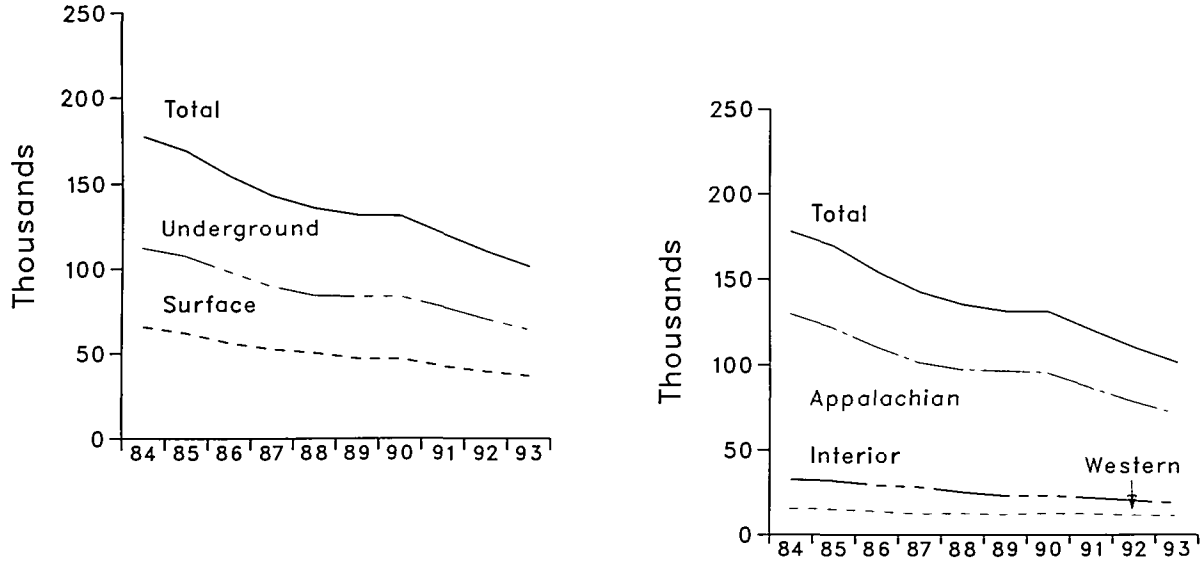
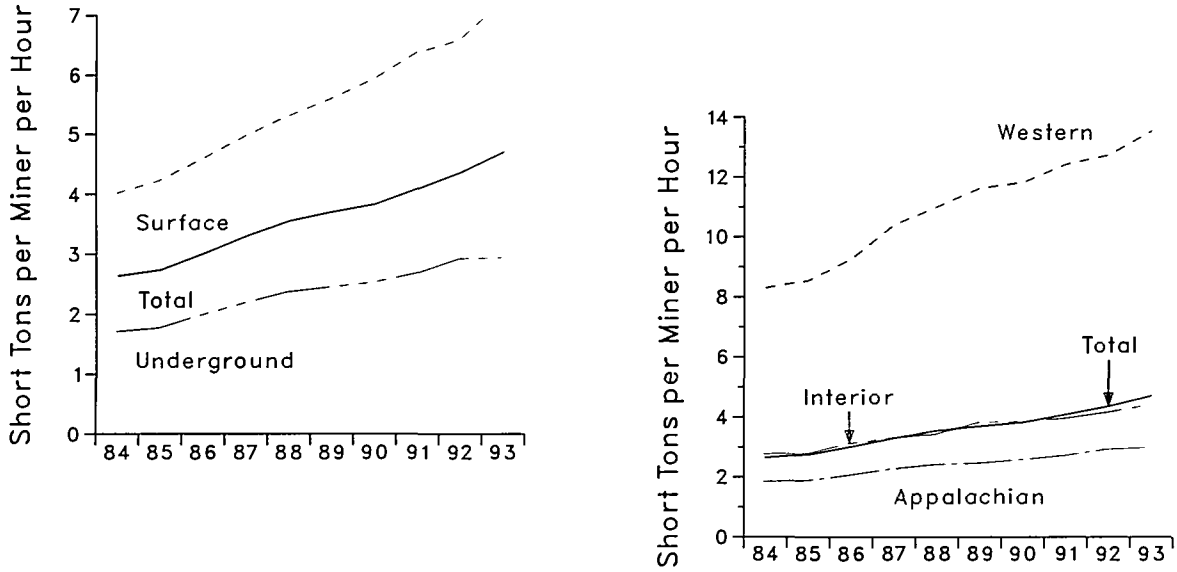


Figure 7. U.S. Coal Mining Productivity by Mine Type and by Region, 1984-1993



Note: Scale has been enlarged to show detail in the short tons per miner per hour by type of mining plot. Because vertical scales differ, graphs should not be compared. Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons of coal during the year and preparation plants with less than 5,000 employee hours. Includes all employees engaged in production, preparation, processing, development, maintenance, repair, shop or yard work at mining operations. Excludes office workers. Includes mining operations management and all technical and engineering personnel. Short tons produced per miner per hour is calculated by dividing total coal production by the direct labor hours worked by all mine employees.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 39. Average Number of Miners by State, 1984, 1989-1993

Coal-Producing State and Region	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Alabama	5,399	5,386	6,314	6,534	6,505	8,581	0.2	-4.5	-5.0
Alaska	96	111	99	84	87	78	-13.5	2.5	2.3
Arizona	876	888	900	951	780	909	-1.3	2.9	-.4
Arkansas	5	14	14	13	8	23	-64.3	-11.1	-15.6
California	-	8	8	5	5	-	-100.0	-	-
Colorado	1,775	1,610	2,037	2,009	2,019	2,835	10.2	-3.2	-5.1
Georgia	-	-	-	-	-	33	-	-	-
Illinois	7,303	8,323	9,102	10,018	10,003	13,339	-12.3	-7.6	-6.5
Indiana	3,331	3,652	3,919	4,195	3,684	5,477	-8.8	-2.5	-5.4
Iowa	90	101	97	135	149	127	-10.9	-11.8	-3.8
Kansas	81	96	92	132	165	283	-15.6	-16.3	-13.0
Kentucky Total	24,063	24,624	26,642	30,498	30,656	37,876	-2.3	-5.9	-4.9
Eastern	18,711	19,419	21,129	24,912	24,620	29,801	-3.6	-6.6	-5.0
Western	5,352	5,205	5,513	5,586	6,036	8,075	2.8	-3.0	-4.5
Louisiana	99	77	103	103	69	-	28.6	9.4	-
Maryland	441	438	524	589	554	844	.7	-5.5	-6.9
Missouri	180	323	312	347	428	1,272	-44.3	-19.5	-19.5
Montana	660	715	794	821	682	1,112	-7.7	-.8	-5.6
New Mexico	1,762	1,683	1,650	1,472	1,470	1,760	4.7	4.6	*
North Dakota	782	744	814	931	850	1,186	5.1	-2.1	-4.5
Ohio	3,866	4,515	5,293	5,866	7,374	9,803	-14.4	-14.9	-9.8
Oklahoma	273	334	410	415	414	1,301	-18.3	-9.9	-15.9
Pennsylvania Total	10,940	12,659	13,506	15,903	15,469	24,797	-13.6	-8.3	-8.7
Anthracite	1,124	1,217	1,161	1,687	1,394	2,102	-7.6	-5.2	-6.7
Bituminous	9,816	11,442	12,345	14,216	14,075	22,695	-14.2	-8.6	-8.9
Tennessee	646	804	1,242	1,697	1,857	2,586	-19.6	-23.2	-14.3
Texas	1,841	2,001	2,149	2,131	2,109	2,274	-8.0	-3.3	-2.3
Utah	1,769	1,997	2,277	2,434	2,169	2,525	-11.4	-5.0	-3.9
Virginia	8,339	9,138	10,055	10,342	10,371	14,091	-8.7	-5.3	-5.7
Washington	567	612	638	777	787	624	-7.3	-7.9	-1.0
West Virginia Total	22,979	26,017	28,310	29,578	29,482	39,636	-11.7	-6.0	-5.9
Northern	7,274	8,481	9,468	10,053	10,280	12,994	-14.2	-8.3	-6.2
Southern	15,705	17,536	18,842	19,525	19,202	26,642	-10.4	-4.9	-5.7
Wyoming	3,159	3,326	3,301	3,330	3,351	4,476	-5.0	-1.5	-3.8
Appalachian Total[1]	**71,321**	**78,376**	**86,373**	**95,421**	**96,232**	**130,172**	**-9.0**	**-7.2**	**-6.5**
Interior Total[1]	**18,555**	**20,126**	**21,711**	**23,075**	**23,065**	**32,171**	**-7.8**	**-5.3**	**-5.9**
Western Total[1]	**11,446**	**11,694**	**12,518**	**12,814**	**12,200**	**15,505**	**-2.1**	**-1.6**	**-3.3**
East of Miss. River	**87,307**	**95,556**	**104,907**	**115,220**	**115,955**	**157,063**	**-8.6**	**-6.8**	**-6.3**
West of Miss. River	**14,015**	**14,640**	**15,695**	**16,090**	**15,542**	**20,785**	**-4.3**	**-2.5**	**-4.3**
U.S. Total	**101,322**	**110,196**	**120,602**	**131,310**	**131,497**	**177,848**	**-8.0**	**-6.3**	**-6.1**

[1] For a definition of coal-producing regions, see Appendix C.

* Data round to zero.

Notes: Includes all employees engaged in production, preparation, processing, development, maintenance, repair, shop or yard work at mining operations. Excludes office workers. Includes mining operations management and all technical and engineering personnel. Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons and preparation plants with less than 5,000 employee hours, which are not required to provide these data.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 40. Average Number of Miners at Underground Mines by State, 1984, 1989-1993

Coal-Producing State and Region	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Alabama	3,707	3,810	4,473	4,395	4,371	5,828	-2.7	-4.0	-4.9
Colorado	1,119	1,085	1,530	1,509	1,490	1,802	3.1	-6.9	-5.1
Illinois	6,196	6,780	7,056	7,407	8,084	9,794	-8.6	-6.4	-5.0
Indiana	545	422	447	524	521	374	29.1	1.1	4.3
Iowa	-	-	-	-	15	36	-	-	-
Kentucky Total	16,493	16,888	18,481	20,898	20,752	22,527	-2.3	-5.6	-3.4
Eastern	13,028	13,405	14,878	17,407	16,586	18,474	-2.8	-5.8	-3.8
Western	3,465	3,483	3,603	3,491	4,166	4,053	-.5	-4.5	-1.7
Maryland	260	228	309	288	282	466	14.0	-2.0	-6.3
Montana	7	-	-	-	-	-	-	-	-
New Mexico	246	141	63	10	49	240	74.5	49.7	.3
Ohio	1,601	1,926	2,359	2,603	2,953	4,702	-16.9	-14.2	-11.3
Oklahoma	40	24	31	36	36	-	66.7	2.7	-
Pennsylvania Total	6,853	8,113	8,751	9,937	9,578	15,826	-15.5	-8.0	-8.9
Anthracite	194	147	123	174	193	298	32.0	.1	-4.6
Bituminous	6,659	7,966	8,628	9,763	9,385	15,528	-16.4	-8.2	-9.0
Tennessee	375	599	988	1,319	1,471	1,908	-37.4	-28.9	-16.5
Utah	1,769	1,997	2,277	2,434	2,169	2,525	-11.4	-5.0	-3.9
Virginia	7,092	7,888	8,515	8,955	8,889	12,250	-10.1	-5.5	-5.9
West Virginia Total	18,040	20,738	22,512	23,584	23,048	33,675	-13.0	-5.9	-6.7
Northern	6,414	7,513	8,509	8,784	8,656	10,850	-14.6	-7.2	-5.7
Southern	11,626	13,225	14,003	14,800	14,392	22,825	-12.1	-5.2	-7.2
Wyoming	261	268	258	255	280	270	-2.6	-1.7	-.4
Appalachian Total[1]	**50,956**	**56,707**	**62,785**	**68,488**	**67,178**	**93,129**	**-10.1**	**-6.7**	**-6.5**
Interior Total[1]	**10,246**	**10,709**	**11,137**	**11,458**	**12,822**	**14,257**	**-4.3**	**-5.4**	**-3.6**
Western Total[1]	**3,402**	**3,491**	**4,128**	**4,208**	**3,988**	**4,837**	**-2.5**	**-3.9**	**-3.8**
East of Miss. River	**61,162**	**67,392**	**73,891**	**79,910**	**79,949**	**107,350**	**-9.2**	**-6.5**	**-6.0**
West of Miss. River	**3,442**	**3,515**	**4,159**	**4,244**	**4,039**	**4,873**	**-2.1**	**-3.9**	**-3.8**
U.S. Total	**64,604**	**70,907**	**78,050**	**84,154**	**83,988**	**112,223**	**-8.9**	**-6.3**	**-5.9**

[1] For a definition of coal-producing regions, see Appendix C.

Notes: Includes all employees engaged in production, preparation, processing, development, maintenance, repair, shop or yard work at mining operations. Excludes office workers. Includes mining operations management and all technical and engineering personnel. Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons and preparation plants with less than 5,000 employee hours, which are not required to provide these data.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 41. Average Number of Miners at Surface Mines by State, 1984, 1989-1993

Coal-Producing State and Region	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Alabama	1,692	1,576	1,841	2,139	2,134	2,753	7.4	-5.6	-5.3
Alaska	96	111	99	84	87	78	-13.5	2.5	2.3
Arizona	876	888	900	951	780	909	-1.3	2.9	-.4
Arkansas	5	14	14	13	8	23	-64.3	-11.1	-15.6
California	-	8	8	5	5	-	-100.0	-	-
Colorado	656	525	507	500	529	1,033	24.9	5.5	-4.9
Georgia	-	-	-	-	-	33	-	-	-
Illinois	1,107	1,543	2,046	2,611	1,919	3,545	-28.3	-12.8	-12.1
Indiana	2,786	3,230	3,472	3,671	3,163	5,103	-13.7	-3.1	-6.5
Iowa	90	101	97	135	134	91	-10.9	-9.5	-.1
Kansas	81	96	92	132	165	283	-15.6	-16.3	-13.0
Kentucky Total	7,570	7,736	8,161	9,600	9,904	15,349	-2.1	-6.5	-7.5
Eastern	5,683	6,014	6,251	7,505	8,034	11,327	-5.5	-8.3	-7.4
Western	1,887	1,722	1,910	2,095	1,870	4,022	9.6	.2	-8.1
Louisiana	99	77	103	103	69	-	28.6	9.4	-
Maryland	181	210	215	301	272	378	-13.8	-9.7	-7.8
Missouri	180	323	312	347	428	1,272	-44.3	-19.5	-19.5
Montana	653	715	794	821	682	1,112	-8.7	-1.1	-5.7
New Mexico	1,516	1,542	1,587	1,462	1,421	1,520	-1.7	1.6	*
North Dakota	782	744	814	931	850	1,186	5.1	-2.1	-4.5
Ohio	2,265	2,589	2,934	3,263	4,421	5,101	-12.5	-15.4	-8.6
Oklahoma	233	310	379	379	378	1,301	-24.8	-11.4	-17.4
Pennsylvania Total	4,087	4,546	4,755	5,966	5,891	8,971	-10.1	-8.7	-8.4
Anthracite	930	1,070	1,038	1,513	1,201	1,804	-13.1	-6.2	-7.1
Bituminous	3,157	3,476	3,717	4,453	4,690	7,167	-9.2	-9.4	-8.7
Tennessee	271	205	254	378	386	678	32.2	-8.5	-9.7
Texas	1,841	2,001	2,149	2,131	2,109	2,274	-8.0	-3.3	-2.3
Virginia	1,247	1,250	1,540	1,387	1,482	1,841	-.2	-4.2	-4.2
Washington	567	612	638	777	787	624	-7.3	-7.9	-1.0
West Virginia Total	4,939	5,279	5,798	5,994	6,434	5,961	-6.4	-6.4	-2.1
Northern	860	968	959	1,269	1,624	2,144	-11.1	-14.7	-9.6
Southern	4,079	4,311	4,839	4,725	4,810	3,817	-5.4	-4.0	.7
Wyoming	2,898	3,058	3,043	3,075	3,071	4,206	-5.2	-1.4	-4.0
Appalachian Total[1]	**20,365**	**21,669**	**23,588**	**26,933**	**29,054**	**37,043**	**-6.0**	**-8.5**	**-6.4**
Interior Total[1]	**8,309**	**9,417**	**10,574**	**11,617**	**10,243**	**17,914**	**-11.8**	**-5.1**	**-8.2**
Western Total[1]	**8,044**	**8,203**	**8,390**	**8,606**	**8,212**	**10,668**	**-1.9**	**-.5**	**-3.1**
East of Miss. River	**26,145**	**28,164**	**31,016**	**35,310**	**36,006**	**49,713**	**-7.2**	**-7.7**	**-6.9**
West of Miss. River	**10,573**	**11,125**	**11,536**	**11,846**	**11,503**	**15,912**	**-5.0**	**-2.1**	**-4.4**
U.S. Total	**36,718**	**39,289**	**42,552**	**47,156**	**47,509**	**65,625**	**-6.5**	**-6.2**	**-6.2**

[1] For a definition of coal-producing regions, see Appendix C.

* Data round to zero.

Notes: Includes all employees engaged in production, preparation, processing, development, maintenance, repair, shop or yard work at mining operations. Excludes office workers. Includes mining operations management and all technical and engineering personnel. Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons and preparation plants with less than 5,000 employee hours, which are not required to provide these data.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 42. Average Number of Miners by State and Mine Production Range, 1993

Coal-Producing State and Region	Mine Production Range (thousand short tons)							Total
	1,000 and over	500 to 1,000	200 to 500	100 to 200	50 to 100	10 to 50	Zero[1]	
Alabama	3,594	597	238	331	226	317	96	5,399
Alaska	96	-	-	-	-	-	-	96
Arizona	843	-	-	-	-	-	33	876
Arkansas	-	-	-	-	-	5	-	5
Colorado	1,194	295	137	79	-	8	62	1,775
Illinois	4,710	1,652	549	81	-	20	291	7,303
Indiana	1,895	571	518	126	137	39	45	3,331
Iowa	-	-	-	90	-	-	-	90
Kansas	-	-	69	-	-	12	-	81
Kentucky Total	5,544	3,513	5,143	2,883	2,185	2,406	2,389	24,063
Eastern	3,042	2,648	4,085	2,664	2,014	2,248	2,010	18,711
Western	2,502	865	1,058	219	171	158	379	5,352
Louisiana	75	-	24	-	-	-	-	99
Maryland	219	-	60	14	56	59	33	441
Missouri	-	-	-	170	6	4	-	180
Montana	641	-	12	-	-	7	-	660
New Mexico	1,327	402	-	-	-	-	33	1,762
North Dakota	704	78	-	-	-	-	-	782
Ohio	1,624	686	557	275	241	281	202	3,866
Oklahoma	-	-	87	73	89	24	-	273
Pennsylvania Total	3,052	1,523	2,418	803	917	1,159	1,068	10,940
Anthracite	-	10	229	108	65	261	451	1,124
Bituminous	3,052	1,513	2,189	695	852	898	617	9,816
Tennessee	-	114	109	193	47	104	79	646
Texas	1,772	-	57	-	-	12	-	1,841
Utah	1,311	216	161	31	-	6	44	1,769
Virginia	657	1,913	1,848	1,174	966	654	1,127	8,339
Washington	531	-	36	-	-	-	-	567
West Virginia Total	8,281	3,264	3,842	2,183	1,349	1,512	2,548	22,979
Northern	4,666	291	684	422	283	410	518	7,274
Southern	3,615	2,973	3,158	1,761	1,066	1,102	2,030	15,705
Wyoming	2,951	75	97	2	21	13	-	3,159
Appalachian Total[2]	**20,469**	**10,745**	**13,157**	**7,637**	**5,816**	**6,334**	**7,163**	**71,321**
Interior Total[2]	**10,954**	**3,088**	**2,362**	**759**	**403**	**274**	**715**	**18,555**
Western Total[2]	**9,598**	**1,066**	**443**	**112**	**21**	**34**	**172**	**11,446**
East of Miss. River	**29,576**	**13,833**	**15,282**	**8,063**	**6,124**	**6,551**	**7,878**	**87,307**
West of Miss. River	**11,445**	**1,066**	**680**	**445**	**116**	**91**	**172**	**14,015**
U.S. Total	**41,021**	**14,899**	**15,962**	**8,508**	**6,240**	**6,642**	**8,050**	**101,322**

[1] Includes all employees at preparation plants and tipples not co-located with a mine.
[2] For a definition of coal-producing regions, see Appendix C.

Notes: Includes all employees engaged in production, preparation, processing, development, maintenance, repair, shop or yard work at mining operations. Excludes office workers. Includes mining operations management and all technical and engineering personnel. Excludes silt, culm refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons and preparation plants with less than 5,000 employee hours, which are not required to provide these data.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 43. Average Number of Miners at Underground Mines by State and Mine Production Range, 1993

Coal-Producing State and Region	Mine Production Range (thousand short tons)							Total
	1,000 and over	500 to 1,000	200 to 500	100 to 200	50 to 100	10 to 50	Zero[1]	
Alabama	3,450	171	42	-	-	-	44	3,707
Colorado	618	256	137	46	-	8	54	1,119
Illinois	4,185	1,515	282	-	-	-	214	6,196
Indiana	246	84	105	42	66	-	2	545
Kentucky Total	3,884	1,911	3,461	2,108	1,670	1,883	1,576	16,493
Eastern	1,880	1,449	2,818	2,084	1,670	1,782	1,345	13,028
Western	2,004	462	643	24	-	101	231	3,465
Maryland	219	-	-	-	-	8	33	260
Montana	-	-	-	-	-	7	-	7
New Mexico	-	222	-	-	-	-	24	246
Ohio	1,224	222	66	-	50	-	39	1,601
Oklahoma	-	-	-	-	40	-	-	40
Pennsylvania Total	2,892	966	1,742	215	297	287	454	6,853
Anthracite	-	-	-	21	-	66	107	194
Bituminous	2,892	966	1,742	194	297	221	347	6,659
Tennessee	-	114	48	81	34	51	47	375
Utah	1,311	216	161	31	-	6	44	1,769
Virginia	657	1,775	1,312	964	843	569	972	7,092
West Virginia Total	6,620	2,171	3,258	1,875	1,154	1,151	1,811	18,040
Northern	4,523	189	658	247	196	236	365	6,414
Southern	2,097	1,982	2,600	1,628	958	915	1,446	11,626
Wyoming	164	-	97	-	-	-	-	261
Appalachian Total[2]	**16,942**	**6,868**	**9,286**	**5,219**	**4,048**	**3,848**	**4,745**	**50,956**
Interior Total[2]	**6,435**	**2,061**	**1,030**	**66**	**106**	**101**	**447**	**10,246**
Western Total[2]	**2,093**	**694**	**395**	**77**	**-**	**21**	**122**	**3,402**
East of Miss. River	**23,377**	**8,929**	**10,316**	**5,285**	**4,114**	**3,949**	**5,192**	**61,162**
West of Miss. River	**2,093**	**694**	**395**	**77**	**40**	**21**	**122**	**3,442**
U.S. Total	**25,470**	**9,623**	**10,711**	**5,362**	**4,154**	**3,970**	**5,314**	**64,604**

[1] Includes all employees at preparation plants and tipples not co-located with a mine.
[2] For a definition of coal-producing regions, see Appendix C.

Notes: Includes all employees engaged in production, preparation, processing, development, maintenance, repair, shop or yard work at mining operations. Excludes office workers. Includes mining operations management and all technical and engineering personnel. Excludes silt, culm refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons and preparation plants with less than 5,000 employee hours, which are not required to provide these data.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 44. Average Number of Miners at Surface Mines by State and Mine Production Range, 1993

Coal-Producing State and Region	Mine Production Range (thousand short tons)							Total
	1,000 and over	500 to 1,000	200 to 500	100 to 200	50 to 100	10 to 50	Zero[1]	
Alabama	144	426	196	331	226	317	52	1,692
Alaska	96	-	-	-	-	-	-	96
Arizona	843	-	-	-	-	-	33	876
Arkansas	-	-	-	-	-	5	-	5
Colorado	576	39	-	33	-	-	8	656
Illinois	525	137	267	81	-	20	77	1,107
Indiana	1,649	487	413	84	71	39	43	2,786
Iowa	-	-	-	90	-	-	-	90
Kansas	-	-	69	-	-	12	-	81
Kentucky Total	1,660	1,602	1,682	775	515	523	813	7,570
Eastern	1,162	1,199	1,267	580	344	466	665	5,683
Western	498	403	415	195	171	57	148	1,887
Louisiana	75	-	24	-	-	-	-	99
Maryland	-	-	60	14	56	51	-	181
Missouri	-	-	-	170	6	4	-	180
Montana	641	-	12	-	-	-	-	653
New Mexico	1,327	180	-	-	-	-	9	1,516
North Dakota	704	78	-	-	-	-	-	782
Ohio	400	464	491	275	191	281	163	2,265
Oklahoma	-	-	87	73	49	24	-	233
Pennsylvania Total	160	557	676	588	620	872	614	4,087
Anthracite	-	10	229	87	65	195	344	930
Bituminous	160	547	447	501	555	677	270	3,157
Tennessee	-	-	61	112	13	53	32	271
Texas	1,772	-	57	-	-	12	-	1,841
Virginia	-	138	536	210	123	85	155	1,247
Washington	531	-	36	-	-	-	-	567
West Virginia Total	1,661	1,093	584	308	195	361	737	4,939
Northern	143	102	26	175	87	174	153	860
Southern	1,518	991	558	133	108	187	584	4,079
Wyoming	2,787	75	-	2	21	13	-	2,898
Appalachian Total[2]	**3,527**	**3,877**	**3,871**	**2,418**	**1,768**	**2,486**	**2,418**	**20,365**
Interior Total[2]	**4,519**	**1,027**	**1,332**	**693**	**297**	**173**	**268**	**8,309**
Western Total[2]	**7,505**	**372**	**48**	**35**	**21**	**13**	**50**	**8,044**
East of Miss. River	**6,199**	**4,904**	**4,966**	**2,778**	**2,010**	**2,602**	**2,686**	**26,145**
West of Miss. River	**9,352**	**372**	**285**	**368**	**76**	**70**	**50**	**10,573**
U.S. Total	**15,551**	**5,276**	**5,251**	**3,146**	**2,086**	**2,672**	**2,736**	**36,718**

[1] Includes all employees at preparation plants and tipples not co-located with a mine.
[2] For a definition of coal-producing regions, see Appendix C.

Notes: Includes all employees engaged in production, preparation, processing, development, maintenance, repair, shop or yard work at mining operations. Excludes office workers. Includes mining operations management and all technical and engineering personnel. Excludes silt, culm refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons and preparation plants with less than 5,000 employee hours, which are not required to provide these data.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 45. Average Number of Miners by State, Mine Type, and Union Type, 1993

Coal-Producing State and Region	UMWA	Other Unions	Union Total	Nonunion	Total
Alabama	**4,412**	**-**	**4,412**	**987**	**5,399**
Underground	3,656	-	3,656	51	3,707
Surface	756	-	756	936	1,692
Alaska	**-**	**96**	**96**	**-**	**96**
Surface	-	96	96	-	96
Arizona	**843**	**-**	**843**	**33**	**876**
Surface	843	-	843	33	876
Arkansas	**-**	**-**	**-**	**5**	**5**
Surface	-	-	-	5	5
Colorado	**628**	**174**	**802**	**973**	**1,775**
Underground	489	-	489	630	1,119
Surface	139	174	313	343	656
Illinois	**5,694**	**552**	**6,246**	**1,057**	**7,303**
Underground	4,792	450	5,242	954	6,196
Surface	902	102	1,004	103	1,107
Indiana	**1,791**	**96**	**1,887**	**1,444**	**3,331**
Underground	330	-	330	215	545
Surface	1,461	96	1,557	1,229	2,786
Iowa	**-**	**-**	**-**	**90**	**90**
Surface	-	-	-	90	90
Kansas	**69**	**-**	**69**	**12**	**81**
Surface	69	-	69	12	81
Kentucky Total	**2,294**	**188**	**2,482**	**21,581**	**24,063**
Underground	2,068	120	2,188	14,305	16,493
Surface	226	68	294	7,276	7,570
Eastern	**989**	**188**	**1,177**	**17,534**	**18,711**
Underground	948	120	1,068	11,960	13,028
Surface	41	68	109	5,574	5,683
Western	**1,305**	**-**	**1,305**	**4,047**	**5,352**
Underground	1,120	-	1,120	2,345	3,465
Surface	185	-	185	1,702	1,887
Louisiana	**-**	**-**	**-**	**99**	**99**
Surface	-	-	-	99	99
Maryland	**-**	**-**	**-**	**441**	**441**
Underground	-	-	-	260	260
Surface	-	-	-	181	181
Missouri	**120**	**-**	**120**	**60**	**180**
Surface	120	-	120	60	180
Montana	**303**	**284**	**587**	**73**	**660**
Underground	-	-	-	7	7
Surface	303	284	587	66	653
New Mexico	**870**	**742**	**1,612**	**150**	**1,762**
Underground	246	-	246	-	246
Surface	624	742	1,366	150	1,516
North Dakota	**242**	**114**	**356**	**426**	**782**
Surface	242	114	356	426	782
Ohio	**1,885**	**27**	**1,912**	**1,954**	**3,866**
Underground	1,390	-	1,390	211	1,601
Surface	495	27	522	1,743	2,265
Oklahoma	**-**	**54**	**54**	**219**	**273**
Underground	-	-	-	40	40
Surface	-	54	54	179	233
Pennsylvania Total	**5,278**	**23**	**5,301**	**5,639**	**10,940**
Underground	4,665	4	4,669	2,184	6,853
Surface	613	19	632	3,455	4,087
Anthracite	**503**	**9**	**512**	**612**	**1,124**
Underground	2	4	6	188	194
Surface	501	5	506	424	930
Bituminous	**4,775**	**14**	**4,789**	**5,027**	**9,816**
Underground	4,663	-	4,663	1,996	6,659
Surface	112	14	126	3,031	3,157
Tennessee	**-**	**-**	**-**	**646**	**646**
Underground	-	-	-	375	375
Surface	-	-	-	271	271
Texas	**-**	**1,089**	**1,089**	**752**	**1,841**
Surface	-	1,089	1,089	752	1,841
Utah	**750**	**78**	**828**	**941**	**1,769**
Underground	750	78	828	941	1,769
Virginia	**3,027**	**-**	**3,027**	**5,312**	**8,339**
Underground	2,883	-	2,883	4,209	7,092
Surface	144	-	144	1,103	1,247

See footnotes at end of table.

Table 45. Average Number of Miners by State, Mine Type, and Union Type, 1993 (Continued)

Coal-Producing State and Region	UMWA	Other Unions	Union Total	Nonunion	Total
Washington	-	531	531	36	567
Surface	-	531	531	36	567
West Virginia Total	13,076	37	13,113	9,866	22,979
Underground	11,125	16	11,141	6,899	18,040
Surface	1,951	21	1,972	2,967	4,939
Northern	4,641	-	4,641	2,633	7,274
Underground	4,640	-	4,640	1,774	6,414
Surface	1	-	1	859	860
Southern	8,435	37	8,472	7,233	15,705
Underground	6,485	16	6,501	5,125	11,626
Surface	1,950	21	1,971	2,108	4,079
Wyoming	414	156	570	2,589	3,159
Underground	-	-	-	261	261
Surface	414	156	570	2,328	2,898
Appalachian Total[1]	28,667	275	28,942	42,379	71,321
Underground	24,667	140	24,807	26,149	50,956
Surface	4,000	135	4,135	16,230	20,365
Interior Total[1]	8,979	1,791	10,770	7,785	18,555
Underground	6,242	450	6,692	3,554	10,246
Surface	2,737	1,341	4,078	4,231	8,309
Western Total[1]	4,050	2,175	6,225	5,221	11,446
Underground	1,485	78	1,563	1,839	3,402
Surface	2,565	2,097	4,662	3,382	8,044
East of Miss. River	37,457	923	38,380	48,927	87,307
Underground	30,909	590	31,499	29,663	61,162
Surface	6,548	333	6,881	19,264	26,145
West of Miss. River	4,239	3,318	7,557	6,458	14,015
Underground	1,485	78	1,563	1,879	3,442
Surface	2,754	3,240	5,994	4,579	10,573
U.S. Total	41,696	4,241	45,937	55,385	101,322
Underground	32,394	668	33,062	31,542	64,604
Surface	9,302	3,573	12,875	23,843	36,718

[1] For a definition of coal-producing regions, see Appendix C.

Notes: Includes all employees engaged in production, preparation, processing, development, maintenance, repair, shop or yard work at mining operations. Excludes office workers. Includes mining operations management and all technical and engineering personnel. Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons, which are not required to provide these data. See Glossary for listing of other unions.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Figure 8. U.S. Coal Mine Injuries, 1984-1993

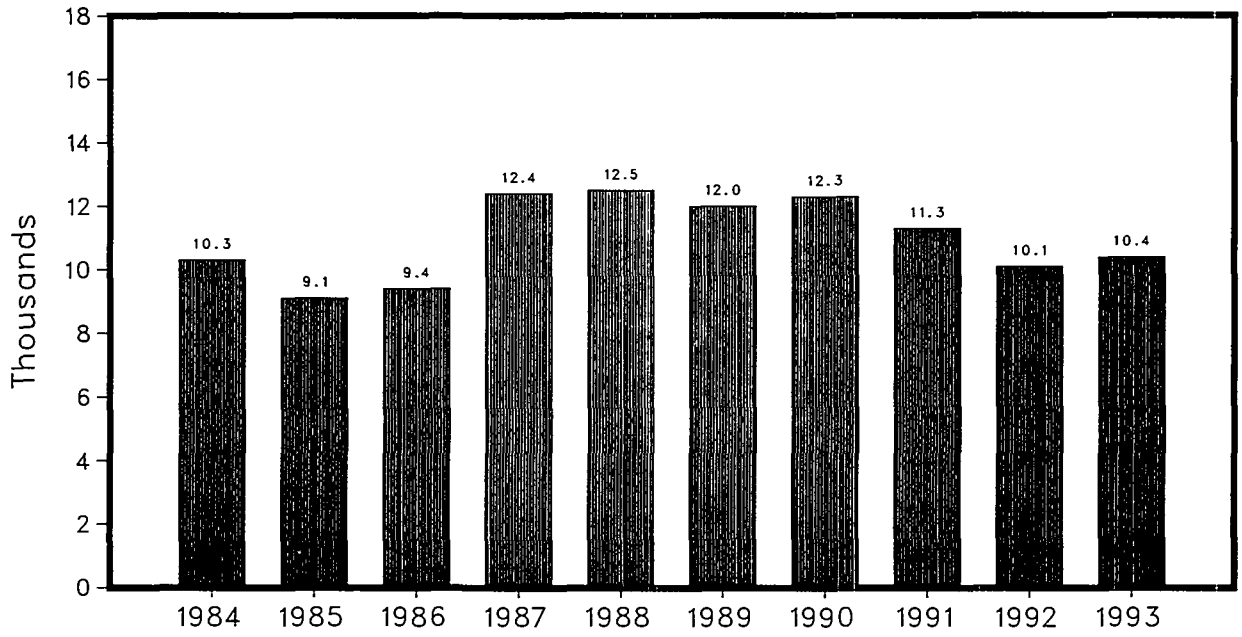
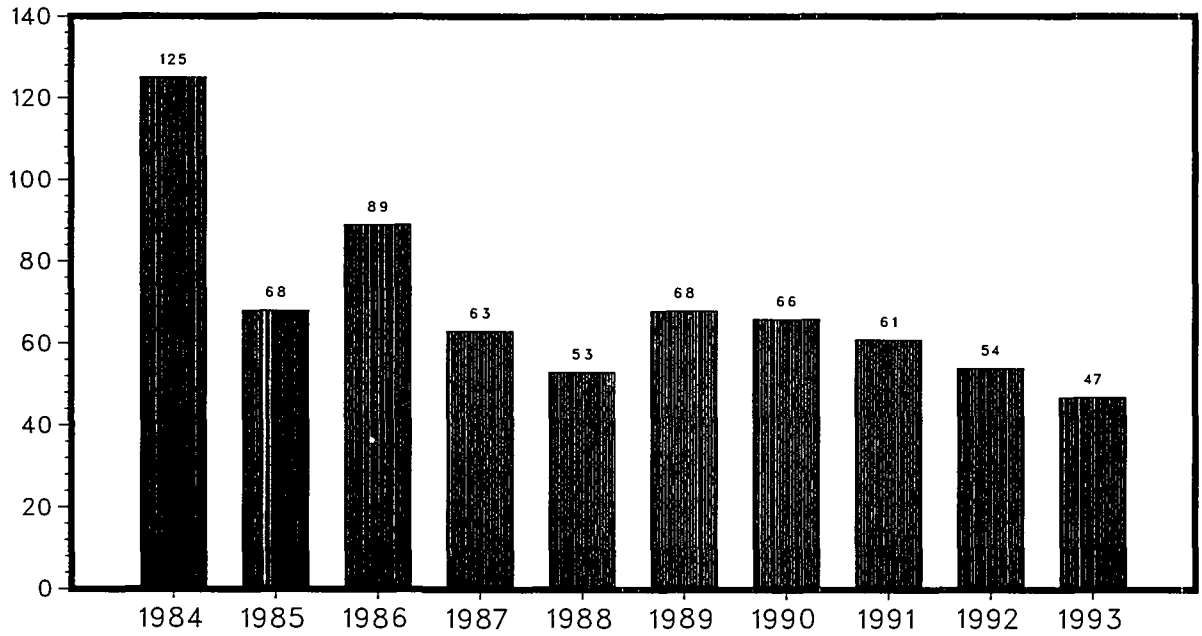


Figure 9. U.S. Coal Mine Fatalities, 1984-1993



Sources: U.S. Department of Labor, Mine Safety and Health Administration, *Mine Injuries and Worktime, Quarterly*, various issues.

Table 46. U.S. Coal Mine Injuries, 1984, 1989-1993

Injury Type	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Injuries Total[1]	**10,364**	**10,109**	**11,386**	**12,312**	**12,068**	**10,386**	**2.5**	**-3.7**	**0.0**
Fatal	47	54	61	66	68	125	-13.0	-8.8	-10.3
Nonfatal[2]	10,317	10,055	11,325	12,246	12,000	10,261	2.6	-3.7	.1
Injuries per 200,000 Employee-Hours Total	**6.53**	**7.32**	**7.90**	**7.92**	**7.99**	**5.52**	**-10.8**	**-4.9**	**1.9**
Fatal	.04	.04	.04	.04	.05	.07	.0	-5.4	-6.0
Nonfatal[2]	6.49	7.28	7.86	7.88	7.94	5.45	-10.9	-4.9	2.0

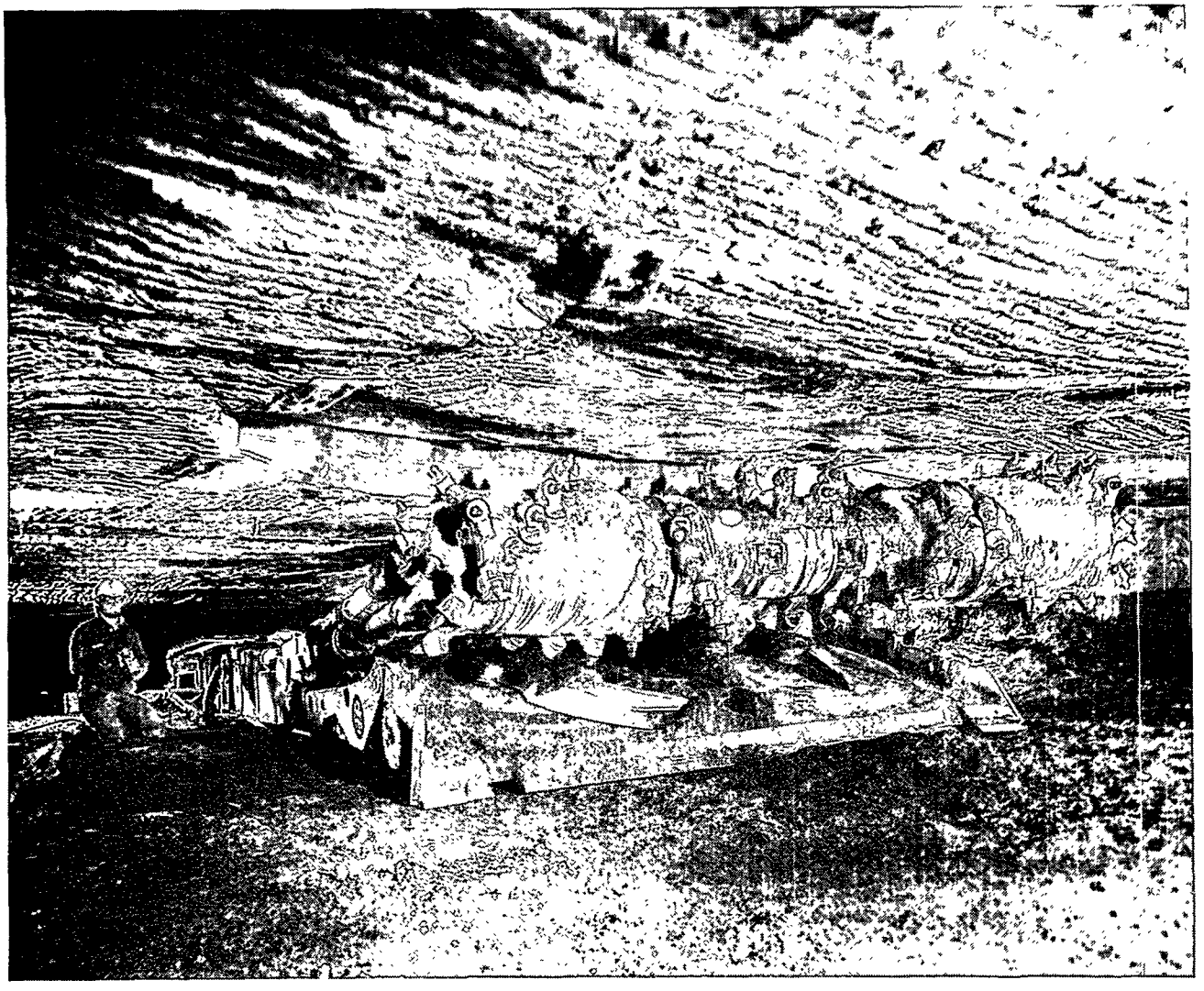
[1] Includes contractors and office workers.
[2] Includes only non-fatal injuries that resulted in absence from work.
Source: U.S. Department of Labor, Mine Safety and Health Administration, *Mine Injuries and Worktime, Quarterly,* various issues.

Table 47. Profile of U.S. Coal Miners, 1986, 1992

	1992	1986
Age (mean, years)	45	39
Gender (percent)		
Female	4	2
Male	96	98
Education (percent)		
High School or above	NA	78
Experience (median, years)		
Years of experience in mining industry	18	11
Earnings (dollars)		
Average hourly earnings	17.20	15.39
Average weekly earnings	754.60	625.24

NA Not available.
Note: Data are for production workers.
Sources: U.S. Department of Interior, Bureau of Mines, Information Circular 9192, "Characterization of the 1986 Coal Mining Workforce" (1988); U.S. Department of Labor, "Employment, Hours and Earnings," 1981-93, August 1993; and Bituminous Coal Operator's Association, Washington, D.C.

Productivity



Continuous mining machines such as this one contribute to increased productivity of underground coal mining. This method accounted for 56 percent of U.S. underground coal mining in 1993.

Table 48. Coal Mining Productivity by State, 1984, 1989-1993
(Short Tons of Coal Produced per Miner per Hour)

Coal-Producing State and Region	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Alabama	2.35	2.49	2.17	2.23	2.25	1.63	-5.4	1.1	4.1
Alaska	7.40	6.93	6.82	8.46	7.73	4.44	6.7	-1.1	5.8
Arizona	6.21	6.29	6.64	5.93	6.25	6.38	-1.3	-.1	-.3
Arkansas	1.39	1.68	2.27	1.46	1.75	2.05	-17.4	-5.6	-4.3
California	-	11.12	11.31	17.69	8.21	-	-100.0	-	-
Colorado	5.85	5.27	5.05	4.24	4.08	3.24	10.9	9.4	6.8
Georgia	-	-	-	-	-	1.87	-	-	-
Illinois	3.23	3.42	3.18	2.94	2.77	2.22	-5.5	3.9	4.2
Indiana	4.46	4.09	4.02	3.84	3.86	2.93	8.9	3.6	4.8
Iowa	.72	1.14	1.29	1.45	1.51	1.69	-36.9	-17.0	-9.1
Kansas	2.30	2.21	2.15	2.03	2.66	2.64	4.2	-3.6	-1.5
Kentucky Total	3.25	3.20	3.01	2.83	2.78	2.24	1.5	3.9	4.2
Eastern	3.18	3.10	2.90	2.66	2.58	2.13	2.4	5.3	4.6
Western	3.49	3.49	3.37	3.46	3.62	2.61	-.2	-1.0	3.3
Louisiana	12.14	12.43	12.56	13.16	15.04	-	-2.3	-5.2	-
Maryland	3.41	2.91	3.11	2.93	3.00	2.34	17.2	3.3	4.3
Missouri	1.84	3.10	2.69	2.99	3.43	2.56	-40.6	-14.4	-3.6
Montana	19.49	20.16	18.99	18.78	18.94	14.27	-3.3	.7	3.5
New Mexico	6.68	6.68	6.25	7.64	7.93	5.92	-.1	-4.2	1.3
North Dakota	17.66	18.12	17.64	16.12	15.69	10.10	-2.5	3.0	6.4
Ohio	3.46	3.04	2.67	2.80	2.33	2.01	14.0	10.4	6.2
Oklahoma	2.80	2.17	2.30	2.08	2.15	1.80	28.9	6.9	5.0
Pennsylvania Total	2.80	2.67	2.43	2.24	2.28	1.67	4.7	5.2	5.9
Anthracite	1.85	1.33	1.39	1.03	1.12	1.02	38.9	13.3	6.8
Bituminous	2.91	2.81	2.52	2.37	2.39	1.72	3.5	5.0	6.0
Tennessee	2.47	2.19	1.88	1.81	1.72	1.54	12.9	9.5	5.4
Texas	8.42	7.34	7.17	7.48	7.31	5.86	14.6	3.6	4.1
Utah	5.96	5.46	4.80	4.74	4.75	2.94	9.1	5.8	8.2
Virginia	2.41	2.37	2.23	2.24	2.21	1.61	1.6	2.2	4.6
Washington	4.00	4.51	3.97	3.41	3.34	3.12	-11.4	4.6	2.8
West Virginia Total	3.27	3.27	3.11	2.96	2.77	1.88	-.1	4.2	6.4
Northern	2.98	3.17	2.84	2.69	2.65	2.25	-6.1	2.9	3.1
Southern	3.39	3.32	3.26	3.12	2.85	1.67	2.0	4.4	8.2
Wyoming	24.46	21.50	21.87	21.41	20.28	13.77	13.8	4.8	6.6
Appalachian Total[1]	**3.00**	**2.95**	**2.74**	**2.60**	**2.49**	**1.86**	**2.0**	**4.8**	**5.5**
Interior Total[1]	**4.43**	**4.18**	**3.98**	**3.88**	**3.84**	**2.80**	**5.9**	**3.6**	**5.2**
Western Total[1]	**13.53**	**12.73**	**12.42**	**11.82**	**11.63**	**8.30**	**6.3**	**3.8**	**5.6**
East of Miss. River	**3.11**	**3.07**	**2.86**	**2.73**	**2.63**	**1.98**	**1.3**	**4.3**	**5.1**
West of Miss. River	**12.14**	**11.03**	**10.79**	**10.41**	**10.21**	**7.07**	**10.0**	**4.4**	**6.2**
U.S. Total	**4.70**	**4.36**	**4.09**	**3.83**	**3.70**	**2.64**	**7.7**	**6.1**	**6.6**

[1] For a definition of coal-producing regions, see Appendix C.

Notes: Productivity is calculated by dividing total coal production by the total direct labor hours worked by all mine employees. Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons, which are not required to provide these data.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 49. Underground Coal Mining Productivity by State, 1984, 1989-1993
(Short Tons of Coal Produced per Miner per Hour)

Coal-Producing State and Region	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Alabama	2.09	2.17	1.90	2.01	2.00	1.18	-3.8	1.0	6.5
Colorado	5.21	4.52	4.23	3.26	2.91	2.05	15.4	15.6	10.9
Illinois	3.11	3.21	2.88	2.70	2.41	1.91	-3.2	6.6	5.5
Indiana	2.49	2.80	2.97	2.90	2.47	1.90	-11.1	.2	3.0
Iowa	-	-	-	-	2.06	1.86	-	-	-
Kentucky Total	2.93	2.91	2.71	2.54	2.54	1.94	.9	3.6	4.7
Eastern	2.89	2.86	2.66	2.44	2.40	1.88	.8	4.7	4.9
Western	3.10	3.05	2.86	2.93	3.13	2.19	1.8	-.2	4.0
Maryland	4.34	3.50	3.73	3.17	3.09	2.27	23.9	8.8	7 5
Montana	1.06	-	-	-	-	-	-	-	-
New Mexico	1.63	.40	.71	4.27	1.03	1.43	307.8	12.3	1.5
Ohio	3.27	3.01	2.55	2.34	2.00	1.55	8.7	13.1	8 6
Oklahoma	1.03	1.04	.52	1.30	1.28	-	-1.1	-5.2	-
Pennsylvania Total	2.91	2.81	2.38	2.12	2.16	1.32	3.6	7.8	9.2
Anthracite	.74	.84	.51	.73	.71	.68	-12.0	.7	8
Bituminous	2.98	2.84	2.40	2.15	2.19	1.33	4.8	8.0	9.3
Tennessee	2.34	1.81	1.72	1.68	1.58	1.52	29.1	10.3	4 9
Utah	5.96	5.46	4.80	4.74	4.75	2.94	9.1	5.8	8 2
Virginia	2.19	2.20	2.12	2.14	2.15	1.49	-.2	.5	4.3
West Virginia Total	2.92	2.99	2.83	2.70	2.59	1.79	-2.3	3.1	5.6
Northern	2.84	3.12	2.80	2.62	2.61	2.22	-9.0	2.1	2.8
Southern	2.96	2.92	2.84	2.76	2.57	1.55	1.5	3.6	7.4
Wyoming	3.56	4.19	4.17	2.80	3.21	2.42	-14.9	2.7	4.4
Appalachian Total[1]	**2.75**	**2.76**	**2.54**	**2.40**	**2.34**	**1.63**	**-.1**	**4.2**	**6.0**
Interior Total[1]	**3.06**	**3.14**	**2.87**	**2.78**	**2.63**	**1.99**	**-2.4**	**3.9**	**4.9**
Western Total[1]	**5.23**	**4.88**	**4.56**	**4.04**	**3.93**	**2.50**	**7.2**	**7.4**	**8.5**
East of Miss. River	**2.81**	**2.82**	**2.59**	**2.46**	**2.39**	**1.69**	**-.6**	**4.1**	**5.8**
West of Miss. River	**5.18**	**4.85**	**4.53**	**4.01**	**3.92**	**2.49**	**6.7**	**7.2**	**8.4**
U.S. Total	**2.95**	**2.93**	**2.69**	**2.54**	**2.46**	**1.72**	**.8**	**4.6**	**6.2**

[1] For a definition of coal-producing regions, see Appendix C.

Notes: Productivity is calculated by dividing total coal production by the total direct labor hours worked by all mine employees. Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons, which are not required to provide these data.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 50. Surface Coal Mining Productivity by State, 1984, 1989-1993
(Short Tons of Coal Produced per Miner per Hour)

Coal-Producing State and Region	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Alabama	3.01	3.28	2.84	2.69	2.72	2.55	-8.2	2.5	1.8
Alaska	7.40	6.93	6.82	8.46	7.73	4.44	6.7	-1.1	5.8
Arizona	6.21	6.29	6.64	5.93	6.25	6.38	-1.3	-.1	-.3
Arkansas	1.39	1.68	2.27	1.46	1.75	2.05	-17.4	-5.6	-4.3
California	-	11.12	11.31	17.69	8.21	-	-100.0	-	-
Colorado	7.07	6.52	6.51	6.86	6.74	4.78	8.5	1.2	4.4
Georgia	-	-	-	-	-	1.87	-	-	-
Illinois	3.86	4.47	4.30	3.64	3.96	2.96	-13.6	-.6	3.0
Indiana	4.82	4.28	4.17	3.96	4.04	3.04	12.8	4.5	5.3
Iowa	.72	1.14	1.29	1.45	1.48	1.62	-36.9	-16.5	-8.6
Kansas	2.30	2.21	2.15	2.03	2.66	2.64	4.2	-3.6	-1.5
Kentucky Total	3.84	3.75	3.66	3.43	3.23	2.64	2.3	4.4	4.2
Eastern	3.74	3.57	3.43	3.13	2.92	2.49	4.9	6.4	4.6
Western	4.14	4.31	4.42	4.42	4.53	3.01	-3.9	-2.2	3.6
Louisiana	12.14	12.43	12.56	13.16	15.04	-	-2.3	-5.2	-
Maryland	2.07	2.13	2.23	2.66	2.90	2.43	-2.8	-8.1	-1.8
Missouri	1.84	3.10	2.69	2.99	3.43	2.56	-40.6	-14.4	-3.6
Montana	19.59	20.16	18.99	18.78	18.94	14.27	-2.8	.8	3.6
New Mexico	7.26	7.11	6.31	7.66	8.03	6.46	2.2	-2.5	1.3
North Dakota	17.66	18.12	17.64	16.12	15.69	10.10	-2.5	3.0	6.4
Ohio	3.58	3.06	2.76	3.17	2.52	2.41	17.1	9.2	4.5
Oklahoma	3.12	2.26	2.42	2.17	2.18	1.80	38.1	9.4	6.3
Pennsylvania Total	2.63	2.45	2.53	2.42	2.47	2.22	7.5	1.6	1.9
Anthracite	2.09	1.39	1.51	1.06	1.19	1.08	49.6	15.1	7.5
Bituminous	2.78	2.74	2.80	2.81	2.76	2.46	1.3	.2	1.3
Tennessee	2.71	3.06	2.45	2.32	2.20	1.59	-11.3	5.4	6.1
Texas	8.42	7.34	7.17	7.48	7.31	5.86	14.6	3.6	4.1
Virginia	3.55	3.50	2.95	2.89	2.59	2.41	1.4	8.3	4.4
Washington	4.00	4.51	3.97	3.41	3.34	3.12	-11.4	4.6	2.8
West Virginia Total	4.35	4.27	4.18	4.02	3.49	2.38	1.8	5.6	6.9
Northern	3.70	3.52	3.16	3.30	2.88	2.44	5.1	6.4	4.7
Southern	4.49	4.43	4.38	4.21	3.71	2.35	1.4	4.9	7.5
Wyoming	26.03	22.76	23.11	22.84	21.38	14.48	14.4	5.0	6.7
Appalachian Total[1]	**3.55**	**3.40**	**3.24**	**3.10**	**2.84**	**2.38**	**4.6**	**5.8**	**4.5**
Interior Total[1]	**5.71**	**5.21**	**5.08**	**4.86**	**4.97**	**3.37**	**9.5**	**3.6**	**6.0**
Western Total[1]	**16.49**	**15.46**	**15.33**	**15.18**	**14.64**	**10.45**	**6.7**	**3.0**	**5.2**
East of Miss. River	**3.74**	**3.61**	**3.49**	**3.32**	**3.13**	**2.56**	**3.5**	**4.5**	**4.3**
West of Miss. River	**13.94**	**12.49**	**12.36**	**12.26**	**11.86**	**8.15**	**11.6**	**4.1**	**6.1**
U.S. Total	**7.23**	**6.59**	**6.38**	**5.94**	**5.61**	**4.03**	**9.7**	**6.5**	**6.7**

[1] For a definition of coal-producing regions, see Appendix C.

Notes: Productivity is calculated by dividing total coal production by the total direct labor hours worked by all mine employees. Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons, which are not required to provide these data.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 51. Coal Mining Productivity by State and Mine Type, 1993

Coal-Producing State and Region	Number of Mining Operations[1]	Average Number of Miners Working Daily[2]	Average Production per Miner per Hour (short tons)[3]	Average Production per Miner per Shift (short tons)[4]
Alabama	**81**	**5,399**	**2.35**	**19.98**
Underground	13	3,707	2.09	17.18
Surface	68	1,692	3.01	25.72
Alaska	**1**	**96**	**7.40**	**66.61**
Surface	1	96	7.40	66.61
Arizona	**3**	**876**	**6.21**	**61.75**
Surface	3	876	6.21	61.75
Arkansas	**1**	**5**	**1.39**	**13.87**
Surface	1	5	1.39	13.87
Colorado	**22**	**1,775**	**5.85**	**49.52**
Underground	15	1,119	5.21	44.05
Surface	7	656	7.07	60.16
Illinois	**50**	**7,303**	**3.23**	**26.55**
Underground	33	6,196	3.11	25.56
Surface	17	1,107	3.86	31.69
Indiana	**58**	**3,331**	**4.46**	**42.37**
Underground	6	545	2.49	21.91
Surface	52	2,786	4.82	46.27
Iowa	**1**	**90**	**.72**	**7.18**
Surface	1	90	.72	7.18
Kansas	**2**	**81**	**2.30**	**17.84**
Surface	2	81	2.30	17.84
Kentucky Total	**818**	**24,063**	**3.25**	**28.58**
Underground	507	16,493	2.93	25.10
Surface	311	7,570	3.84	35.33
Eastern	**727**	**18,711**	**3.18**	**28.12**
Underground	475	13,028	2.89	24.76
Surface	252	5,683	3.74	35.01
Western	**91**	**5,352**	**3.49**	**29.68**
Underground	32	3,465	3.10	25.76
Surface	59	1,887	4.14	35.73
Louisiana	**2**	**99**	**12.14**	**103.22**
Surface	2	99	12.14	103.22
Maryland	**18**	**441**	**3.41**	**29.80**
Underground	3	260	4.34	37.54
Surface	15	181	2.07	18.10
Missouri	**6**	**180**	**1.84**	**14.90**
Surface	6	180	1.84	14.90
Montana	**8**	**660**	**19.49**	**173.79**
Underground	1	7	1.06	9.44
Surface	7	653	19.59	174.66
New Mexico	**9**	**1,762**	**6.68**	**51.60**
Underground	2	246	1.63	11.30
Surface	7	1,516	7.26	57.79
North Dakota	**7**	**782**	**17.66**	**143.33**
Surface	7	782	17.66	143.33
Ohio	**134**	**3,866**	**3.46**	**31.84**
Underground	18	1,601	3.27	30.33
Surface	116	2,265	3.58	32.91
Oklahoma	**13**	**273**	**2.80**	**25.84**
Underground	1	40	1.03	8.76
Surface	12	233	3.12	28.96
Pennsylvania Total	**470**	**10,940**	**2.80**	**23.73**
Underground	128	6,853	2.91	23.87
Surface	342	4,087	2.63	22.59
Anthracite	**113**	**1,124**	**1.85**	**14.87**
Underground	31	194	.74	5.85
Surface	82	930	2.09	16.85
Bituminous	**357**	**9,816**	**2.91**	**25.05**
Underground	97	6,659	2.98	24.66
Surface	260	3,157	2.78	24.29
Tennessee	**41**	**646**	**2.47**	**21.31**
Underground	21	375	2.34	19.96
Surface	20	271	2.71	23.69
Texas	**14**	**1,841**	**8.42**	**87.62**
Surface	14	1,841	8.42	87.62
Utah	**18**	**1,769**	**5.96**	**51.58**
Underground	18	1,769	5.96	51.58
Virginia	**279**	**8,339**	**2.41**	**20.71**
Underground	201	7,092	2.19	18.57
Surface	78	1,247	3.55	31.80

See footnotes at end of table.

Table 51. Coal Mining Productivity by State and Mine Type, 1993 (Continued)

Coal-Producing State and Region	Number of Mining Operations[1]	Average Number of Miners Working Daily[2]	Average Production per Miner per Hour (short tons)[3]	Average Production per Miner per Shift (short tons)[4]
Washington	3	567	4.00	33.29
Surface	3	567	4.00	33.29
West Virginia Total	598	22,979	3.27	27.96
Underground	400	18,040	2.92	24.67
Surface	198	4,939	4.35	38.08
Northern	155	7,274	2.98	25.10
Underground	91	6,414	2.84	23.83
Surface	64	860	3.70	31.43
Southern	443	15,705	3.39	29.10
Underground	309	11,626	2.96	25.03
Surface	134	4,079	4.49	39.92
Wyoming	28	3,159	24.46	230.96
Underground	3	261	3.56	32.79
Surface	25	2,898	26.03	246.51
Appalachian Total[5]	2,348	71,321	3.00	26.04
Underground	1,259	50,956	2.75	23.35
Surface	1,089	20,365	3.55	31.57
Interior Total[5]	238	18,555	4.43	39.12
Underground	72	10,246	3.06	25.43
Surface	166	8,309	5.71	51.80
Western Total[5]	99	11,446	13.53	118.59
Underground	39	3,402	5.23	44.66
Surface	60	8,044	16.49	147.08
East of Miss. River	2,547	87,307	3.11	26.97
Underground	1,330	61,162	2.81	23.77
Surface	1,217	26,145	3.74	33.23
West of Miss. River	138	14,015	12.14	108.59
Underground	40	3,442	5.18	44.19
Surface	98	10,573	13.94	127.06
U.S. Total	2,685	101,322	4.70	40.82
Underground	1,370	64,604	2.95	25.00
Surface	1,315	36,718	7.23	64.41

[1] Mining operations that consist of a mine and preparation plant, or a preparation plant only processing both underground and surface coal will be counted as two operations.

[2] Includes all employees engaged in production, preparation, processing, development, maintenance, repair, shop or yard work at mining operations. Excludes office workers. Includes mining operations management and all technical and engineering employees.

[3] Calculated by dividing total coal production by the total direct labor hours worked by all mine employees.

[4] Calculated by multiplying average production per miner per hour by the average length of a miner shift.

[5] For a definition of coal-producing regions, see Appendix C.

Notes: Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania Anthracite. Excludes mines producing less than 10,000 short tons of coal during the year, and preparation plants with less than 5,000 employee hours, which are not required to provide these data.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 52. Weighted Average Number of Days Worked by State and Mine Type, 1984, 1989-1993

Coal-Producing State and Region	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Alabama	**250**	**245**	**239**	**250**	**250**	**259**	**2.4**	*	**-0.4**
Underground	249	236	231	245	232	237	5.4	1.8	.5
Surface	253	258	254	259	275	279	-2.0	-2.1	-1.1
Alaska	**250**	**224**	**265**	**272**	**265**	**250**	**11.6**	**-1.4**	-
Surface	250	224	265	272	265	250	11.6	-1.4	-
Arizona	**211**	**225**	**230**	**202**	**212**	**222**	**-6.4**	**-.2**	**-.6**
Surface	211	225	230	202	212	222	-6.4	-.2	-.6
Arkansas	**240**	**228**	**161**	**246**	**300**	**186**	**5.5**	**-5.4**	**2.9**
Surface	240	228	161	246	300	186	5.5	-5.4	2.9
California	**-**	**116**	**63**	**100**	**124**	**-**	**-100.0**	**-**	**-**
Surface	-	116	63	100	124	-	-100.0	-	-
Colorado	**243**	**278**	**275**	**269**	**266**	**280**	**-12.6**	**-2.2**	**-1.5**
Underground	282	268	260	257	247	251	5.1	3.3	1.3
Surface	188	290	292	284	284	296	-35.0	-9.8	-4.9
Georgia	**-**	**-**	**-**	**-**	**-**	**225**	**-**	**-**	**-**
Surface	-	-	-	-	-	225	-	-	-
Illinois	**220**	**253**	**252**	**252**	**248**	**260**	**-13.0**	**-2.9**	**-1.8**
Underground	222	258	259	260	254	250	-14.0	-3.3	-1.3
Surface	212	233	235	234	235	276	-9.0	-2.5	-2.9
Indiana	**254**	**250**	**245**	**265**	**272**	**285**	**1.5**	**-1.6**	**-1.3**
Underground	246	263	284	262	241	339	-6.7	.5	-3.5
Surface	255	249	241	265	274	282	2.3	-1.8	-1.1
Iowa	**260**	**259**	**250**	**259**	**246**	**280**	**.4**	**1.3**	**-.8**
Underground	-	-	-	-	121	280	-	-	-
Surface	260	259	250	259	258	280	.4	.2	-.8
Kansas	**259**	**242**	**277**	**307**	**233**	**245**	**6.7**	**2.7**	**.6**
Surface	259	242	277	307	233	245	6.7	2.7	.6
Kentucky Total	**255**	**259**	**248**	**245**	**246**	**236**	**-1.6**	**.9**	**.9**
Underground	247	254	249	244	242	223	-3.0	.5	1.1
Surface	267	267	247	246	251	249	.2	1.6	.8
Eastern	**253**	**250**	**241**	**235**	**242**	**228**	**1.1**	**1.1**	**1.2**
Underground	244	246	241	235	238	215	-1.1	.6	1.4
Surface	266	255	242	234	247	241	4.2	1.8	1.1
Western	**263**	**286**	**268**	**273**	**257**	**258**	**-8.1**	**.5**	**.2**
Underground	256	278	273	272	254	248	-7.7	.2	.3
Surface	270	296	261	274	260	265	-8.5	.9	.2
Louisiana	**293**	**335**	**268**	**291**	**300**	**-**	**-12.7**	**-.6**	**-**
Surface	293	335	268	291	300	-	-12.7	-.6	-
Maryland	**249**	**311**	**282**	**246**	**237**	**236**	**-19.9**	**1.3**	**.6**
Underground	249	339	291	252	237	242	-26.5	1.2	.3
Surface	250	251	260	237	236	228	-.3	1.5	1.0
Missouri	**181**	**345**	**344**	**332**	**303**	**254**	**-47.6**	**-12.1**	**-3.7**
Surface	181	345	344	332	303	254	-47.6	-12.1	-3.7
Montana	**341**	**344**	**319**	**321**	**316**	**281**	**-.8**	**1.9**	**2.2**
Underground	158	-	-	-	-	-	-	-	-
Surface	341	344	319	321	316	281	-.7	1.9	2.2
New Mexico	**297**	**284**	**279**	**278**	**282**	**293**	**4.7**	**1.4**	**.1**
Underground	241	241	71	253	59	224	-	42.2	.8
Surface	299	284	279	278	282	295	5.1	1.4	.1
North Dakota	**307**	**287**	**265**	**247**	**260**	**245**	**6.8**	**4.2**	**2.5**
Surface	307	287	265	247	260	245	6.8	4.2	2.5
Ohio	**266**	**268**	**258**	**248**	**240**	**232**	**-.7**	**2.6**	**1.5**
Underground	266	268	260	256	231	235	-.6	3.6	1.4
Surface	266	267	257	243	245	230	-.7	2.1	1.6
Oklahoma	**294**	**282**	**289**	**253**	**255**	**267**	**4.1**	**3.6**	**1.0**
Underground	300	260	162	237	86	-	15.4	36.7	-
Surface	293	283	291	254	259	267	3.7	3.2	1.0
Pennsylvania Total	**246**	**249**	**243**	**241**	**243**	**237**	**-1.4**	**.3**	**.4**
Underground	238	245	240	237	236	227	-2.9	.2	.5
Surface	258	257	250	247	253	247	.6	.5	.5
Anthracite	**247**	**246**	**256**	**211**	**244**	**248**	**.5**	**.3**	*
Underground	263	227	256	212	243	246	15.9	2.0	.8
Surface	246	247	256	211	244	248	-.6	.2	-.1
Bituminous	**246**	**249**	**243**	**243**	**243**	**236**	**-1.5**	**.2**	**.4**
Underground	238	245	240	237	236	227	-3.0	.2	.5
Surface	261	258	249	250	254	247	1.0	.7	.6
Tennessee	**223**	**243**	**236**	**222**	**235**	**231**	**-8.0**	**-1.2**	**-.3**
Underground	254	241	239	225	233	235	5.7	2.3	.9
Surface	173	246	228	214	239	219	-29.6	-7.8	-2.6

See footnotes at end of table.

Table 52. Weighted Average Number of Days Worked by State and Mine Type, 1984, 1989-1993 (Continued)

Coal-Producing State and Region	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Texas	**350**	**348**	**341**	**344**	**344**	**346**	**0.5**	**0.4**	**0.1**
Surface	350	348	341	344	344	346	.5	.4	.1
Utah	**249**	**246**	**252**	**256**	**242**	**221**	**1.5**	**.7**	**1.4**
Underground	249	246	252	256	242	221	1.5	.7	1.4
Virginia	**246**	**253**	**241**	**243**	**240**	**217**	**-2.8**	**.6**	**1.4**
Underground	245	256	243	245	240	214	-4.1	.5	1.5
Surface	247	241	231	234	239	227	2.8	.9	.9
Washington	**252**	**231**	**230**	**254**	**186**	**355**	**9.0**	**7.8**	**-3.7**
Surface	252	231	230	254	186	355	9.0	7.8	-3.7
West Virginia Total	**227**	**246**	**241**	**240**	**231**	**220**	**-7.9**	**-.5**	**.3**
Underground	217	243	240	239	234	220	-10.7	-1.9	-.2
Surface	248	255	244	245	224	221	-2.8	2.6	1.3
Northern	**194**	**235**	**240**	**252**	**240**	**229**	**-17.6**	**-5.3**	**-1.8**
Underground	175	235	241	253	242	231	-25.6	-7.8	-3.0
Surface	271	236	238	244	232	217	14.8	4.0	2.5
Southern	**238**	**251**	**242**	**235**	**226**	**214**	**-5.1**	**1.4**	**1.2**
Underground	235	248	240	229	228	211	-4.9	.8	1.2
Surface	243	258	245	245	221	223	-5.6	2.4	1.0
Wyoming	**345**	**339**	**339**	**334**	**334**	**305**	**1.7**	**.8**	**1.4**
Underground	258	238	232	239	257	250	8.4	.1	.3
Surface	346	341	341	335	335	305	1.5	.8	1.4
Appalachian Total[1]	**243**	**250**	**243**	**240**	**238**	**228**	**-2.7**	**.5**	**.7**
Underground	235	247	241	239	236	221	-4.7	*	.7
Surface	257	256	246	242	244	240	.3	1.3	.8
Interior Total[1]	**280**	**289**	**281**	**286**	**282**	**282**	**-3.3**	**-.2**	**-.1**
Underground	236	265	265	265	253	253	-11.0	-1.8	-.8
Surface	302	304	290	296	296	295	-.6	.5	.3
Western Total[1]	**320**	**316**	**312**	**306**	**305**	**286**	**1.4**	**1.2**	**1.2**
Underground	261	252	253	255	244	232	3.6	1.7	1.3
Surface	327	323	318	312	311	291	1.3	1.2	1.3
East of Miss. River	**243**	**253**	**246**	**245**	**243**	**238**	**-3.7**	**.1**	**.3**
Underground	235	250	246	244	239	227	-6.0	-.4	.4
Surface	256	257	246	247	248	252	-.4	.8	.2
West of Miss. River	**323**	**320**	**315**	**311**	**310**	**293**	**.9**	**1.1**	**1.1**
Underground	261	252	253	255	244	232	3.6	1.7	1.3
Surface	329	326	321	316	315	298	.8	1.1	1.1
U.S. Total	**280**	**280**	**274**	**271**	**269**	**257**	**-.3**	**1.0**	**.9**
Underground	238	251	246	245	239	227	-5.0	-.1	.5
Surface	304	301	293	289	289	276	1.0	1.3	1.1

[1] For a definition of coal-producing regions, see Appendix C.

* Data round to zero.

Notes: Weighted average number of days worked is calculated by multiplying average days worked for each mine times its production and then summing these products over all mines in the region/state and then dividing the sum by the total production for the region/state. Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons, which are not required to provide these data.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 53. Weighted Average Number of Days Worked by Mine Production Range, 1993

Coal-Producing State and Region	Mine Production Range (thousand short tons)						Total
	1,000 and over	500 to 1,000	200 to 500	100 to 200	50 to 100	10 to 50	
Alabama	253	269	262	246	195	139	250
Alaska	250	-	-	-	-	-	250
Arizona	211	-	-	-	-	-	211
Arkansas	-	-	-	-	-	240	240
Colorado	246	243	234	156	-	170	243
Illinois	240	127	183	95	-	158	220
Indiana	257	264	253	213	147	177	254
Iowa	-	-	-	260	-	-	260
Kansas	-	-	272	-	-	21	259
Kentucky Total	279	263	251	230	191	143	255
Eastern	275	271	253	230	195	144	253
Western	287	237	232	237	144	123	263
Louisiana	300	-	250	-	-	-	293
Maryland	250	-	220	306	255	231	249
Missouri	-	-	-	181	200	64	181
Montana	342	-	246	-	-	158	341
New Mexico	299	266	-	-	-	-	297
North Dakota	312	108	-	-	-	-	307
Ohio	298	232	250	251	220	184	266
Oklahoma	-	-	324	293	191	198	294
Pennsylvania Total	250	260	232	262	229	217	246
Anthracite	-	295	248	267	218	220	247
Bituminous	250	258	230	262	232	216	246
Tennessee	-	251	199	222	231	201	223
Texas	351	-	278	-	-	109	350
Utah	250	261	241	223	-	99	249
Virginia	276	213	274	235	216	178	246
Washington	250	-	287	-	-	-	252
West Virginia Total	222	245	238	215	202	152	227
Northern	171	231	249	241	205	170	194
Southern	253	246	235	208	201	141	238
Wyoming	346	212	232	24	263	105	345
Appalachian Total[1]	**251**	**253**	**249**	**233**	**209**	**174**	**243**
Interior Total[1]	**298**	**212**	**241**	**226**	**154**	**144**	**280**
Western Total[1]	**323**	**234**	**241**	**164**	**263**	**118**	**320**
East of Miss. River	**253**	**244**	**247**	**232**	**206**	**173**	**243**
West of Miss. River	**326**	**234**	**261**	**209**	**219**	**140**	**323**
U.S. Total	**301**	**244**	**248**	**231**	**206**	**172**	**280**

[1] For a definition of coal-producing regions, see Appendix C.

Notes: Weighted average number of days worked is calculated by multiplying average days worked for each mine times its production and then summing these products over all mines in the region/state and then dividing the sum by the total production for the region/state. Excludes silt, culm refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons, which are not required to provide these data.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 54 has been revised to include the distribution of stand alone preparation plant hours across mining method. The criteria used to classify mines by mining method has also been revised and are described in the footnotes of the table. The revised table appears below.

Table 54. Underground Coal Mining Productivity by State and Mining Method, 1993
(Short Tons of Coal Produced per Miner per Hour)

Coal-Producing State and Region	Continuous [1]	Conventional [2]	Longwall [3]	Other [4]	Total
Alabama	1.71	-	2.27	-	2.09
Colorado	3.84	-	5.92	-	5.21
Illinois	2.99	-	3.35	3.07	3.11
Indiana	2.49	-	-	-	2.49
Kentucky Total	2.97	2.79	3.19	2.47	2.93
Eastern	2.96	2.47	3.84	2.47	2.89
Western	3.03	4.10	2.47	-	3.10
Maryland	3.15	-	4.36	-	4.34
Montana	-	1.06	-	-	1.06
New Mexico	-	-	1.63	-	1.63
Ohio	4.20	2.45	3.15	-	3.27
Oklahoma	1.03	-	-	-	1.03
Pennsylvania Total	2.32	1.62	3.53	1.71	2.91
Anthracite	-	0.74	-	1.71	0.74
Bituminous	2.32	1.89	3.53	-	2.98
Tennessee	2.51	2.03	-	-	2.34
Utah	4.80	-	6.28	-	5.96
Virginia	2.20	2.17	2.22	1.85	2.19
West Virginia Total	3.07	2.74	2.89	3.60	2.92
Northern	2.75	2.68	2.94	4.39	2.84
Southern	3.12	2.76	2.83	2.83	2.96
Wyoming	4.74	1.10	4.63	-	3.56
Appalachian Total[5]	**2.76**	**2.44**	**2.94**	**2.51**	**2.75**
Interior Total[5]	**2.94**	**4.10**	**3.05**	**3.07**	**3.06**
Western Total[5]	**4.32**	**1.10**	**5.67**	**-**	**5.23**
East of Miss. River	**2.80**	**2.58**	**2.96**	**2.74**	**2.81**
West of Miss. River	**4.15**	**1.10**	**5.67**	**-**	**5.18**
U.S. Total	**2.84**	**2.56**	**3.30**	**2.74**	**2.95**

[1] Mines that produce greater than 50 percent of coal by continuous mining method.
[2] Mines that produce greater than 50 percent of coal by conventional mining method.
[3] Mines that have any production from longwall mining method. A typical longwall mining operation uses 80 percent longwall mining and 20 percent continuous mining.
[4] Mines that produce coal using shortwall, scoop loading, hand loading, or other mining methods or a 50/50 percent continuous/conventional split in mining method.
[5] For a definition of coal producing regions, see Appendix C.

Notes: For each State, stand alone preparation plant hours are distributed across the mining methods by the proportion of production for all stand alone mines. Productivity is calculated by dividing total coal production by the total direct labor hours worked by all mine employees. Excludes mines producing less than 10,000 short tons of coal during the year, and preparation plants with less than 5,000 employee hours, which are not required to provide these data.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 55. U.S. Coal Mining Productivity by Coalbed Thickness and Mining Method, 1993

(Short Tons of Coal Produced per Miner per Hour)

Coalbed Thickness (Inches)	Underground						Surface	Total
	Continuous[1]	Conventional[1]	Longwall[1]	Shortwall[1]	Other[1 2]	Unknown[3]		
7-12	-	-	-	-	-	-	3.94	3.94
13-18	-	-	-	-	-	-	3.92	3.92
19-24	2.26	1.29	-	-	1.37	-	4.27	4.17
25-30	2.50	2.27	-	-	2.01	-	3.94	3.75
31-36	2.86	2.83	3.66	-	2.67	-	4.27	3.64
37-42	2.81	2.91	1.68	-	2.26	-	4.79	3.76
43-48	2.90	2.85	2.60	-	2.62	-	5.08	3.87
49-54	3.00	2.49	2.94	1.74	-	-	5.85	4.38
55-60	3.68	3.78	2.60	-	1.40	-	5.61	4.25
61-66	3.02	2.95	3.79	-	-	-	6.62	4.34
67-72	3.58	3.16	4.13	-	-	-	5.86	4.74
73-78	3.50	-	2.78	-	-	-	5.64	3.66
79-84	3.81	3.30	3.03	-	-	-	6.73	4.73
85-90	2.62	-	2.18	-	-	-	5.28	4.33
91-96	3.30	4.99	3.55	-	1.65	-	5.67	4.12
97-102	4.08	-	3.44	-	-	-	6.07	5.45
103-108	4.03	-	7.57	-	-	-	3.18	5.28
109-114	5.21	-	5.45	-	-	-	5.38	5.40
115-120	6.41	1.53	7.40	-	-	-	5.16	6.00
> 120	5.24	3.00	5.62	-	-	-	14.86	14.06
U.S. Total	**3.20**	**2.93**	**3.47**	**1.74**	**2.15**	**-**	**7.23**	**4.70**

[1] Calculated by multiplying reported mining method percentages by the individual mine production.
[2] Includes scoop loading and hand loading.
[3] Calculated by subtracting the sum of the reported mining methods from total received underground productivity.

Notes: Productivity is calculated by dividing total coal production by the total direct labor hours worked by all mine employees. Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons, which are not required to provide these data.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 56. Coal Mining Productivity by State, Mine Type, and Mine Production Range, 1993 (Continued)

(Short Tons of Coal Produced per Miner per Hour)

Coal-Producing State and Region	Mine Production Range (thousand short tons)						Total
	1,000 and over	500 to 1,000	200 to 500	100 to 200	50 to 100	10 to 50	
Utah	**6.90**	**2.98**	**3.81**	**5.66**	**-**	**0.86**	**5.96**
Underground	6.90	2.98	3.81	5.66	-	.86	5.96
Virginia	**2.86**	**2.59**	**3.27**	**2.78**	**2.37**	**2.01**	**2.41**
Underground	2.86	2.27	2.99	2.54	2.23	1.93	2.19
Surface	-	5.36	3.94	4.21	3.53	2.47	3.55
Washington	**4.08**	**-**	**2.76**	**-**	**-**	**-**	**4.00**
Surface	4.08	-	2.76	-	-	-	4.00
West Virginia Total	**3.85**	**4.18**	**3.97**	**3.27**	**2.63**	**2.28**	**3.27**
Underground	3.24	3.41	3.87	3.14	2.38	2.09	2.92
Surface	5.72	5.48	4.56	3.84	3.85	2.66	4.35
Northern	**3.21**	**4.35**	**3.71**	**2.92**	**2.93**	**2.40**	**2.98**
Underground	3.00	2.99	3.67	2.66	2.41	2.14	2.84
Surface	6.62	5.73	4.46	3.30	3.98	2.66	3.70
Southern	**4.39**	**4.16**	**4.03**	**3.38**	**2.53**	**2.22**	**3.39**
Underground	3.55	3.44	3.92	3.24	2.37	2.07	2.96
Surface	5.61	5.44	4.57	4.50	3.74	2.65	4.49
Wyoming	**25.53**	**6.30**	**1.94**	**8.14**	**4.43**	**7.04**	**24.46**
Underground	4.63	-	1.94	-	-	-	3.56
Surface	26.50	6.30	-	8.14	4.43	7.04	26.03
Appalachian Total[1]	**3.65**	**3.66**	**3.49**	**3.07**	**2.54**	**2.13**	**3.00**
Underground	3.28	3.01	3.35	2.89	2.25	1.90	2.75
Surface	5.11	4.58	3.79	3.42	3.14	2.36	3.55
Interior Total[1]	**4.99**	**4.09**	**3.45**	**2.58**	**3.09**	**2.67**	**4.43**
Underground	3.22	3.24	2.97	2.08	1.27	1.45	3.06
Surface	7.01	5.07	3.63	2.64	3.89	2.98	5.71
Western Total[1]	**15.12**	**3.45**	**3.43**	**4.33**	**4.43**	**2.21**	**13.53**
Underground	6.58	3.09	3.23	3.12	-	1.02	5.23
Surface	17.18	4.08	5.07	8.21	4.43	7.04	16.49
East of Miss. River	**3.68**	**3.74**	**3.48**	**3.09**	**2.57**	**2.15**	**3.11**
Underground	3.26	3.05	3.33	2.87	2.25	1.89	2.81
Surface	5.07	4.68	3.76	3.46	3.20	2.40	3.74
West of Miss. River	**13.73**	**3.45**	**3.50**	**2.27**	**2.45**	**2.31**	**12.14**
Underground	6.58	3.09	3.23	3.12	1.03	1.02	5.18
Surface	15.01	4.08	3.80	2.11	4.35	2.89	13.94
U.S. Total	**7.02**	**3.72**	**3.48**	**3.04**	**2.57**	**2.15**	**4.70**
Underground	3.56	3.05	3.33	2.88	2.23	1.89	2.95
Surface	11.50	4.64	3.76	3.28	3.23	2.41	7.23

[1] For a definition of coal-producing regions, see Appendix C.

Notes: Productivity is calculated by dividing total coal production by the total direct labor hours worked by all mine employees. Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons, which are not required to provide these data.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 56. Coal Mining Productivity by State, Mine Type, and Mine Production Range, 1993

(Short Tons of Coal Produced per Miner per Hour)

Coal-Producing State and Region	Mine Production Range (thousand short tons)						Total
	1,000 and over	500 to 1,000	200 to 500	100 to 200	50 to 100	10 to 50	
Alabama	**2.10**	**3.09**	**3.91**	**3.02**	**2.99**	**2.11**	**2.35**
Underground	2.06	2.75	3.05	-	-	-	2.09
Surface	2.96	3.21	4.15	3.02	2.99	2.11	3.01
Alaska	**7.40**	-	-	-	-	-	**7.40**
Surface	7.40	-	-	-	-	-	7.40
Arizona	**6.42**	-	-	-	-	-	**6.21**
Surface	6.42	-	-	-	-	-	6.21
Arkansas	-	-	-	-	-	**1.39**	**1.39**
Surface	-	-	-	-	-	1.39	1.39
Colorado	**6.81**	**4.34**	**3.66**	**3.40**	-	**1.24**	**5.85**
Underground	6.46	4.14	3.66	1.72	-	1.24	5.21
Surface	7.28	5.36	-	8.24	-	-	7.07
Illinois	**3.44**	**3.25**	**2.47**	**1.63**	-	**2.28**	**3.23**
Underground	3.27	3.00	2.05	-	-	-	3.11
Surface	4.86	5.02	2.68	1.63	-	2.28	3.86
Indiana	**4.82**	**4.45**	**4.02**	**3.88**	**3.53**	**2.61**	**4.46**
Underground	2.57	3.12	2.05	2.04	1.79	-	2.49
Surface	5.19	4.67	4.49	4.75	4.48	2.61	4.82
Iowa	-	-	-	**.72**	-	-	**.72**
Surface	-	-	-	.72	-	-	.72
Kansas	-	-	**2.24**	-	-	**4.70**	**2.30**
Surface	-	-	2.24	-	-	4.70	2.30
Kentucky Total	**4.15**	**4.33**	**3.59**	**2.95**	**2.53**	**2.00**	**3.25**
Underground	3.69	3.68	3.46	2.90	2.43	1.88	2.93
Surface	5.06	4.99	3.82	3.12	2.93	2.29	3.84
Eastern	**4.68**	**4.22**	**3.60**	**2.90**	**2.46**	**1.94**	**3.18**
Underground	4.26	3.65	3.43	2.91	2.43	1.90	2.89
Surface	5.23	4.81	3.94	2.87	2.67	2.07	3.74
Western	**3.52**	**4.76**	**3.55**	**3.68**	**3.57**	**2.93**	**3.49**
Underground	3.20	3.79	3.75	2.13	-	1.45	3.10
Surface	4.67	5.64	3.41	3.96	3.57	4.20	4.14
Louisiana	**13.10**	-	**8.52**	-	-	-	**12.14**
Surface	13.10	-	8.52	-	-	-	12.14
Maryland	**5.01**	-	**1.93**	**2.97**	**2.08**	**1.90**	**3.41**
Underground	5.01	-	-	-	-	2.68	4.34
Surface	-	-	1.93	2.97	2.08	1.86	2.07
Missouri	-	-	-	**1.66**	**7.00**	**5.53**	**1.84**
Surface	-	-	-	1.66	7.00	5.53	1.84
Montana	**19.65**	-	**13.84**	-	-	**1.06**	**19.49**
Underground	-	-	-	-	-	1.06	1.06
Surface	19.65	-	13.84	-	-	-	19.59
New Mexico	**7.85**	**2.17**	-	-	-	-	**6.68**
Underground	-	1.85	-	-	-	-	1.63
Surface	7.85	2.50	-	-	-	-	7.26
North Dakota	**18.66**	**5.66**	-	-	-	-	**17.66**
Surface	18.66	5.66	-	-	-	-	17.66
Ohio	**3.62**	**4.19**	**3.57**	**4.11**	**3.39**	**2.14**	**3.46**
Underground	3.31	3.82	3.67	-	2.90	-	3.27
Surface	4.42	4.26	3.56	4.11	3.46	2.14	3.58
Oklahoma	-	-	**3.32**	**3.07**	**1.52**	**2.03**	**2.80**
Underground	-	-	-	-	1.03	-	1.03
Surface	-	-	3.32	3.07	3.23	2.03	3.12
Pennsylvania Total	**3.96**	**2.76**	**2.59**	**3.19**	**2.44**	**2.30**	**2.80**
Underground	4.06	2.20	2.34	2.72	.99	1.43	2.91
Surface	2.51	3.62	3.05	3.34	3.12	2.52	2.63
Anthracite	-	**19.55**	**3.17**	**2.82**	**5.38**	**1.72**	**1.85**
Underground	-	-	-	2.14	-	1.33	.74
Surface	-	19.55	3.17	3.01	5.38	1.86	2.09
Bituminous	**3.96**	**2.61**	**2.53**	**3.25**	**2.22**	**2.50**	**2.91**
Underground	4.06	2.20	2.34	2.81	.99	1.48	2.98
Surface	2.51	3.26	3.00	3.39	2.86	2.72	2.78
Tennessee	-	**3.38**	**2.96**	**2.74**	**2.85**	**2.09**	**2.47**
Underground	-	3.38	2.57	2.27	2.43	1.82	2.34
Surface	-	-	3.23	3.59	3.78	2.43	2.71
Texas	**8.55**	-	**3.64**	-	-	**3.17**	**8.42**
Surface	8.55	-	3.64	-	-	3.17	8.42

See footnotes at end of table.

Table 57. Coal Mining Productivity by State, Mine Type, and Union Type, 1993

(Short Tons of Coal Produced per Miner per Hour)

Coal-Producing State and Region	UMWA	Other Unions	Union Total	Nonunion	Total
Alabama	**2.22**	-	**2.22**	3.14	**2.35**
Underground	2.07	-	2.07	2.74	2.09
Surface	2.87	-	2.87	3.17	3.01
Alaska	-	7.40	**7.40**	-	**7.40**
Surface	-	7.40	7.40	-	7.40
Arizona	**6.42**	-	**6.42**	-	**6.21**
Surface	6.42	-	6.42	-	6.21
Arkansas	-	-	-	1.39	**1.39**
Surface	-	-	-	1.39	1.39
Colorado	**4.26**	**5.89**	**4.63**	**6.72**	**5.85**
Underground	3.37	-	3.37	6.33	5.21
Surface	7.23	5.89	6.49	7.64	7.07
Illinois	**3.09**	**3.12**	**3.09**	**3.78**	**3.23**
Underground	2.87	3.37	2.92	3.75	3.11
Surface	4.01	1.43	3.84	4.03	3.86
Indiana	**4.50**	**3.73**	**4.45**	**4.47**	**4.46**
Underground	2.72	-	2.72	1.99	2.49
Surface	5.05	3.73	4.93	4.74	4.82
Iowa	-	-	-	**.72**	**.72**
Surface	-	-	-	.72	.72
Kansas	**2.24**	-	**2.24**	**4.70**	**2.30**
Surface	2.24	-	2.24	4.70	2.30
Kentucky Total	**3.06**	**3.23**	**3.07**	**3.26**	**3.25**
Underground	2.86	2.21	2.81	2.95	2.93
Surface	4.82	4.81	4.82	3.80	3.84
Eastern	**3.30**	**3.23**	**3.28**	**3.17**	**3.18**
Underground	3.29	2.21	3.14	2.87	2.89
Surface	3.53	4.81	4.44	3.73	3.74
Western	**2.86**	-	**2.86**	**3.63**	**3.49**
Underground	2.47	-	2.47	3.32	3.10
Surface	5.11	-	5.11	4.06	4.14
Louisiana	-	-	-	**12.14**	**12.14**
Surface	-	-	-	12.14	12.14
Maryland	-	-	-	**3.41**	**3.41**
Underground	-	-	-	4.34	4.34
Surface	-	-	-	2.07	2.07
Missouri	**.72**	-	**.72**	**4.26**	**1.84**
Surface	.72	-	.72	4.26	1.84
Montana	**16.76**	**20.08**	**18.36**	**25.84**	**19.49**
Underground	-	-	-	1.06	1.06
Surface	16.76	20.08	18.36	26.74	19.59
New Mexico	**5.61**	**7.06**	**6.41**	**9.00**	**6.68**
Underground	1.63	-	1.63	-	1.63
Surface	6.98	7.06	7.03	9.00	7.26
North Dakota	**13.64**	**15.71**	**14.45**	**19.55**	**17.66**
Surface	13.64	15.71	14.45	19.55	17.66
Ohio	**3.16**	**3.66**	**3.17**	**3.72**	**3.46**
Underground	3.20	-	3.20	3.64	3.27
Surface	3.08	3.66	3.11	3.73	3.58
Oklahoma	-	**3.34**	**3.34**	**2.78**	**2.80**
Underground	-	-	-	1.03	1.03
Surface	-	3.34	3.34	3.11	3.12
Pennsylvania Total	**1.85**	**2.42**	**1.85**	**3.52**	**2.80**
Underground	1.92	-	1.92	4.60	2.91
Surface	1.38	2.93	1.42	2.83	2.63
Anthracite	**1.42**	**2.67**	**1.45**	**2.16**	**1.85**
Underground	-	-	-	.75	.74
Surface	1.43	4.08	1.46	2.79	2.09
Bituminous	1.90	**2.17**	**1.90**	**3.68**	**2.91**
Underground	1.92	-	1.92	4.93	2.98
Surface	1.18	2.17	1.26	2.84	2.78
Tennessee	-	-	-	**2.47**	**2.47**
Underground	-	-	-	2.34	2.34
Surface	-	-	-	2.71	2.71
Texas	-	**7.98**	**7.98**	**9.31**	**8.42**
Surface	-	7.98	7.98	9.31	8.42
Utah	**4.99**	**2.83**	**4.76**	**6.84**	**5.96**
Underground	4.99	2.83	4.76	6.84	5.96
Virginia	**2.26**	-	**2.26**	**2.49**	**2.41**
Underground	2.18	-	2.18	2.20	2.19
Surface	3.67	-	3.67	3.54	3.55

See footnotes at end of table.

Table 57. Coal Mining Productivity by State, Mine Type, and Union Type, 1993 (Continued)

(Short Tons of Coal Produced per Miner per Hour)

Coal-Producing State and Region	UMWA	Other Unions	Union Total	Nonunion	Total
Washington	-	4.08	4.08	2.76	4.00
Surface	-	4.08	4.08	2.76	4.00
West Virginia Total	2.80	-	2.79	3.80	3.27
Underground	2.59	-	2.58	3.40	2.92
Surface	3.99	-	3.94	4.54	4.35
Northern	2.91	-	2.91	3.06	2.98
Underground	2.92	-	2.92	2.70	2.84
Surface	-	-	-	3.70	3.70
Southern	2.74	-	2.73	4.05	3.39
Underground	2.39	-	2.39	3.64	2.96
Surface	4.00	-	3.94	4.85	4.49
Wyoming	6.29	10.11	7.39	26.70	24.46
Underground	-	-	-	3.56	3.56
Surface	6.29	10.11	7.39	28.69	26.03
Appalachian Total[1]	2.50	2.83	2.50	3.30	3.00
Underground	2.38	1.94	2.38	3.07	2.75
Surface	3.18	3.65	3.20	3.63	3.55
Interior Total[1]	3.30	6.94	4.31	4.56	4.43
Underground	2.80	3.37	2.84	3.36	3.06
Surface	4.36	7.57	5.97	5.47	5.71
Western Total[1]	7.07	8.72	7.71	19.11	13.53
Underground	3.90	2.83	3.84	6.18	5.23
Surface	8.68	8.91	8.79	24.83	16.49
East of Miss. River	2.69	3.10	2.70	3.38	3.11
Underground	2.46	3.01	2.47	3.11	2.81
Surface	3.72	3.26	3.70	3.75	3.74
West of Miss. River	6.80	8.37	7.63	16.87	12.14
Underground	3.90	2.83	3.84	6.07	5.18
Surface	8.19	8.46	8.36	20.51	13.94
U.S. Total	3.17	7.55	3.77	5.36	4.70
Underground	2.53	2.99	2.54	3.32	2.95
Surface	5.20	8.13	6.28	7.71	7.23

[1] For a definition of coal-producing regions, see Appendix C.

Notes: Productivity is calculated by dividing total coal production by the total direct labor hours worked by all mine employees. Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons, which are not required to provide these data. See Glossary for listing of other unions.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Distribution

Coal distribution during 1993 totaled 959 million short tons, 4 percent less than in 1992 (Table 58). Coal distributed from Wyoming, the Nation's leading coal producer, totaled 212 million short tons and represented 22 percent of the total. Collectively, coal distribution from the three major coal-producing States, Wyoming, Kentucky, and West Virginia, totaled 508 million short tons, or 53 percent of total U.S. distribution.

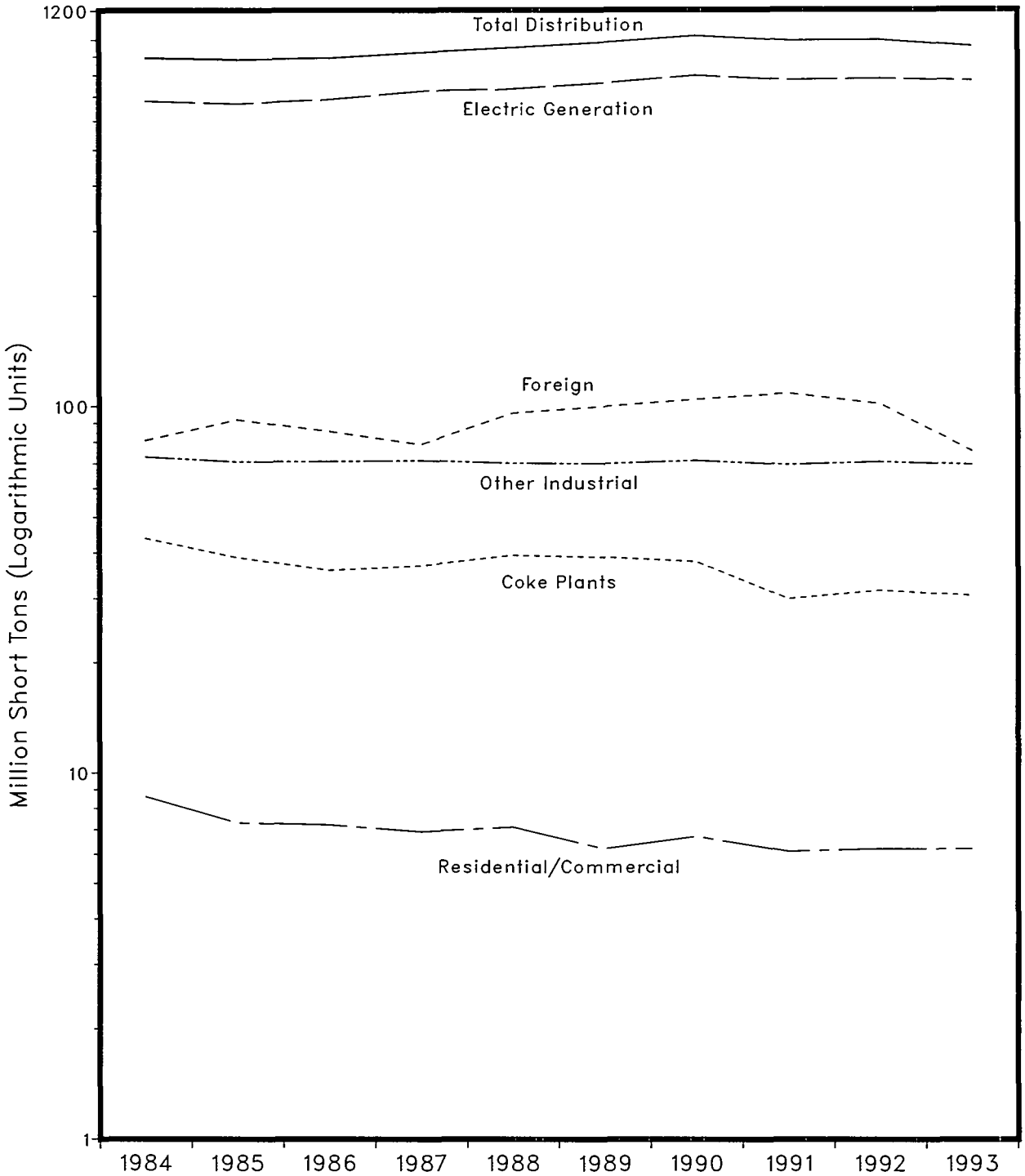
Texas was the leading destination for coal distributed domestically during 1993, with shipments totaling 95 million short tons or 10 percent of total distribution (Table 65). Of the coal distributed to Texas, 57 percent was indigenous, with virtually all of the balance arriving from Wyoming and Colorado.

Other major destination States included Ohio, Indiana, and Pennsylvania, which collectively accounted for 163 million short tons, or 17 percent of total 1993 distribution. As with Texas, a significant portion of the coal distributed in these States was indigenous (Appendix A).

Foreign distribution of U.S. coal during 1993 totaled 76 million short tons, representing 8 percent of the total amount of coal distributed (Table 65). The leading source of U.S. coal exports in 1993 was West Virginia, with exports totaling 33 million short tons, or 44 percent of total foreign distribution. Other major sources of coal exports were Virginia and Kentucky, with exports totaling 14 million short tons and 10 million short tons, respectively. Collectively, coal exported from these three States represented 75 percent of total U.S. coal exports.

Rail continued to be the dominant method of transporting coal with 530 million short tons of shipments, 55 percent of the total (Table 65). The amount of coal transported by water, including shipments by river, shipments on the Great Lakes, and shipments through tidewater ports, accounted for 214 million short tons, or 22 percent of the total coal distributed. Distribution of coal by truck accounted for 116 million short tons, 12 percent of the total, while distribution by tramway and conveyor totaled 95 million short tons, or 10 percent of the total.

Figure 10. Coal Distribution, 1984-1993



Source: Energy Information Administration, Form EIA-6, "Coal Distribution Report."

Table 58. Distribution of U.S. Coal By State of Origin, 1989-1993
(Thousand Short Tons)

Coal-Producing State and Region	1993	1992	1991	1990	1989	Percent Change 1992-1993	Average Annual Percent Change 1989-1993
Alabama	25,556	25,491	27,679	28,735	28,836	0.3	-3.0
Alaska	1,598	1,531	1,483	1,580	1,452	4.4	2.4
Arizona	12,138	12,418	12,933	11,446	11,939	-2.3	.4
Arkansas	25	32	1	13	94	-20.8	-27.8
California	-	142	23	57	22	-100.0	-
Colorado	21,465	18,864	17,757	18,386	16,898	13.8	6.2
Illinois	42,000	58,913	58,553	60,592	59,464	-28.7	-8.3
Indiana	29,664	31,393	31,412	36,122	33,727	-5.5	-3.2
Iowa	175	287	350	380	424	-39.3	-19.9
Kansas	345	354	424	734	1,078	-2.5	-24.8
Kentucky Total	160,395	161,860	158,290	173,277	152,649	-.9	1.3
Eastern	125,041	120,186	117,462	128,010	110,248	4.0	3.2
Western	35,354	41,674	40,828	45,267	42,401	-15.2	-4.4
Louisiana	3,103	3,208	3,151	3,186	2,983	-3.3	1.0
Maryland	3,572	3,480	3,773	3,606	3,094	2.7	3.7
Missouri	638	2,795	2,203	2,488	3,206	-77.2	-33.2
Montana	35,916	38,866	38,119	37,866	37,489	-7.6	-1.1
New Mexico	27,942	24,827	22,378	23,380	22,650	12.5	5.4
North Dakota	32,372	31,702	29,741	29,206	29,860	2.1	2.0
Ohio	28,315	29,550	30,023	34,335	32,970	-4.2	-3.7
Oklahoma	2,309	1,954	1,867	1,778	2,015	18.1	3.5
Pennsylvania Total	58,990	67,649	65,454	69,802	72,322	-12.8	-5.0
Anthracite	3,331	3,554	3,182	3,012	3,229	-6.3	.8
Bituminous	55,659	64,095	62,272	66,790	69,093	-13.2	-5.3
Tennessee	2,577	2,837	4,274	6,247	6,656	-9.2	-21.1
Texas	54,224	54,447	54,243	55,024	54,201	-.4	*
Utah	22,243	21,052	21,444	21,506	20,578	5.7	2.0
Virginia	41,639	45,728	43,495	48,038	42,533	-8.9	-.5
Washington	4,714	5,283	5,096	5,000	5,013	-10.8	-1.5
West Virginia Total	135,818	163,723	165,576	166,765	138,946	-17.0	-.6
Northern	37,100	50,646	52,633	58,200	57,467	-26.8	-10.4
Southern	98,718	113,077	112,943	108,565	81,479	-12.7	4.9
Wyoming	211,713	190,260	194,407	184,386	171,565	11.3	5.4
Unknown State	-	-	-	-	29,035	-	-
Appalachian Total[1]	**421,508**	**458,645**	**457,735**	**485,537**	**464,640**	**-8.1**	**-2.4**
Interior Total[1]	**167,836**	**195,057**	**193,030**	**205,584**	**199,592**	**-14.0**	**-4.2**
Western Total[1]	**370,102**	**344,945**	**343,381**	**332,813**	**317,468**	**7.3**	**3.9**
East of Miss. River	**528,525**	**590,624**	**588,527**	**627,519**	**600,232**	**-10.5**	**-3.1**
West of Miss. River	**430,920**	**408,023**	**405,619**	**396,416**	**381,468**	**5.6**	**3.1**
U.S. Total	**959,445**	**998,647**	**994,146**	**1,023,935**	**981,699**	**-3.9**	**-.6**

[1] For a definition of coal-producing regions, see Appendix C.
* Data round to zero.
Notes: See Technical Note 1 for the difference between production and distribution. Totals may not equal sum of components due to independent rounding.
Source: Energy Information Administration, Form EIA-6, "Coal Distribution Report."

Table 59. Domestic Distribution of U.S. Coal by State of Origin, 1989-1993
(Thousand Short Tons)

Coal-Producing State and Region	1993	1992	1991	1990	1989	Percent Change 1992-1993	Average Annual Percent Change 1989-1993
Alabama	19,668	19,560	20,667	20,545	20,093	0.5	-0.5
Alaska	855	797	811	783	747	7.3	3.4
Arizona	12,138	12,418	12,933	11,446	11,939	-2.3	.4
Arkansas	25	29	1	7	91	-13.4	-27.2
California	-	142	23	57	22	-100.0	-
Colorado	20,338	18,195	17,132	18,019	16,866	11.8	4.8
Illinois	41,330	57,670	57,290	60,222	58,976	-28.3	-8.5
Indiana	29,475	31,216	31,204	35,967	33,546	-5.6	-3.2
Iowa	175	287	350	380	424	-39.3	-19.9
Kansas	345	354	424	734	1,078	-2.5	-24.8
Kentucky Total	150,874	147,825	142,811	157,587	140,042	2.1	1.9
Eastern	115,723	106,372	102,416	112,741	98,823	8.8	4.0
Western	35,151	41,453	40,395	44,847	41,219	-15.2	-3.9
Louisiana	3,103	3,208	3,151	3,186	2,983	-3.3	1.0
Maryland	3,278	3,246	3,594	3,063	2,039	1.0	12.6
Missouri	638	2,795	2,203	2,488	3,206	-77.2	-33.2
Montana	35,795	38,804	37,812	37,294	37,073	-7.8	-.9
New Mexico	27,942	24,823	22,378	23,380	22,650	12.6	5.4
North Dakota	32,372	31,702	29,741	29,206	29,860	2.1	2.0
Ohio	28,315	29,549	30,001	34,209	32,658	-4.2	-3.5
Oklahoma	2,297	1,940	1,867	1,727	1,988	18.4	3.7
Pennsylvania Total	53,482	61,208	58,151	62,917	61,867	-12.6	-3.6
Anthracite	3,015	3,230	2,821	2,463	2,734	-6.6	2.5
Bituminous	50,467	57,979	55,330	60,454	59,132	-13.0	-3.9
Tennessee	2,577	2,835	4,243	6,098	6,557	-9.1	-20.8
Texas	54,224	54,447	54,243	55,016	54,201	-.4	*
Utah	19,283	18,792	19,358	19,756	18,402	2.6	1.2
Virginia	27,388	28,504	25,390	28,863	27,799	-3.9	-.4
Washington	4,621	5,020	4,894	4,893	4,959	-7.9	-1.8
West Virginia Total	102,659	112,917	111,785	118,032	102,864	-9.1	*
Northern	34,573	44,093	45,586	50,042	49,437	-21.6	-8.5
Southern	68,086	68,824	66,199	67,990	53,427	-1.1	6.3
Wyoming	210,739	188,983	193,425	183,712	171,487	11.5	5.3
Unknown State	-	-	-	-	17,616	-	-
Appalachian Total[1]	**353,089**	**364,191**	**356,247**	**386,469**	**370,316**	**-3.0**	**-1.2**
Interior Total[1]	**166,763**	**193,400**	**191,126**	**204,574**	**197,712**	**-13.8**	**-4.2**
Western Total[1]	**364,083**	**339,676**	**338,508**	**328,547**	**314,005**	**7.2**	**3.8**
East of Miss. River	**459,045**	**494,530**	**485,136**	**527,505**	**504,058**	**-7.2**	**-2.3**
West of Miss. River	**424,890**	**402,737**	**400,746**	**392,085**	**377,976**	**5.5**	**3.0**
U.S. Total	**883,934**	**897,267**	**885,882**	**919,589**	**882,034**	**-1.5**	*

[1] For a definition of coal-producing regions, see Appendix C.
* Data round to zero.
Note: Totals may not equal sum of components due to independent rounding.
Source: Energy Information Administration, Form EIA-6, "Coal Distribution Report."

Table 60. Major U.S. Coal Distributors, 1993

Company Name	
Top Ten Distributors	
Atlantic Richfield Co.	North American Coal Corp.
A.T. Massey Coal Co., Inc.	Peabody Holding Co.
Consol Energy Inc.	Texas Utilities Mining Co.
Cyprus AMAX Minerals Co.	The Coastal Corp.
Exxon Corp.	Zeigler Coal Holding Co.
Other Major Distributors	
Addington Resources, Inc.	Kerr-McGee Corp.
AGIP Coal Sales USA	Knife River Coal Mining
Aluminum Co. of America	Mapco Coal Inc.
American Eagle Coal Co.	Marigold Land Co.
American Electric Power	Minnesota Power & Light
American Metals & Coal	Montana Power Co.
Andalex Resources Inc.	Ohio Valley Resources, Inc.
Anker Energy Corp.	Pacificorp Electric
Apogee Coal Co.	Pen Holdings
Arch Mineral Corp.	Phibro Energy Inc.
Ashland Coal Inc.	Phoenix Resources
Bethlehem Stee Corp.	Plateau Mining Co.
BHP Utah Minerals Int'l	Pyro Energy Corp.
Black Beauty Coal Co.	Quaker Coal Co., Inc.
Centralia Mining Co.	Rochester & Pittsburgh Co.
Chevron Corp.	Sun Coal Co.
Coal Arbed Int'l Trading Co.	The Pittston Co.
Costain America Inc.	TMPA
Decker Coal Co.	Transco Energy Inc.
Drummond Company	United Coal Co.
Electric Fuels Corp.	USX Corp.
General Dynamics Corp.	Utility Fuels Inc.
James River Coal Co.	Western Fuels-Wyoming
Jim Walter Resources Inc.	Westmoreland Coal Co.
Kennecott Energy Co.	W.R. Grace & Co.

Notes: The top ten distribution companies accounted for 42 percent of the total distribution. Companies are listed in alphabetical order to ensure non-disclosure of company data.

'Source: Energy Information Administration, Form EIA-6, "Coal Distribution Report."

Table 61. Domestic Distribution of U.S. Coal by Coal-Producing Region and State, and Destination Census Division and State, 1989-1993
(Thousand Short Tons)

Coal-Producing Region and State, and Destination Census Division and State	1993	1992	1991	1990	1989	Percent Change 1992-1993	Average Annual Percent Change 1989-1993
Appalachian Total	**353,089**	**364,191**	**356,247**	**386,469**	**352,700**	**-3.0**	*
Alabama	**19,668**	**19,560**	**20,667**	**20,545**	**20,093**	**.5**	**-0.5**
Middle Atlantic	492	228	*	-	-	115.9	-
Pennsylvania	492	228	*	-	-	115.9	-
East North Central	-	-	6	312	253	-	-
Indiana	-	-	6	312	253	-	-
West North Central	-	1	-	-	-	-100.0	-
South Dakota	-	1	-	-	-	-100.0	-
South Atlantic	207	287	112	252	443	-27.6	-17.3
Florida	202	185	69	158	156	9.7	6.7
Georgia	1	102	43	94	287	-99.0	-75.9
North Carolina	-	-	*	-	-	-	-
South Carolina	4	-	-	-	-	-	-
East South Central	18,851	18,918	20,181	19,590	18,832	-.3	*
Alabama	18,716	18,849	20,150	19,535	18,778	-.7	-.1
Kentucky	-	-	-	1	-	-	-
Mississippi	132	68	28	49	44	93.1	31.8
Tennessee	3	*	3	5	11	NM	-25.6
West South Central	18	33	5	7	9	-46.7	17.4
Arkansas	9	12	5	6	9	-22.8	.5
Texas	8	21	*	*	-	-60.8	-
Kentucky, Eastern	**115,723**	**106,372**	**102,416**	**112,741**	**98,823**	**8.8**	**4.0**
New England	1,106	2,337	1,572	1,650	1,065	-52.7	.9
Connecticut	576	837	912	920	842	-31.2	-9.0
Maine	380	771	187	9	160	-50.6	24.1
Massachusetts	71	729	465	706	58	-90.3	4.8
New Hampshire	79	-	8	15	-	-	-
Rhode Island	-	-	-	-	3	-	-
Vermont	-	-	-	-	2	-	-
Middle Atlantic	3,679	3,901	4,238	2,742	1,495	-5.7	25.3
New Jersey	61	204	36	21	50	-70.2	4.8
New York	1,188	1,288	2,040	1,090	688	-7.7	14.6
Pennsylvania	2,429	2,409	2,162	1,631	756	.9	33.9
East North Central	25,309	21,902	23,622	29,008	24,442	15.5	.9
Illinois	2,333	1,575	1,766	2,180	1,722	48.1	7.9
Indiana	2,074	2,645	2,299	2,831	2,757	-21.6	-6.9
Michigan	8,857	8,083	8,648	10,193	9,620	9.6	-2.0
Ohio	11,294	8,648	9,915	12,658	9,148	30.6	5.4
Wisconsin	751	951	995	1,145	1,195	-21.1	-11.0
West North Central	482	444	641	652	512	8.7	-1.5
Iowa	25	65	232	209	171	-61.3	-38.1
Kansas	-	5	15	4	27	-100.0	-
Minnesota	124	125	184	293	230	-.8	-14.3
Missouri	334	249	·211	147	83	33.8	41.6
South Dakota	-	-	-	-	1	-	-
South Atlantic	57,532	52,997	50,747	53,711	50,648	8.6	3.2
Delaware	27	-	52	142	-	-	-
District of Columbia	16	18	47	23	41	-9.0	-20.6
Florida	11,311	12,584	11,302	11,249	10,845	-10.1	1.1
Georgia	14,163	11,770	12,277	13,325	12,968	20.3	2.2
Maryland	958	296	449	690	802	224.0	4.5
North Carolina	13,491	12,517	11,334	13,045	9,522	7.8	9.1
South Carolina	9,962	9,847	9,587	9,103	10,099	1.2	-.3
Virginia	6,672	5,246	4,872	4,844	4,900	27.2	8.0
West Virginia	932	721	826	1,291	1,471	29.4	-10.8
East South Central	26,008	22,917	19,666	22,951	19,181	13.5	7.9
Alabama	2,320	2,703	2,164	1,491	719	-14.2	34.0
Kentucky	10,145	10,486	8,563	10,885	9,418	-3.3	1.9
Mississippi	1,731	1,616	2,105	2,140	1,659	7.1	1.1
Tennessee	11,811	8,112	6,835	8,435	7,385	45.6	12.5
West South Central	104	95	237	360	221	8.8	-17.2
Louisiana	104	95	235	349	194	8.8	-14.5
Oklahoma	-	-	-	-	23	-	-
Texas	-	-	1	11	3	-	-
Mountain	-	2	-	-	53	-100.0	-
Idaho	-	2	-	-	-	-100.0	-
Utah	-	-	-	-	53	-	-
Pacific	4	-	-	*	30	-	-39.4

See footnotes at end of table.

Table 61. Domestic Distribution of U.S. Coal by Coal-Producing Region and State, and Destination Census Division and State, 1989-1993 (Continued)
(Thousand Short Tons)

Coal-Producing Region and State, and Destination Census Division and State	1993	1992	1991	1990	1989	Percent Change 1992-1993	Average Annual Percent Change 1989-1993
Kentucky, Eastern (Continued)							
Oregon	4	-	-	*	8	-	-15.6
Washington	-	-	-	*	22	-	-
Maryland	**3,278**	**3,246**	**3,594**	**3,063**	**2,039**	**1.0**	**12.6**
New England	11	-	-	11	-	-	-
Connecticut	-	-	-	2	-	-	-
Massachusetts	11	-	-	9	-	-	-
Middle Atlantic	19	6	22	70	15	215.5	5.4
New York	-	4	8	22	1	-100.0	-
Pennsylvania	19	2	14	48	14	NM	8.0
South Atlantic	3,230	3,166	3,553	2,956	1,982	2.0	13.0
Delaware	37	-	15	21	7	-	51.0
Maryland	820	1,159	1,363	1,584	1,014	-29.3	-5.2
Virginia	-	1	37	106	83	-100.0	-
West Virginia	2,373	2,006	2,139	1,245	878	18.3	28.2
Ohio	**28,315**	**29,549**	**30,001**	**34,209**	**32,658**	**-4.2**	**-3.5**
New England	17	4	*	*	17	299.9	.7
Connecticut	*	1	-	-	-	-85.7	-
Massachusetts	17	4	*	*	*	391.9	198.8
New Hampshire	-	-	-	-	17	-	-
Middle Atlantic	1,388	556	934	2,005	2,115	149.8	-10.0
New Jersey	-	-	-	14	7	-	-
New York	52	47	45	149	55	10.2	-1.2
Pennsylvania	1,336	508	889	1,843	2,053	162.8	-10.2
East North Central	25,119	27,497	27,875	29,289	26,884	-8.6	-1.7
Illinois	*	2	-	-	-	-97.8	-
Indiana	274	134	181	225	141	104.0	18.0
Michigan	474	419	627	751	529	13.2	-2.7
Ohio	24,370	26,941	27,061	28,301	26,189	-9.5	-1.8
Wisconsin	-	-	6	12	25	-	-
West North Central	83	-	*	27	-	-	-
Iowa	67	-	-	-	-	-	-
Missouri	16	-	*	27	-	-	-
South Atlantic	1,041	1,385	995	1,961	1,166	-24.8	-2.8
Delaware	48	-	-	1	-	-	-
Florida	-	-	172	-	-	-	-
Maryland	-	-	7	7	-	-	-
South Carolina	-	-	5	38	-	-	-
West Virginia	993	1,385	811	1,915	1,166	-28.3	-3.9
East South Central	261	-	49	705	2,332	-	-42.2
Alabama	151	-	48	696	2,246	-	-49.1
Kentucky	29	-	-	9	71	-	-20.0
Tennessee	81	-	*	*	15	-	51.3
West South Central	-	*	1	3	3	-100.0	-
Louisiana	-	*	1	3	3	-100.0	-
Pacific	-	-	-	-	*	-	-
California	-	-	-	-	*	-	-
Pennsylvania, Anthracite	**3,015**	**3,230**	**2,821**	**2,463**	**2,734**	**-6.6**	**2.5**
New England	64	73	74	88	72	-12.6	-3.1
Connecticut	13	14	13	13	12	-7.8	1.0
Maine	8	12	11	11	9	-27.3	-1.6
Massachusetts	24	22	20	28	33	7.5	-7.6
New Hampshire	10	14	22	24	9	-28.5	3.0
Rhode Island	3	5	4	5	3	-33.5	1.8
Vermont	6	7	5	8	7	-14.1	-3.8
Middle Atlantic	2,618	2,916	2,554	2,077	2,314	-10.2	3.1
New Jersey	20	17	18	23	27	17.9	-7.6
New York	179	215	164	161	209	-16.9	-3.9
Pennsylvania	2,420	2,685	2,371	1,894	2,077	-9.9	3.9
East North Central	39	40	31	41	63	-3.7	-11.4
Illinois	14	8	11	5	10	66.8	9.4
Indiana	5	5	5	8	4	-5.7	1.7
Michigan	*	1	2	1	8	-69.7	-53.2
Ohio	19	26	13	21	31	-27.5	-12.1

See footnotes at end of table.

Table 61. Domestic Distribution of U.S. Coal by Coal-Producing Region and State, and Destination Census Division and State, 1989-1993 (Continued)
(Thousand Short Tons)

Coal-Producing Region and State, and Destination Census Division and State	1993	1992	1991	1990	1989	Percent Change 1992-1993	Average Annual Percent Change 1989-1993
Pennsylvania, Anthracite (Continued)							
Wisconsin	1	*	*	5	10	NM	-38.5
West North Central	34	35	33	49	45	-3.3	-6.8
Iowa	28	27	29	47	45	.4	-11.7
Kansas	*	6	*	*	*	-99.5	-11.4
Minnesota	3	*	*	*	*	NM	117.1
Missouri	2	*	*	*	*	NM	NM
Nebraska	2	2	4	1	-	-20.9	-
North Dakota	*	*	*	*	*	425.0	40.9
South Dakota	-	*	*	*	*	-100.0	-
South Atlantic	64	51	39	51	66	25.3	-.8
Delaware	11	7	*	*	1	49.9	72.5
District of Columbia	*	*	*	*	*	-2.9	-1.1
Florida	6	7	4	8	9	-8.5	-8.1
Georgia	*	1	1	2	1	-60.8	-8.2
Maryland	4	3	9	4	4	18.9	-.4
North Carolina	*	*	*	*	*	286.4	-32.0
South Carolina	11	*	3	12	23	NM	-16.9
Virginia	14	13	16	17	17	5.6	-4.6
West Virginia	18	20	6	7	12	-8.4	11.8
East South Central	34	42	44	60	91	-17.3	-21.6
Alabama	3	6	1	17	15	-55.3	-34.4
Kentucky	18	24	27	27	60	-24.3	-26.2
Mississippi	*	*	*	*	*	-65.1	-17.3
Tennessee	14	12	16	17	16	16.8	-3.4
West South Central	11	10	5	2	3	10.1	34.6
Arkansas	*	4	3	*	2	-94.9	-41.0
Louisiana	8	*	*	*	*	NM	233.3
Oklahoma	*	1	*	*	*	-43.8	53.7
Texas	3	5	1	1	2	-49.1	14.0
Mountain	3	*	1	1	1	NM	17.3
Arizona	*	*	*	*	*	-82.0	1.9
Colorado	3	*	*	*	*	NM	132.4
Idaho	*	-	-	-	1	-	-73.5
Montana	*	-	-	*	*	-	18.9
Nevada	-	-	-	1	-	-	-
New Mexico	*	*	-	-	*	-7.1	34.3
Utah	*	-	*	*	*	-	43.6
Wyoming	*	*	*	*	*	-72.0	-45.9
Pacific	10	*	*	*	*	NM	263.1
California	*	*	*	*	*	111.0	59.1
Oregon	9	-	*	-	*	-	NM
Washington	-	*	*	*	*	-100.0	-
Pennsylvania, Bituminous	50,467	57,979	55,330	60,454	59,132	-13.0	-3.9
New England	989	1,124	1,113	996	905	-12.1	2.3
Connecticut	*	131	87	14	*	-99.8	4.6
Maine	2	19	1	*	59	-89.2	-56.8
Massachusetts	330	294	290	695	626	12.4	-14.8
New Hampshire	656	681	734	286	219	-3.7	31.5
Vermont	*	-	*	*	*	-	14.1
Middle Atlantic	37,417	43,559	40,806	46,212	45,995	-14.1	-5.0
New Jersey	153	15	23	46	50	NM	31.9
New York	6,228	8,532	6,893	7,844	7,888	-27.0	-5.7
Pennsylvania	31,036	35,012	33,889	38,322	38,056	-11.3	-5.0
East North Central	6,502	7,466	7,138	7,364	6,978	-12.9	-1.8
Illinois	43	69	154	54	17	-37.7	25.6
Indiana	505	380	277	391	401	33.0	5.9
Michigan	1,607	1,862	1,682	1,758	1,617	-13.7	-.1
Ohio	3,848	3,567	3,411	3,856	3,856	7.9	*
Wisconsin	500	1,589	1,615	1,304	1,088	-68.5	-17.7
West North Central	205	191	558	44	27	7.6	66.4
Iowa	103	162	67	-	-	-36.2	-
Minnesota	-	28	492	44	27	-100.0	-
Missouri	102	1	-	-	-	NM	-
North Dakota	*	-	-	-	-	-	-

See footnotes at end of table.

Table 61. Domestic Distribution of U.S. Coal by Coal-Producing Region and State, and Destination Census Division and State, 1989-1993 (Continued)
(Thousand Short Tons)

Coal-Producing Region and State, and Destination Census Division and State	1993	1992	1991	1990	1989	Percent Change 1992-1993	Average Annual Percent Change 1989-1993
Pennsylvania, Bituminous (Continued)							
South Atlantic	3,955	4,090	4,957	4,935	4,347	-3.3	-2.3
Delaware	252	226	576	568	593	11.5	-19.3
District of Columbia	-	-	-	*	1	-	-
Florida	-	-	66	-	-	-	-
Maryland	2,372	2,437	2,624	3,001	3,010	-2.7	-5.8
North Carolina	-	-	-	-	29	-	-
South Carolina	-	1	2	*	-	-100.0	-
Virginia	29	5	71	27	36	436.8	-4.9
West Virginia	1,302	1,421	1,616	1,339	679	-8.3	17.7
East South Central	772	83	6	6	25	NM	135.8
Alabama	46	1	*	6	-	NM	-
Kentucky	225	31	-	-	25	NM	73.2
Mississippi	3	6	-	-	-	-45.0	-
Tennessee	498	46	6	-	-	NM	-
West South Central	*	*	2	*	-	-46.7	-
Texas	*	*	2	*	-	-46.7	-
Mountain	240	290	265	26	-	-17.4	-
Colorado	-	-	-	*	-	-	-
Utah	240	290	265	26	-	-17.4	-
Pacific	-	-	*	-	-	-	-
California	-	-	*	-	-	-	-
Tennessee	**2,577**	**2,835**	**4,243**	**6,098**	**6,557**	**-9.1**	**-20.8**
Middle Atlantic	-	-	5	2	-	-	-
New York	-	-	5	-	-	-	-
Pennsylvania	-	-	-	2	-	-	-
East North Central	*	24	63	207	141	-99.9	-88.5
Illinois	-	-	29	170	*	-	-
Indiana	*	3	2	8	3	-99.1	-70.7
Michigan	-	21	31	23	123	-100.0	-
Ohio	-	-	1	4	*	-	-
Wisconsin	-	-	-	2	14	-	-
West North Central	-	-	-	-	5	-	-
Iowa	-	-	-	-	5	-	-
South Atlantic	303	387	820	2,133	2,265	-21.7	-39.5
Florida	-	-	242	143	240	-	-
Georgia	204	259	384	1,590	1,506	-21.0	-39.3
North Carolina	96	114	150	124	324	-16.2	-26.3
South Carolina	3	13	34	269	188	-79.6	-65.7
Virginia	*	1	10	7	6	-85.0	-59.4
West Virginia	-	-	-	-	1	-	-
East South Central	2,215	2,376	3,292	3,712	4,099	-6.8	-14.3
Alabama	592	734	934	971	828	-19.4	-8.0
Kentucky	122	39	436	601	533	210.6	-30.8
Mississippi	-	-	-	-	1	-	-
Tennessee	1,501	1,603	1,922	2,139	2,737	-6.3	-13.9
West South Central	-	-	-	-	17	-	-
Louisiana	-	-	-	-	*	-	-
Oklahoma	-	-	-	-	16	-	-
Virginia	**27,388**	**28,504**	**25,390**	**28,863**	**27,799**	**-3.9**	**-.4**
New England	-	281	886	492	1,420	-100.0	-
Connecticut	-	-	-	-	*	-	-
Maine	-	44	-	-	-	-100.0	-
Massachusetts	-	237	693	490	1,339	-100.0	-
New Hampshire	-	-	186	2	81	-	-
Vermont	-	-	7	-	-	-	-
Middle Atlantic	2,073	2,957	1,812	2,180	1,191	-29.9	14.9
New Jersey	359	734	551	447	366	-51.1	-.5
New York	108	96	128	128	82	11.8	7.0
Pennsylvania	1,607	2,127	1,134	1,606	743	-24.5	21.3
East North Central	3,475	3,794	2,574	3,852	4,499	-8.4	-6.3
Illinois	260	478	380	406	606	-45.5	-19.1
Indiana	2,045	2,240	1,339	1,242	1,094	-8.7	16.9
Michigan	188	68	34	140	724	176.4	-28.6
Ohio	875	940	772	2,005	2,008	-7.0	-18.8

See footnotes at end of table.

Table 61. Domestic Distribution of U.S. Coal by Coal-Producing Region and State, and Destination Census Division and State, 1989-1993 (Continued)
(Thousand Short Tons)

Coal-Producing Region and State, and Destination Census Division and State	1993	1992	1991	1990	1989	Percent Change 1992-1993	Average Annual Percent Change 1989-1993
Virginia (Continued)							
Wisconsin	108	68	50	59	66	58.4	12.9
West North Central	-	*	-	*	*	-100.0	-
Minnesota	-	-	-	-	*	-	-
North Dakota	-	*	-	-	-	-100.0	-
South Dakota	-	-	-	*	-	-	-
South Atlantic	18,553	16,839	16,290	18,247	17,650	10.2	1.3
Delaware	155	208	137	226	294	-25.5	-14.8
Florida	457	451	455	663	901	1.3	-15.6
Georgia	3,496	2,779	3,219	3,661	3,323	25.8	1.3
Maryland	8	79	115	376	600	-90.4	-66.5
North Carolina	5,867	5,207	4,520	4,592	4,707	12.7	5.7
South Carolina	1,663	1,356	1,523	1,565	1,808	22.6	-2.1
Virginia	6,076	6,082	5,457	5,638	4,992	-.1	5.0
West Virginia	832	677	864	1,525	1,024	22.8	-5.1
East South Central	3,026	3,432	3,312	3,366	2,827	-11.8	1.7
Alabama	887	1,017	763	764	386	-12.8	23.1
Kentucky	1	*	-	64	105	NM	-67.7
Tennessee	2,138	2,415	2,549	2,539	2,335	-11.4	-2.2
West South Central	2	2	10	103	2	-26.2	-6.1
Louisiana	-	-	-	90	-	-	-
Texas	2	2	10	13	2	-26.2	-6.1
Mountain	103	192	198	-	*	-46.5	NM
Colorado	*	-	*	-	-	-	-
Utah	103	192	198	-	-	-46.6	-
Wyoming	-	-	-	-	*	-	-
West Virginia, Northern	34,573	44,093	45,586	50,042	49,437	-21.6	-8.5
New England	1,002	2,776	2,216	2,142	2,352	-63.9	-19.2
Connecticut	-	*	-	169	79	-100.0	-
Maine	-	-	-	12	22	-	-
Massachusetts	613	2,379	1,965	1,264	1,249	-74.2	-16.3
New Hampshire	389	397	251	696	1,002	-2.1	-21.1
Middle Atlantic	9,769	13,804	15,039	16,090	14,802	-29.2	-9.9
New Jersey	1,234	1,213	1,094	1,443	1,654	1.7	-7.1
New York	1,336	2,530	3,393	4,185	3,235	-47.2	-19.8
Pennsylvania	7,200	10,061	10,553	10,463	9,913	-28.4	-7.7
East North Central	4,220	5,803	6,435	7,459	6,952	-27.3	-11.7
Illinois	44	-	-	10	17	-	26.6
Indiana	216	70	313	334	123	207.8	15.1
Michigan	113	114	81	170	240	-.6	-17.1
Ohio	3,659	5,365	5,513	6,129	5,919	-31.8	-11.3
Wisconsin	188	254	528	815	653	-26.1	-26.8
West North Central	54	9	20	19	32	483.9	13.9
Iowa	-	-	1	-	-	-	-
Minnesota	-	9	19	19	32	-100.0	-
Missouri	54	-	-	-	-	-	-
North Dakota	-	-	-	*	-	-	-
South Atlantic	17,772	20,988	21,434	23,875	24,019	-15.3	-7.3
Delaware	1,096	1,111	714	872	932	-1.3	4.1
District of Columbia	12	6	9	20	15	108.5	-5.4
Florida	580	452	454	686	556	28.5	1.1
Maryland	4,314	3,466	4,425	4,152	4,178	24.5	.8
North Carolina	-	*	2	4	-	-100.0	-
Virginia	306	243	276	260	226	25.7	7.9
West Virginia	11,464	15,710	15,553	17,881	18,113	-27.0	-10.8
East South Central	749	167	53	3	8	349.9	209.3
Alabama	27	-	*	-	1	-	110.7
Kentucky	130	4	9	3	4	NM	142.8
Mississippi	5	4	13	-	3	28.4	11.8
Tennessee	589	159	31	-	-	271.3	-
West South Central	154	-	-	-	234	-	-9.9
Louisiana	154	-	-	-	234	-	-9.9
Mountain	-	-	-	-	5	-	-
New Mexico	-	-	-	-	5	-	-
Pacific	*	*	*	*	-	292.0	-
California	*	*	*	*	-	292.0	-

See footnotes at end of table.

Table 61. Domestic Distribution of U.S. Coal by Coal-Producing Region and State, and Destination Census Division and State, 1989-1993 (Continued)
(Thousand Short Tons)

Coal-Producing Region and State, and Destination Census Division and State	1993	1992	1991	1990	1989	Percent Change 1992-1993	Average Annual Percent Change 1989-1993
West Virginia, Southern	**68,086**	**68,824**	**66,199**	**67,990**	**53,427**	**-1.1**	**6.3**
New England	917	1,109	416	179	225	-17.3	42.1
Connecticut	106	21	*	*	26	408.6	42.5
Maine	14	20	11	72	1	-29.1	87.3
Massachusetts	739	971	304	93	187	-23.9	41.0
New Hampshire	58	97	101	13	11	-40.1	51.8
Rhode Island	*	-	-	-	-	-	-
Vermont	-	-	-	*	*	-	-
Middle Atlantic	6,965	5,160	4,570	6,048	4,789	35.0	9.8
New Jersey	343	250	155	170	46	36.8	64.8
New York	1,860	1,265	980	1,399	1,528	47.0	5.0
Pennsylvania	4,763	3,644	3,434	4,479	3,215	30.7	10.3
East North Central	22,906	25,560	24,205	23,796	20,174	-10.4	3.2
Illinois	1,971	1,472	1,668	931	772	33.9	26.4
Indiana	3,401	4,920	4,131	3,791	2,427	-30.9	8.8
Michigan	4,048	6,120	6,951	6,794	6,246	-33.9	-10.3
Ohio	12,485	12,457	11,163	12,053	10,455	.2	4.5
Wisconsin	1,002	592	293	227	274	69.2	38.3
West North Central	223	364	253	291	135	-38.7	13.4
Iowa	69	77	39	107	14	-9.6	49.8
Kansas	-	34	60	-	-	-100.0	-
Minnesota	11	24	22	24	62	-54.2	-34.9
Missouri	142	228	126	156	59	-37.6	24.8
North Dakota	-	-	1	4	-	-	-
South Dakota	-	-	5	-	-	-	-
South Atlantic	26,459	28,512	28,761	30,763	23,164	-7.2	3.4
Delaware	617	361	723	590	94	70.8	59.9
District of Columbia	23	27	10	27	-	-13.7	-
Florida	817	1,010	1,507	1,789	1,897	-19.1	-19.0
Georgia	2,958	2,477	2,517	1,549	1,461	19.4	19.3
Maryland	1,376	2,296	1,721	1,961	535	-40.1	26.6
North Carolina	6,167	7,963	6,047	6,270	4,971	-22.5	5.5
South Carolina	107	121	178	83	50	-11.9	20.8
Virginia	2,971	3,323	4,420	3,418	2,117	-10.6	8.8
West Virginia	11,423	10,934	11,638	15,076	12,038	4.5	-1.3
East South Central	10,095	7,054	7,469	6,274	3,916	43.1	26.7
Alabama	3,736	2,362	2,335	1,026	654	58.2	54.6
Kentucky	4,704	3,755	4,062	4,901	2,950	25.3	12.4
Mississippi	87	34	4	21	3	156.0	138.7
Tennessee	1,569	904	1,067	326	309	73.5	50.1
West South Central	49	22	31	31	25	120.0	18.9
Louisiana	2	-	14	8	22	-	-47.6
Oklahoma	48	22	18	22	3	112.7	99.7
Texas	-	-	-	*	-	-	-
Mountain	135	-	35	14	13	-	81.0
Montana	-	-	-	-	13	-	-
Utah	135	-	35	14	-	-	-
Pacific	*	-	*	3	1	-	-35.8
California	*	-	*	-	-	-	-
Washington	-	-	-	3	1	-	-
Interior Total	**166,763**	**193,400**	**191,126**	**204,574**	**197,712**	**-13.8**	**-4.2**
Arkansas	**25**	**29**	**1**	**7**	**91**	**-13.4**	**-27.2**
New England	-	13	-	-	-	-100.0	-
Vermont	-	13	-	-	-	-100.0	-

See footnotes at end of table.

Table 61. Domestic Distribution of U.S. Coal by Coal-Producing Region and State, and Destination Census Division and State, 1989-1993 (Continued)
(Thousand Short Tons)

Coal-Producing Region and State, and Destination Census Division and State	1993	1992	1991	1990	1989	Percent Change 1992-1993	Average Annual Percent Change 1989-1993
Arkansas (Continued)							
West North Central	8	11	-	-	-	-23.4	-
Missouri	8	11	-	-	-	-23.4	-
West South Central	17	5	1	-	7	225.5	23.2
Arkansas	12	-	1	-	-	-	-
Oklahoma	5	5	-	-	7	-8.7	-10.4
Illinois	**41,330**	**57,670**	**57,290**	**60,222**	**58,976**	**-28.3**	**-8.5**
New England	-	-	*	*	-	-	-
Connecticut	-	-	*	-	-	-	-
Massachusetts	-	-	-	*	-	-	-
Middle Atlantic	*	*	1	*	*	25.8	-16.6
New Jersey	-	*	-	-	-	-100.0	-
New York	*	*	*	*	*	55.7	97.1
Pennsylvania	-	-	*	*	*	-	-
East North Central	20,483	28,821	29,022	30,701	28,757	-28.9	-8.1
Illinois	15,206	18,167	18,787	18,700	17,588	-16.3	-3.6
Indiana	4,541	9,595	9,185	10,571	9,508	-52.7	-16.9
Michigan	-	6	5	10	10	-100.0	-
Ohio	-	-	73	58	2	-	-
Wisconsin	736	1,053	971	1,362	1,649	-30.1	-18.3
West North Central	7,783	13,499	15,470	15,856	16,977	-42.3	-17.7
Iowa	1,534	1,175	1,473	1,592	2,362	30.6	-10.2
Kansas	179	640	1,320	1,157	612	-72.0	-26.4
Minnesota	43	58	40	41	47	-25.8	-2.1
Missouri	6,027	11,625	12,637	13,067	13,956	-48.2	-18.9
North Dakota	*	-	*	-	*	-	-15.1
South Atlantic	8,137	10,485	8,811	9,019	9,055	-22.4	-2.6
Florida	4,782	5,529	4,464	4,150	3,814	-13.5	5.8
Georgia	3,355	4,955	4,347	4,869	5,241	-32.3	-10.5
South Carolina	-	1	-	-	-	-100.0	-
Virginia	*	-	*	-	-	-	-
West Virginia	-	-	-	-	*	-	-
East South Central	4,823	4,780	3,681	4,482	4,015	.9	4.7
Alabama	401	632	474	813	768	-36.5	-15.0
Kentucky	535	7	15	453	424	NM	6.0
Mississippi	1,106	1,879	1,518	1,218	1,293	-41.1	-3.8
Tennessee	2,780	2,261	1,673	1,998	1,530	22.9	16.1
West South Central	58	81	99	82	105	-28.7	-13.7
Arkansas	37	81	99	82	98	-54.4	-21.5
Louisiana	21	-	-	-	1	-	94.6
Texas	-	-	*	-	5	-	-
Mountain	-	-	201	11	-	-	-
Montana	-	-	201	*	-	-	-
Wyoming	-	-	-	11	-	-	-
Pacific	-	-	-	-	10	-	-
California	-	-	-	-	10	-	-
Indiana	**29,475**	**31,216**	**31,204**	**35,967**	**33,546**	**-5.6**	**-3.2**
New England	21	-	-	-	-	-	-
Massachusetts	21	-	-	-	-	-	-
Middle Atlantic	-	-	-	-	3	-	-
Pennsylvania	-	-	-	-	3	-	-
East North Central	26,347	27,677	27,023	30,173	29,095	-4.8	-2.4
Illinois	1,562	1,021	1,698	2,373	2,275	53.1	-9.0
Indiana	23,913	24,655	22,619	25,301	24,089	-3.0	-.2
Michigan	184	338	311	407	308	-45.6	-12.0
Ohio	60	135	*	184	162	-56.0	-22.2
Wisconsin	628	1,528	2,394	1,908	2,262	-58.9	-27.4
West North Central	1,249	756	1,289	2,252	1,245	65.2	.1
Iowa	646	746	1,027	2,003	1,010	-13.3	-10.6
Kansas	18	-	6	3	-	-	-
Minnesota	-	-	91	51	37	-	-
Missouri	585	11	165	196	195	NM	31.6
Nebraska	-	-	-	-	3	-	-
South Atlantic	264	548	316	443	533	-51.8	-16.1
District of Columbia	-	-	-	-	4	-	-
Florida	96	-	171	443	500	-	-33.8
Georgia	153	548	144	-	-	-72.1	-

See footnotes at end of table.

Table 61. Domestic Distribution of U.S. Coal by Coal-Producing Region and State, and Destination Census Division and State, 1989-1993 (Continued)
(Thousand Short Tons)

Coal-Producing Region and State, and Destination Census Division and State	1993	1992	1991	1990	1989	Percent Change 1992-1993	Average Annual Percent Change 1989-1993
Indiana (Continued)							
South Carolina	-	-	-	-	3	-	-
Virginia	15	-	-	-	26	-	-12.5
East South Central	1,506	2,071	2,401	2,895	2,626	-27.3	-13.0
Alabama	60	127	127	72	1	-52.7	180.5
Kentucky	1,313	1,694	2,039	2,450	2,225	-22.5	-12.3
Mississippi	-	3	24	24	-	-100.0	-
Tennessee	132	247	210	349	400	-46.4	-24.2
West South Central	1	-	2	-	-	-	-
Oklahoma	1	-	2	-	-	-	-
Texas	-	-	*	-	-	-	-
Iowa	**175**	**287**	**350**	**380**	**424**	**-39.3**	**-19.9**
West North Central	175	287	350	380	424	-39.3	-19.9
Iowa	175	287	347	367	418	-39.3	-19.6
Missouri	-	-	2	13	6	-	-
Kansas	**345**	**354**	**424**	**734**	**1,078**	**-2.5**	**-24.8**
West North Central	345	345	424	734	1,034	-.1	-24.0
Kansas	167	165	136	348	768	1.5	-31.7
Missouri	178	181	288	387	267	-1.6	-9.7
West South Central	-	-	-	-	22	-	-
Arkansas	-	-	-	-	22	-	-
Oklahoma	-	-	-	-	*	-	-
Pacific	-	-	-	-	*	-	-
California	-	-	-	-	*	-	-
Kentucky, Western	**35,151**	**41,453**	**40,395**	**44,847**	**41,219**	**-15.2**	**-3.9**
New England	-	-	*	-	-	-	-
Connecticut	-	-	*	-	-	-	-
Middle Atlantic	*	*	-	*	8	-93.4	-77.8
New York	-	-	-	-	8	-	-
Pennsylvania	*	*	-	*	-	-93.4	-
East North Central	4,169	4,346	5,204	5,358	5,180	-4.1	-5.3
Illinois	659	214	470	1,224	370	207.3	15.6
Indiana	3,229	3,275	3,482	3,316	3,343	-1.4	-.9
Michigan	28	8	74	59	-	268.9	-
Ohio	146	514	786	650	1,310	-71.7	-42.3
Wisconsin	108	336	391	109	157	-68.0	-9.0
West North Central	352	896	1,027	2,482	1,132	-60.7	-25.3
Iowa	217	271	383	492	412	-19.7	-14.8
Kansas	-	-	3	2	15	-	-
Minnesota	32	27	2	2	51	16.6	-11.1
Missouri	102	598	640	1,986	654	-82.9	-37.1
South Atlantic	3,040	5,260	5,849	6,689	6,475	-42.2	-17.2
Florida	3,039	3,910	4,472	5,106	4,889	-22.3	-11.2
Georgia	-	1,350	1,358	1,496	1,547	-100.0	-
South Carolina	-	-	-	29	-	-	-
Virginia	-	*	-	14	-	-100.0	-
West Virginia	1	*	19	44	39	NM	-56.1
East South Central	27,512	30,682	27,911	29,781	27,866	-10.3	-.3
Alabama	1,761	2,310	1,627	2,235	2,012	-23.8	-3.3
Kentucky	17,990	17,455	16,268	18,795	17,431	3.1	.8
Mississippi	10	190	169	645	419	-94.9	-61.1
Tennessee	7,751	10,727	9,847	8,106	8,005	-27.7	-.8
West South Central	12	204	311	318	295	-94.1	-55.0
Arkansas	12	8	11	11	10	48.3	5.1
Louisiana	-	196	300	307	229	-100.0	-
Oklahoma	-	-	-	-	50	-	-
Texas	-	-	-	-	5	-	-
Louisiana	**3,103**	**3,208**	**3,151**	**3,186**	**2,983**	**-3.3**	**1.0**
West North Central	*	-	-	-	-	-	-
Missouri	*	-	-	-	-	-	-
West South Central	3,103	3,208	3,151	3,186	2,983	-3.3	1.0
Louisiana	3,103	3,208	3,151	3,186	2,983	-3.3	1.0

See footnotes at end of table.

Table 61. Domestic Distribution of U.S. Coal by Coal-Producing Region and State, and Destination Census Division and State, 1989-1993 (Continued)
(Thousand Short Tons)

Coal-Producing Region and State, and Destination Census Division and State	1993	1992	1991	1990	1989	Percent Change 1992-1993	Average Annual Percent Change 1989-1993
Missouri	**638**	**2,795**	**2,203**	**2,488**	**3,206**	**-77.2**	**-33.2**
East North Central	-	-	*	1	*	-	-
Illinois	-	-	*	1	*	-	-
West North Central	614	2,783	2,183	2,487	3,206	-77.9	-33.8
Iowa	-	-	-	-	34	-	-
Kansas	23	54	19	-	-	-58.1	-
Missouri	592	2,729	2,164	2,487	3,172	-78.3	-34.3
West South Central	2	-	-	-	-	-	-
Oklahoma	2	-	-	-	-	-	-
Oklahoma	**2,297**	**1,940**	**1,867**	**1,727**	**1,988**	**18.4**	**3.7**
East North Central	-	-	-	-	6	-	-
Illinois	-	-	-	-	6	-	-
West North Central	57	83	23	52	348	-31.4	-36.4
Kansas	41	73	23	16	33	-43.9	5.1
Missouri	16	10	*	36	315	57.7	-52.5
West South Central	2,240	1,857	1,841	1,612	1,627	20.6	8.3
Arkansas	196	130	94	71	74	50.5	27.7
Oklahoma	1,869	1,601	1,569	1,389	1,356	16.7	8.4
Texas	175	126	178	152	198	38.9	-3.1
Pacific	*	-	-	-	-	-	-
California	*	-	-	-	-	-	-
Texas	**54,224**	**54,447**	**54,243**	**55,016**	**54,201**	**-.4**	*****
West South Central	54,224	54,447	54,243	55,016	54,201	-.4	*
Texas	54,224	54,447	54,243	55,016	54,201	-.4	*
Mountain	-	-	-	*	-	-	-
Wyoming	-	-	-	*	-	-	-
Western Total	**364,083**	**339,676**	**338,508**	**328,547**	**314,005**	**7.2**	**3.8**
Alaska	**855**	**797**	**811**	**783**	**747**	**7.3**	**3.4**
Pacific	855	797	811	783	747	7.3	3.4
Alaska	855	797	811	783	747	7.3	3.4
Arizona	**12,138**	**12,418**	**12,933**	**11,446**	**11,939**	**-2.3**	**.4**
Mountain	12,138	12,418	12,933	11,446	11,939	-2.3	.4
Arizona	7,566	7,441	7,869	7,275	7,795	1.7	-.7
Nevada	4,572	4,977	5,064	4,171	4,137	-8.1	2.5
Utah	-	-	-	-	7	-	-
California	**-**	**142**	**23**	**57**	**22**	**-100.0**	**-**
Pacific	-	142	23	57	22	-100.0	-
California	-	142	23	57	22	-100.0	-
Colorado	**20,338**	**18,195**	**17,132**	**18,019**	**16,866**	**11.8**	**4.8**
New England	-	-	-	*	-	-	-
Rhode Island	-	-	-	*	-	-	-
East North Central	2,471	1,322	1,033	621	326	86.9	66.0
Illinois	1,246	518	460	11	60	140.7	113.8
Indiana	978	794	573	591	266	23.3	38.5
Ohio	-	-	*	20	-	-	-
Wisconsin	246	10	-	-	-	NM	-
West North Central	871	1,013	445	638	233	-14.0	39.0
Iowa	135	122	-	28	12	10.4	83.3
Kansas	90	298	-	187	-	-69.7	-
Minnesota	8	-	-	62	*	-	99.1
Missouri	566	526	386	301	62	7.7	74.1
Nebraska	72	67	59	60	159	7.7	-18.1
South Atlantic	44	181	-	-	-	-75.5	-
Florida	-	181	-	-	-	-100.0	-
Georgia	44	-	-	-	-	-	-
East South Central	711	-	-	-	-	-	-
Mississippi	170	-	-	-	-	-	-
Tennessee	541	-	-	-	-	-	-
West South Central	2,628	2,250	2,267	2,461	2,209	16.8	4.4
Oklahoma	121	-	58	56	17	-	64.6
Texas	2,507	2,250	2,208	2,404	2,192	11.4	3.4
Mountain	13,497	13,369	13,229	14,135	13,937	1.0	-.8

See footnotes at end of table.

Table 61. Domestic Distribution of U.S. Coal by Coal-Producing Region and State, and Destination Census Division and State, 1989-1993 (Continued)
(Thousand Short Tons)

Coal-Producing Region and State, and Destination Census Division and State	1993	1992	1991	1990	1989	Percent Change 1992-1993	Average Annual Percent Change 1989-1993
Colorado (Continued)							
Arizona	117	226	868	1,158	805	-48.1	-38.2
Colorado	11,181	11,241	10,911	10,703	10,762	-.5	1.0
Idaho	-	-	12	22	19	-	-
Montana	-	-	6	1	-	-	-
Nevada	514	169	-	41	8	205.3	180.7
New Mexico	84	69	64	64	64	21.1	6.9
Utah	1,598	1,604	1,300	2,077	2,233	-.4	-8.0
Wyoming	3	60	67	69	45	-95.3	-50.0
Pacific	80	60	158	161	159	32.5	-15.8
California	33	24	107	104	87	37.4	-21.8
Washington	47	37	50	58	72	29.4	-9.8
Montana	**35,795**	**38,804**	**37,812**	**37,294**	**37,073**	**-7.8**	**-.9**
East North Central	15,841	15,717	16,771	17,052	16,528	.8	-1.1
Illinois	3,295	3,013	3,203	2,651	2,880	9.4	3.4
Indiana	433	451	725	573	352	-3.9	5.3
Michigan	10,055	10,376	10,838	11,795	11,181	-3.1	-2.6
Wisconsin	2,057	1,878	2,005	2,033	2,115	9.6	-.7
West North Central	9,411	9,152	10,243	10,400	9,780	2.8	-1.0
Iowa	1	-	-	-	-	-	-
Minnesota	8,852	8,566	9,668	9,920	9,408	3.3	-1.5
Nebraska	136	142	150	131	109	-4.4	5.8
North Dakota	422	444	425	349	264	-5.0	12.5
South Atlantic	-	-	-	-	53	-	-
Georgia	-	-	-	-	53	-	-
East South Central	178	84	105	-	*	111.9	359.1
Alabama	-	-	-	-	*	-	-
Mississippi	178	82	105	-	-	116.1	-
Tennessee	-	2	-	-	-	-100.0	-
Mountain	9,233	11,276	10,687	9,842	10,633	-18.1	-3.5
Colorado	86	106	101	94	90	-18.6	-1.2
Montana	9,115	11,159	10,578	9,742	10,384	-18.3	-3.2
Nevada	-	-	-	-	57	-	-
Wyoming	31	11	8	6	102	177.6	-25.5
Pacific	1,108	2,549	-	-	55	-56.5	112.0
Oregon	355	1,835	-	-	-	-80.6	-
Washington	753	715	-	-	55	5.3	92.5
New Mexico	**27,942**	**24,823**	**22,378**	**23,380**	**22,650**	**12.6**	**5.4**
East North Central	1,392	590	129	254	20	135.9	190.3
Illinois	-	-	-	211	20	-	-
Wisconsin	1,392	590	129	43	-	135.9	-
West North Central	-	-	8	18	-	-	-
Missouri	-	-	8	18	-	-	-
West South Central	350	216	182	143	145	62.1	24.5
Oklahoma	5	-	-	-	-	-	-
Texas	345	216	182	143	145	59.8	24.1
Mountain	26,201	24,005	21,973	22,731	22,367	9.1	4.0
Arizona	11,263	9,175	8,843	7,499	7,224	22.8	11.7
Colorado	-	-	*	-	32	-	-
New Mexico	14,938	14,829	13,130	15,232	15,111	.7	-.3
Pacific	-	12	87	233	118	-100.0	-
California	-	12	87	233	118	-100.0	-
North Dakota	**32,372**	**31,702**	**29,741**	**29,206**	**29,860**	**2.1**	**2.0**
East North Central	*	-	-	-	-	-	-
Wisconsin	*	-	-	-	-	-	-
West North Central	32,367	31,702	29,741	29,206	29,860	2.1	2.0
Minnesota	-	-	1	2	2	-	-
North Dakota	30,215	29,573	27,405	27,137	27,847	2.2	2.1
South Dakota	2,153	2,129	2,335	2,067	2,011	1.1	1.7
Mountain	*	-	-	-	-	-	-
Montana	*	-	-	-	-	-	-
Utah	**19,283**	**18,792**	**19,358**	**19,756**	**18,402**	**2.6**	**1.2**
East North Central	421	233	10	-	-	80.4	-
Illinois	207	233	10	-	-	-11.3	-

See footnotes at end of table.

Table 61. Domestic Distribution of U.S. Coal by Coal-Producing Region and State, and Destination Census Division and State, 1989-1993 (Continued)
(Thousand Short Tons)

Coal-Producing Region and State, and Destination Census Division and State	1993	1992	1991	1990	1989	Percent Change 1992-1993	Average Annual Percent Change 1989-1993
Utah (Continued)							
Indiana	204	-	-	-	-	-	-
Ohio	*	-	-	-	-	-	-
Wisconsin	10	-	-	-	-	-	-
West North Central	382	80	*	*	48	380.1	67.9
Iowa	-	-	*	*	*	-	-
Missouri	382	79	-	-	48	380.4	68.0
Nebraska	*	*	-	-	*	-46.9	2.0
South Atlantic	159	32	-	-	-	404.1	-
Florida	155	32	-	-	-	391.1	-
West Virginia	4	-	-	-	-	-	-
West South Central	-	-	-	-	232	-	-
Louisiana	-	-	-	-	11	-	-
Texas	-	-	-	-	221	-	-
Mountain	15,456	15,289	16,632	17,080	15,656	1.1	-.3
Arizona	89	101	111	93	94	-12.4	-1.3
Colorado	14	34	19	66	16	-60.2	-3.4
Idaho	95	61	89	80	74	57.3	6.4
Montana	42	42	34	38	34	-2.2	5.2
Nevada	1,781	1,979	2,711	2,619	2,402	-10.0	-7.2
Utah	13,418	13,035	13,605	14,107	12,945	2.9	.9
Wyoming	18	37	62	78	92	-51.6	-33.6
Pacific	2,843	3,143	2,708	2,607	2,465	-9.5	3.6
California	2,575	2,777	2,556	2,466	2,318	-7.3	2.7
Oregon	123	113	2	2	2	8.5	200.2
Washington	145	253	150	139	146	-42.5	*
Washington	**4,621**	**5,020**	**4,894**	**4,893**	**4,959**	**-7.9**	**-1.8**
Pacific	4,621	5,020	4,894	4,893	4,959	-7.9	-1.8
Washington	4,621	5,020	4,894	4,893	4,959	-7.9	-1.8
Wyoming	**210,739**	**188,983**	**193,425**	**183,712**	**171,487**	**11.5**	**5.3**
New England	14	-	*	-	*	-	243.3
Connecticut	-	-	*	-	-	-	-
Massachusetts	14	-	-	-	-	-	-
New Hampshire	-	-	-	-	*	-	-
Middle Atlantic	-	*	9	-	-	-100.0	-
New York	-	-	9	-	-	-	-
Pennsylvania	-	*	-	-	-	-100.0	-
East North Central	37,648	30,920	31,402	28,688	23,661	21.8	12.3
Illinois	7,593	4,417	4,394	3,534	3,476	71.9	21.6
Indiana	12,635	11,804	11,967	11,561	7,603	7.0	13.5
Michigan	4,487	2,948	2,762	2,373	1,087	52.2	42.5
Ohio	-	124	45	-	1,409	-100.0	-
Wisconsin	12,934	11,627	12,234	11,220	10,087	11.2	6.4
West North Central	61,641	52,269	53,239	51,682	48,474	17.9	6.2
Iowa	15,950	14,056	14,614	13,491	11,895	13.5	7.6
Kansas	16,484	13,526	14,016	15,731	14,057	21.9	4.1
Minnesota	9,093	8,385	7,531	8,133	8,131	8.4	2.8
Missouri	10,815	7,958	7,976	5,912	6,438	35.9	13.8
Nebraska	8,801	7,882	8,583	7,950	7,465	11.7	4.2
North Dakota	5	5	*	*	2	.4	24.9
South Dakota	493	456	519	464	485	8.2	.4
South Atlantic	938	12	1,128	2,207	167	NM	54.0
Florida	-	12	-	-	-	-100.0	-
Georgia	726	-	1,128	2,205	167	-	44.4
Maryland	213	-	-	-	-	-	-
West Virginia	-	-	-	2	-	-	-
East South Central	317	156	991	430	69	103.6	46.2
Alabama	-	-	115	217	47	-	-
Kentucky	248	1	238	213	22	NM	82.8
Mississippi	-	83	-	-	*	-100.0	-
Tennessee	68	72	639	-	-	-4.8	-
West South Central	76,692	72,339	72,484	67,385	67,435	6.0	3.3
Arkansas	10,826	11,571	12,268	10,898	11,437	-6.4	-1.4
Louisiana	11,133	10,039	9,690	9,030	8,961	10.9	5.6
Oklahoma	16,726	16,733	15,489	13,920	12,522	*	7.5
Texas	38,007	33,995	35,036	33,537	34,516	11.8	2.4

See footnotes at end of table.

Table 61. Domestic Distribution of U.S. Coal by Coal-Producing Region and State, and Destination Census Division and State, 1989-1993 (Continued)

(Thousand Short Tons)

Coal-Producing Region and State, and Destination Census Division and State	1993	1992	1991	1990	1989	Percent Change 1992-1993	Average Annual Percent Change 1989-1993
Wyoming (Continued)							
Mountain	32,195	33,165	32,177	31,850	30,894	-2.9	1.0
Arizona	5	-	-	-	-	-	-
Colorado	5,538	4,952	5,321	5,359	5,587	11.8	-.2
Idaho	343	393	455	424	384	-12.8	-2.8
Montana	37	44	104	102	50	-15.6	-7.2
Nevada	753	802	797	575	554	-6.1	8.0
Utah	-	586	216	4	50	-100.0	-
Wyoming	25,519	26,388	25,284	25,387	24,269	-3.3	1.3
Pacific	1,271	120	1,982	1,439	783	NM	12.9
California	-	-	58	1	-	-	-
Oregon	1,270	114	1,892	1,059	77	NM	101.5
Washington	1	6	33	379	706	-75.8	-79.1
U.S. Total	**883,934**	**897,267**	**885,882**	**919,589**	**882,034**	**-1.5**	*
New England	4,141	7,717	6,276	5,558	6,491	-46.3	-10.6
Connecticut	695	1,003	1,012	1,119	959	-30.7	-7.7
Maine	405	866	209	105	252	-53.2	12.6
Massachusetts	1,840	4,634	3,737	3,284	3,891	-60.3	-17.1
New Hampshire	1,192	1,189	1,302	1,037	1,353	.2	-3.1
Rhode Island	3	5	4	5	27	-33.1	-41.2
Vermont	6	20	12	8	8	-70.9	-9.1
Middle Atlantic	64,421	73,087	69,990	77,427	74,850	-11.9	-3.7
New Jersey	2,169	2,433	1,878	2,163	2,782	-10.9	-6.0
New York	10,950	13,977	13,666	14,978	14,169	-21.7	-6.2
Pennsylvania	51,302	56,677	54,446	60,287	57,900	-9.5	-3.0
East North Central	196,343	201,713	202,545	214,175	199,286	-2.7	-.4
Illinois	34,433	31,186	33,031	32,461	30,146	10.4	3.4
Indiana	54,452	60,970	57,105	61,056	52,814	-10.7	.8
Michigan	30,041	30,363	32,046	34,474	32,918	-1.1	-2.3
Ohio	56,755	58,716	58,752	65,939	63,768	-3.3	-2.9
Wisconsin	20,662	20,477	21,611	20,245	19,639	.9	1.3
West North Central	116,337	113,921	115,949	117,270	113,727	2.1	.6
Iowa	18,950	16,988	18,212	18,336	16,446	11.5	3.6
Kansas	17,002	14,801	15,599	17,447	15,512	14.9	2.3
Minnesota	18,166	17,224	18,051	18,590	18,028	5.5	.2
Missouri	19,921	24,207	24,602	24,734	25,396	-17.7	-5.9
Nebraska	9,011	8,093	8,796	8,142	7,735	11.3	3.9
North Dakota	30,642	30,022	27,831	27,490	28,113	2.1	2.2
South Dakota	2,646	2,586	2,859	2,531	2,497	2.3	1.5
South Atlantic	141,701	145,219	143,809	157,243	148,804	-2.4	-1.2
Delaware	2,242	1,913	2,219	2,420	1,929	17.2	3.8
District of Columbia	51	50	66	69	60	1.8	-3.9
Florida	21,446	24,351	23,378	24,396	23,845	-11.9	-2.6
Georgia	25,101	24,242	25,418	28,791	27,067	3.5	-1.9
Maryland	10,063	9,735	10,712	11,776	10,860	3.4	-1.9
North Carolina	25,621	25,801	22,054	24,036	21,337	-.7	4.7
South Carolina	11,749	11,338	11,332	11,100	12,485	3.6	-1.5
Virginia	16,084	14,915	15,159	14,332	14,115	7.8	3.3
West Virginia	29,343	32,874	33,473	40,324	37,107	-10.7	-5.7
East South Central	97,057	92,761	89,160	94,255	88,549	4.6	2.3
Alabama	28,698	28,741	28,739	27,842	26,930	-.1	1.6
Kentucky	35,461	33,497	31,656	38,401	34,895	5.9	.4
Mississippi	3,421	3,965	3,966	4,098	3,448	-13.7	-.2
Tennessee	29,477	26,559	24,799	23,914	23,276	11.0	6.1
West South Central	139,664	134,770	134,870	130,709	129,779	3.6	1.8
Arkansas	11,094	11,807	12,481	11,069	11,651	-6.0	-1.2
Louisiana	14,524	13,539	13,392	12,974	12,643	7.3	3.5
Oklahoma	18,777	18,362	17,136	15,388	13,994	2.3	7.6
Texas	95,269	91,062	91,862	91,277	91,492	4.6	1.0
Mountain	109,200	110,007	108,329	107,137	105,498	-.7	.9
Arizona	19,039	16,944	17,691	16,025	15,918	12.4	4.6
Colorado	16,821	16,333	16,352	16,222	16,487	3.0	.5
Idaho	438	456	556	525	479	-3.9	-2.2
Montana	9,194	11,245	10,924	9,883	10,481	-18.2	-3.2
Nevada	7,621	7,926	8,572	7,407	7,158	-3.9	1.6
New Mexico	15,022	14,899	13,194	15,296	15,179	.8	-.3
Utah	15,493	15,707	15,619	16,228	15,288	-1.4	.3

See footnotes at end of table.

Table 61. Domestic Distribution of U.S. Coal by Coal-Producing Region and State, and Destination Census Division and State, 1989-1993 (Continued)
(Thousand Short Tons)

Coal-Producing Region and State, and Destination Census Division and State	1993	1992	1991	1990	1989	Percent Change 1992-1993	Average Annual Percent Change 1989-1993
U.S. Total (Continued)							
Wyoming	25,571	26,497	25,421	25,551	24,508	-3.5	1.1
Pacific	10,791	11,844	10,664	10,177	9,354	-8.9	3.6
Alaska	855	797	811	783	747	7.3	3.4
California	2,608	2,955	2,833	2,861	2,556	-11.8	.5
Oregon	1,761	2,062	1,893	1,061	87	-14.6	112.4
Washington	5,567	6,030	5,127	5,472	5,965	-7.7	-1.7

* Data round to zero.
NM Not meaningful as value is greater than 500.
Note: Totals may not equal sum of components due to independent rounding.
Source: Energy Information Administration, Form EIA-6, "Coal Distribution Report."

Table 62. Foreign Distribution of U.S. Coal by Major Coal-Exporting States and Destination, 1989-1993
(Thousand Short Tons)

Coal-Exporting State and Destination	1993	1992	1991	1990	1989	Percent Change 1992-1993	Average Annual Percent Change 1989-1993
Alabama	**5,888**	**5,931**	**7,012**	**8,190**	**8,743**	**-0.7**	**-9.4**
Albania	-	22	63	70	-	-100.0	-
Argentina	351	170	223	283	744	106.6	-17.1
Belgium & Luxembourg	952	856	1,074	1,411	2,027	11.3	-17.2
Brazil	212	-	112	173	557	-	-21.5
Bulgaria	120	-	-	-	-	-	-
China (Taiwan)	46	49	87	-	244	-6.3	-34.2
France	-	-	-	125	353	-	-
Hong Kong	-	-	89	-	-	-	-
Italy	*	138	443	429	-	-100.0	-
Japan	2,422	2,536	2,920	3,463	840	-4.5	30.3
Morocco	43	-	-	-	-	-	-
Netherlands	-	77	-	40	620	-100.0	-
Romania	188	199	373	594	1,571	-5.4	-41.2
South Africa, Rep of	-	229	-	-	-	-100.0	-
Soviet Union	-	-	-	-	1	-	-
Spain	-	-	-	-	12	-	-
Turkey	278	459	386	374	359	-39.4	-6.2
United Kingdom	1,277	1,197	1,213	1,226	1,055	6.7	4.9
Yugoslavia	-	-	29	-	359	-	-
Alaska	**743**	**734**	**672**	**797**	**705**	**1.2**	**1.3**
Korea, Republic of	743	734	672	797	705	1.2	1.3
Colorado	**1,128**	**669**	**625**	**367**	**32**	**68.6**	**142.9**
Ireland	-	-	-	-	32	-	-
Japan	918	669	625	367	-	37.3	-
Korea, Republic of	209	-	-	-	-	-	-
Illinois	**670**	**1,242**	**1,263**	**370**	**488**	**-46.1**	**8.2**
Belgium & Luxembourg	-	58	79	24	-	-100.0	-
Brazil	-	298	249	79	-	-100.0	-
Canada	-	-	4	-	16	-	-
Denmark	-	45	-	-	-	-100.0	-
Finland	-	-	-	-	2	-	-
France	-	-	-	46	-	-	-
Ireland	108	213	225	95	462	-49.1	-30.4
Japan	109	53	59	6	9	107.0	88.5
Korea, Republic of	-	50	34	33	-	-100.0	-
Morocco	452	350	464	-	-	29.3	-
Netherlands	-	-	-	23	-	-	-
Spain	-	-	-	11	-	-	-
United Kingdom	-	175	148	42	-	-100.0	-
Venezuela	-	-	-	11	-	-	-
Kentucky	**9,521**	**14,036**	**15,478**	**15,690**	**12,607**	**-32.2**	**-6.8**
Belgium & Luxembourg	601	651	973	1,255	351	-7.7	14.4
Brazil	478	110	77	351	212	334.3	22.5
Canada	1,416	2,078	1,560	1,727	1,538	-31.8	-2.0
Chile	-	-	-	-	375	-	-
China (Taiwan)	4,419	3,758	4,329	3,751	4,882	17.6	-2.5
Denmark	40	193	779	521	187	-79.4	-32.1
Finland	2	-	-	-	-	-	-
France	446	1,764	2,304	459	303	-74.7	10.1
Greece	-	-	91	-	-	-	-
Honduras	-	-	*	-	-	-	-
Iceland	-	35	-	62	34	-100.0	-
India	-	-	-	-	40	-	-
Ireland	19	379	13	-	-	-94.9	-
Italy	998	930	1,013	3,551	1,736	7.3	-12.9
Jamaica	47	39	59	59	86	20.6	-14.0
Japan	328	342	539	596	867	-4.1	-21.6
Netherlands	294	2,229	1,649	1,308	1,032	-86.8	-27.0
Norway	110	110	158	169	93	.2	4.3
Portugal	-	-	183	-	-	-	-
Soviet Union	-	-	64	-	-	-	-
Spain	-	111	170	30	104	-100.0	-
Sweden	238	514	343	270	404	-53.8	-12.4
Turkey	-	170	260	787	311	-100.0	-

See footnotes at end of table.

Table 62. Foreign Distribution of U.S. Coal by Major Coal-Exporting States and Destination, 1989-1993 (Continued)

(Thousand Short Tons)

Coal-Exporting State and Destination	1993	1992	1991	1990	1989	Percent Change 1992-1993	Average Annual Percent Change 1989-1993
Kentucky (Continued)							
United Kingdom	86	581	835	706	-	-85.2	-
Yugoslavia	-	42	79	90	52	-100.0	-
Pennsylvania	**5,508**	**6,440**	**7,303**	**6,884**	**10,455**	**-14.5**	**-14.8**
Argentina	46	-	-	-	72	-	-10.6
Australia	-	-	-	*	*	-	-
Belgium & Luxembourg	-	91	305	244	303	-100.0	-
Brazil	156	101	23	4	10	53.4	97.5
Bulgaria	71	73	106	-	-	-4.0	-
Canada	597	1,599	2,338	2,692	4,920	-62.7	-41.0
Chile	-	38	206	278	-	-100.0	-
China (Taiwan)	-	-	-	*	-	-	-
Costa Rica	-	*	*	-	*	-100.0	-
Croatia	45	-	-	-	-	-	-
Denmark	187	1,456	794	1,193	933	-87.2	-33.1
Dominican Republic	59	158	201	90	69	-62.6	-3.8
Finland	56	-	-	-	-	-	-
France	188	186	-	25	223	1.0	-4.2
Germany	102	153	29	97	-	-33.2	-
Haiti	-	-	-	-	11	-	-
Honduras	-	-	-	*	-	-	-
Indonesia	-	*	-	-	-	-100.0	-
Ireland	911	-	-	-	562	-	12.8
Israel	940	1,101	986	496	393	-14.6	24.4
Italy	164	-	-	-	302	-	-14.1
Japan	1,384	931	1,388	867	1,473	48.7	-1.6
Korea, Republic of	91	-	-	-	-	-	-
Malaysia	-	*	*	*	-	-100.0	-
Mexico	-	18	3	-	-	-100.0	-
Morocco	-	-	185	561	646	-	-
Netherlands	-	2	-	3	1	-100.0	-
New Zealand	-	-	-	*	-	-	-
Norway	30	49	66	40	47	-37.4	-10.0
Panama	-	*	*	*	-	-100.0	-
Paraguay	-	3	-	-	-	-100.0	-
Portugal	467	305	491	243	460	53.4	.4
Qatar	-	*	-	-	-	-100.0	-
Saudi Arabia	*	-	-	*	-	-	-
Sierra Leone	-	-	-	*	-	-	-
Singapore	-	-	*	*	-	-	-
Spain	-	-	129	-	-	-	-
Surinam	*	*	-	-	-	-50.0	-
Sweden	-	1	-	-	-	-100.0	-
Trinidad & Tobago	1	2	2	-	1	-66.6	-9.7
Turkey	-	-	11	8	-	-	-
United Arab Emirates	*	-	-	-	-	-	-
United Kingdom	*	-	*	32	-	-	-
Venezuela	15	39	39	12	28	-62.6	-14.8
Yugoslavia	-	134	-	-	-	-100.0	-
Utah	**2,959**	**2,260**	**2,086**	**1,751**	**2,177**	**31.0**	**8.0**
Canada	346	-	-	-	-	-	-
China (Taiwan)	849	721	506	560	658	17.7	6.6
France	-	-	-	16	-	-	-
Hong Kong	-	359	433	111	-	-100.0	-
Indonesia	-	-	*	-	-	-	-
Japan	1,764	1,180	1,147	1,063	1,519	49.5	3.8
Mexico	*	-	-	-	-	-	-
Virginia	**14,251**	**17,224**	**18,105**	**19,174**	**14,733**	**-17.3**	**-.8**
Albania	-	-	20	43	-	-	-
Algeria	466	665	427	409	256	-29.9	16.1
Argentina	70	-	59	59	131	-	-14.6
Austria	-	-	104	265	-	-	-
Belgium & Luxembourg	1,447	2,629	2,472	2,657	2,031	-45.0	-8.1
Brazil	2,469	2,803	2,667	2,908	2,116	-11.9	3.9
Bulgaria	328	214	349	-	-	53.1	-

See footnotes at end of table.

Table 62. Foreign Distribution of U.S. Coal by Major Coal-Exporting States and Destination, 1989-1993 (Continued)

(Thousand Short Tons)

Coal-Exporting State and Destination	1993	1992	1991	1990	1989	Percent Change 1992-1993	Average Annual Percent Change 1989-1993
Virginia (Continued)							
Canada	1,229	1,331	1,404	1,244	990	-7.6	5.6
China (Taiwan)	-	-	13	-	126	-	-
Croatia	339	-	-	-	-	-	-
Denmark	-	74	-	64	343	-100.0	-
Egypt	316	297	182	125	-	6.2	-
France	822	869	1,027	1,079	777	-5.5	1.4
Germany	68	47	22	-	-	46.0	-
Iceland	-	-	34	-	-	-	-
Ireland	-	-	12	-	-	-	-
Italy	1,903	1,674	2,072	2,671	1,370	13.7	8.6
Japan	403	710	474	1,444	345	-43.2	4.0
Korea, Republic of	1,675	1,893	1,973	1,105	515	-11.6	34.3
Netherlands	546	1,176	1,641	1,767	1,596	-53.5	-23.5
Norway	-	-	31	29	-	-	-
Portugal	-	353	298	217	40	-100.0	-
Romania	-	180	61	458	904	-100.0	-
Spain	1,782	1,352	1,343	1,688	1,698	31.8	1.2
Sweden	-	-	96	-	45	-	-
Turkey	-	-	470	97	273	-	-
United Kingdom	389	902	745	641	1,102	-56.9	-22.9
Yugoslavia	-	54	108	206	76	-100.0	-
West Virginia	**33,159**	**50,806**	**53,792**	**48,733**	**36,082**	**-34.7**	**-2.1**
Albania	-	-	20	73	71	-	-
Algeria	-	-	*	-	218	-	-
Argentina	110	149	113	309	139	-26.3	-5.8
Austria	-	-	-	10	155	-	-
Belgium & Luxembourg	1,911	1,380	1,624	2,446	1,053	38.4	16.1
Brazil	2,101	2,597	3,415	1,730	1,987	-19.1	1.4
Bulgaria	535	546	440	90	57	-2.1	75.0
Canada	4,108	8,911	7,464	6,992	5,444	-53.9	-6.8
Chile	-	-	27	129	403	-	-
China (Taiwan)	117	250	229	782	473	-53.0	-29.4
Croatia	52	151	-	-	-	-65.2	-
Denmark	140	2,116	3,638	1,748	1,252	-93.4	-42.2
Egypt	499	491	510	560	346	1.5	9.6
Finland	176	183	517	98	60	-4.0	30.6
France	3,140	5,984	5,600	4,676	2,917	-47.5	1.9
Germany	527	846	1,353	746	239	-37.7	21.9
Greece	-	-	-	30	126	-	-
Iceland	-	.7	5	-	19	-100.0	-
Ireland	97	726	764	1,037	316	-86.6	-25.6
Israel	-	185	150	198	158	-100.0	-
Italy	3,476	5,973	7,141	5,544	5,097	-41.8	-9.1
Japan	4,437	5,388	5,050	5,259	5,704	-17.6	-6.1
Korea, Republic of	660	513	558	1,806	1,576	28.6	-19.5
Morocco	66	150	182	185	280	-56.3	-30.4
Netherlands	3,269	4,023	4,174	3,801	3,155	-18.8	.9
Nigeria	36	-	-	-	-	-	-
Norway	-	13	-	-	36	-100.0	-
Pakistan	-	-	-	-	36	-	-
Portugal	950	849	799	1,441	641	11.8	10.3
Romania	598	332	621	615	2	80.2	318.7
Slovenia	-	61	-	-	-	-100.0	-
South Africa, Rep of	479	360	218	68	-	33.1	-
Spain	1,371	1,610	1,840	1,735	909	-14.8	10.8
Sweden	501	723	758	658	262	-30.8	17.5
Turkey	1,137	1,261	707	962	590	-9.8	17.8
United Kingdom	2,668	4,644	5,146	4,377	1,710	-42.5	11.8
Yugoslavia	-	385	730	629	652	-100.0	-
Wyoming	**974**	**1,277**	**982**	**674**	**78**	**-23.8**	**87.8**
Canada	-	-	20	62	-	-	-
Japan	*	-	*	-	78	-	-84.8
Spain	974	1,277	791	-	-	-23.8	-
Yugoslavia	-	-	170	-	-	-	-
Unknown	-	-	-	612	-	-	-

* Data round to zero.

Notes: Major coal-exporting States are those that exported over 900 thousand short tons. Totals may not equal sum of components due to independent rounding.

Sources: Values shown for destinations other than Canada and Mexico are estimates based upon information reported on Energy Information Administration Form EIA-6, "Coal Distribution Report," and coal export data presented in King's COALBASE (King Publishing Corp., Knoxville, Tennessee). See the Explanatory Notes for a complete description of the methodology used to develop these estimates. Values shown for Canada and Mexico are based upon Form EIA-6.

Table 63. Foreign Distribution of U.S. Metallurgical Coal by Major Coal-Exporting States and Destination, 1989-1993
(Thousand Short Tons)

Coal-Exporting State and Destination	1993	1992	1991	1990	1989	Percent Change 1992-1993	Average Annual Percent Change 1989-1993
Alabama	**5,841**	**5,789**	**6,476**	**7,724**	**8,723**	**0.9**	**-9.5**
Albania	-	22	63	70	-	-100.0	-
Argentina	351	170	223	283	744	106.6	-17.1
Belgium & Luxembourg	952	856	1,074	1,411	2,027	11.3	-17.2
Brazil	212	-	112	173	557	-	-21.5
Bulgaria	120	-	-	-	-	-	-
China (Taiwan)	46	49	87	-	244	-6.3	-34.2
France	-	-	-	125	353	-	-
Italy	*	*	-	83	-	-50.0	-
Japan	2,418	2,532	2,917	3,456	840	-4.5	30.3
Netherlands	-	77	-	-	620	-100.0	-
Romania	188	199	373	594	1,571	-5.4	-41.2
South Africa, Rep of	-	229	-	-	-	-100.0	-
Soviet Union	-	-	-	-	1	-	-
Spain	-	-	-	-	12	-	-
Turkey	278	459	386	374	359	-39.4	-6.2
United Kingdom	1,277	1,197	1,213	1,154	1,035	6.7	5.4
Yugoslavia	-	-	29	-	359	-	-
Colorado	**-**	**-**	**-**	**290**	**32**	**-**	**-100.0**
Ireland	-	-	-	-	32	-	-
Japan	-	-	-	290	-	-	-
Illinois	**109**	**614**	**546**	**237**	**10**	**-82.2**	**80.6**
Belgium & Luxembourg	-	58	79	24	-	-100.0	-
Brazil	-	298	249	79	-	-100.0	-
Finland	-	-	-	-	2	-	-
France	-	-	-	46	-	-	-
Japan	109	32	36	2	9	239.8	88.5
Korea, Republic of	-	50	34	33	-	-100.0	-
United Kingdom	-	175	148	42	-	-100.0	-
Venezuela	-	-	-	11	-	-	-
Kentucky	**3,310**	**4,971**	**4,354**	**7,104**	**4,846**	**-33.4**	**-9.1**
Belgium & Luxembourg	68	-	546	632	231	-	-26.3
Brazil	478	110	77	299	212	334.3	22.5
Canada	1,356	1,373	1,125	1,106	1,447	-1.2	-1.6
China (Taiwan)	171	139	198	237	411	23.1	-19.7
France	122	202	23	125	57	-39.6	20.8
Iceland	-	35	-	45	34	-100.0	-
India	-	-	-	-	40	-	-
Italy	121	22	54	1,275	208	459.0	-12.7
Japan	266	342	506	596	867	-22.1	-25.5
Netherlands	294	1,613	866	877	375	-81.8	-5.9
Norway	110	110	83	156	93	.2	4.3
Soviet Union	-	-	64	-	-	-	-
Spain	-	-	29	11	104	-	-
Sweden	238	514	287	270	404	-53.8	-12.4
Turkey	-	170	260	787	311	-100.0	-
United Kingdom	86	299	156	598	-	-71.3	-
Yugoslavia	-	42	79	90	52	-100.0	-
Pennsylvania	**1,919**	**1,266**	**1,331**	**522**	**1,813**	**51.6**	**1.4**
Argentina	46	-	-	-	-	-	-
Belgium & Luxembourg	-	-	-	-	67	-	-
Brazil	148	90	-	-	-	64.9	-
Bulgaria	71	73	106	-	-	-4.0	-
Canada	10	-	8	42	147	-	-48.8
Chile	-	38	-	-	-	-100.0	-
Finland	56	-	-	-	-	-	-
Honduras	-	-	-	*	-	-	-
Ireland	-	-	-	-	121	-	-
Italy	114	-	-	-	302	-	-21.5
Japan	1,384	931	1,217	448	1,104	48.7	5.8
Korea, Republic of	91	-	-	-	-	-	-
Portugal	-	-	-	-	72	-	-
United Kingdom	-	-	-	32	-	-	-
Yugoslavia	-	134	-	-	-	-100.0	-

See footnotes at end of table.

Table 63. Foreign Distribution of U.S. Metallurgical Coal by Major Coal-Exporting States and Destination, 1989-1993 (Continued)

(Thousand Short Tons)

Coal-Exporting State and Destination	1993	1992	1991	1990	1989	Percent Change 1992-1993	Average Annual Percent Change 1989-1993
Utah	-	-	-	190	*	-	-100.0
France	-	-	-	16	-	-	-
Japan	-	-	-	174	*	-	-
Virginia	13,512	14,021	14,404	16,435	12,871	-3.6	1.2
Albania	-	-	20	43	-	-	-
Algeria	466	665	427	409	256	-29.9	16.1
Argentina	70	-	59	59	131	-	-14.6
Austria	-	-	104	265	-	-	-
Belgium & Luxembourg	1,447	2,241	2,111	2,405	1,714	-35.4	-4.1
Brazil	2,469	2,803	2,667	2,880	2,116	-11.9	3.9
Bulgaria	328	214	349	-	-	53.1	-
Canada	1,229	-	-	-	-	-	-
China (Taiwan)	-	-	13	-	126	-	-
Croatia	339	-	-	-	-	-	-
Egypt	316	297	182	125	-	6.2	-
France	822	785	871	992	753	4.7	2.2
Germany	68	47	22	-	-	46.0	-
Iceland	-	-	34	-	-	-	-
Italy	1,286	774	545	2,096	1,370	66.2	-1.6
Japan	329	628	474	1,444	345	-47.6	-1.2
Korea, Republic of	1,675	1,893	1,973	1,105	515	-11.6	34.3
Netherlands	498	1,176	1,641	1,551	1,406	-57.7	-22.9
Norway	-	-	31	29	-	-	-
Portugal	-	91	65	-	40	-100.0	-
Romania	-	180	61	458	904	-100.0	-
Spain	1,782	1,270	1,337	1,688	1,698	40.3	1.2
Sweden	-	-	96	-	45	-	-
Turkey	-	-	470	97	273	-	-
United Kingdom	389	902	745	585	1,102	-56.9	-22.9
Yugoslavia	-	54	108	206	76	-100.0	-
West Virginia	27,627	35,353	35,891	29,995	27,031	-21.8	.5
Albania	-	-	20	73	71	-	-
Algeria	-	-	*	-	218	-	-
Argentina	110	149	113	309	139	-26.3	-5.8
Austria	-	-	-	10	155	-	-
Belgium & Luxembourg	1,236	280	785	1,002	877	341.2	9.0
Brazil	2,101	2,597	3,415	1,730	1,974	-19.1	1.6
Bulgaria	535	546	440	90	57	-2.1	75.0
Canada	4,071	8,021	7,351	5,067	5,165	-49.3	-5.8
Chile	-	-	27	21	17	-	-
China (Taiwan)	117	250	229	252	180	-53.0	-10.1
Croatia	52	151	-	-	-	-65.2	-
Denmark	-	-	-	-	38	-	-
Egypt	499	491	510	560	346	1.5	9.6
Finland	176	183	388	98	60	-4.0	30.6
France	2,695	3,253	3,194	2,574	1,859	-17.2	9.7
Germany	237	278	403	265	110	-14.6	21.1
Greece	-	-	-	-	40	-	-
Iceland	-	7	5	-	19	-100.0	-
Italy	2,891	4,737	5,162	3,539	3,047	-39.0	-1.3
Japan	4,079	5,019	4,560	4,918	5,622	-18.7	-7.7
Korea, Republic of	660	513	558	1,778	1,556	28.6	-19.3
Netherlands	2,280	2,860	2,251	1,519	1,613	-20.3	9.0
Nigeria	36	-	-	-	-	-	-
Norway	-	13	-	-	32	-100.0	-
Pakistan	-	-	-	-	36	-	-
Portugal	126	95	-	175	17	31.5	64.9
Romania	598	332	490	615	-	80.2	-
South Africa, Rep of	479	360	218	68	-	33.1	-
Spain	1,255	1,372	1,568	1,534	859	-8.5	9.9
Sweden	501	723	751	634	159	-30.8	33.2
Turkey	1,137	1,261	707	962	590	-9.8	17.8
United Kingdom	1,757	1,476	2,015	1,651	1,522	19.0	3.7
Yugoslavia	-	385	730	551	652	-100.0	-

* Data round to zero.

Notes: Major coal-exporting States are those that exported over 900 thousand short tons. Totals may not equal sum of components due to independent rounding.

Sources: Values shown for destinations other than Canada and Mexico are estimates based upon information reported on Energy Information Administration Form EIA-6, "Coal Distribution Report," and coal export data presented in King's COALBASE (King Publishing Corp., Knoxville, Tennessee). See the Explanatory Notes for a complete description of the methodology used to develop these estimates. Values shown for Canada and Mexico are based upon Form EIA-6.

Table 64. Foreign Distribution of U.S. Steam Coal by Major Coal-Exporting States and Destination, 1989-1993
(Thousand Short Tons)

Coal-Exporting State and Destination	1993	1992	1991	1990	1989	Percent Change 1992-1993	Average Annual Percent Change 1989-1993
Alabama	**47**	**142**	**536**	**466**	**20**	**-66.9**	**24.2**
Hong Kong	-	-	89	-	-	-	-
Italy	-	138	443	346	-	-100.0	-
Japan	4	4	3	7	-	1.7	-
Morocco	43	-	-	-	-	-	-
Netherlands	-	-	-	40	-	-	-
United Kingdom	-	-	-	72	20	-	-
Alaska	**743**	**734**	**672**	**797**	**705**	**1.2**	**1.3**
Korea, Republic of	743	734	672	797	705	1.2	1.3
Colorado	**1,128**	**669**	**625**	**77**	**-**	**68.6**	**-**
Japan	918	669	625	77	-	37.3	-
Korea, Republic of	209	-	-	-	-	-	-
Illinois	**561**	**629**	**717**	**133**	**478**	**-10.9**	**4.1**
Canada	-	-	4	-	16	-	-
Denmark	-	45	-	-	-	-100.0	-
Ireland	108	213	225	95	462	-49.1	-30.4
Japan	-	21	24	4	-	-100.0	-
Morocco	452	350	464	-	-	29.3	-
Netherlands	-	-	-	23	-	-	-
Spain	-	-	-	11	-	-	-
Kentucky	**6,212**	**9,065**	**11,124**	**8,586**	**7,760**	**-31.5**	**-5.4**
Belgium & Luxembourg	533	651	427	623	120	-18.1	45.3
Brazil	-	-	-	52	-	-	-
Canada	60	705	435	621	91	-91.5	-9.9
Chile	-	-	-	-	375	-	-
China (Taiwan)	4,248	3,620	4,131	3,513	4,472	17.4	-1.3
Denmark	40	193	779	521	187	-79.4	-32.1
Finland	2	-	-	-	-	-	-
France	324	1,561	2,281	333	246	-79.3	7.1
Greece	-	-	91	-	-	-	-
Honduras	-	-	*	-	-	-	-
Iceland	-	-	-	17	-	-	-
Ireland	19	379	13	-	-	-94.9	-
Italy	877	908	959	2,276	1,528	-3.4	-13.0
Jamaica	47	39	59	59	86	20.6	-14.0
Japan	61	-	33	-	-	-	-
Netherlands	-	616	783	430	657	-100.0	-
Norway	-	-	75	13	-	-	-
Portugal	-	-	183	-	-	-	-
Spain	-	111	140	19	-	-100.0	-
Sweden	-	-	56	-	-	-	-
United Kingdom	-	282	679	107	-	-100.0	-
Pennsylvania	**3,589**	**5,175**	**5,972**	**6,362**	**8,642**	**-30.6**	**-19.7**
Argentina	-	-	-	-	72	-	-
Australia	-	-	-	*	*	-	-
Belgium & Luxembourg	-	91	305	244	236	-100.0	-
Brazil	7	12	23	4	10	-35.9	-7.6
Canada	587	1,599	2,330	2,650	4,773	-63.3	-40.8
Chile	-	-	206	278	-	-	-
China (Taiwan)	-	-	-	*	-	-	-
Costa Rica	-	*	*	-	*	-100.0	-
Croatia	45	-	-	-	-	-	-
Denmark	187	1,456	794	1,193	933	-87.2	-33.1
Dominican Republic	59	158	201	90	69	-62.6	-3.8
France	188	186	-	25	223	1.0	-4.2
Germany	102	153	29	97	-	-33.2	-
Haiti	-	-	-	-	11	-	-
Indonesia	-	*	-	-	-	-100.0	-
Ireland	911	-	-	-	441	-	19.9
Israel	940	1,101	986	496	393	-14.6	24.4
Italy	50	-	-	-	-	-	-
Japan	-	-	171	419	369	-	-
Malaysia	-	*	*	*	-	-100.0	-
Mexico	-	18	3	-	-	-100.0	-

See footnotes at end of table.

Table 64. Foreign Distribution of U.S. Steam Coal by Major Coal-Exporting States and Destination, 1989-1993 (Continued)
(Thousand Short Tons)

Coal-Exporting State and Destination	1993	1992	1991	1990	1989	Percent Change 1992-1993	Average Annual Percent Change 1989-1993
Pennsylvania (Continued)							
Morocco	-	-	185	561	646	-	-
Netherlands	-	2	-	3	1	-100.0	-
New Zealand	-	-	-	*	-	-	-
Norway	30	49	66	40	47	-37.4	-10.0
Panama	-	*	*	*	-	-100.0	-
Paraguay	-	3	-	-	-	-100.0	-
Portugal	467	305	491	243	388	53.4	4.8
Qatar	-	*	-	-	-	-100.0	-
Saudi Arabia	*	-	-	*	-	-	-
Sierra Leone	-	-	-	*	-	-	-
Singapore	-	-	*	*	-	-	-
Spain	-	-	129	-	-	-	-
Surinam	*	*	-	-	-	-50.0	-
Sweden	-	1	-	-	-	-100.0	-
Trinidad & Tobago	1	2	2	-	1	-66.6	-9.7
Turkey	-	-	11	8	-	-	-
United Arab Emirates	*	-	-	-	-	-	-
United Kingdom	*	-	*	-	-	-	-
Venezuela	15	39	39	12	28	-62.6	-14.8
Utah	**2,959**	**2,260**	**2,086**	**1,560**	**2,176**	**31.0**	**8.0**
Canada	346	-	-	-	-	-	-
China (Taiwan)	849	721	506	560	658	17.7	6.6
Hong Kong	-	359	433	111	-	-100.0	-
Indonesia	-	-	*	-	-	-	-
Japan	1,764	1,180	1,147	889	1,519	49.5	3.8
Mexico	*	-	-	-	-	-	-
Virginia	**739**	**3,203**	**3,700**	**2,740**	**1,863**	**-76.9**	**-20.6**
Belgium & Luxembourg	-	388	361	252	317	-100.0	-
Brazil	-	-	-	28	-	-	-
Canada	-	1,331	1,404	1,244	990	-100.0	-
Denmark	-	74	-	64	343	-100.0	-
France	-	85	156	87	23	-100.0	-
Ireland	-	-	12	-	-	-	-
Italy	616	900	1,528	575	-	-31.5	-
Japan	74	81	-	-	-	-9.2	-
Netherlands	49	-	-	216	189	-	-28.7
Portugal	-	262	233	217	-	-100.0	-
Spain	-	82	7	-	-	-100.0	-
United Kingdom	-	-	-	57	-	-	-
West Virginia	**5,532**	**15,453**	**17,900**	**18,739**	**9,051**	**-64.2**	**-11.6**
Belgium & Luxembourg	675	1,100	838	1,444	176	-38.7	39.9
Brazil	-	-	-	-	13	-	-
Canada	37	890	113	1,925	279	-95.8	-39.7
Chile	-	-	-	108	386	-	-
China (Taiwan)	-	-	-	530	293	-	-
Denmark	140	2,116	3,638	1,748	1,213	-93.4	-41.8
Finland	-	-	129	-	-	-	-
France	445	2,731	2,405	2,103	1,058	-83.7	-19.5
Germany	290	569	950	480	128	-49.0	22.6
Greece	-	-	-	30	86	-	-
Ireland	97	726	764	1,037	316	-86.6	-25.6
Israel	-	185	150	198	158	-100.0	-
Italy	585	1,236	1,979	2,005	2,050	-52.7	-26.9
Japan	358	369	490	341	81	-3.0	44.9
Korea, Republic of	-	-	-	28	19	-	-
Morocco	66	150	182	185	280	-56.3	-30.4
Netherlands	989	1,163	1,922	2,282	1,542	-14.9	-10.5
Norway	-	-	-	-	4	-	-
Portugal	824	754	799	1,266	624	9.4	7.2
Romania	-	-	131	-	2	-	-
Slovenia	-	61	-	-	-	-100.0	-
Spain	116	237	272	201	50	-51.1	23.7
Sweden	-	-	7	24	103	-	-
United Kingdom	911	3,168	3,131	2,727	189	-71.2	48.3
Yugoslavia	-	-	-	78	-	-	-

See footnotes at end of table.

Table 64. Foreign Distribution of U.S. Steam Coal by Major Coal-Exporting States and Destination, 1989-1993 (Continued)
(Thousand Short Tons)

Coal-Exporting State and Destination	1993	1992	1991	1990	1989	Percent Change 1992-1993	Average Annual Percent Change 1989-1993
Wyoming	974	1,277	982	674	78	-23.8	87.8
Canada	-	-	20	62	-	-	-
Japan	*	-	*	-	78	-	-84.8
Spain	974	1,277	791	-	-	-23.8	-
Yugoslavia	-	-	170	-	-	-	-
Unknown	-	-	-	612	-	-	-

* Data round to zero.

Notes: Major coal-exporting States are those that exported over 900 thousand short tons. Totals may not equal sum of components due to independent rounding.

Sources: Values shown for destinations other than Canada and Mexico are estimates based upon information reported on Energy Information Administration Form EIA-6, "Coal Distribution Report," and coal export data presented in King's COALBASE (King Publishing Corp., Knoxville, Tennessee). See the Explanatory Notes for a complete description of the methodology used to develop these estimates. Values shown for Canada and Mexico are based upon Form EIA-6.

Table 65. Distribution of U.S. Coal by Origin, Destination, and Method of Transportation, 1993
(Thousand Short Tons)

Origin State and Destination State	Railroad	Water				Truck	Tramway, Conveyor, and Slurry Pipeline	Unknown	Total
		River	Great Lakes	Tidewater	Total				
Alabama	**6,115**	**2,565**	**-**	**5,888**	**8,454**	**9,322**	**1,566**	**100**	**25,556**
Alabama	5,630	2,316	-	-	2,316	9,204	1,566	-	18,716
Arkansas	-	-	-	-	-	9	-	-	9
Florida	165	37	-	-	37	*	-	-	202
Georgia	-	-	-	-	-	1	-	-	1
Mississippi	-	32	-	-	32	100	-	-	132
Pennsylvania	312	180	-	-	180	-	-	-	492
South Carolina	-	-	-	-	-	4	-	-	4
Tennessee	-	-	-	-	-	3	-	-	3
Texas	8	-	-	-	-	1	-	-	8
Unknown State	-	-	-	-	-	-	-	100	100
Foreign	-	-	-	5,888	5,888	-	-	-	5,888
Alaska	**635**	**-**	**-**	**743**	**743**	**220**	**-**	**-**	**1,598**
Alaska	635	-	-	-	-	220	-	-	855
Foreign	-	-	-	743	743	-	-	-	743
Arizona	**7,566**	**-**	**-**	**-**	**-**	**-**	**4,572**	**-**	**12,138**
Arizona	7,566	-	-	-	-	-	-	-	7,566
Nevada	-	-	-	-	-	-	4,572	-	4,572
Arkansas	**-**	**-**	**-**	**-**	**-**	**25**	**-**	**-**	**25**
Arkansas	-	-	-	-	-	12	-	-	12
Missouri	-	-	-	-	-	8	-	-	8
Oklahoma	-	-	-	-	-	5	-	-	5
Colorado	**15,653**	**512**	**-**	**1,128**	**1,640**	**4,129**	**9**	**35**	**21,465**
Arizona	92	-	-	-	-	25	-	-	117
California	33	-	-	-	-	-	-	-	33
Colorado	7,170	-	-	-	-	4,010	-	-	11,181
Georgia	44	-	-	-	-	-	-	-	44
Illinois	725	512	-	-	512	9	-	-	1,246
Indiana	978	-	-	-	-	-	-	-	978
Iowa	135	-	-	-	-	-	-	-	135
Kansas	90	-	-	-	-	-	-	-	90
Minnesota	8	-	-	-	-	-	-	-	8
Mississippi	170	-	-	-	-	-	-	-	170
Missouri	566	-	-	-	-	-	-	-	566
Nebraska	72	-	-	-	-	-	-	-	72
Nevada	514	-	-	-	-	-	-	-	514
New Mexico	-	-	-	-	-	84	-	-	84
Oklahoma	121	-	-	-	-	-	-	-	121
Tennessee	541	-	-	-	-	-	-	-	541
Texas	2,498	-	-	-	-	-	9	-	2,507
Utah	1,598	-	-	-	-	-	-	-	1,598
Washington	47	-	-	-	-	-	-	-	47
Wisconsin	246	-	-	-	-	-	-	-	246
Wyoming	3	-	-	-	-	-	-	-	3
Unknown State	-	-	-	-	-	-	-	35	35
Foreign	-	-	-	1,128	1,128	-	-	-	1,128
Illinois	**19,315**	**15,203**	**30**	**670**	**15,903**	**4,983**	**1,755**	**45**	**42,000**
Alabama	-	401	-	-	401	*	-	-	401
Arkansas	37	-	-	-	-	-	-	-	37
Florida	139	4,624	-	-	4,624	19	-	-	4,782
Georgia	-	3,355	-	-	3,355	-	-	-	3,355
Illinois	8,785	448	-	-	448	4,218	1,755	-	15,206
Indiana	4,392	100	-	-	100	49	-	-	4,541
Iowa	1,231	182	-	-	182	120	-	-	1,534
Kansas	179	-	-	-	-	-	-	-	179
Kentucky	41	485	-	-	485	9	-	-	535
Louisiana	-	21	-	-	21	-	-	-	21
Minnesota	17	-	-	-	-	26	-	-	43
Mississippi	-	1,106	-	-	1,106	-	-	-	1,106
Missouri	4,137	1,509	-	-	1,509	381	-	-	6,027
New York	-	-	-	-	-	*	-	-	*
North Dakota	-	-	-	-	-	*	-	-	*
Tennessee	65	2,558	-	-	2,558	158	-	-	2,780
Virginia	*	-	-	-	-	-	-	-	*

See footnotes at end of table.

Table 65. Distribution of U.S. Coal by Origin, Destination, and Method of Transportation, 1993 (Continued)
(Thousand Short Tons)

Origin State and Destination State	Railroad	Water				Truck	Tramway, Conveyor, and Slurry Pipeline	Unknown	Total
		River	Great Lakes	Tidewater	Total				
Illinois (Continued)									
Wisconsin	292	414	30	-	444	1	-	-	736
Unknown State	-	-	-	-	-	-	-	45	45
Foreign	-	-	-	670	670	-	-	-	670
Indiana	**14,087**	**4,796**	**380**	**188**	**5,365**	**9,534**	**591**	**87**	**29,664**
Alabama	-	60	-	-	60	-	-	-	60
Florida	70	27	-	-	27	-	-	-	96
Georgia	125	28	-	-	28	-	-	-	153
Illinois	709	196	-	-	196	657	-	-	1,562
Indiana	12,248	2,070	213	-	2,283	8,791	591	-	23,913
Iowa	271	358	-	-	358	17	-	-	646
Kansas	-	18	-	-	18	-	-	-	18
Kentucky	-	1,261	-	-	1,261	52	-	-	1,313
Massachusetts	21	-	-	-	-	-	-	-	21
Michigan	27	-	156	-	156	1	-	-	184
Missouri	-	585	-	-	585	*	-	-	585
Ohio	-	60	-	-	60	-	-	-	60
Oklahoma	-	1	-	-	1	-	-	-	1
Tennessee	-	132	-	-	132	-	-	-	132
Virginia	-	-	-	-	-	15	-	-	15
Wisconsin	616	-	12	-	12	-	-	-	628
Unknown State	-	-	-	-	-	-	-	87	87
Foreign	-	-	-	188	188	-	-	-	188
Iowa	**-**	**-**	**-**	**-**	**-**	**175**	**-**	**-**	**175**
Iowa	-	-	-	-	-	175	-	-	175
Kansas	**71**	**-**	**-**	**-**	**-**	**274**	**-**	**-**	**345**
Kansas	-	-	-	-	-	167	-	-	167
Missouri	71	-	-	-	-	107	-	-	178
Kentucky	**93,073**	**36,215**	**3,539**	**11,236**	**50,990**	**14,475**	**289**	**1,568**	**160,395**
Alabama	1,312	2,708	-	-	2,708	61	-	-	4,081
Arkansas	-	-	-	-	-	12	-	-	12
Connecticut	*	-	-	576	576	-	-	-	576
Delaware	27	-	-	-	-	-	-	-	27
District of Columbia	16	-	-	-	-	-	-	-	16
Florida	8,876	4,181	-	1,266	5,446	27	-	-	14,350
Georgia	13,919	165	-	-	165	79	-	-	14,163
Illinois	1,762	1,083	32	-	1,115	114	-	-	2,992
Indiana	1,632	3,540	-	-	3,540	130	-	-	5,303
Iowa	-	242	-	-	242	1	-	-	242
Kentucky	11,108	6,141	-	-	6,141	10,596	289	2	28,136
Louisiana	-	104	-	-	104	-	-	-	104
Maine	17	-	-	364	364	-	-	-	380
Maryland	513	-	-	446	446	-	-	-	958
Massachusetts	37	*	-	28	28	5	-	-	71
Michigan	6,952	226	1,284	-	1,509	424	-	-	8,885
Minnesota	13	61	82	-	143	*	-	-	156
Mississippi	1,532	209	-	-	209	-	-	-	1,741
Missouri	29	407	-	-	407	-	-	-	436
New Hampshire	64	-	-	14	14	-	-	-	79
New Jersey	61	-	-	-	-	-	-	-	61
New York	1,165	5	-	-	5	19	-	-	1,188
North Carolina	13,187	-	-	-	-	304	-	-	13,491
Ohio	5,374	4,612	170	-	4,782	1,284	-	-	11,440
Oregon	4	-	-	-	-	-	-	-	4
Pennsylvania	541	1,783	-	-	1,783	105	-	-	2,429
South Carolina	9,812	30	-	-	30	120	-	-	9,962
Tennessee	8,871	9,926	-	-	9,926	765	-	-	19,562
Virginia	5,872	127	-	437	564	236	-	-	6,672
West Virginia	209	559	-	-	559	166	-	-	934
Wisconsin	143	107	582	-	689	26	-	-	858
Unknown State	-	-	-	-	-	-	-	1,565	1,565
Foreign	24	-	1,390	8,106	9,496	2	-	-	9,521

See footnotes at end of table.

Table 65. Distribution of U.S. Coal by Origin, Destination, and Method of Transportation, 1993 (Continued)
(Thousand Short Tons)

Origin State and Destination State	Railroad	Water				Truck	Tramway, Conveyor, and Slurry Pipeline	Unknown	Total
		River	Great Lakes	Tidewater	Total				
Kentucky, Eastern	**82,762**	**17,852**	**3,531**	**10,752**	**32,136**	**8,638**	**3**	**1,502**	**125,041**
Alabama	1,204	1,056	-	-	1,056	61	-	-	2,320
Connecticut	*	-	-	576	576	-	-	-	576
Delaware	27	-	-	-	-	-	-	-	27
District of Columbia	16	-	-	-	-	-	-	-	16
Florida	8,800	1,509	-	985	2,494	16	-	-	11,311
Georgia	13,919	165	-	-	165	79	-	-	14,163
Illinois	1,620	638	32	-	670	43	-	-	2,333
Indiana	1,502	468	-	-	468	104	-	-	2,074
Iowa	-	25	-	-	25	*	-	-	25
Kentucky	3,091	2,111	-	-	2,111	4,938	3	2	10,145
Louisiana	-	104	-	-	104	-	-	-	104
Maine	17	-	-	364	364	-	-	-	380
Maryland	513	-	-	446	446	-	-	-	958
Massachusetts	37	*	-	28	28	5	-	-	71
Michigan	6,952	206	1,276	-	1,482	424	-	-	8,857
Minnesota	13	29	82	-	111	*	-	-	124
Mississippi	1,532	199	-	-	199	-	-	-	1,731
Missouri	29	305	-	-	305	-	-	-	334
New Hampshire	64	-	-	14	14	-	-	-	79
New Jersey	61	-	-	-	-	-	-	-	61
New York	1,165	5	-	-	5	19	-	-	1,188
North Carolina	13,187	-	-	-	-	304	-	-	13,491
Ohio	5,357	4,484	170	-	4,654	1,284	-	-	11,294
Oregon	4	-	-	-	-	-	-	-	4
Pennsylvania	541	1,783	-	-	1,783	105	-	-	2,429
South Carolina	9,812	30	-	-	30	120	-	-	9,962
Tennessee	7,161	3,945	-	-	3,945	705	-	-	11,811
Virginia	5,872	127	-	437	564	236	-	-	6,672
West Virginia	209	558	-	-	558	166	-	-	932
Wisconsin	36	107	582	-	689	26	-	-	751
Unknown State	-	-	-	-	-	-	-	1,500	1,500
Foreign	24	-	1,390	7,902	9,292	2	-	-	9,318
Kentucky, Western	**10,311**	**18,363**	**8**	**484**	**18,854**	**5,837**	**286**	**66**	**35,354**
Alabama	109	1,652	-	-	1,652	-	-	-	1,761
Arkansas	-	-	-	-	-	12	-	-	12
Florida	76	2,672	-	280	2,952	11	-	-	3,039
Illinois	142	446	-	-	446	71	-	-	659
Indiana	131	3,073	-	-	3,073	26	-	-	3,229
Iowa	-	217	-	-	217	1	-	-	217
Kentucky	8,017	4,030	-	-	4,030	5,657	286	-	17,990
Michigan	-	20	8	-	28	-	-	-	28
Minnesota	-	32	-	-	32	-	-	-	32
Mississippi	-	10	-	-	10	-	-	-	10
Missouri	-	102	-	-	102	-	-	-	102
Ohio	17	128	-	-	128	-	-	-	146
Pennsylvania	-	-	-	-	-	*	-	-	*
Tennessee	1,711	5,980	-	-	5,980	60	-	-	7,751
West Virginia	-	1	-	-	1	-	-	-	1
Wisconsin	108	-	-	-	-	-	-	-	108
Unknown State	-	-	-	-	-	-	-	66	66
Foreign	-	-	-	204	204	-	-	-	204
Louisiana	**-**	**-**	**-**	**-**	**-**	**460**	**2,643**	**-**	**3,103**
Louisiana	-	-	-	-	-	460	2,643	-	3,103
Missouri	-	-	-	-	-	*	-	-	*
Maryland	**2,151**	**515**	**-**	**295**	**809**	**594**	**-**	**18**	**3,572**
Delaware	37	-	-	-	-	-	-	-	37
Maryland	491	-	-	-	-	329	-	-	820
Massachusetts	11	-	-	-	-	-	-	-	11
Pennsylvania	-	-	-	-	-	19	-	-	19
West Virginia	1,612	515	-	-	515	247	-	-	2,373
Unknown State	-	-	-	-	-	-	-	18	18
Foreign	-	-	-	295	295	-	-	-	295

See footnotes at end of table.

Table 65. Distribution of U.S. Coal by Origin, Destination, and Method of Transportation, 1993 (Continued)
(Thousand Short Tons)

Origin State and Destination State	Railroad	Water				Truck	Tramway, Conveyor, and Slurry Pipeline	Unknown	Total
		River	Great Lakes	Tidewater	Total				
Missouri	54	-	-	-	-	388	174	22	638
Kansas	-	-	-	-	-	23	-	-	23
Missouri	52	-	-	-	-	365	174	-	591
Oklahoma	2	-	-	-	-	-	-	-	2
Unknown State	-	-	-	-	-	-	-	22	22
Montana	21,318	-	6,157	67	6,225	334	8,014	25	35,916
Colorado	86	-	-	-	-	-	-	-	86
Illinois	3,295	-	-	-	-	-	-	-	3,295
Indiana	433	-	-	-	-	-	-	-	433
Iowa	1	-	-	-	-	-	-	-	1
Michigan	3,957	-	6,098	-	6,098	-	-	-	10,055
Minnesota	8,833	-	16	-	16	3	-	-	8,852
Mississippi	178	-	-	-	-	-	-	-	178
Montana	791	-	-	-	-	309	8,014	-	9,115
Nebraska	136	-	-	-	-	-	-	-	136
North Dakota	422	-	-	-	-	-	-	-	422
Oregon	355	-	-	-	-	-	-	-	355
Washington	753	-	-	-	-	-	-	-	753
Wisconsin	2,057	-	-	-	-	*	-	-	2,057
Wyoming	10	-	-	-	-	21	-	-	31
Unknown State	-	-	-	-	-	-	-	25	25
Foreign	11	-	43	67	110	-	-	-	121
New Mexico	22,420	-	-	-	-	5,522	-	-	27,942
Arizona	11,263	-	-	-	-	*	-	-	11,263
New Mexico	9,416	-	-	-	-	5,522	-	-	14,938
Oklahoma	5	-	-	-	-	-	-	-	5
Texas	345	-	-	-	-	-	-	-	345
Wisconsin	1,392	-	-	-	-	-	-	-	1,392
North Dakota	2,566	-	-	-	-	4,678	25,123	4	32,372
Montana	-	-	-	-	-	*	-	-	*
North Dakota	414	-	-	-	-	4,678	25,123	-	30,215
South Dakota	2,153	-	-	-	-	-	-	-	2,153
Wisconsin	-	-	-	-	-	*	-	-	*
Unknown State	-	-	-	-	-	-	-	4	4
Ohio	2,221	8,042	16	-	8,059	11,278	6,352	405	28,315
Alabama	-	151	-	-	151	-	-	-	151
Connecticut	-	-	-	-	-	*	-	-	*
Delaware	14	-	-	-	-	34	-	-	48
Illinois	-	-	-	-	-	*	-	-	*
Indiana	200	-	-	-	-	74	-	-	274
Iowa	5	48	-	-	48	13	-	-	67
Kentucky	-	21	-	-	21	8	-	-	29
Massachusetts	17	-	-	-	-	-	-	-	17
Michigan	41	-	16	-	16	417	-	-	474
Missouri	-	3	-	-	3	13	-	-	16
New York	40	3	-	-	3	9	-	-	52
Ohio	1,873	6,175	-	-	6,175	9,971	6,352	*	24,370
Pennsylvania	16	711	-	-	711	609	-	-	1,336
Tennessee	-	55	-	-	55	26	-	-	81
West Virginia	15	874	-	-	874	104	-	-	993
Unknown State	-	-	-	-	-	-	-	405	405
Oklahoma	11	-	-	-	-	2,297	-	1	2,309
Arkansas	-	-	-	-	-	196	-	-	196
California	-	-	-	-	-	*	-	-	*
Kansas	-	-	-	-	-	41	-	-	41
Missouri	-	-	-	-	-	16	-	-	16
Oklahoma	-	-	-	-	-	1,869	-	-	1,869
Texas	-	-	-	-	-	175	-	-	175
Unknown State	-	-	-	-	-	-	-	1	1
Foreign	11	-	-	-	-	-	-	-	11
Pennsylvania	24,549	7,860	621	5,119	13,600	16,367	3,944	531	58,990

See footnotes at end of table.

Table 65. Distribution of U.S. Coal by Origin, Destination, and Method of Transportation, 1993 (Continued)

(Thousand Short Tons)

Origin State and Destination State	Railroad	Water				Truck	Tramway, Conveyor, and Slurry Pipeline	Unknown	Total
		River	Great Lakes	Tidewater	Total				
Pennsylvania (Continued)									
Alabama	2	46	-	-	46	1	-	-	48
Arizona	*	-	-	-	-	-	-	-	*
Arkansas	*	-	-	-	-	*	-	-	*
California	-	-	-	-	-	*	-	-	*
Colorado	3	-	-	-	-	-	-	-	3
Connecticut	*	-	-	-	-	12	-	-	13
Delaware	246	-	-	-	-	16	-	-	262
District of Columbia	-	-	-	-	-	*	-	-	*
Florida	6	-	-	-	-	*	-	-	6
Georgia	*	-	-	-	-	*	-	-	*
Idaho	*	-	-	-	-	-	-	-	*
Illinois	37	19	-	-	19	1	-	-	56
Indiana	344	160	-	-	160	6	-	-	510
Iowa	28	103	-	-	103	*	-	-	131
Kansas	-	-	-	-	-	*	-	-	*
Kentucky	20	222	-	-	222	*	-	-	243
Louisiana	8	-	-	-	-	*	-	-	8
Maine	4	-	-	-	-	7	-	-	11
Maryland	2,060	-	-	-	-	315	-	-	2,375
Massachusetts	308	-	-	-	-	46	-	-	354
Michigan	1,402	-	197	-	197	8	-	-	1,607
Minnesota	3	-	-	-	-	*	-	-	3
Mississippi	*	3	-	-	3	-	-	-	3
Missouri	102	-	-	-	-	2	-	-	104
Montana	*	-	-	-	-	-	-	-	*
Nebraska	2	-	-	-	-	-	-	-	2
New Hampshire	658	-	-	-	-	9	-	-	666
New Jersey	153	-	-	-	-	20	-	-	173
New Mexico	-	-	-	-	-	*	-	-	*
New York	5,041	453	-	-	453	912	-	-	6,406
North Carolina	*	-	-	-	-	-	-	-	*
North Dakota	*	-	-	-	-	*	-	-	*
Ohio	1,627	1,779	159	-	1,938	302	-	-	3,867
Oklahoma	*	-	-	-	-	*	-	-	*
Oregon	9	-	-	-	-	-	-	-	9
Pennsylvania	11,592	3,612	-	-	3,612	14,302	3,944	6	33,456
Rhode Island	-	-	-	-	-	3	-	-	3
South Carolina	11	-	-	-	-	*	-	-	11
Tennessee	8	494	-	-	494	9	-	-	512
Texas	2	-	-	-	-	*	-	-	3
Utah	240	-	-	-	-	-	-	-	240
Vermont	1	-	-	-	-	5	-	-	6
Virginia	*	5	-	-	5	38	-	-	43
West Virginia	51	963	-	-	963	306	-	-	1,321
Wisconsin	394	-	106	-	106	1	-	-	501
Wyoming	*	-	-	-	-	*	-	-	*
Unknown State	-	-	-	-	-	-	-	525	525
Foreign	188	-	158	5,119	5,277	43	-	-	5,508
Pennsylvania Anthracite	**425**	**1**	**-**	**98**	**99**	**2,040**	**628**	**138**	**3,331**
Alabama	2	-	-	-	-	1	-	-	3
Arizona	*	-	-	-	-	-	-	-	*
Arkansas	*	-	-	-	-	*	-	-	*
California	-	-	-	-	-	*	-	-	*
Colorado	3	-	-	-	-	-	-	-	3
Connecticut	*	-	-	-	-	12	-	-	13
Delaware	*	-	-	-	-	11	-	-	11
District of Columbia	-	-	-	-	-	*	-	-	*
Florida	6	-	-	-	-	*	-	-	6
Georgia	*	-	-	-	-	*	-	-	*
Idaho	*	-	-	-	-	-	-	-	*
Illinois	13	-	-	-	-	1	-	-	14
Indiana	*	-	-	-	-	4	-	-	5
Iowa	28	-	-	-	-	*	-	-	28
Kansas	-	-	-	-	-	*	-	-	*
Kentucky	18	-	-	-	-	*	-	-	18
Louisiana	8	-	-	-	-	*	-	-	8

See footnotes at end of table.

Table 65. Distribution of U.S. Coal by Origin, Destination, and Method of Transportation, 1993 (Continued)
(Thousand Short Tons)

Origin State and Destination State	Railroad	Water				Truck	Tramway, Conveyor, and Slurry Pipeline	Unknown	Total
		River	Great Lakes	Tidewater	Total				
Pennsylvania Anthracite (Continued)									
Maine	2	-	-	-	-	6	-	-	8
Maryland	*	-	-	-	-	4	-	-	4
Massachusetts	4	-	-	-	-	20	-	-	24
Michigan	*	-	-	-	-	*	-	-	*
Minnesota	3	-	-	-	-	*	-	-	3
Mississippi	*	-	-	-	-	-	-	-	*
Missouri	-	-	-	-	-	2	-	-	2
Montana	*	-	-	-	-	-	-	-	*
Nebraska	2	-	-	-	-	-	-	-	2
New Hampshire	1	-	-	-	-	9	-	-	10
New Jersey	*	-	-	-	-	20	-	-	20
New Mexico	-	-	-	-	-	*	-	-	*
New York	29	-	-	-	-	150	-	-	179
North Carolina	*	-	-	-	-	-	-	-	*
North Dakota	*	-	-	-	-	*	-	-	*
Ohio	*	1	-	-	1	17	-	-	19
Oklahoma	*	-	-	-	-	*	-	-	*
Oregon	9	-	-	-	-	-	-	-	9
Pennsylvania	91	-	-	-	-	1,701	628	-	2,420
Rhode Island	-	-	-	-	-	3	-	-	3
South Carolina	11	-	-	-	-	*	-	-	11
Tennessee	4	-	-	-	-	9	-	-	14
Texas	2	-	-	-	-	*	-	-	3
Utah	*	-	-	-	-	-	-	-	*
Vermont	1	-	-	-	-	4	-	-	6
Virginia	*	-	-	-	-	14	-	-	14
West Virginia	*	-	-	-	-	18	-	-	18
Wisconsin	*	-	-	-	-	1	-	-	1
Wyoming	*	-	-	-	-	*	-	-	*
Unknown State	-	-	-	-	-	-	-	138	138
Foreign	188	-	-	98	98	30	-	-	316
Pennsylvania Bituminous	**24,123**	**7,859**	**621**	**5,021**	**13,500**	**14,326**	**3,316**	**393**	**55,659**
Alabama	-	46	-	-	46	-	-	-	46
Connecticut	-	-	-	-	-	*	-	-	*
Delaware	246	-	-	-	-	6	-	-	252
Illinois	24	19	-	-	19	-	-	-	43
Indiana	344	160	-	-	160	2	-	-	505
Iowa	-	103	-	-	103	-	-	-	103
Kentucky	2	222	-	-	222	-	-	-	225
Maine	2	-	-	-	-	*	-	-	2
Maryland	2,060	-	-	-	-	311	-	-	2,372
Massachusetts	305	-	-	-	-	25	-	-	330
Michigan	1,402	-	197	-	197	8	-	-	1,607
Mississippi	-	3	-	-	3	-	-	-	3
Missouri	102	-	-	-	-	-	-	-	102
New Hampshire	656	-	-	-	-	-	-	-	656
New Jersey	153	-	-	-	-	*	-	-	153
New York	5,012	453	-	-	453	763	-	-	6,228
North Dakota	*	-	-	-	-	-	-	-	*
Ohio	1,627	1,778	159	-	1,937	284	-	-	3,848
Pennsylvania	11,502	3,612	-	-	3,612	12,601	3,316	6	31,036
Tennessee	4	494	-	-	494	-	-	-	498
Texas	-	-	-	-	-	*	-	-	*
Utah	240	-	-	-	-	-	-	-	240
Vermont	-	-	-	-	-	*	-	-	*
Virginia	-	5	-	-	5	25	-	-	29
West Virginia	51	963	-	-	963	288	-	-	1,302
Wisconsin	394	-	106	-	106	-	-	-	500
Unknown State	-	-	-	-	-	-	-	387	387
Foreign	-	-	158	5,021	5,179	13	-	-	5,192
Tennessee	**1,658**	**592**	**-**	**-**	**592**	**268**	**-**	**59**	**2,577**

See footnotes at end of table.

Table 65. Distribution of U.S. Coal by Origin, Destination, and Method of Transportation, 1993 (Continued)
(Thousand Short Tons)

Origin State and Destination State	Railroad	Water				Truck	Tramway, Conveyor, and Slurry Pipeline	Unknown	Total
		River	Great Lakes	Tidewater	Total				
Tennessee (Continued)									
Alabama	-	592	-	-	592	-	-	-	592
Georgia	105	-	-	-	-	99	-	-	204
Indiana	-	-	-	-	-	*	-	-	*
Kentucky	122	-	-	-	-	-	-	-	122
North Carolina	89	-	-	-	-	7	-	-	96
South Carolina	3	-	-	-	-	-	-	-	3
Tennessee	1,340	-	-	-	-	162	-	-	1,501
Virginia	-	-	-	-	-	*	-	-	*
Unknown State	-	-	-	-	-	-	-	59	59
Texas	**22,693**	**-**	**-**	**-**	**-**	**13,965**	**17,566**	**-**	**54,224**
Texas	22,693	-	-	-	-	13,965	17,566	-	54,224
Utah	**10,631**	**300**	**10**	**2,664**	**2,974**	**5,923**	**2,692**	**23**	**22,243**
Arizona	87	-	-	-	-	1	-	-	89
California	2,554	-	-	-	-	20	-	-	2,575
Colorado	10	-	-	-	-	3	-	-	14
Florida	-	104	-	52	155	-	-	-	155
Idaho	1	-	-	-	-	94	-	-	95
Illinois	11	196	-	-	196	*	-	-	207
Indiana	204	-	-	-	-	*	-	-	204
Missouri	382	-	-	-	-	-	-	-	382
Montana	2	-	-	-	-	40	-	-	42
Nebraska	-	-	-	-	-	*	-	-	*
Nevada	1,648	-	-	-	-	133	-	-	1,781
Ohio	-	-	-	-	-	*	-	-	*
Oregon	122	-	-	-	-	1	-	-	123
Utah	5,120	-	-	-	-	5,606	2,692	-	13,418
Washington	144	-	-	-	-	2	-	-	145
West Virginia	-	-	-	-	-	4	-	-	4
Wisconsin	-	-	10	-	10	-	-	-	10
Wyoming	-	-	-	-	-	18	-	-	18
Unknown State	-	-	-	-	-	-	-	23	23
Foreign	346	-	-	2,613	2,613	*	-	-	2,959
Virginia	**23,485**	**1,639**	**1,360**	**13,484**	**16,482**	**572**	**943**	**155**	**41,639**
Alabama	887	-	-	-	-	*	-	-	887
Colorado	-	-	-	-	-	*	-	-	*
Delaware	155	-	-	-	-	-	-	-	155
Florida	457	-	-	-	-	-	-	-	457
Georgia	3,496	-	-	-	-	1	-	-	3,496
Illinois	28	213	19	-	232	-	-	-	260
Indiana	1,998	47	-	-	47	-	-	-	2,045
Kentucky	*	-	-	-	-	1	-	-	1
Maryland	8	-	-	-	-	*	-	-	8
Michigan	48	-	141	-	141	*	-	-	188
New Jersey	127	-	-	232	232	-	-	-	359
New York	108	-	-	-	-	-	-	-	108
North Carolina	5,806	-	-	-	-	61	-	-	5,866
Ohio	746	-	129	-	129	-	-	-	875
Pennsylvania	904	702	-	-	702	*	-	-	1,607
South Carolina	1,654	-	-	-	-	9	-	-	1,663
Tennessee	2,072	-	-	-	-	66	-	-	2,138
Texas	2	-	-	-	-	-	-	-	2
Utah	103	-	-	-	-	-	-	-	103
Virginia	4,469	-	-	230	230	434	943	*	6,076
West Virginia	227	604	-	-	604	1	-	-	832
Wisconsin	35	73	-	-	73	-	-	-	108
Unknown State	-	-	-	-	-	-	-	155	155
Foreign	158	-	1,072	13,021	14,093	*	-	-	14,251
Washington	**-**	**-**	**-**	**93**	**93**	**104**	**4,518**	**-**	**4,714**
Washington	-	-	-	-	-	103	4,518	-	4,621
Foreign	-	-	-	93	93	1	-	-	94
West Virginia	**52,740**	**36,070**	**4,118**	**31,844**	**72,031**	**6,446**	**3,380**	**1,220**	**135,818**

See footnotes at end of table.

Table 65. Distribution of U.S. Coal by Origin, Destination, and Method of Transportation, 1993 (Continued)
(Thousand Short Tons)

Origin State and Destination State	Railroad	Water				Truck	Tramway, Conveyor, and Slurry Pipeline	Unknown	Total
		River	Great Lakes	Tidewater	Total				
West Virginia (Continued)									
Alabama	2,790	972	-	-	972	*	-	-	3,762
California	*	-	-	-	-	-	-	-	*
Connecticut	-	-	-	106	106	-	-	-	106
Delaware	1,629	36	-	-	36	49	-	-	1,713
District of Columbia	23	-	-	-	-	12	-	-	35
Florida	314	458	-	626	1,083	-	-	-	1,397
Georgia	2,667	290	-	-	290	-	-	-	2,958
Illinois	843	1,172	-	-	1,172	*	-	-	2,015
Indiana	2,653	910	-	-	910	54	-	-	3,617
Iowa	24	45	-	-	45	-	-	-	69
Kentucky	1,590	3,050	-	-	3,050	193	-	-	4,833
Louisiana	-	156	-	-	156	-	-	-	156
Maine	-	-	-	14	14	-	-	-	14
Maryland	4,076	189	-	1,331	1,520	94	-	-	5,690
Massachusetts	835	260	-	257	517	1	-	-	1,352
Michigan	3,636	228	293	-	522	3	-	-	4,161
Minnesota	-	3	-	-	3	9	-	-	11
Mississippi	-	92	-	-	92	-	-	-	92
Missouri	21	122	-	-	122	54	-	-	196
New Hampshire	418	-	-	29	29	-	-	-	447
New Jersey	1,239	98	-	240	338	-	-	-	1,576
New York	2,987	105	39	-	144	64	-	-	3,195
North Carolina	6,139	5	-	-	5	23	-	-	6,167
Ohio	4,277	11,085	117	-	11,202	665	-	-	16,144
Oklahoma	9	39	-	-	39	-	-	-	48
Pennsylvania	3,585	7,759	-	10	7,769	609	-	-	11,963
Rhode Island	-	-	-	-	-	*	-	-	*
South Carolina	63	31	-	-	31	13	-	-	107
Tennessee	65	2,092	-	-	2,092	-	-	-	2,157
Utah	135	-	-	-	-	-	-	-	135
Virginia	2,663	300	-	138	437	178	-	-	3,277
West Virginia	8,713	6,336	-	-	6,336	4,425	3,380	32	22,887
Wisconsin	479	238	472	-	710	1	-	-	1,190
Unknown State	-	-	-	-	-	-	-	1,187	1,187
Foreign	868	-	3,197	29,094	32,291	-	-	-	33,159
West Virginia, Northern	**12,926**	**12,245**	**1,150**	**2,733**	**16,128**	**4,198**	**2,995**	**852**	**37,100**
Alabama	-	27	-	-	27	-	-	-	27
California	*	-	-	-	-	-	-	-	*
Delaware	1,012	36	-	-	36	49	-	-	1,096
District of Columbia	-	-	-	-	-	12	-	-	12
Florida	-	408	-	173	580	-	-	-	580
Illinois	32	12	-	-	12	-	-	-	44
Indiana	216	-	-	-	-	-	-	-	216
Kentucky	-	128	-	-	128	2	-	-	130
Louisiana	-	154	-	-	154	-	-	-	154
Maryland	3,276	-	-	944	944	94	-	-	4,314
Massachusetts	612	-	-	-	-	1	-	-	613
Michigan	85	-	28	-	28	-	-	-	113
Mississippi	-	5	-	-	5	-	-	-	5
Missouri	-	-	-	-	-	54	-	-	54
New Hampshire	389	-	-	-	-	-	-	-	389
New Jersey	1,127	98	-	9	107	-	-	-	1,234
New York	1,232	*	39	-	40	64	-	-	1,336
Ohio	599	2,863	-	-	2,863	197	-	-	3,659
Pennsylvania	955	5,718	-	-	5,718	527	-	-	7,200
Tennessee	-	589	-	-	589	-	-	-	589
Virginia	231	-	-	-	-	75	-	-	306
West Virginia	3,136	2,208	-	-	2,208	3,124	2,995	*	11,464
Wisconsin	24	-	163	-	163	-	-	-	188
Unknown State	-	-	-	-	-	-	-	851	851
Foreign	-	-	919	1,608	2,527	-	-	-	2,527
West Virginia, Southern	**39,814**	**23,824**	**2,967**	**29,111**	**55,903**	**2,248**	**385**	**368**	**98,718**

See footnotes at end of table.

Table 65. Distribution of U.S. Coal by Origin, Destination, and Method of Transportation, 1993 (Continued)

(Thousand Short Tons)

Origin State and Destination State	Railroad	Water				Truck	Tramway, Conveyor, and Slurry Pipeline	Unknown	Total
		River	Great Lakes	Tidewater	Total				
West Virginia, Southern (Continued)									
Alabama	2,790	946	-	-	946	*	-	-	3,736
California	*	-	-	-	-	-	-	-	*
Connecticut	-	-	-	106	106	-	-	-	106
Delaware	617	-	-	-	-	-	-	-	617
District of Columbia	23	-	-	-	-	-	-	-	23
Florida	314	50	-	453	503	-	-	-	817
Georgia	2,667	290	-	-	290	-	-	-	2,958
Illinois	810	1,161	-	-	1,161	*	-	-	1,971
Indiana	2,437	910	-	-	910	54	-	-	3,401
Iowa	24	45	-	-	45	-	-	-	69
Kentucky	1,590	2,923	-	-	2,923	191	-	-	4,704
Louisiana	-	2	-	-	2	-	-	-	2
Maine	-	-	-	14	14	-	-	-	14
Maryland	799	189	-	387	576	-	-	-	1,376
Massachusetts	222	260	-	257	517	*	-	-	739
Michigan	3,552	228	265	-	493	3	-	-	4,048
Minnesota	-	3	-	-	3	9	-	-	11
Mississippi	-	87	-	-	87	-	-	-	87
Missouri	21	122	-	-	122	-	-	-	142
New Hampshire	29	-	-	29	29	-	-	-	58
New Jersey	111	-	-	231	231	-	-	-	343
New York	1,755	104	-	-	104	-	-	-	1,860
North Carolina	6,139	5	-	-	5	23	-	-	6,167
Ohio	3,678	8,222	117	-	8,338	468	-	-	12,485
Oklahoma	9	39	-	-	39	-	-	-	48
Pennsylvania	2,630	2,041	-	10	2,051	82	-	-	4,763
Rhode Island	-	-	-	-	-	*	-	-	*
South Carolina	63	31	-	-	31	13	-	-	107
Tennessee	65	1,503	-	-	1,503	-	-	-	1,569
Utah	135	-	-	-	-	-	-	-	135
Virginia	2,432	300	-	138	437	103	-	-	2,971
West Virginia	5,577	4,127	-	-	4,127	1,301	385	32	11,423
Wisconsin	454	238	308	-	547	1	-	-	1,002
Unknown State	-	-	-	-	-	-	-	336	336
Foreign	868	-	2,277	27,487	29,764	-	-	-	30,632
Wyoming	**187,331**	**8,182**	**878**	**974**	**10,034**	**3,268**	**11,057**	**22**	**211,713**
Arizona	5	-	-	-	-	-	-	-	5
Arkansas	10,826	-	-	-	-	-	-	-	10,826
Colorado	5,538	-	-	-	-	*	-	-	5,538
Georgia	726	-	-	-	-	-	-	-	726
Idaho	305	-	-	-	-	37	-	-	343
Illinois	7,593	-	-	-	-	-	-	-	7,593
Indiana	12,635	-	-	-	-	-	-	-	12,635
Iowa	15,540	410	-	-	410	-	-	-	15,950
Kansas	16,484	-	-	-	-	-	-	-	16,484
Kentucky	237	11	-	-	11	-	-	-	248
Louisiana	4,817	6,316	-	-	6,316	-	-	-	11,133
Maryland	213	-	-	-	-	-	-	-	213
Massachusetts	14	-	-	-	-	-	-	-	14
Michigan	4,345	-	142	-	142	-	-	-	4,487
Minnesota	8,357	-	736	-	736	-	-	-	9,093
Missouri	9,370	1,445	-	-	1,445	-	-	-	10,815
Montana	37	-	-	-	-	*	-	-	37
Nebraska	8,801	-	-	-	-	*	-	-	8,801
Nevada	753	-	-	-	-	-	-	-	753
North Dakota	5	-	-	-	-	-	-	-	5
Oklahoma	16,726	-	-	-	-	-	-	-	16,726
Oregon	1,270	-	-	-	-	-	-	-	1,270
South Dakota	-	-	-	-	-	493	-	-	493
Tennessee	68	-	-	-	-	-	-	-	68
Texas	38,007	-	-	-	-	-	-	-	38,007
Washington	-	-	-	-	-	1	-	-	1
Wisconsin	12,934	-	-	-	-	-	-	-	12,934
Wyoming	11,726	-	-	-	-	2,736	11,057	-	25,519
Unknown State	-	-	-	-	-	-	-	22	22

See footnotes at end of table.

Table 65. Distribution of U.S. Coal by Origin, Destination, and Method of Transportation, 1993 (Continued)
(Thousand Short Tons)

Origin State and Destination State	Railroad	Water				Truck	Tramway, Conveyor, and Slurry Pipeline	Unknown	Total
		River	Great Lakes	Tidewater	Total				
Wyoming (Continued)									
Foreign	-	-	-	974	974	-	-	-	974
U.S. Total	**530,343**	**122,490**	**17,109**	**74,393**	**213,993**	**115,601**	**95,188**	**4,321**	**959,445**
Alabama	10,621	7,245	-	-	7,245	9,266	1,566	-	28,698
Alaska	635	-	-	-	-	220	-	-	855
Arizona	19,013	-	-	-	-	27	-	-	19,039
Arkansas	10,864	-	-	-	-	230	-	-	11,094
California	2,587	-	-	-	-	20	-	-	2,608
Colorado	12,808	-	-	-	-	4,014	-	-	16,821
Connecticut	*	-	-	682	682	13	-	-	695
Delaware	2,107	36	-	-	36	99	-	-	2,242
District of Columbia	39	-	-	-	-	12	-	-	51
Florida	10,027	9,430	-	1,943	11,373	47	-	-	21,446
Georgia	21,082	3,839	-	-	3,839	180	-	-	25,101
Idaho	306	-	-	-	-	132	-	-	438
Illinois	23,787	3,840	51	-	3,892	5,000	1,755	-	34,433
Indiana	37,718	6,826	213	-	7,039	9,105	591	-	54,452
Iowa	17,235	1,388	-	-	1,388	326	-	-	18,950
Kansas	16,753	18	-	-	18	231	-	-	17,002
Kentucky	13,118	11,193	-	-	11,193	10,858	289	2	35,461
Louisiana	4,825	6,597	-	-	6,597	460	2,643	-	14,524
Maine	21	-	-	378	378	7	-	-	405
Maryland	7,359	189	-	1,777	1,966	738	-	-	10,063
Massachusetts	1,243	260	-	285	545	52	-	-	1,840
Michigan	20,408	454	8,327	-	8,781	852	-	-	30,041
Minnesota	17,230	64	834	-	897	38	-	-	18,166
Mississippi	1,880	1,441	-	-	1,441	100	-	-	3,421
Missouri	14,729	4,071	-	-	4,071	947	174	-	19,921
Montana	831	-	-	-	-	349	8,014	-	9,194
Nebraska	9,011	-	-	-	-	*	-	-	9,011
Nevada	2,915	-	-	-	-	133	4,572	-	7,621
New Hampshire	1,140	-	-	43	43	9	-	-	1,192
New Jersey	1,579	98	-	472	570	20	-	-	2,169
New Mexico	9,416	-	-	-	-	5,606	-	-	15,022
New York	9,340	566	39	-	605	1,004	-	-	10,950
North Carolina	25,221	5	-	-	5	395	-	-	25,621
North Dakota	841	-	-	-	-	4,678	25,123	-	30,642
Ohio	13,897	23,710	574	-	24,285	12,221	6,352	*	56,755
Oklahoma	16,863	40	-	-	40	1,874	-	-	18,777
Oregon	1,760	-	-	-	-	1	-	-	1,761
Pennsylvania	16,950	14,748	-	10	14,758	15,644	3,944	6	51,302
Rhode Island	-	-	-	-	-	3	-	-	3
South Carolina	11,542	60	-	-	60	147	-	-	11,749
South Dakota	2,153	-	-	-	-	493	-	-	2,646
Tennessee	13,031	15,258	-	-	15,258	1,189	-	-	29,477
Texas	63,554	-	-	-	-	14,140	17,574	-	95,269
Utah	7,195	-	-	-	-	5,606	2,692	-	15,493
Vermont	1	-	-	-	-	5	-	-	6
Virginia	13,004	432	-	805	1,236	901	943	*	16,084
Washington	944	-	-	-	-	106	4,518	-	5,567
West Virginia	10,826	9,851	-	-	9,851	5,253	3,380	32	29,343
Wisconsin	18,588	832	1,212	-	2,043	30	-	-	20,662
Wyoming	11,739	-	-	-	-	2,775	11,057	-	25,571
Unknown State	-	-	-	-	-	-	-	4,279	4,279
Foreign	1,607	-	5,859	67,999	73,858	46	-	-	75,510

* Data round to zero.
Note: Totals may not equal sum of components due to independent rounding.
Source: Energy Information Administration, Form EIA-6, "Coal Distribution Report."

Demand

Domestic Markets

In 1993, domestic coal consumption rose by nearly 4 percent to 926 million short tons, a record level, led by a 4.3-percent increase in coal use at electric utility plants (Table 67). Electric utility coal consumption, which accounted for 88 percent of total U.S. coal consumption, totaled 814 million short tons, a record level and 34 million short tons more than in 1992 (Table 69). Major U.S. coal consumers in the electric utility, manufacturing, and coke sectors are presented in Table 66.

Electric Utility Use

Weather conditions were a major factor in determining the level of coal consumed by electric utilities in 1993. The weather also affected the delivery of coal to power plants. Weather conditions most notable in 1993, which affected coal, included an intense summer heatwave throughout the East and South, and severe flooding along the upper Mississippi and Missouri River Basins from June through August.

The summer heatwave in the East and South was the main cause of record levels of electricity demand in July and August. Several electric utilities set all time summer peak levels. Typically electric utilities would have a comparable increase in coal receipts in August and September. However, this did not occur in 1993 partly because of the United Mine Workers of America (UMWA) strike, extensive flooding in the Midwest which affected local and interstate rail and barge deliveries of coal, and a decision by some electric utilities to maintain a smaller inventory of coal than in the past.

Most of the increase in electric utility coal consumption was in the East North Central and East South Central Census Divisions. In Illinois, off-system sales of electricity to neighboring States led to increases in coal-fired generation. In Texas, a reduction in nuclear-powered generation, coupled with an intense summer heatwave, resulted in much greater use of coal. In Tennessee, a 79-percent decrease in nuclear-powered generation resulted in an increase in coal use.

On the other hand, double-digit increases in hydroelectric generation in both the Mountain and the Pacific Census Divisions reduced coal requirements in those regions. Above normal precipitation in Montana resulted in an increase in less expensive hydroelectric generation and a decrease in coal-fired generation. Coal consumption in Montana dropped 18 percent from 1992. A large increase in nuclear-powered generation in the New England and Middle Atlantic Census Divisions reduced the demand for coal in those regions.

Coal Stocks

Consumer coal stocks fell to 120 million short tons in 1993 from 164 million short tons in 1992, primarily because of a 28-percent (43 million short tons) drop in coal inventories in the electric utility sector (Table 68). Among the reasons for the drop in electric utility coal stocks was a conscious decision by some electric utilities to reduce inventory costs.

Delivery Problems

A second reason for the decline in electric utility coal stocks was that the coal strike limited the available supply of coal, reduced or eliminated some shipments of coal under contract, and increased the price of spot-market coal from Appalachia and the Interior coal-producing regions. To replace contract coal not delivered because of the strike, electric utilities could have relied on the spot-market for larger quantities of coal. However, many electric utilities did not want to pay higher prices on the spot-market to replenish coal stocks and thought that an end to the strike would bring lower prices.

A third reason for the drop in stocks was the severe flooding in the Midwest during June through August which disrupted rail and barge delivery of western coal to this region and beyond. By the time the flood receded and the transportation network was repaired, delivery of western coal to many power plants was well behind schedule. During September through December 1993, congestion on the tracks and limited equipment prevented the railroads from delivering all of the western coal ordered by electric utilities in 1993. A fourth reason for the decline in electric utility stocks

was the record coal consumption in July and August. As a result, by year's end, coal stocks at electric utilities had decreased from 154 million short tons to 111 million short tons, the lowest year-end level since 1975.

Other Use

Coal consumption in 1993 at other industrial plants went up slightly, 1 percent, from the 1992 level (Table 71). However coal consumption at manufacturing plants was close to its 1992 level. Increasing or steady coal consumption at manufacturing plants in the major coal-consuming industries (chemicals, stone, clay and glass) was offset by declining coal consumption in several other manufacturing industries.

Coal consumption at coke plants declined 3 percent, from 32 million short tons in 1992 to 31 million short tons in 1993 (Table 73). Most of the decrease occurred at coke plants in Ohio and Indiana, where coal consumption declined by 1 million short tons in each State. The decline was offset partially by increased coal consumption at coke plants in Pennsylvania and West Virginia.

Residential and commercial coal consumption in 1993 was about the same as in 1992 (Table 75). Increases in coal consumption in the South Atlantic and West North Central Census Divisions were offset by decreases in coal consumption in the Middle Atlantic Census Division.

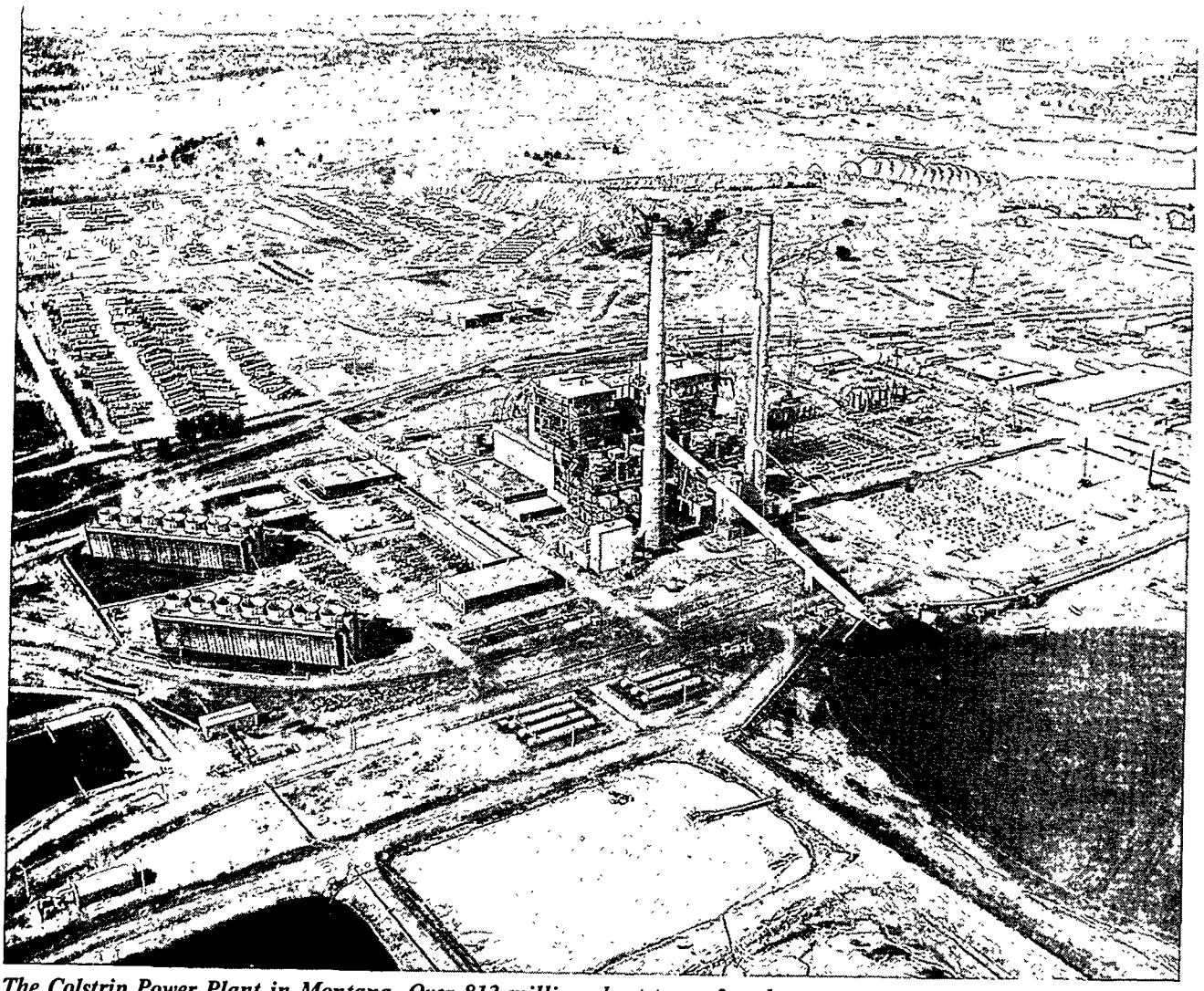
Foreign Markets

U.S. coal exports in 1993 totaled 75 million short tons, 28 million short tons less than in 1992, and the lowest level since 1979 (Table 76). Some of the contributing factors to the drop in exports were weak international demand for steam coal; a restructuring of the European steel industry; and the UMWA strike. Coal exports from all of the major U.S. coal ports declined in 1993, led by a 29-percent drop in exports through the Norfolk, Virginia, Customs District (Table 79).

U.S. metallurgical coal exports in 1993 amounted to 50 million short tons, a decrease of 16 percent from 1992 (Table 77). The largest decline, 20 percent, was in metallurgical coal shipments to Europe. In tonnage terms, there was no substantial increases in metallurgical coal exports to any of the importing countries.

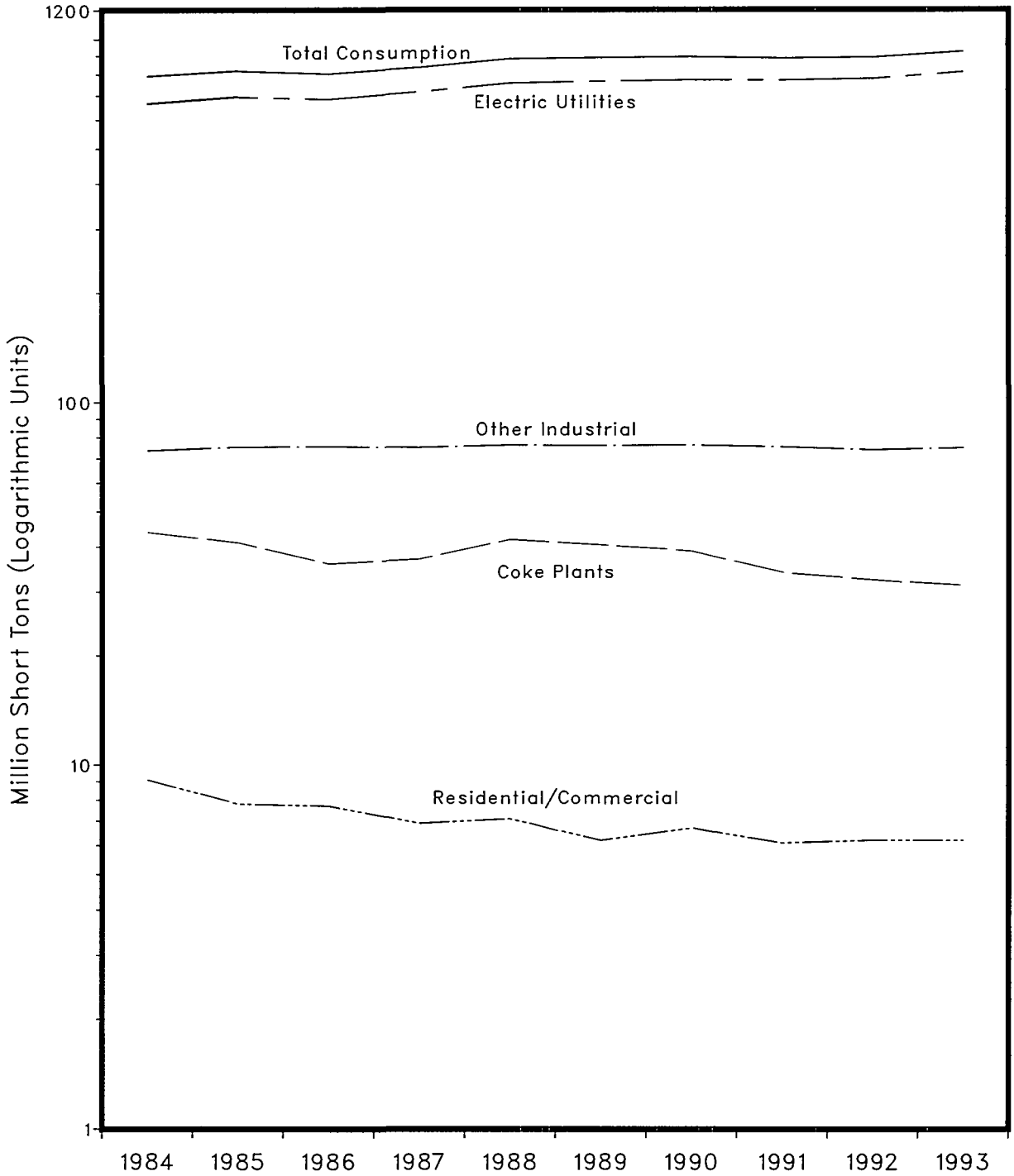
Total U.S. steam coal exports in 1993 were 25 million short tons, a drop of 42 percent from the 1992 level (Table 78). Most of the decline was due to a 59 percent fall in steam coal exports to Canada and a 55 percent drop in steam coal exports to Europe. However, steam coal exports to Asia, particularly Japan, increased 13 percent. Steam coal accounted for 33 percent of total U.S. coal exports in 1993, down from 42 percent in 1992.

Domestic Markets



The Colstrip Power Plant in Montana. Over 813 million short tons of coal were consumed by U.S. electric utilities in 1993, 88 percent of total domestic coal consumption.

Figure 11. U.S. Coal Consumption, 1984-1993



Sources: Energy Information Administration, • Electric Utilities: Form EIA-759, "Monthly Power Plant Report." • Coke Plants: Form EIA-5, "Coke Plant Report - Quarterly." • Other Industrial: Form EIA-3, "Quarterly Coal Consumption Report - Manufacturing Plants;" and Form EIA-6, "Coal Distribution Report." • Residential and Commercial: Form EIA-6, "Coal Distribution Report."

Table 66. Major U.S. Coal Consumers, 1993

Rank	Company Name	Plant Location
	Electric Utilities	
1	Tennessee Valley Authority	(AL) (KY) (TN)
2	Texas Utilities Electric Co.	(TX)
3	PacifiCorp	(UT) (WA) (WY)
4	Georgia Power Co.	(GA)
5	The Detroit Edison Co.	(MI)
6	Alabama Power Co.	(AL)
7	Houston Lighting & Power Co.	(TX)
8	Pennsylvania Electric Co.	(PA)
9	Basin Electric Power CoOp., Inc.	(ND) (WY)
10	Ohio Power Co.	(OH) (WV)
11	PSI Energy, Inc.	(IN)
12	Duke Power Co.	(NC) (SC)
13	Commonwealth Edison Co.	(IL)
14	Northern States Power Co.	(MN) (WI)
15	Arizona Public Service Co.	(AZ) (NM)
16	Indiana & Michigan Power Co.	(IN)
17	Carolina Power & Light Co.	(NC) (SC)
18	Monongahela Power Co.	(WV)
19	Virginia Electric & Power Co.	(VA) (WV)
20	Southwestern Electric Power Co.	(AR) (TX)
21	Salt River Project Agricultural Improvement Power Dist.	(AZ)
22	Union Electric Co.	(MO)
23	Kansas City Power & Light Co.	(KS) (MO)
24	Cincinnati Gas & Electric Co.	(OH) (KY)
25	Arkansas Power & Light Co.	(AR)
26	Western Resources, Inc.	(KS)
27	Appalachian Power Co.	(VA) (WV)
28	Oklahoma Gas & Electric Co.	(OK)
29	Pennsylvania Power & Light Co.	(PA)
30	Southwestern Public Service Co.	(TX)
31	Wisconsin Electric Power Co.	(WI) (MI)
32	The Montana Power Co.	(MT)
33	Public Service Co. of Colorado	(CO)
34	Midwest Power Co.	(IA)
35	Ohio Edison Co.	(OH)
36	The Dayton Power & Light Co.	(OH)
37	Cooperative Power Association	(ND)
38	Northern Indiana Public Service Co.	(IN)
39	Wisconsin Power & Light Co.	(WI)
40	Consumers Power Co.	(MI)
41	Pennsylvania Power Co.	(PA)
42	Tampa Electric Co.	(FL)
43	Lower Colorado River Authority	(TX)
44	Kentucky Utilities Co.	(KY)
45	Illinois Power Co.	(IL)
46	Indianapolis Power & Light Co.	(IN)
47	Cajun Electric Power CoOp., Inc.	(LA)
48	Louisville Gas & Electric Co.	(KY)
49	San Antonio Public Service Board	(TX)
50	Potomac Electric Power Co.	(MD) (VA)
51	Public Service Co. of New Mexico	(NM)
52	The Cleveland Electric Illuminating Co.	(OH)
53	Florida Power Corp.	(FL)
54	Central Illinois Public Service Co.	(IL)
55	Big Rivers Rivers Electric Corp.	(KY)
56	SCANA Corp.	(SC)
57	Los Angeles Dept. of Water & Power	(UT)
58	Central Louisiana Electric Co., Inc.	(LA)
59	Tri-State Generation & Transmission Assn., Inc.	(CO)
60	West Penn Power Co.	(PA) (WV)
61	Nebraska Public Power Dist.	(NE)
62	South Carolina Public Service Authority	(SC)
63	Baltimore Gas & Electric Co.	(MD)
64	Southern California Edison Co.	(NV)
65	Cardinal Operating Co.	(OH)
66	Minnkota Power CoOp., Inc.	(ND)
67	Jacksonville Electric Authority	(FL)
68	Indiana-Kentucky Electric Corp.	(IN)
69	New Nork State Electric & Gas Corp.	(NY)
70	Omaha Public Power District	(NE)
71	Minnesota Power & Light Co.	(MN)
72	Grand River Dam Authority	(OK)
73	Electric Energy, Inc.	(IL)

See footnotes at end of table.

Table 66. Major U.S. Coal Consumers, 1993 (Continued)

Company Name	Plant Location
Top Ten Manufacturers	
Aluminum Co. of America	(IN) (OH) (TN) (TX)
Archer Daniels Midland Co.	(IA) (IL) (MN) (NE)
Champion International Corp.	(AL) (FL) (ME) (MI) (MN) (NC) (NY) (OH)
Dakota Gasification	(ND)
Eastman Kodak Co.	(AR) (NY) (SC) (TN) (TX)
E I Du Pont De Nemours & Co.	(DE) (KY) (MS) (NC) (NJ) (SC) (TN) (VA) (WV)
FMC Corp.	(WV) (WY)
General Motors Corp.	(AL) (IL) (IN) (MI) (MO) (NY) (OH) (WI)
Hoechst Celanese Corp.	(SC) (TX) (VA)
Westvaco Corp.	(MD) (PA) (SD) (VA)
Other Major Manufacturers	
A. E. Staley Manufacturing Co.	(IL) (IN) (TN)
Amalgamated Sugar Co.	(ID) (OR)
American Crystal Sugar Co.	(MN) (ND)
Applied Energy Services Inc.	(PA)
Cargill Inc.	(GA) (IA) (MN) (NC) (OH) (TN) (VA)
CPC International Inc.	(IL) (NC)
Dixie Cement Inc.	(CA) (CO) (FL) (OH) (TN)
Dow Chemical Co.	(MI)
Elkem Metals Co.	(OH) (WV)
Florida Crushed Stone	(FL)
Fort Howard Corp.	(GA) (OK) (WI)
G.E. Co.	(IN) (KY) (PA)
Georgia-Pacific Corp.	(AR) (GA) (MI) (VA) (WI)
Holnan Inc.	(AL) (IA) (MI) (MO) (MS) (MT) (SC) (UT)
Inland Steel Industries Inc.	(IN)
International Paper Co.	(AL) (LA) (PA) (SC) (WI)
Jefferson Smurfit Corp.	(AL) (FL) (IL) (IN) (OH)
Kerr-McGee Corp.	(CA)
LaFarge Corp.	(AL) (KS) (MI) (OH) (PA) (TX)
Lehigh Portland Cement Co.	(AL) (IA) (IN) (MD) (NY)
Lone Star Industries Inc.	(FL) (IL) (IN) (MO) (OK) (PA) (TX)
Louisiana Gasification Tech.	(LA)
Marblehead Lime	(IL) (IN) (MI)
Mead Corporation	Monsanto Co.
(AL) (IA) (ID) (IL) (MA) (WV)	(MI) (OH) (TN) (WI)
PPG Industries Inc.	(WV)
Scott Paper Co.	(AL) (ME) (MI) (PA) (WI)
Stone Container Corp	(AZ) (FL) (MI) (SC) (VA)
Tenneco Inc.	(OH) (TN) (WY)
Union Camp Corp.	(AL) (GA) (OH) (SC) (VA)
Top Ten Coke Producers	
Armco Steel, L.P.	(KY) (OH)
Basic Manufacturing & Tech.	(UT)
Bethlehem Steel Corp.	(IN) (NY) (PA)
Citizens Gas & Coke Utility	(IN)
Drummond Company Inc.	(AL)
Elk River Resources Inc.	(TN)
Inland Steel Co.	(IN)
LTV Steel Company Inc.	(IL) (IN) (OH) (PA)
USX Corp.	(IN) (PA)
Wheeling-Pittsburgh Steel Corp.	(OH)

Note: Major electric utility coal consumers are companies that consumed more than 3.6 million short tons of coal in 1993. Major manufacturers are the top 40 coal consumers in the manufacturing sector. Major coke producers are the top 10 coal consumers in the coke plant sector. Companies are listed in alphabetical order.

Sources: Energy Information Administration, • Electric Utilities: Form EIA-759, "Monthly Power Plant Report." • Manufacturers: Form EIA-3, "Quarterly Coal Consumption Report - Manufacturing Plants." • Coke Plants: Form EIA-5, "Coke Plant Report - Quarterly."

Table 67. Coal Consumption by Census Division and State, 1984, 1989-1993
(Thousand Short Tons)

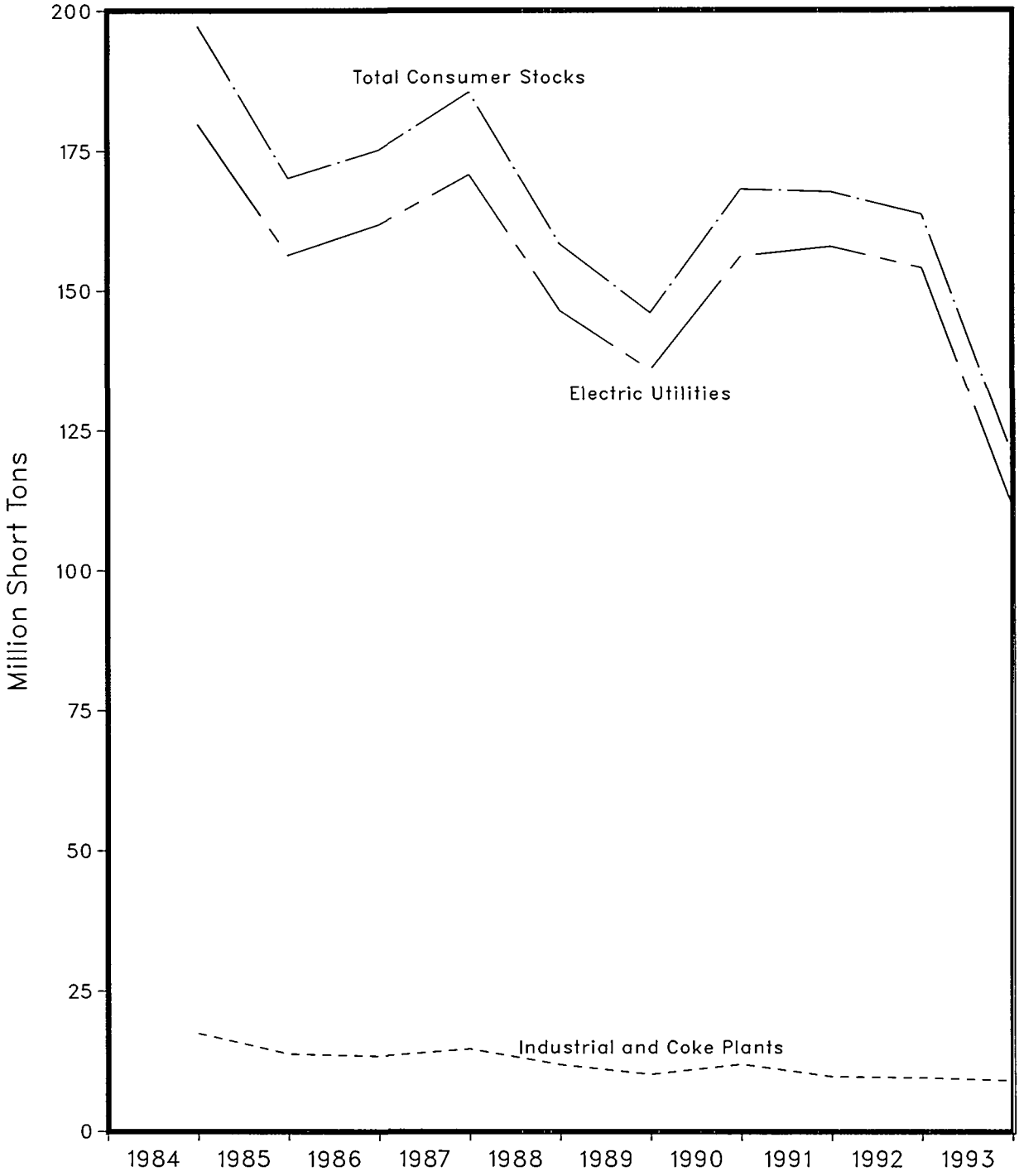
Census Division and State	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change 1989-1993	Average Annual Percent Change 1984-1993
New England Total	**6,485**	**7,298**	**7,012**	**6,771**	**7,021**	**5,989**	**-11.1**	**-2.0**	**0.9**
Connecticut	788	849	856	971	890	59	-7.1	-3.0	33.4
Maine	449	856	374	265	271	200	-47.6	13.4	9.4
Massachusetts	3,811	4,257	4,451	4,337	4,641	4,403	-10.5	-4.8	-1.6
New Hampshire	1,428	1,311	1,315	1,186	1,183	1,263	8.9	4.8	1.4
Rhode Island	3	5	4	5	27	9	-33.1	-41.2	-10.1
Vermont	6	20	12	8	9	55	-70.9	-9.4	-22.2
Middle Atlantic Total	**70,389**	**71,418**	**70,594**	**73,812**	**76,177**	**73,589**	**-1.4**	**-1.9**	**-.5**
New Jersey	2,353	2,348	2,326	3,029	3,545	3,196	.2	-9.7	-3.3
New York	11,878	12,996	13,338	13,465	14,105	11,895	-8.6	-4.2	*
Pennsylvania	56,158	56,074	54,931	57,319	58,526	58,498	.1	-1.0	-.4
East North Central Total	**210,632**	**200,660**	**208,583**	**209,619**	**205,586**	**198,280**	**5.0**	**.6**	**.7**
Illinois	38,135	31,599	34,677	33,904	32,374	38,298	20.7	4.2	*
Indiana	60,353	58,765	60,790	61,701	57,388	53,571	2.7	1.3	1.3
Michigan	32,217	31,554	33,879	34,713	34,885	31,412	2.1	-2.0	.3
Ohio	59,031	58,671	58,578	59,205	61,016	57,049	.6	-.8	.4
Wisconsin	20,897	20,071	20,659	20,097	19,922	17,949	4.1	1.2	1.7
West North Central Total	**120,940**	**115,505**	**116,707**	**116,268**	**114,245**	**99,369**	**4.7**	**1.4**	**2.2**
Iowa	19,188	17,992	18,741	17,929	17,126	13,624	6.6	2.9	3.9
Kansas	17,386	14,227	14,881	15,175	14,963	15,565	22.2	3.8	1.2
Minnesota	18,321	16,924	16,993	18,377	18,279	13,258	8.2	*	3.6
Missouri	23,381	25,180	25,773	25,836	26,348	27,607	-7.1	-2.9	-1.8
Nebraska	9,666	8,212	8,859	8,266	7,587	6,939	17.7	6.2	3.8
North Dakota	30,302	30,301	28,597	28,114	27,401	19,657	*	2.5	4.9
South Dakota	2,696	2,670	2,863	2,571	2,541	2,719	1.0	1.5	-.1
South Atlantic Total	**150,580**	**144,178**	**144,073**	**149,455**	**153,008**	**137,568**	**4.4**	**-.4**	**1.0**
Delaware	2,446	1,770	2,186	2,293	2,357	2,813	38.2	.9	-1.5
District of Columbia	51	50	66	69	60	100	1.8	-3.9	-7.1
Florida	26,430	26,368	26,004	25,233	25,447	15,478	.2	.9	6.1
Georgia	27,081	25,481	26,957	30,067	27,918	28,072	6.3	-.8	-.4
Maryland	10,268	9,713	10,709	11,193	11,541	10,595	5.7	-2.9	-.3
North Carolina	25,760	24,075	20,877	21,150	22,239	22,417	7.0	3.7	1.5
South Carolina	12,914	11,285	11,451	11,447	11,981	9,768	14.4	1.9	3.1
Virginia	13,584	13,418	13,980	13,105	14,279	12,168	1.2	-1.2	1.2
West Virginia	32,046	32,019	31,843	34,896	37,186	36,158	.1	-3.6	-1.3
East South Central Total	**104,027**	**93,804**	**90,785**	**91,126**	**87,655**	**80,333**	**10.9**	**4.4**	**2.9**
Alabama	33,047	31,510	29,349	27,640	27,537	23,876	4.9	4.7	3.7
Kentucky	39,095	34,704	34,517	34,449	32,792	28,863	12.6	4.5	3.4
Mississippi	4,030	3,485	3,812	4,159	3,831	4,297	15.6	1.3	-.7
Tennessee	27,854	24,106	23,107	24,878	23,496	23,297	15.5	4.3	2.0
West South Central Total	**140,797**	**135,210**	**133,635**	**131,478**	**130,093**	**101,996**	**4.1**	**2.0**	**3.6**
Arkansas	11,447	12,538	12,261	12,092	11,547	9,435	-8.7	-.2	2.2
Louisiana	13,676	13,674	12,965	12,547	12,471	6,855	*	2.3	8.0
Oklahoma	18,866	17,430	16,345	15,423	15,086	13,254	8.2	5.7	4.0
Texas	96,809	91,568	92,064	91,415	90,989	72,452	5.7	1.6	3.3
Mountain Total	**110,673**	**112,163**	**105,177**	**107,158**	**106,212**	**85,508**	**-1.3**	**1.0**	**2.9**
Arizona	18,991	17,915	16,805	16,419	16,871	15,406	6.0	3.0	2.3
Colorado	17,070	16,696	16,218	16,710	16,393	14,740	2.2	1.0	1.6
Idaho	528	535	673	549	533	490	-1.1	-.2	.8
Montana	9,247	11,040	10,549	9,676	10,458	5,283	-16.2	-3.0	6.4
Nevada	7,806	8,088	8,091	7,442	7,667	6,948	-3.5	.4	1.3
New Mexico	15,012	14,832	12,858	15,111	15,295	13,979	1.2	-.5	.8
Utah	15,848	15,719	14,834	15,738	15,044	7,905	.8	1.3	8.0
Wyoming	26,171	27,339	25,150	25,514	23,952	20,756	-4.3	2.2	2.6
Pacific Total	**11,422**	**12,186**	**11,055**	**9,792**	**9,120**	**8,133**	**-6.3**	**5.8**	**3.8**
Alaska	863	792	802	784	299	815	9.0	30.4	.6
California	2,453	2,821	2,816	2,899	2,551	1,669	-13.0	-1.0	4.4
Hawaii	73	47	37	28	32	38	55.8	22.6	7.4
Oregon	2,099	2,124	1,940	934	396	685	-1.2	51.7	13.2
Washington	5,934	6,402	5,461	5,147	5,843	4,926	-7.3	.4	2.1
U.S. Total	**925,944**	**892,421**	**887,621**	**895,480**	**889,699**	**791,296**	**3.8**	**1.0**	**1.8**

* Data round to zero.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration, Form EIA-759, "Monthly Power Plant Report;" Form EIA-3, "Quarterly Coal Consumption Report - Manufacturing Plants;" Form EIA-5, "Coke Plant Report - Quarterly;" and Form EIA-6, "Coal Distribution Report."

Figure 12. U.S. Consumer Coal Stocks, 1984-1993



Note: Each increment represents end-of-year data. Industrial stocks reflect manufacturing plants and coke plants.
Sources: Energy Information Administration, • Electric Utilities: Form EIA-759, "Monthly Power Plant Report." • Industrial: Form EIA-5, "Coke Plant Report - Quarterly;" and Form EIA-3, "Quarterly Coal Consumption Report - Manufacturing Plants."

Table 68. Year-End Consumer Coal Stocks by Census Division and State, 1984, 1989-1993
(Thousand Short Tons)

Census Division and State	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
New England Total	**989**	**1,253**	**1,134**	**1,145**	**1,088**	**976**	**-21.1**	**-2.4**	**0.1**
Connecticut	w	w	w	w	w	w	w	w	w
Maine	w	w	w	w	w	w	w	w	w
Massachusetts	w	w	w	w	w	w	w	w	w
New Hampshire	w	w	w	w	w	w	w	w	w
Rhode Island	-	-	-	w	w	w	w	w	w
Vermont	-	-	-	-	w	w	w	w	w
Middle Atlantic Total	**14,060**	**19,486**	**18,246**	**18,776**	**14,256**	**22,229**	**-27.8**	**-.3**	**-5.0**
New Jersey	w	w	w	w	w	w	w	w	w
New York	w	w	w	w	w	w	w	w	w
Pennsylvania	12,265	15,976	15,546	15,426	11,870	18,603	-23.2	.8	-4.5
East North Central Total	**30,162**	**43,661**	**43,179**	**45,411**	**38,922**	**54,074**	**-30.9**	**-6.2**	**-6.3**
Illinois	w	w	w	w	w	8,544	w	w	w
Indiana	7,798	12,507	11,387	12,226	9,398	15,022	-37.6	-4.5	-7.0
Michigan	w	w	w	w	w	w	w	w	w
Ohio	7,630	10,804	10,618	10,471	7,055	12,079	-29.4	2.0	-5.0
Wisconsin	3,193	4,034	w	w	w	w	-20.9	w	w
West North Central Total	**14,898**	**20,732**	**w**	**w**	**w**	**w**	**-28.1**	**w**	**w**
Iowa	3,819	4,857	5,133	4,920	4,575	5,324	-21.4	-4.4	-3.6
Kansas	2,024	2,759	3,321	3,742	3,284	3,674	-26.6	-11.4	-6.4
Minnesota	1,250	2,252	2,693	2,336	2,143	4,012	-44.5	-12.6	-12.1
Missouri	3,704	6,439	w	w	w	w	-42.5	w	w
Nebraska	w	w	w	w	w	2,227	w	w	w
North Dakota	w	w	w	w	w	w	w	w	w
South Dakota	w	w	w	w	w	w	w	w	w
South Atlantic Total	**19,092**	**29,282**	**29,952**	**29,422**	**21,981**	**31,749**	**-34.8**	**-3.5**	**-5.5**
Delaware	w	w	w	w	w	w	w	w	w
Florida	3,541	4,121	4,880	4,972	4,490	3,105	-14.1	-5.8	1.5
Georgia	2,926	4,836	5,419	5,704	5,181	7,102	-39.5	-13.3	-9.4
Maryland	w	w	w	w	w	w	w	w	w
North Carolina	3,059	4,715	4,866	4,659	2,996	4,839	-35.1	.5	-5.0
South Carolina	1,893	2,451	2,241	2,316	2,164	1,671	-22.7	-3.3	1.4
Virginia	w	w	w	w	w	w	w	w	w
West Virginia	w	w	w	w	w	w	w	w	w
East South Central Total	**9,277**	**14,400**	**15,026**	**16,846**	**12,555**	**25,184**	**-35.6**	**-7.3**	**-10.5**
Alabama	2,797	4,529	4,671	4,372	4,189	6,497	-38.2	-9.6	-8.9
Kentucky	w	w	w	w	w	w	w	w	w
Mississippi	w	w	w	w	w	w	w	w	w
Tennessee	1,877	3,286	w	w	w	w	-42.9	w	w
West South Central Total	**15,105**	**16,898**	**18,318**	**16,579**	**w**	**17,487**	**-10.6**	**w**	**-1.6**
Arkansas	1,881	1,591	2,165	1,735	2,152	3,006	18.2	-3.3	-5.1
Louisiana	2,000	1,755	2,301	2,503	2,751	w	14.0	-7.7	w
Oklahoma	2,052	3,161	2,919	2,721	2,904	4,333	-35.1	-8.3	-8.0
Texas	9,172	10,392	10,932	9,619	w	w	-11.7	w	w
Mountain Total	**w**	**w**	**w**	**w**	**w**	**w**	**w**	**w**	**w**
Arizona	3,717	3,596	4,229	3,129	3,411	w	3.3	2.2	w
Colorado	3,454	3,439	3,487	3,334	3,970	w	.4	-3.4	w
Idaho	86	101	79	140	123	76	-14.9	-8.5	1.4
Montana	w	w	w	w	w	w	w	w	w
Nevada	w	w	w	w	w	w	w	w	w
New Mexico	w	w	w	w	w	w	w	w	w
Utah	w	w	w	w	w	w	w	w	w
Wyoming	1,841	2,242	2,835	3,293	3,410	w	-17.9	-14.3	w
Pacific Total	**918**	**1,529**	**2,034**	**2,231**	**1,730**	**w**	**-39.9**	**-14.6**	**w**
Alaska	5	6	8	2	w	w	-11.7	w	w
California	93	109	139	122	160	w	-15.1	-12.8	w
Hawaii	w	w	w	w	w	41	w	w	w
Oregon	w	w	w	w	w	w	w	w	w
Washington	459	736	1,194	1,378	1,054	1,059	-37.6	-18.8	-8.9
U.S. Total	**120,458**	**163,692**	**167,711**	**168,210**	**146,087**	**197,211**	**-26.4**	**-4.7**	**-5.3**

w Withheld to avoid disclosure of individual company data.
Notes: Stocks for Residential and Commercial Sector are not included. Totals may not equal sum of components due to independent rounding.
Sources: Energy Information Administration, Form EIA-759, "Monthly Power Plant Report;" Form EIA-5, "Coke Plant Report - Quarterly;" and Form EIA-3, "Quarterly Coal Consumption Report - Manufacturing Plants."

Table 69. Coal Consumption at Electric Utility Plants by Census Division and State, 1984, 1989-1993
(Thousand Short Tons)

Census Division and State	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
New England Total	**5,736**	**6,112**	**6,421**	**6,305**	**6,510**	**5,328**	**-6.1**	**-3.1**	**0.8**
Connecticut	745	817	840	958	877	13	-8.9	-4.0	56.8
Massachusetts	3,652	4,044	4,339	4,201	4,474	4,080	-9.7	-4.9	-1.2
New Hampshire	1,339	1,251	1,242	1,146	1,160	1,198	7.0	3.6	1.2
Vermont	-	-	-	-	-	37	-	-	-
Middle Atlantic Total	**51,079**	**52,488**	**52,617**	**54,197**	**56,642**	**51,022**	**-2.7**	**-2.5**	*
New Jersey	2,123	2,118	2,081	2,740	3,244	2,853	.3	-10.0	-3.2
New York	8,699	9,963	9,874	9,993	10,158	7,333	-12.7	-3.8	1.9
Pennsylvania	40,257	40,407	40,662	41,465	43,241	40,836	-.4	-1.8	-.1
East North Central Total	**179,833**	**169,029**	**173,718**	**171,756**	**166,437**	**155,772**	**6.4**	**1.9**	**1.6**
Illinois	31,744	25,264	27,754	27,396	25,758	32,054	25.6	5.4	-.1
Indiana	48,836	46,937	47,720	47,654	42,378	38,398	4.0	3.6	2.7
Michigan	28,749	28,238	29,896	29,726	29,972	24,491	1.8	-1.0	1.8
Ohio	51,456	50,358	49,577	48,848	50,479	45,025	2.2	.5	1.5
Wisconsin	19,049	18,231	18,771	18,133	17,851	15,804	4.5	1.6	2.1
West North Central Total	**107,584**	**102,557**	**104,246**	**103,445**	**101,213**	**91,005**	**4.9**	**1.5**	**1.9**
Iowa	16,623	15,357	15,846	15,331	14,598	11,966	8.2	3.3	3.7
Kansas	17,226	14,068	14,732	15,018	14,774	15,252	22.4	3.9	1.4
Minnesota	16,844	15,841	16,114	16,916	17,056	12,015	6.3	-.3	3.8
Missouri	21,945	23,815	24,286	24,231	24,663	25,763	-7.8	-2.9	-1.8
Nebraska	9,297	7,881	8,524	8,027	7,303	6,569	18.0	6.2	3.9
North Dakota	23,290	23,192	22,174	21,579	20,538	16,953	.4	3.2	3.6
South Dakota	2,360	2,402	2,570	2,345	2,281	2,487	-1.8	.8	-.6
South Atlantic Total	**132,885**	**126,093**	**123,729**	**128,072**	**132,285**	**117,267**	**5.4**	**.1**	**1.4**
Delaware	2,223	1,628	1,958	2,056	2,128	2,618	36.5	1.1	-1.8
Florida	25,108	25,016	24,870	24,022	24,292	14,579	.4	.8	6.2
Georgia	25,339	23,656	24,848	27,812	25,839	26,455	7.1	-.5	-.5
Maryland	9,521	8,993	8,632	8,945	9,074	7,501	5.9	1.2	2.7
North Carolina	23,055	21,011	18,078	18,005	19,516	20,306	9.7	4.3	1.4
South Carolina	10,410	9,078	9,218	9,131	9,472	7,428	14.7	2.4	3.8
Virginia	9,447	8,661	8,568	8,228	9,573	7,323	9.1	-.3	2.9
West Virginia	27,782	28,050	27,557	29,873	32,391	31,058	-.9	-3.8	-1.2
East South Central Total	**90,365**	**80,203**	**77,917**	**77,579**	**73,842**	**65,984**	**12.7**	**5.2**	**3.5**
Alabama	27,533	24,988	23,700	22,010	21,884	17,786	10.2	5.9	5.0
Kentucky	35,264	31,715	31,432	30,867	29,109	25,014	11.2	4.9	3.9
Mississippi	3,767	3,237	3,570	3,888	3,566	4,076	16.4	1.4	-.9
Tennessee	23,801	20,263	19,216	20,814	19,283	19,106	17.4	5.4	2.5
West South Central Total	**134,009**	**129,351**	**127,908**	**125,698**	**124,171**	**94,997**	**3.6**	**1.9**	**3.9**
Arkansas	11,116	12,241	11,978	11,836	11,278	9,036	-9.2	-.4	2.3
Louisiana	13,089	13,077	12,406	11,748	11,770	6,463	.1	2.7	8.1
Oklahoma	17,668	16,699	15,668	14,866	14,423	12,541	5.8	5.2	3.9
Texas	92,135	87,333	87,856	87,248	86,701	66,957	5.5	1.5	3.6
Mountain Total	**104,093**	**105,609**	**98,400**	**100,505**	**99,670**	**77,697**	**-1.4**	**1.1**	**3.3**
Arizona	18,316	17,280	16,116	15,758	16,182	13,601	6.0	3.1	3.4
Colorado	16,252	15,902	15,416	15,924	15,686	13,758	2.2	.9	1.9
Montana	8,869	10,768	10,223	9,399	10,208	5,113	-17.6	-3.4	6.3
Nevada	7,608	7,914	7,892	7,270	7,487	6,811	-3.9	.4	1.2
New Mexico	14,942	14,775	12,809	15,065	15,250	13,896	1.1	-.5	.8
Utah	13,995	13,857	12,829	13,563	12,949	5,712	1.0	2.0	10.5
Wyoming	24,111	25,114	23,115	23,526	21,908	18,805	-4.0	2.4	2.8
Pacific Total	**7,924**	**8,419**	**7,313**	**5,992**	**6,118**	**5,327**	**-5.9**	**6.7**	**4.5**
Alaska	298	277	298	290	299	314	7.3	-.1	-.6
Oregon	1,981	1,994	1,831	850	306	506	-.7	59.5	16.4
Washington	5,646	6,148	5,184	4,852	5,514	4,506	-8.1	.6	2.5
U.S. Total	**813,508**	**779,860**	**772,268**	**773,549**	**766,888**	**664,399**	**4.3**	**1.5**	**2.3**

* Data round to zero.
Note: Totals may not equal sum of components due to independent rounding.
Source: Energy Information Administration, Form EIA-759, "Monthly Power Plant Report."

Table 70. Year-End Coal Stocks at Electric Utility Plants by Census Division and State, 1984, 1989-1993
(Thousand Short Tons)

Census Division and State	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
New England Total	**967**	**1,237**	**1,128**	**1,113**	**1,058**	**968**	**-21.8**	**-2.2**	*
Connecticut	160	150	173	140	145	-	6.8	2.4	-
Massachusetts	449	727	583	597	642	567	-38.2	-8.5	-2.5
New Hampshire	358	361	373	348	243	356	-.8	10.1	.1
Rhode Island	-	-	-	28	28	38	-	-	-
Vermont	-	-	-	-	-	7	-	-	-
Middle Atlantic Total	**12,564**	**17,743**	**16,638**	**17,148**	**12,934**	**18,974**	**-29.2**	**-.7**	**-4.5**
New Jersey	501	771	681	740	632	935	-35.0	-5.6	-6.7
New York	953	2,106	1,546	2,045	1,233	1,929	-54.8	-6.2	-7.5
Pennsylvania	11,110	14,866	14,412	14,363	11,069	16,110	-25.3	.1	-4.0
East North Central Total	**27,296**	**40,250**	**39,394**	**40,740**	**34,948**	**46,740**	**-32.2**	**-6.0**	**-5.8**
Illinois	4,019	7,399	6,977	7,398	8,204	7,484	-45.7	-16.3	-6.7
Indiana	6,935	11,294	9,953	10,610	8,043	12,245	-38.6	-3.6	-6.1
Michigan	6,206	7,402	8,099	9,093	8,185	10,649	-16.1	-6.7	-5.8
Ohio	7,249	10,395	10,213	9,956	6,607	11,062	-30.3	2.3	-4.6
Wisconsin	2,887	3,760	4,151	3,683	3,909	5,302	-23.2	-7.3	-6.5
West North Central Total	**14,123**	**19,712**	**20,169**	**19,324**	**19,356**	**23,850**	**-28.3**	**-7.6**	**-5.6**
Iowa	3,401	4,301	4,499	4,206	4,044	4,738	-20.9	-4.2	-3.6
Kansas	2,008	2,747	3,310	3,729	3,266	3,626	-26.9	-11.4	-6.3
Minnesota	1,182	2,175	2,616	2,253	2,052	3,850	-45.6	-12.9	-12.3
Missouri	3,555	6,211	5,458	4,434	4,275	6,660	-42.8	-4.5	-6.7
Nebraska	1,272	1,798	1,976	1,589	1,685	2,179	-29.3	-6.8	-5.8
North Dakota	2,417	2,194	1,999	2,828	3,731	2,469	10.2	-10.3	-.2
South Dakota	287	285	312	286	303	328	.7	-1.4	-1.5
South Atlantic Total	**17,877**	**27,977**	**28,746**	**27,799**	**20,493**	**29,829**	**-36.1**	**-3.3**	**-5.5**
Delaware	192	361	458	406	259	622	-46.8	-7.2	-12.2
Florida	3,451	4,021	4,781	4,822	4,383	2,990	-14.2	-5.8	1.6
Georgia	2,825	4,692	5,251	5,473	5,040	6,912	-39.8	-13.5	-9.5
Maryland	1,455	2,400	2,220	2,114	1,046	2,069	-39.4	8.6	-3.8
North Carolina	2,887	4,512	4,657	4,419	2,795	4,569	-36.0	.8	-5.0
South Carolina	1,648	2,206	1,988	2,052	1,873	1,420	-25.3	-3.1	1.7
Virginia	1,418	1,922	1,685	1,639	1,368	2,119	-26.2	.9	-4.4
West Virginia	4,001	7,863	7,707	6,874	3,729	9,127	-49.1	1.8	-8.8
East South Central Total	**8,370**	**13,401**	**14,210**	**15,876**	**11,651**	**23,530**	**-37.5**	**-7.9**	**-10.8**
Alabama	2,331	4,071	4,247	3,869	3,721	5,779	-42.7	-11.0	-9.6
Kentucky	3,990	5,415	5,881	7,612	4,299	10,457	-26.3	-1.8	-10.1
Mississippi	417	899	933	799	754	1,158	-53.7	-13.8	-10.7
Tennessee	1,632	3,016	3,148	3,596	2,875	6,135	-45.9	-13.2	-13.7
West South Central Total	**13,867**	**16,483**	**17,694**	**15,344**	**16,917**	**16,401**	**-15.9**	**-4.8**	**-1.8**
Arkansas	1,866	1,572	2,150	1,722	2,134	2,938	18.7	-3.3	-4.9
Louisiana	1,932	1,701	2,235	2,458	2,627	2,689	13.6	-7.4	-3.6
Oklahoma	1,944	3,066	2,835	2,633	2,826	4,080	-36.6	-8.9	-7.9
Texas	8,125	10,143	10,474	8,531	9,329	6,694	-19.9	-3.4	2.2
Mountain Total	**15,529**	**16,009**	**18,086**	**16,828**	**17,035**	**17,844**	**-3.0**	**-2.3**	**-1.5**
Arizona	3,687	3,543	4,177	3,090	3,367	3,593	4.0	2.3	.3
Colorado	3,428	3,410	3,466	3,298	3,921	4,850	.5	-3.3	-3.8
Montana	721	735	741	767	813	657	-1.9	-2.9	1.0
Nevada	1,195	1,447	1,412	1,222	993	1,267	-17.4	4.8	-.6
New Mexico	1,506	1,570	1,399	1,538	1,403	2,216	-4.0	1.8	-4.2
Utah	3,264	3,153	4,123	3,697	3,202	618	3.5	.5	20.3
Wyoming	1,728	2,153	2,767	3,215	3,337	4,642	-19.7	-15.2	-10.4
Pacific Total	**748**	**1,317**	**1,812**	**1,993**	**1,469**	**1,590**	**-43.2**	**-15.5**	**-8.0**
Alaska	5	6	8	2	3	7	-11.7	17.2	-3.3
Oregon	312	615	660	675	480	548	-49.3	-10.2	-6.1
Washington	431	697	1,145	1,316	986	1,035	-38.1	-18.7	-9.3
U.S. Total	**111,341**	**154,130**	**157,876**	**156,166**	**135,860**	**179,727**	**-27.8**	**-4.8**	**-5.2**

* Data round to zero.
Note: Totals may not equal sum of components due to independent rounding.
Source: Energy Information Administration, Form EIA-759, "Monthly Power Plant Report."

Table 71. Coal Consumption at Other Industrial Plants by Census Division and State, 1984, 1989-1993
(Thousand Short Tons)

Census Division and State	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
New England Total	**647**	**1,045**	**507**	**325**	**406**	**319**	**-38.1**	**12.4**	**8.2**
Connecticut	w	w	w	w	w	w	w	w	w
Maine	w	w	w	w	w	w	w	w	w
Massachusetts	w	w	w	w	w	w	w	w	w
New Hampshire	w	w	w	w	w	w	w	w	w
Rhode Island	w	-	-	w	w	w	w	w	w
Vermont	w	w	w	w	w	w	w	w	w
Middle Atlantic Total	**w**	**w**	**w**	**w**	**w**	**w**	**w**	**w**	**w**
New Jersey	w	w	w	w	w	w	w	w	w
New York	1,704	1,610	1,959	1,844	1,993	2,719	5.8	-3.8	-5.1
Pennsylvania	4,311	4,173	4,049	4,090	3,995	4,639	3.3	1.9	-.8
East North Central Total	**17,699**	**16,931**	**18,670**	**18,886**	**19,086**	**20,406**	**4.5**	**-1.9**	**-1.6**
Illinois	3,970	3,736	4,426	3,888	3,770	3,325	6.2	1.3	2.0
Indiana	4,587	4,263	4,404	4,629	4,738	5,054	7.6	-.8	-1.1
Michigan	3,230	3,127	3,149	3,656	3,798	4,041	3.3	-4.0	-2.4
Ohio	4,100	3,970	4,813	4,753	4,727	5,967	3.3	-3.5	-4.1
Wisconsin	1,811	1,835	1,878	1,960	2,053	2,019	-1.3	-3.1	-1.2
West North Central Total	**12,753**	**12,505**	**11,741**	**11,972**	**12,168**	**7,328**	**2.0**	**1.2**	**6.3**
Iowa	2,494	2,571	2,672	2,353	2,351	1,443	-3.0	1.5	6.3
Kansas	137	158	148	157	183	310	-13.2	-7.0	-8.7
Minnesota	1,370	1,059	785	1,283	972	1,006	29.3	8.9	3.5
Missouri	1,177	1,137	1,235	1,321	1,436	1,611	3.5	-4.8	-3.4
Nebraska	w	w	w	w	w	280	w	w	w
North Dakota	w	w	w	w	w	w	w	w	w
South Dakota	w	w	w	w	w	w	w	w	w
South Atlantic Total	**w**	**w**	**w**	**w**	**w**	**w**	**w**	**w**	**w**
Delaware	w	w	w	w	w	w	w	w	w
Florida	1,307	1,335	1,133	1,207	1,154	829	-2.1	3.1	5.2
Georgia	1,720	1,787	2,101	2,232	2,067	1,544	-3.7	-4.5	1.2
Maryland	731	706	1,040	945	685	888	3.5	1.6	-2.1
North Carolina	2,476	2,860	2,702	2,989	2,570	1,992	-13.4	-.9	2.4
South Carolina	2,395	2,177	2,212	2,310	2,491	2,226	10.0	-1.0	.8
Virginia	2,863	3,592	4,301	3,756	3,576	3,563	-20.3	-5.4	-2.4
West Virginia	2,406	2,266	2,310	2,918	2,712	2,922	6.2	-2.9	-2.1
East South Central Total	**w**	**w**	**w**	**w**	**w**	**w**	**w**	**w**	**w**
Alabama	2,268	3,136	2,468	2,237	2,275	3,046	-27.7	-.1	-3.2
Kentucky	2,392	1,648	2,044	2,253	2,168	2,152	45.1	2.5	1.2
Mississippi	w	w	w	w	w	w	w	w	w
Tennessee	3,942	3,686	3,702	3,779	3,924	3,758	6.9	.1	.5
West South Central Total	**6,780**	**5,846**	**5,716**	**5,769**	**5,905**	**w**	**16.0**	**3.5**	**w**
Arkansas	330	295	283	256	267	396	12.1	5.5	-2.0
Louisiana	w	w	w	w	w	w	w	w	w
Oklahoma	w	w	w	w	w	707	w	w	w
Texas	4,667	4,225	4,198	4,157	4,275	4,996	10.4	2.2	-.8
Mountain Total	**5,163**	**4,973**	**4,954**	**4,841**	**4,789**	**5,810**	**3.8**	**1.9**	**-1.3**
Arizona	674	632	689	660	689	w	6.8	-.5	w
Colorado	780	735	738	729	643	856	6.1	4.9	-1.0
Idaho	486	484	604	489	452	406	.4	1.8	2.0
Montana	w	w	w	w	w	w	w	w	w
Nevada	w	w	w	w	w	w	w	w	w
New Mexico	w	w	w	w	w	w	w	w	w
Utah	727	525	508	676	686	608	38.4	1.4	2.0
Wyoming	1,873	2,126	1,896	1,857	1,908	w	-11.9	-.4	w
Pacific Total	**2,677**	**3,161**	**3,113**	**3,214**	**2,895**	**2,058**	**-15.3**	**-1.9**	**3.0**
Alaska	w	-	-	-	-	-	w	w	w
California	2,311	2,821	2,771	2,874	2,540	1,635	-18.1	-2.3	3.9
Hawaii	w	w	w	w	w	38	w	w	w
Oregon	w	w	w	w	w	w	w	w	w
Washington	174	163	197	229	238	211	6.6	-7.6	-2.1
U.S. Total	**74,892**	**74,042**	**75,405**	**76,330**	**76,134**	**73,745**	**1.1**	**-.4**	**.2**

w Withheld to avoid disclosure of individual company data.
Note: Totals may not equal sum of components due to independent rounding.
Sources: Energy Information Administration, Form EIA-3, "Quarterly Coal Consumption Report - Manufacturing Plants;" and Form EIA-6, "Coal Distribution Report."

Table 72. Year-End Coal Stocks at Other Industrial Plants by Census Division and State, 1984, 1989-1993
(Thousand Short Tons)

Census Division and State	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
New England Total	**21**	**16**	**6**	**32**	**30**	**8**	**34.2**	**-7.8**	**11.3**
Connecticut	-	-	-	-	-	w	w	w	w
Maine	w	w	w	w	w	w	w	w	w
Massachusetts	w	w	w	w	w	w	w	w	w
New Hampshire	-	-	-	-	w	w	w	w	w
Vermont	-	-	-	-	w	w	w	w	w
Middle Atlantic Total	**w**	**w**	**w**	**w**	**w**	**w**	**w**	**w**	**w**
New Jersey	w	w	w	w	w	w	w	w	w
New York	321	402	296	365	348	474	-20.3	-2.1	-4.2
Pennsylvania	287	306	282	330	287	589	-6.0	.1	-7.7
East North Central Total	**2,044**	**2,505**	**2,583**	**2,955**	**2,479**	**4,230**	**-18.4**	**-4.7**	**-7.8**
Illinois	368	389	422	508	435	694	-5.3	-4.1	-6.8
Indiana	470	732	764	856	606	1,158	-35.9	-6.2	-9.5
Michigan	702	882	891	1,046	936	1,307	-20.3	-6.9	-6.7
Ohio	198	228	190	216	232	497	-13.4	-3.9	-9.7
Wisconsin	306	274	315	330	269	574	11.7	3.3	-6.8
West North Central Total	**775**	**1,020**	**1,163**	**1,156**	**983**	**1,310**	**-24.0**	**-5.8**	**-5.7**
Iowa	418	556	635	714	531	586	-24.9	-5.8	-3.7
Kansas	16	11	10	13	18	49	37.7	-3.8	-11.8
Minnesota	68	77	78	84	91	161	-11.8	-7.1	-9.2
Missouri	148	227	210	177	179	356	-34.8	-4.6	-9.3
Nebraska	w	w	w	w	w	48	w	w	w
North Dakota	w	w	w	w	w	w	w	w	w
South Dakota	w	w	w	w	w	w	w	w	w
South Atlantic Total	**w**	**w**	**w**	**w**	**w**	**w**	**w**	**w**	**w**
Delaware	w	w	w	w	w	w	w	w	w
Florida	90	100	99	151	107	115	-9.9	-4.3	-2.7
Georgia	101	144	167	231	141	190	-30.2	-8.0	-6.8
Maryland	41	35	37	35	46	76	16.5	-3.0	-6.6
North Carolina	172	203	209	240	201	270	-15.2	-3.8	-4.9
South Carolina	245	245	253	263	291	251	.1	-4.2	-.3
Virginia	216	275	206	308	326	431	-21.6	-9.8	-7.4
West Virginia	167	156	131	192	159	310	7.1	1.3	-6.7
East South Central Total	**w**	**w**	**w**	**w**	**w**	**w**	**w**	**w**	**w**
Alabama	132	127	131	183	154	333	4.4	-3.7	-9.7
Kentucky	73	127	123	142	112	224	-42.1	-10.0	-11.6
Mississippi	w	w	w	w	w	w	w	w	w
Tennessee	246	270	219	233	233	515	-8.8	1.4	-7.9
West South Central Total	**1,218**	**395**	**603**	**1,214**	**736**	**w**	**208.2**	**13.4**	**w**
Arkansas	15	19	15	13	17	68	-20.3	-3.3	-15.4
Louisiana	w	w	w	w	w	w	w	w	w
Oklahoma	w	w	w	w	w	253	w	w	w
Texas	1,026	228	437	1,067	517	646	350.9	18.7	5.3
Mountain Total	**332**	**360**	**307**	**417**	**408**	**486**	**-7.7**	**-5.0**	**-4.1**
Arizona	30	53	52	39	44	w	-43.3	-8.9	w
Colorado	25	29	21	36	50	66	-13.2	-15.7	-10.2
Idaho	86	101	79	140	123	76	-14.9	-8.5	1.4
Montana	w	w	w	w	w	w	w	w	w
Nevada	w	w	w	w	w	w	w	w	w
New Mexico	w	w	w	w	w	w	w	w	w
Utah	20	26	39	60	83	152	-20.6	-29.7	-20.0
Wyoming	113	89	68	78	74	w	27.0	11.3	w
Pacific Total	**170**	**211**	**222**	**237**	**261**	**357**	**-19.5**	**-10.1**	**-7.9**
California	93	109	139	122	160	271	-15.1	-12.8	-11.3
Hawaii	w	w	w	w	w	41	w	w	w
Oregon	w	w	w	w	w	w	w	w	w
Washington	27	39	49	62	68	24	-29.0	-20.2	1.7
U.S. Total	**6,716**	**6,965**	**7,061**	**8,716**	**7,363**	**11,317**	**-3.6**	**-2.3**	**-5.6**

w Withheld to avoid disclosure of individual company data.
Notes: Other industrial plants include manufacturing plants only. Totals may not equal sum of components due to independent rounding.
Source: Energy Information Administration, Form EIA-3, "Quarterly Coal Consumption Report - Manufacturing Plants."

Table 73. Coal Carbonized at Coke Plants by Census Division and State, 1984, 1989-1993
(Thousand Short Tons)

Census Division and State	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Middle Atlantic Total	w	w	w	w	w	w	w	w	w
New York	w	w	w	w	w	w	w	w	w
Pennsylvania	10,333	9,868	8,812	10,456	9,877	11,546	4.7	1.1	-1.2
East North Central Total	11,643	13,224	14,742	17,233	18,507	19,653	-11.9	-10.9	-5.6
Illinois	w	w	w	w	w	2,499	. w	w	w
Indiana	6,591	7,153	8,234	8,867	9,754	9,462	-7.8	-9.3	-3.9
Michigan	-	-	w	w	w	w	w	w	w
Ohio	2,892	3,755	3,698	4,949	5,265	5,102	-23.0	-13.9	-6.1
West North Central Total	-	-	-	-	-	w	-	w	w
Missouri	-	-	-	-	-	w	-	w	w
South Atlantic Total	w	w	w	w	w	w	w	w	w
Maryland	-	-	w	w	w	w	w	w	w
Virginia	w	w	w	w	w	w	w	w	w
West Virginia	w	w	w	w	w	w	w	w	w
East South Central Total	w	w	w	w	w	w	w	w	w
Alabama	3,206	3,297	3,166	3,288	3,314	2,921	-2.8	-.8	1.0
Kentucky	w	w	w	w	w	w	w	w	w
Tennessee	-	-	w	w	w	w	-	w	w
West South Central Total	-	-	-	-	-	w	-	w	w
Texas	-	-	-	-	-	w	-	w	w
Mountain Total	w	w	w	w	w	w	w	w	w
Utah	w	w	w	w	w	w	w	w	w
U.S. Total	31,323	32,366	33,854	38,877	40,508	44,022	-3.2	-6.2	-3.7

w Withheld to avoid disclosure of individual company data.
Note: Totals may not equal sum of components due to independent rounding.
Source: Energy Information Administration, Form EIA-5, "Coke Plant Report - Quarterly."

Table 74. Year-End Coal Stocks at Coke Plants by Census Division and State, 1984, 1989-1993
(Thousand Short Tons)

Census Division and State	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Middle Atlantic Total	w	w	w	w	w	w	w	w	w
New York	w	w	w	w	w	w	w	w	w
Pennsylvania	868	804	852	733	514	1,904	7.9	14.0	-8.4
East North Central Total	822	906	1,203	1,716	1,496	3,103	-9.2	-13.9	-13.7
Illinois	w	w	w	w	w	366	w	w	w
Indiana	394	481	669	761	749	1,619	-18.2	-14.8	-14.5
Michigan	-	-	w	w	w	w	w	w	w
Ohio	183	180	215	299	217	521	1.8	-4.1	-10.9
West North Central Total	-	-	-	-	-	w	-	w	w
Missouri	-	-	-	-	-	w	-	w	w
South Atlantic Total	w	w	w	w	w	w	w	w	w
Maryland	-	-	w	w	w	w	w	w	w
Virginia	-	w	-	-	-	-	w	w	w
West Virginia	w	w	w	w	w	w	w	w	w
East South Central Total	w	w	w	w	w	w	w	w	w
Alabama	333	332	293	320	314	385	.6	1.5	-1.6
Kentucky	w	w	w	w	w	w	w	w	w
Tennessee	-	-	-	w	w	w	w	w	w
West South Central Total	21	21	21	21	w	w	-	w	w
Texas	21	21	21	21	w	w	-	w	w
Mountain Total	w	w	w	w	w	w	w	w	w
Utah	w	w	w	w	w	w	w	w	w
U.S. Total	2,401	2,597	2,773	3,329	2,864	6,166	-7.5	-4.3	-9.9

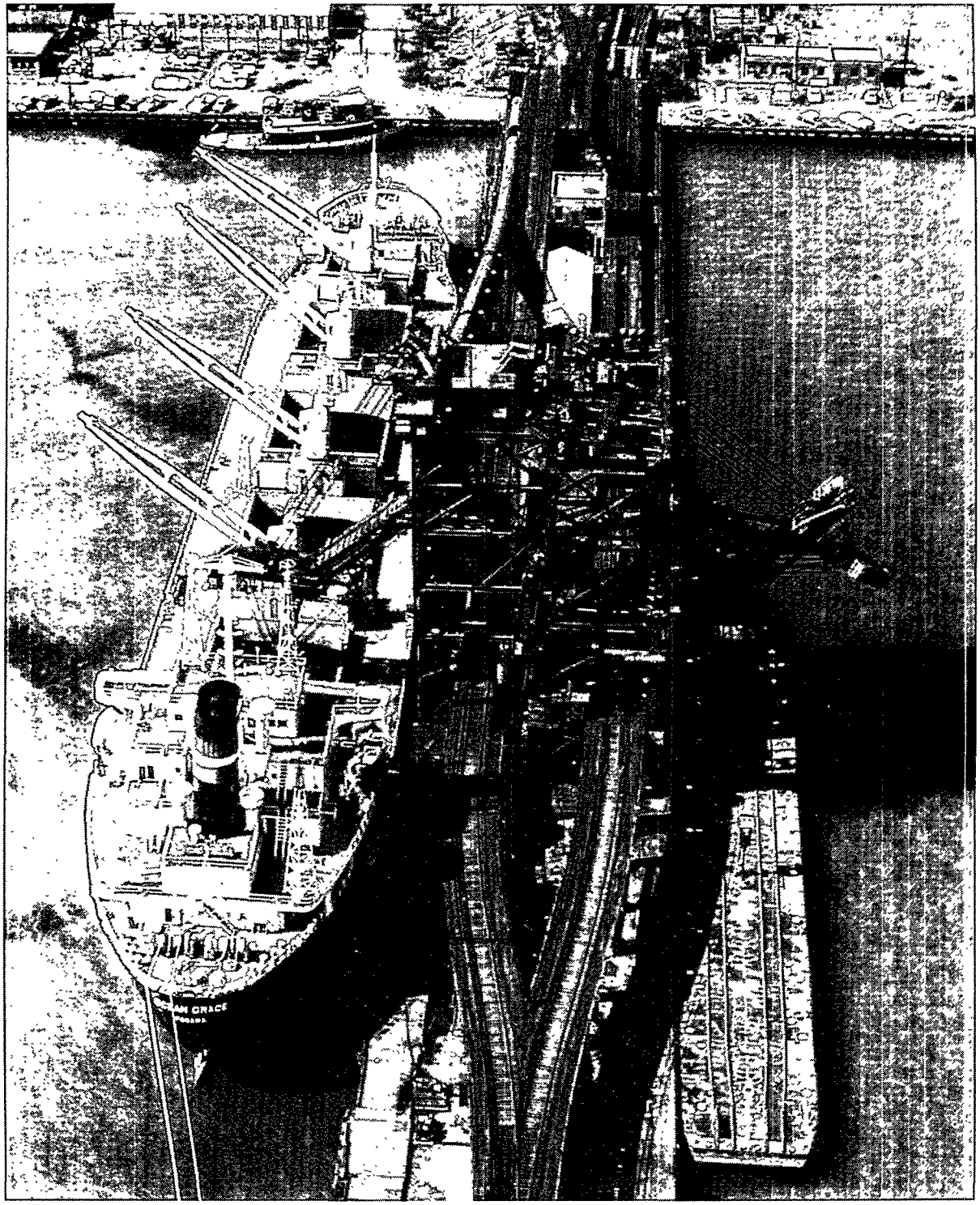
w Withheld to avoid disclosure of individual company data.
Note: Totals may not equal sum of components due to independent rounding.
Source: Energy Information Administration, Form EIA-5, "Coke Plant Report - Quarterly."

Table 75. Coal Consumption by Residential and Commercial Sector, by Census Division and State, 1984, 1989-1993
(Thousand Short Tons)

Census Division and State	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
New England Total	**102**	**141**	**84**	**142**	**105**	**342**	**-27.8**	**-0.9**	**-12.6**
Connecticut	w	w	w	w	w	w	w	w	w
Maine	w	w	w	w	w	w	w	w	w
Massachusetts	w	w	w	w	w	w	w	w	w
New Hampshire	w	w	w	w	w	w	w	w	w
Rhode Island	w	w	w	w	w	w	w	w	w
Vermont	w	w	w	w	w	w	w	w	w
Middle Atlantic Total	**1,498**	**1,916**	**1,698**	**1,594**	**1,727**	**2,001**	**-21.8**	**-3.5**	**-3.2**
New Jersey	w	w	w	w	w	w	w	w	w
New York	w	w	w	w	w	w	w	w	w
Pennsylvania	1,257	1,626	1,408	1,308	1,413	1,477	-22.7	-2.9	-1.8
East North Central Total	**1,458**	**1,476**	**1,453**	**1,743**	**1,556**	**2,448**	**-1.2**	**-1.6**	**-5.6**
Illinois	w	w	w	w	w	420	w	w	w
Indiana	339	411	433	551	518	657	-17.5	-10.1	-7.1
Michigan	w	w	w	w	w	w	w	w	w
Ohio	584	588	489	654	545	955	-.8	1.7	-5.3
Wisconsin	w	w	w	w	w	w	NM	w	w
West North Central Total	**w**	**w**	**w**	**w**	**w**	**w**	**w**	**w**	**w**
Iowa	70	64	223	245	176	215	9.8	-20.5	-11.7
Kansas	23	*	*	*	6	3	NM	40.9	27.0
Minnesota	107	25	94	179	251	237	334.0	-19.1	-8.4
Missouri	w	w	w	w	w	w	w	w	w
Nebraska	w	w	w	w	w	90	w	w	w
North Dakota	w	w	w	w	w	w	w	w	w
South Dakota	w	w	w	w	w	w	w	w	w
South Atlantic Total	**904**	**632**	**490**	**744**	**649**	**1,029**	**43.1**	**8.6**	**-1.4**
Delaware	w	w	w	w	w	w	NM	w	w
District of Columbia	51	50	66	69	60	100	1.8	-3.9	-7.1
Florida	16	16	*	5	*	70	-3.7	166.5	-15.2
Georgia	22	38	8	22	13	73	-42.6	14.7	-12.4
Maryland	w	w	w	w	w	w	w	w	w
North Carolina	229	204	97	156	153	119	12.5	10.6	7.5
South Carolina	109	31	22	6	17	115	256.2	58.7	-.6
Virginia	w	w	w	w	w	w	w	w	w
West Virginia	w	w	w	w	w	w	w	w	w
East South Central Total	**417**	**458**	**376**	**473**	**505**	**754**	**-8.8**	**-4.6**	**-6.4**
Alabama	40	89	17	105	63	122	-54.8	-10.6	-11.6
Kentucky	w	w	w	w	w	w	w	w	w
Mississippi	w	w	w	w	w	w	w	w	w
Tennessee	w	w	w	w	w	w	w	w	w
West South Central Total	**8**	**13**	**12**	**11**	**17**	**19**	**-37.2**	**-16.6**	**-9.1**
Arkansas	1	2	*	*	3	4	-60.9	-28.9	-15.8
Louisiana	w	-	w	-	w	w	w	w	w
Oklahoma	w	w	w	w	*	6	w	w	w
Texas	6	10	11	10	w	w	-36.8	w	w
Mountain Total	**w**	**w**	**w**	**w**	**w**	**w**	**w**	**w**	**w**
Arizona	1	4	*	*	w	w	-73.7	w	w
Colorado	38	58	65	58	w	w	-35.6	w	w
Idaho	43	51	68	61	81	84	-15.6	-14.6	-7.2
Montana	w	w	w	w	w	w	w	w	w
Nevada	w	w	w	w	w	w	w	w	w
New Mexico	w	w	w	w	w	w	w	w	w
Utah	w	w	w	w	w	w	w	w	w
Wyoming	187	99	138	130	w	w	88.0	w	w
Pacific Total	**821**	**607**	**630**	**586**	**w**	**w**	**35.3**	**w**	**w**
Alaska	563	514	504	494	-	w	9.4	w	w
California	142	*	44	25	w	w	NM	w	w
Oregon	w	w	w	w	w	w	w	w	w
Washington	114	91	80	66	90	209	24.8	6.0	-6.5
U.S. Total	**6,221**	**6,153**	**6,094**	**6,724**	**6,167**	**9,130**	**1.1**	**.2**	**-4.2**

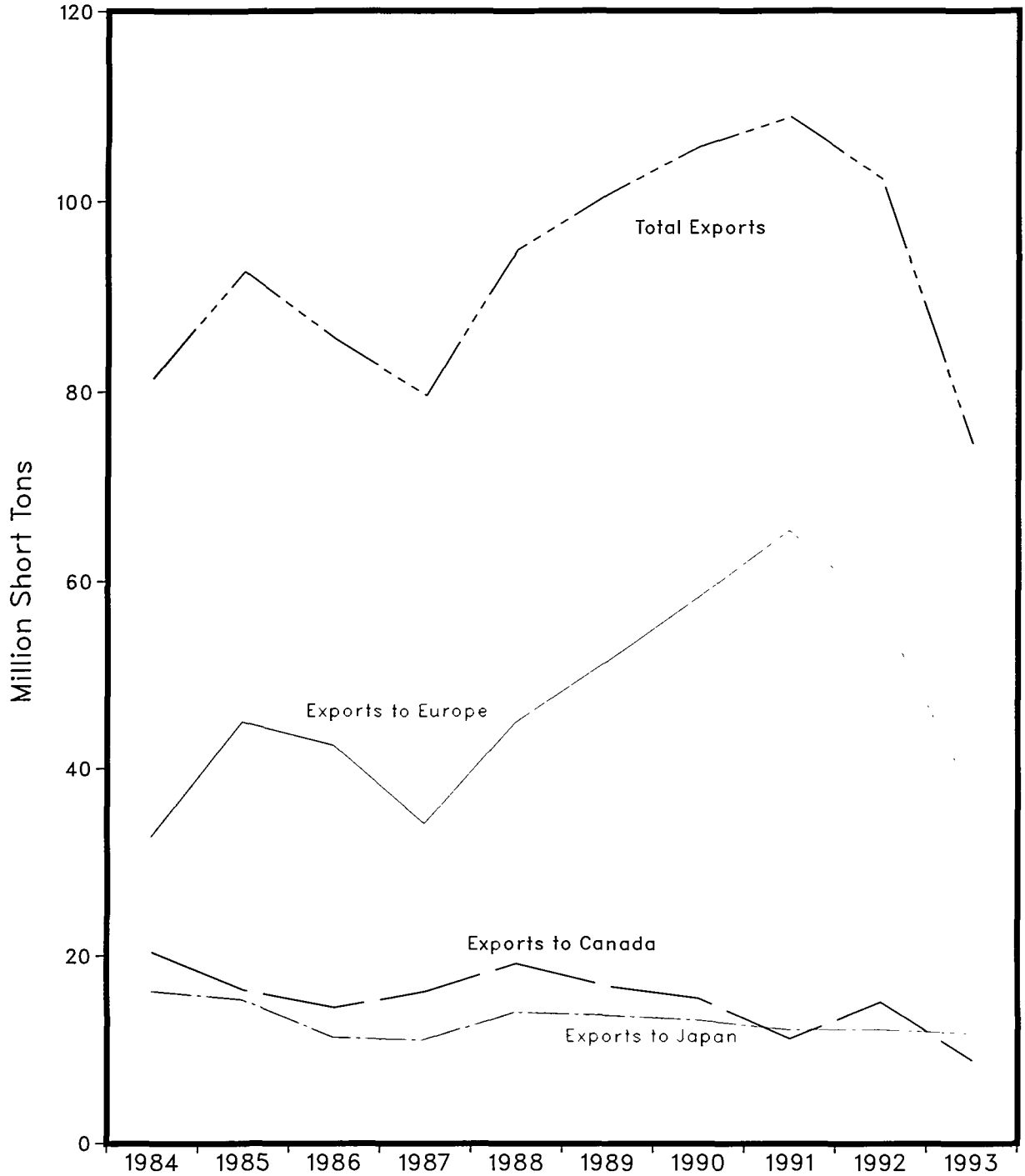
* Data round to zero.
w Withheld to avoid disclosure of individual company data.
NM Not meaningful as value is greater than 500.
Note: Totals may not equal sum of components due to independent rounding.
Source: Energy Information Administration, Form EIA-6, "Coal Distribution Report."

Foreign Markets



A freighter is being loaded with coal for shipment to overseas markets. Forty-three percent of U.S. coal exports were shipped to Europe in 1993.

Figure 13. U.S. Coal Exports, 1984-1993



Sources: U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545."

Table 76. U.S. Coal Exports by Destination, 1984, 1989-1993
(Thousand Short Tons)

Continent and Country of Destination	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
North America Total	**9,219**	**15,331**	**11,454**	**15,859**	**16,943**	**20,641**	**-39.9**	**-14.1**	**-8.6**
Canada[1]	8,889	15,140	11,178	15,511	16,777	20,444	-41.3	-14.7	-8.8
Dominican Republic	50	84	130	82	39	*	-41.0	6.5	154.8
Mexico	250	77	92	210	63	157	225.3	40.9	5.3
Other[2]	31	30	55	55	64	40	1.5	-16.6	-3.0
South America Total	**5,750**	**6,769**	**7,661**	**6,902**	**7,384**	**5,407**	**-15.0**	**-6.1**	**.7**
Argentina	524	335	429	640	742	387	56.5	-8.3	3.4
Brazil	5,197	6,370	7,052	5,847	5,681	4,706	-18.4	-2.2	1.1
Other[2]	28	64	180	415	962	313	-56.2	-58.6	-23.5
Europe Total	**37,575**	**57,255**	**65,520**	**58,382**	**51,604**	**32,811**	**-34.4**	**-7.6**	**1.5**
Belgium & Luxembourg	5,229	7,196	7,464	8,500	7,094	3,902	-27.3	-7.3	3.3
Bulgaria	906	602	946	88	96	-	50.5	75.0	-
Denmark	336	3,832	4,658	3,188	3,178	614	-91.2	-43.0	-6.5
Finland	252	205	530	95	104	*	23.1	24.9	268.8
France	3,972	8,060	9,509	6,879	6,517	3,791	-50.7	-11.6	.5
Germany	508	1,003	1,742	1,057	745	913	-49.4	-9.1	-6.3
Ireland	985	1,449	1,313	1,458	1,248	243	-32.0	-5.7	16.8
Italy	6,918	9,344	11,274	11,947	11,240	7,624	-25.9	-11.4	-1.1
Netherlands	5,562	9,148	9,625	8,369	6,076	5,483	-39.2	-2.2	.1
Norway	101	118	200	177	141	128	-14.8	-8.1	-2.6
Portugal	1,491	1,479	1,629	1,786	1,424	247	.8	1.1	22.1
Romania	720	753	1,147	1,718	1,562	666	-4.3	-17.6	.9
Spain	4,064	4,535	4,694	3,791	3,339	2,306	-10.4	5.0	6.5
Sweden	736	1,165	1,239	866	734	1,432	-36.8	.1	-7.1
Turkey	1,605	1,990	2,186	2,117	1,686	1,472	-19.3	-1.2	1.0
United Kingdom	4,111	5,595	6,171	5,177	4,513	2,853	-26.5	-2.3	4.1
Yugoslavia	78	726	979	933	1,510	590	-89.2	-52.3	-20.1
Other[2]	*	54	214	236	398	545	-99.8	-86.6	-60.5
Asia Total	**19,500**	**20,540**	**21,788**	**22,725**	**22,734**	**21,600**	**-5.1**	**-3.8**	**-1.1**
China (Mainland)	-	137	-	-	-	-	-100.0	-	-
China (Taiwan)	3,435	3,560	4,547	4,604	4,497	2,521	-3.5	-6.5	3.5
Hong Kong	19	357	600	120	-	-	-94.7	-	-
Israel	849	824	651	639	487	296	3.1	14.9	12.4
Japan	11,878	12,304	12,269	13,338	13,846	16,325	-3.4	-3.8	-3.5
Korea, Republic of	3,316	3,352	3,711	3,999	3,836	2,372	-1.1	-3.6	3.8
Other[2]	3	7	11	25	68	86	-62.7	-55.5	-32.0
Oceania & Australia Total	**1**	*	*	3	*	**1**	**238.4**	**20.9**	**1.3**
Africa Total	**2,474**	**2,621**	**2,545**	**1,933**	**2,149**	**1,023**	**-5.6**	**3.6**	**10.3**
Algeria	409	611	522	479	740	668	-33.1	-13.8	-5.3
Egypt	868	848	769	646	585	354	2.3	10.4	10.5
Morocco	587	737	1,013	752	824	-	-20.3	-8.1	-
South Africa, Rep of	567	425	239	55	-	*	33.6	-	227.8
Other[2]	42	-	2	-	*	*	-	315.7	173.2
Total	**74,519**	**102,516**	**108,969**	**105,804**	**100,815**	**81,483**	**-27.3**	**-7.3**	**-1.0**

[1] Based on the U.S. - Canada Free Trade Agreement, as of January 1990, the U.S. Department of Commerce began reporting statistics on U.S. exports to Canada based on information on imports provided monthly by the Canadian government.
[2] Includes countries with exports less than or equal to 50,000 short tons in 1992.
* Data round to zero.
Note: Totals may not equal sum of components due to independent rounding.
Source: U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545."

Table 77. U.S. Metallurgical Coal Exports by Destination, 1984, 1989-1993
(Thousand Short Tons)

Continent and Country of Destination	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
North America Total	**4,853**	**4,957**	**4,060**	**4,399**	**6,838**	**7,825**	**-2.1**	**-8.2**	**-5.2**
Canada[1]	4,663	4,920	4,019	4,396	6,820	7,702	-5.2	-9.1	-5.4
Dominican Republic	-	-	-	-	19	-	-	-100.0	-
Mexico	190	36	41	3	-	123	422.7	-	5.0
Other[2]	*	*	*	*	*	*	-	-3.1	-10.9
South America Total	**5,514**	**6,524**	**7,416**	**6,468**	**6,445**	**5,200**	**-15.5**	**-3.8**	**.6**
Argentina	487	332	428	640	741	372	46.4	-10.0	3.0
Brazil	5,027	6,165	6,958	5,753	5,675	4,587	-18.4	-3.0	1.0
Other[2]	-	27	30	75	29	242	-100.0	-100.0	-100.0
Europe Total	**26,791**	**33,365**	**38,544**	**36,690**	**34,870**	**24,983**	**-19.7**	**-6.4**	**.8**
Belgium & Luxembourg	4,030	5,165	5,531	6,098	6,099	3,253	-22.0	-9.8	2.4
Bulgaria	849	602	946	49	48	-	41.1	105.3	-
Denmark	106	-	568	56	128	-	-	-4.7	-
Finland	252	205	389	95	102	-	22.7	25.3	-
France	3,101	4,314	5,851	4,961	4,841	3,146	-28.1	-10.5	-.1
Germany	203	247	561	701	517	828	-17.9	-20.8	-14.5
Ireland	-	-	-	-	169	7	-	-100.0	-100.0
Italy	4,965	6,180	6,489	7,029	6,662	5,799	-19.7	-7.1	-1.7
Netherlands	3,743	4,836	4,598	3,975	3,138	3,508	-22.6	4.5	.7
Norway	70	91	101	109	93	90	-22.6	-6.7	-2.7
Portugal	149	135	74	258	353	203	10.0	-19.4	-3.4
Romania	373	753	1,003	1,718	1,558	666	-50.5	-30.1	-6.2
Spain	2,994	2,795	3,402	3,479	3,139	1,549	7.1	-1.2	7.6
Sweden	736	1,165	1,231	843	530	1,177	-36.8	8.6	-5.1
Turkey	1,604	1,989	2,066	2,101	1,686	1,223	-19.3	-1.2	3.1
United Kingdom	3,573	4,175	4,657	4,090	4,191	2,799	-14.4	-3.9	2.8
Yugoslavia	43	658	869	920	1,477	529	-93.5	-58.7	-24.4
Other[2]	-	54	207	209	138	206	-100.0	-100.0	-100.0
Asia Total	**10,608**	**12,655**	**12,894**	**14,721**	**15,621**	**17,945**	**-16.2**	**-9.2**	**-5.7**
China (Taiwan)	285	424	459	394	800	117	-32.7	-22.7	10.5
Hong Kong	19	-	-	-	-	-	-	-	-
Israel	-	143	109	55	149	191	-100.0	-100.0	-100.0
Japan	8,028	9,480	9,395	11,044	11,449	15,499	-15.3	-8.5	-7.0
Korea, Republic of	2,276	2,608	2,931	3,206	3,162	2,053	-12.7	-7.9	1.1
Other[2]	-	-	-	23	60	85	-	-100.0	-100.0
Oceania & Australia Total	**-**	**-**	**-**	**1**	**-**	**-**	**-**	**-**	**-**
Africa Total	**1,886**	**1,925**	**1,731**	**1,180**	**1,353**	**1,023**	**-2.0**	**8.6**	**7.0**
Algeria	409	611	522	479	740	668	-33.1	-13.8	-5.3
Egypt	868	848	768	646	585	354	2.3	10.3	10.4
Morocco	-	41	202	-	28	-	-100.0	-100.0	-
South Africa, Rep of	567	425	239	55	-	-	33.6	-	-
Other[2]	42	-	-	-	-	-	-	-	-
Total	**49,652**	**59,426**	**64,645**	**63,459**	**65,128**	**56,975**	**-16.4**	**-6.5**	**-1.5**

[1] Based on the U.S. - Canada Free Trade Agreement, as of January 1990, the U.S. Department of Commerce began reporting statistics on U.S. exports to Canada based on information on imports provided monthly by the Canadian government.
[2] Includes countries with exports less than or equal to 50,000 short tons in 1992.
* Data round to zero.
Note: Totals may not equal sum of components due to independent rounding.
Source: U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545."

Table 78. U.S. Steam Coal Exports by Destination, 1984, 1989-1993
(Thousand Short Tons)

Continent and Country of Destination	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
North America Total	**4,366**	**10,374**	**7,394**	**11,460**	**10,104**	**12,817**	**-57.9**	**-18.9**	**-11.3**
Canada[1]	4,225	10,219	7,159	11,115	9,957	12,742	-58.6	-19.3	-11.5
Dominican Republic	50	84	130	82	20	*	-41.0	25.9	154.8
Mexico	60	40	52	208	63	34	47.9	-1.4	6.5
Other[2]	31	30	54	55	64	40	1.5	-16.6	-3.0
South America Total	**236**	**245**	**245**	**435**	**940**	**206**	**-3.5**	**-29.2**	**1.5**
Argentina	38	3	1	-	*	15	NM	225.5	10.6
Brazil	170	205	94	94	6	119	-16.9	133.4	4.0
Other[2]	28	37	150	340	934	72	-24.5	-58.3	-9.9
Europe Total	**10,784**	**23,891**	**26,975**	**21,692**	**16,734**	**7,828**	**-54.8**	**-10.4**	**3.6**
Belgium & Luxembourg	1,199	2,031	1,933	2,402	995	649	-40.9	4.8	7.1
Bulgaria	57	-	-	39	49	-	-	3.9	-
Denmark	230	3,832	4,090	3,132	3,050	614	-94.0	-47.6	-10.3
Finland	1	-	142	-	2	*	-	-19.6	90.2
France	870	3,745	3,658	1,918	1,676	645	-76.8	-15.1	3.4
Germany	305	756	1,181	356	227	85	-59.7	7.6	15.2
Ireland	985	1,449	1,313	1,458	1,078	237	-32.0	-2.2	17.2
Italy	1,954	3,164	4,785	4,917	4,578	1,825	-38.2	-19.2	.8
Netherlands	1,819	4,312	5,027	4,393	2,938	1,975	-57.8	-11.3	-.9
Norway	31	27	99	68	49	38	11.3	-10.9	-2.3
Portugal	1,342	1,344	1,555	1,528	1,071	44	-.1	5.8	46.2
Romania	347	-	144	-	3	-	-	220.4	-
Spain	1,070	1,740	1,292	312	201	757	-38.5	52.0	3.9
Sweden	-	*	8	23	204	255	-100.0	-100.0	-100.0
Turkey	*	*	120	17	*	249	-1.3	11.3	-52.4
United Kingdom	538	1,421	1,514	1,088	321	55	-62.1	13.7	28.9
Yugoslavia	35	68	110	13	33	61	-47.9	2.0	-5.9
Other[2]	*	*	6	27	260	339	-44.5	-85.1	-58.4
Asia Total	**8,892**	**7,885**	**8,894**	**8,004**	**7,113**	**3,656**	**12.8**	**5.7**	**10.4**
China (Mainland)	-	137	-	-	-	-	-100.0	-	-
China (Taiwan)	3,150	3,136	4,088	4,211	3,697	2,405	.5	-3.9	3.0
Hong Kong	-	357	600	120	-	-	-100.0	-	-
Israel	849	681	542	584	338	104	24.7	25.8	26.3
Japan	3,850	2,823	2,874	2,294	2,397	826	36.4	12.6	18.6
Korea, Republic of	1,040	744	779	793	674	319	39.7	11.4	14.0
Other[2]	3	7	11	3	7	1	-62.7	-22.4	8.0
Oceania & Australia Total	**1**	*****	*****	**2**	*****	**1**	**238.4**	**20.9**	**1.3**
Africa Total	**588**	**696**	**814**	**753**	**795**	*****	**-15.6**	**-7.3**	**172.5**
Egypt	1	1	1	*	-	*	-30.7	-	28.6
Morocco	587	695	811	752	795	-	-15.5	-7.3	-
South Africa, Rep of	-	-	-	-	-	*	-	-	-100.0
Other[2]	-	-	2	-	*	*	-	-100.0	-100.0
Total	**24,867**	**43,090**	**44,323**	**42,345**	**35,687**	**24,508**	**-42.3**	**-8.6**	**.2**

[1] Based on the U.S. - Canada Free Trade Agreement, as of January 1990, the U.S. Department of Commerce began reporting statistics on U.S. exports to Canada based on information on imports provided monthly by the Canadian government.
[2] Includes countries with exports less than or equal to 50,000 short tons in 1992.
* Data round to zero.
NM Not meaningful as value is greater than 500.
Note: Totals may not equal sum of components due to independent rounding.
Source: U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545."

Table 79. Coal Exports by Customs District, 1984, 1989-1993
(Thousand Short Tons)

Customs District	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change 1989-1993	Average Annual Percent Change 1984-1993
Eastern Total	**45,138**	**64,826**	**69,185**	**66,160**	**60,406**	**44,207**	**-30.4**	**-7.0**	**0.2**
Boston, MA	33	-	-	54	-	-	-	-	-
Baltimore, MD	7,354	9,450	9,790	7,786	9,330	7,195	-22.2	-5.8	.2
Portland, ME	1	*	-	1	*	-	NM	50.8	-
Buffalo, NY	67	1,971	773	503	48	19	-96.6	8.4	14.7
New York City, NY	1	4	5	17	2	187	-72.6	-11.4	-43.5
Ogdensburg, NY	44	66	110	54	10	24	-32.8	45.0	7.2
Philadelphia, PA	190	252	639	3,237	2,497	1,152	-24.9	-47.5	-18.2
Norfolk, VA	37,448	53,083	57,868	54,508	48,520	35,630	-29.4	-6.3	.5
St. Albans, VT	*	*	*	-	-	*	-89.7	-	-18.8
Southern Total	**16,658**	**21,343**	**25,667**	**21,988**	**20,720**	**15,610**	**-21.9**	**-5.3**	**.7**
Mobile, AL	6,262	6,853	8,743	7,607	8,827	8,852	-8.6	-8.2	-3.8
Savannah, GA	-	37	*	*	1	*	-100.0	-100.0	-100.0
Miami, FL	2	2	2	1	11	*	38.1	-33.6	29.1
Tampa, FL	*	-	11	19	1	41	-	-17.3	-43.4
New Orleans, LA	9,705	13,480	15,494	12,811	10,851	5,505	-28.0	-2.8	6.5
Wilmington, NC	-	-	-	-	70	125	-	-100.0	-100.0
San Juan, PR	*	-	*	-	-	*	-	-	-17.3
Charleston, SC	475	791	1,161	1,193	835	839	-39.9	-13.1	-6.1
El Paso, TX	*	1	*	-	-	*	-77.3	-	-12.9
Houston-Galveston, TX	155	145	206	154	77	151	7.0	19.2	.3
Laredo, TX	59	36	49	201	47	30	64.0	5.4	7.8
Port Arthur, TX	-	-	-	-	-	65	-	-	-100.0
Virgin Islands	-	*	-	-	-	-	-100.0	-	-
Western Total	**4,201**	**3,651**	**4,430**	**3,009**	**3,155**	**1,520**	**15.1**	**7.4**	**11.9**
Anchorage, AK	733	728	777	793	661	-	.7	2.6	-
Nogales, AZ	*	*	-	3	-	-	46.5	-	-
Los Angeles, CA	3,358	2,721	2,840	1,936	2,301	1,451	23.4	9.9	9.8
San Diego, CA	1	4	2	3	4	1	-73.6	-28.7	1.5
San Francisco, CA	-	60	33	188	42	35	-100.0	-100.0	-100.0
Great Falls, MT	*	-	-	*	*	3	-	35.1	-22.1
Portland, OR	2	-	576	4	1	22	-	42.3	-21.9
Seattle, WA	106	137	202	82	145	9	-22.7	-7.6	31.9
Northern Total	**8,495**	**12,557**	**9,635**	**14,622**	**16,534**	**20,145**	**-32.3**	**-15.3**	**-9.1**
Chicago, IL	-	*	*	47	-	-	-100.0	-	-
Detroit, MI	609	2,181	520	3,901	45	61	-72.1	92.3	29.1
Duluth, MN	134	119	130	504	283	*	13.2	-17.0	106.7
Pembina, ND	1	*	*	*	15	2	NM	-46.2	-5.4
Cleveland, OH	7,751	10,258	8,985	10,073	16,191	20,082	-24.4	-16.8	-10.0
Milwaukee, WI	-	-	-	96	-	-	-	-	-
Other Ports	**26**	**138**	**51**	**25**	**-**	**-**	**-80.8**	**-**	**-**
Total	**74,519**	**102,516**	**108,969**	**105,804**	**100,815**	**81,483**	**-27.3**	**-7.3**	**-1.0**

* Data round to zero.
NM Not meaningful as value is greater than 500.
Note: Totals may not equal sum of components due to independent rounding.
Source: U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545."

Coal Prices

The average mine price of U.S. coal in 1993 was $19.85 per short ton, a drop of 6 percent from 1992, and the 11th straight year of decline. Since 1984 the average mine price of U.S. coal has declined at an average annual rate of almost 3 percent (Table 80). During this period, the average mine price of coal East of the Mississippi River declined at an average annual rate of approximately 2 percent, whereas West of the Mississippi River the decline was almost 3 percent. In real dollars, the decline over this period was 6 percent (Table 81).

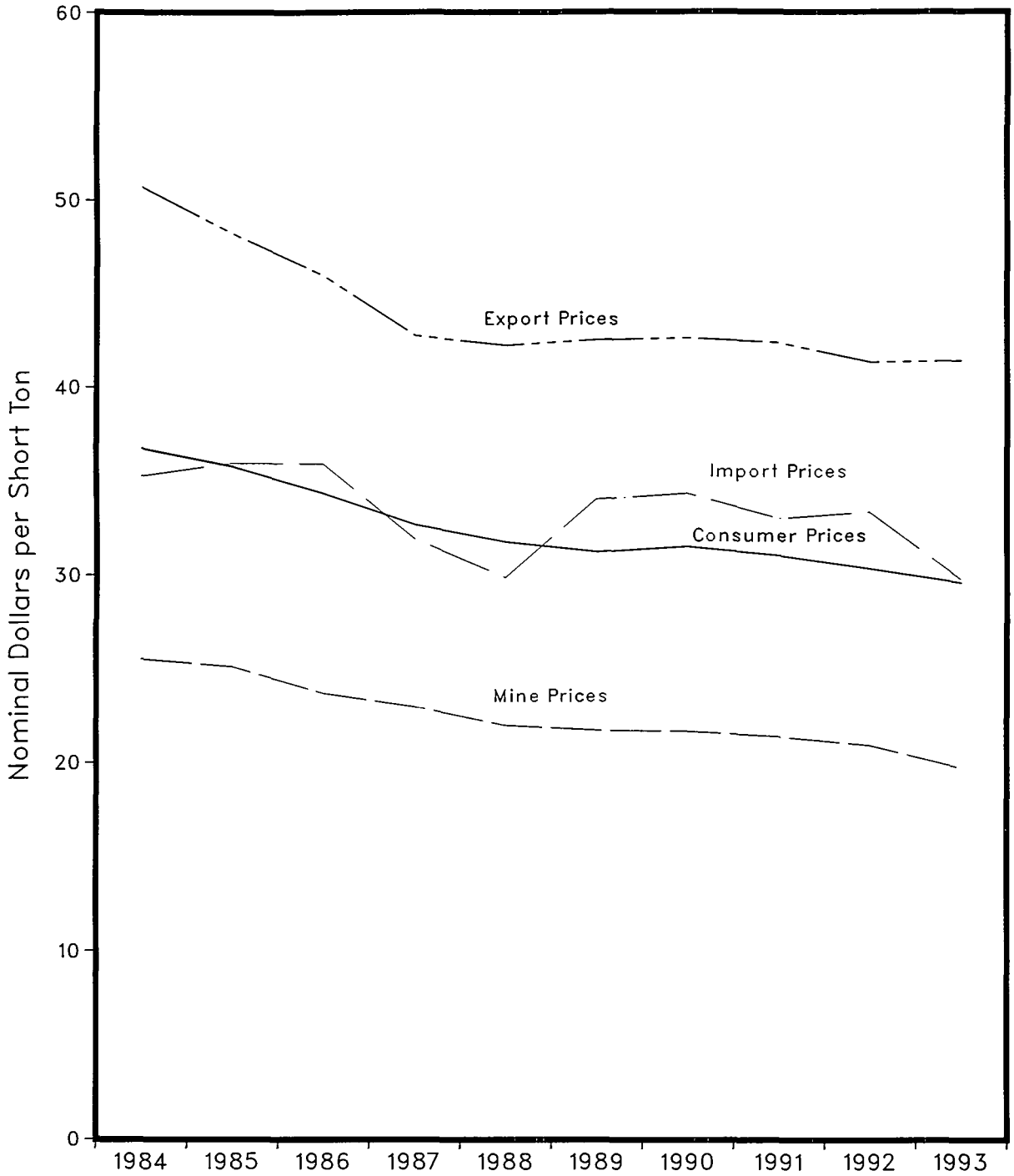
Compared with 1992, the U.S. average mine price of coal in 1993 fell 7 percent in the Interior Region, 4 percent in the Western Region, and 1 percent in Appalachia. In the major coal-producing States, average mine prices fell 10 percent in Wyoming and 2 percent in West Virginia, but rose 1 percent in Kentucky.

Compared with 1992, the average delivered price of coal to U.S. consumers in 1993 declined nearly 3 percent at utilities to $28.58 per short ton, nearly 2 percent at manufacturing plants to $32.23 per short ton, and 1 percent at coke plants to $47.44 per short ton (Tables 92, 94, and 96). Over the last 10 years, the average price of coal delivered to each of these sectors has declined at an average annual rate of 2 percent. In real dollars, the average annual rate of decline of coal delivered to these sectors over this period has been between 5 and 6 percent.

The average price of U.S. coal imports in 1993 was $29.89 per short ton, an 11-percent drop from the 1992 level (Table 98). The average price of coal imported from Colombia, which accounts for 56 percent of U.S. coal imports, dropped 15 percent, accounting for most of the decline. Over the last 10 years, the average price of U.S. coal imports has declined at an average annual rate of 2 percent.

The average price of U.S. coal exports in 1993 was $41.41 per short ton, only a slight increase from the 1992 level (Table 99). The average price of metallurgical coal dropped 3 percent, while the average price of steam coal remained relatively unchanged. Over the last 10 years, the average price of U.S. coal exports has declined at an average annual rate of 2 percent. Metallurgical and steam coal export prices have declined at average annual rates of 2 percent and 3 percent, respectively.

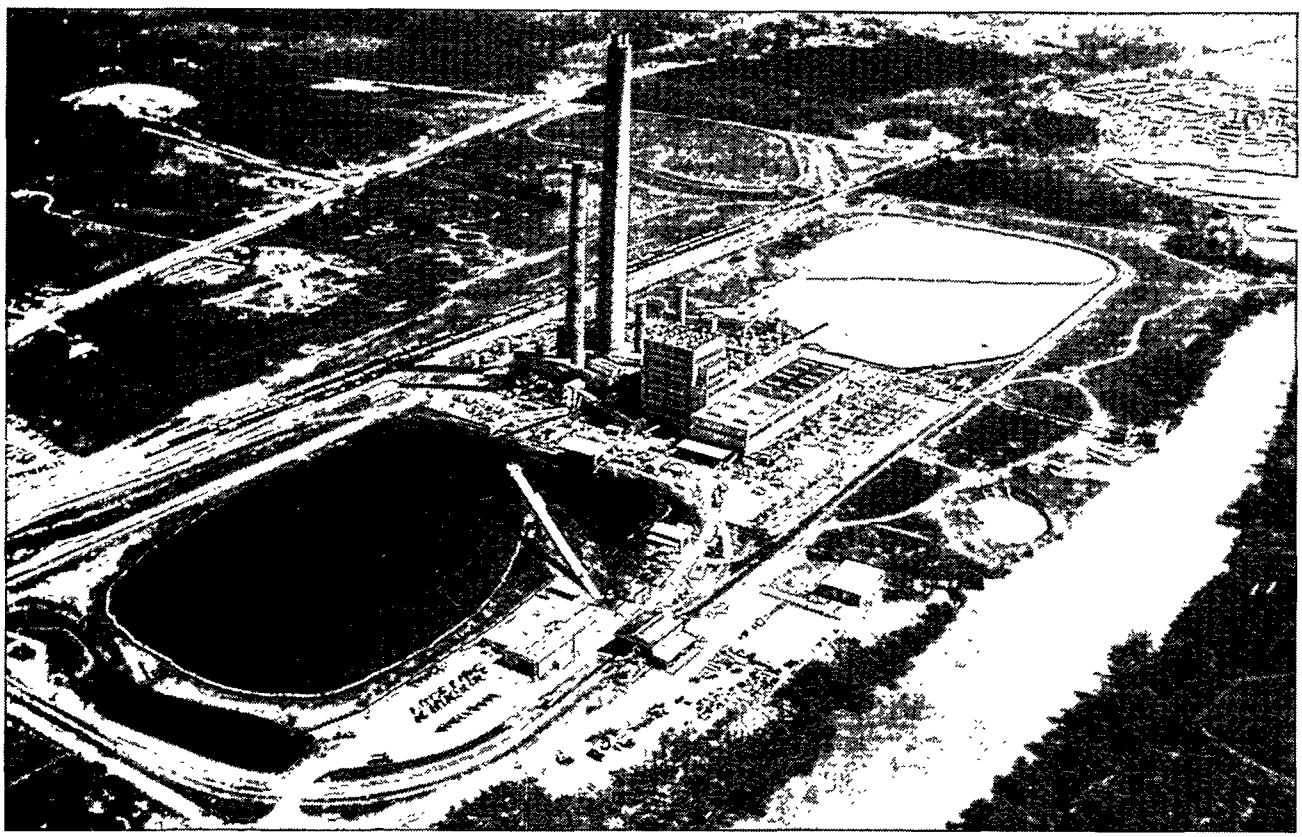
Figure 14. Coal Prices, 1984-1993
(Nominal Dollars per Short Ton)



Note: Average mine prices exclude mines producing less than 10,000 short tons of coal during the year. Mine Price is calculated by dividing the total free on board (f.o.b.) mine value of the coal produced by the total production. Consumer Price is based on the cost including insurance and freight (c.i.f. cost) for electric utilities, and insurance, freight and taxes for manufacturing and coke plants, and does not include the residential and commercial sector. Export Price is based on the free alongside ship (f.a.s.) value. Import Price is based on the customs import value.

Sources: • Mine Prices: Energy Information Administration (EIA), Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report." • Consumer Prices: Federal Regulatory Commission (FERC), FERC Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants;" EIA, Form EIA-5, "Coke Plant Report - Quarterly" and Form EIA-3, "Quarterly Coal ConsumptionReport - Manufacturing Plants." • Export Prices: U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545." • Import Prices: U.S. Department of Commerce, Bureau of the Census, "Monthly Report IM 145."

Mine Prices



Nitrogen oxides are removed from a pulverized coal-fired boiler by use of several advanced wall-fired combustion control techniques at the Hammond Plant, Unit 4, near Coosa, Georgia.

Table 80. Average Mine Price of Coal by State, 1984, 1989-1993
(Nominal Dollars per Short Ton)

Coal-Producing State and Region	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Alabama	$42.34	$40.82	$41.14	$43.04	$41.18	$42.90	3.7	0.7	-0.1
Alaska	w	w	w	w	w	w	w	w	w
Arizona	w	w	w	w	w	w	w	w	w
Arkansas	w	w	w	w	w	w	w	w	w
California	-	w	w	w	w	-	w	w	-
Colorado	20.35	21.33	22.18	21.75	23.64	$23.07	-4.6	-3.7	-1.4
Georgia	-	-	-	-	-	w	-	-	w
Illinois	25.27	27.66	28.35	27.73	28.17	$29.89	-8.6	-2.7	-1.8
Indiana	22.89	23.41	23.58	23.91	23.55	24.98	-2.2	-.7	-1.0
Iowa	w	w	w	w	w	25.32	w	w	w
Kansas	w	w	w	w	27.00	26.91	w	w	w
Kentucky Total	24.77	24.50	25.45	25.19	24.97	28.13	1.1	-.2	-1.4
Eastern	25.50	25.00	26.37	25.84	25.80	28.61	2.0	-.3	-1.3
Western	22.36	23.10	22.88	23.32	22.48	26.81	-3.2	-.1	-2.0
Louisiana	w	w	w	w	w	-	w	w	w
Maryland	25.21	25.39	25.73	25.97	24.73	28.03	-.7	.5	-1.2
Missouri	w	w	w	w	w	24.56	w	w	w
Montana	11.05	10.20	10.76	9.42	10.27	13.57	8.3	1.8	-2.3
New Mexico	22.96	23.14	23.25	22.43	23.42	19.40	-.8	-.5	1.9
North Dakota	7.63	7.48	7.84	7.67	7.36	9.48	2.0	.9	-2.4
Ohio	28.04	26.93	27.75	28.65	30.49	33.17	4.1	-2.1	-1.8
Oklahoma	24.91	25.76	28.52	30.39	28.46	32.13	-3.3	-3.3	-2.8
Pennsylvania Total	26.50	28.61	29.40	30.15	29.33	33.48	-7.4	-2.5	-2.6
Anthracite	32.94	34.24	36.34	39.40	42.93	48.22	-3.8	-6.4	-4.1
Bituminous	26.03	28.34	29.06	29.72	28.74	32.69	-8.1	-2.4	-2.5
Tennessee	27.23	27.11	26.74	27.96	26.98	28.99	.4	.2	-.7
Texas	12.87	12.42	12.21	11.20	10.91	11.14	3.6	4.2	1.6
Utah	20.81	21.11	22.59	18.53	21.46	29.20	-1.4	-.8	-3.7
Virginia	26.80	27.55	27.45	28.05	27.64	31.17	-2.7	-.8	-1.7
Washington	w	w	w	w	w	w	w	w	w
West Virginia Total	27.58	28.15	28.62	28.62	28.69	$34.18	-2.0	-1.0	-2.3
Northern	28.09	29.03	30.16	29.05	28.09	32.03	-3.3	*	-1.4
Southern	27.40	27.76	27.93	28.40	29.03	35.79	-1.3	-1.4	-2.9
Wyoming	7.32	8.14	8.09	8.43	8.63	11.89	-10.1	-4.0	-5.3
Appalachian Total[1]	**27.64**	**27.95**	**28.69**	**28.89**	**28.74**	**w**	**-1.1**	**-1.0**	**w**
Interior Total[1]	**20.03**	**21.61**	**21.86**	**21.45**	**21.31**	**w**	**-7.3**	**-1.5**	**w**
Western Total[1]	**11.14**	**11.60**	**11.71**	**11.60**	**12.12**	**$14.53**	**-3.9**	**-2.1**	**-2.9**
East of Miss. River	**26.81**	**27.34**	**27.97**	**28.09**	**27.95**	**31.42**	**-1.9**	**-1.0**	**-1.7**
West of Miss. River	**11.50**	**11.98**	**12.06**	**11.81**	**12.25**	**14.64**	**-4.0**	**-1.6**	**-2.6**
U.S. Total	**19.85**	**21.03**	**21.49**	**21.76**	**21.82**	**25.61**	**-5.6**	**-2.3**	**-2.8**

[1] *For a definition of coal-producing regions, see Appendix C.*
* *Data round to zero.*
w Withheld to avoid disclosure of individual company data.

Notes: Average mine price is calculated by dividing the total free on board (f.o.b.) mine value of the coal produced by the total production. A measure of dispersion of these average prices at the State level (interquartile range) is given in Appendix D, Table D2. Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons, which are not required to provide these data.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 81. Average Real Mine Price of Coal by State, 1984, 1989-1993
(Real Dollars per Short Ton)

Coal-Producing State and Region	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Alabama	$34.09	$33.71	$34.95	$37.98	$37.96	$47.15	1.1	-2.6	-3.5
Alaska	w	w	w	w	w	w	w	w	w
Arizona	w	w	w	w	w	w	w	w	w
Arkansas	w	w	w	w	w	w	w	w	w
California	-	w	w	w	w	-	w	w	-
Colorado	16.39	17.61	18.84	19.20	21.79	$25.35	-6.9	-6.9	-4.7
Georgia	-	-	-	-	-	w	-	-	w
Illinois	20.35	22.84	24.09	24.47	25.96	$32.85	-10.9	-5.9	-5.2
Indiana	18.43	19.33	20.04	21.10	21.71	27.45	-4.7	-4.0	-4.3
Iowa	w	w	w	w	w	27.82	w	w	w
Kansas	w	w	w	w	24.88	29.57	w	w	w
Kentucky Total	19.95	20.23	21.62	22.23	23.01	30.91	-1.4	-3.5	-4.7
Eastern	20.53	20.64	22.40	22.81	23.78	31.44	-.5	-3.6	-4.6
Western	18.00	19.07	19.44	20.59	20.72	29.46	-5.6	-3.4	-5.3
Louisiana	w	w	w	w	w	-	w	w	w
Maryland	20.30	20.97	21.86	22.92	22.79	30.81	-3.2	-2.8	-4.5
Missouri	w	w	w	w	w	26.99	w	w	w
Montana	8.90	8.42	9.14	8.32	9.47	14.91	5.6	-1.5	-5.6
New Mexico	18.49	19.11	19.76	19.79	21.58	21.32	-3.3	-3.8	-1.6
North Dakota	6.15	6.18	6.66	6.77	6.78	10.42	-.5	-2.4	-5.7
Ohio	22.58	22.24	23.58	25.28	28.10	36.45	1.5	-5.3	-5.2
Oklahoma	20.06	21.27	24.23	26.83	26.23	35.31	-5.7	-6.5	-6.1
Pennsylvania Total	21.34	23.62	24.98	26.61	27.03	36.79	-9.7	-5.7	-5.9
Anthracite	26.52	28.27	30.87	34.78	39.56	52.99	-6.2	-9.5	-7.4
Bituminous	20.96	23.40	24.69	26.23	26.49	35.92	-10.4	-5.7	-5.8
Tennessee	21.92	22.39	22.72	24.67	24.87	31.86	-2.1	-3.1	-4.1
Texas	10.36	10.26	10.37	9.88	10.05	12.25	1.0	.8	-1.8
Utah	16.75	17.43	19.20	16.36	19.78	32.09	-3.9	-4.1	-7.0
Virginia	21.58	22.75	23.32	24.76	25.47	34.25	-5.1	-4.0	-5.0
Washington	w	w	w	w	w	w	w	w	w
West Virginia Total	22.20	23.25	24.32	25.26	26.44	$37.56	-4.5	-4.3	-5.7
Northern	22.62	23.98	25.62	25.64	25.89	35.20	-5.7	-3.3	-4.8
Southern	22.06	22.92	23.73	25.06	26.76	39.33	-3.8	-4.7	-6.2
Wyoming	5.89	6.72	6.88	7.44	7.95	13.07	-12.3	-7.2	-8.5
Appalachian Total[1]	**22.26**	**23.08**	**24.38**	**25.50**	**26.49**	**w**	**-3.5**	**-4.3**	**w**
Interior Total[1]	**16.13**	**17.85**	**18.58**	**18.93**	**19.64**	**w**	**-9.6**	**-4.8**	**w**
Western Total[1]	**8.97**	**9.58**	**9.95**	**10.24**	**11.17**	**$15.97**	**-6.3**	**-5.3**	**-6.2**
East of Miss. River	**21.59**	**22.57**	**23.77**	**24.80**	**25.76**	**34.53**	**-4.4**	**-4.3**	**-5.1**
West of Miss. River	**9.26**	**9.90**	**10.25**	**10.42**	**11.29**	**16.08**	**-6.4**	**-4.8**	**-5.9**
U.S. Total	**15.98**	**17.36**	**18.26**	**19.21**	**20.12**	**28.15**	**-8.0**	**-5.6**	**-6.1**

[1] For a definition of coal-producing regions, see Appendix C.
w Withheld to avoid disclosure of individual company data.

Notes: Real prices are in 1987 dollars, calculated using implicit Gross Domestic Product price deflators. See Appendix D, Table D3. Average mine price is calculated by dividing the total free on board (f.o.b.) mine value of the coal produced by the total production. Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons, which are not required to provide these data.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 82. Average Mine Price of Coal by State and Mine Type, 1993
(Dollars per Short Ton)

Coal-Producing State and Region	Underground		Surface		Total	
	Nominal	Real[1]	Nominal	Real[1]	Nominal	Real[1]
Alabama	$42.00	$33.82	$42.91	$34.55	$42.34	$34.09
Alaska	-	-	w	w	w	w
Arizona	-	-	w	w	w	w
Arkansas	-	-	w	w	w	w
Colorado	20.53	16.53	20.10	16.18	20.35	16.39
Illinois	25.54	20.56	24.18	19.47	25.27	20.35
Indiana	w	w	w	w	22.89	18.43
Iowa	-	-	w	w	w	w
Kansas	-	-	w	w	w	w
Kentucky Total	25.07	20.18	24.35	19.61	24.77	19.95
Eastern	25.42	20.46	25.63	20.64	25.50	20.53
Western	23.84	19.20	20.45	16.46	22.36	18.00
Louisiana	-	-	w	w	w	w
Maryland	w	w	w	w	25.21	20.30
Missouri	-	-	w	w	w	w
Montana	w	w	w	w	11.05	8.90
New Mexico	w	w	w	w	22.96	18.49
North Dakota	-	-	7.63	6.15	7.63	6.15
Ohio	30.73	24.74	26.51	21.34	28.04	22.58
Oklahoma	w	w	w	w	24.91	20.06
Pennsylvania Total	27.35	22.02	25.09	20.20	26.50	21.34
Anthracite	36.02	29.00	32.71	26.34	32.94	26.52
Bituminous	27.29	21.97	23.55	18.96	26.03	20.96
Tennessee	w	w	w	w	27.23	21.92
Texas	-	-	12.87	10.36	12.87	10.36
Utah	20.81	16.75	-	-	20.81	16.75
Virginia	27.26	21.95	25.29	20.37	26.80	21.58
Washington	-	-	w	w	w	w
West Virginia Total	28.54	22.98	25.57	20.59	27.58	22.20
Northern	29.28	23.58	23.17	18.65	28.09	22.62
Southern	28.21	22.72	26.02	20.95	27.40	22.06
Wyoming	w	w	w	w	7.32	5.89
Appalachian Total[2]	**28.23**	**22.73**	**26.65**	**21.46**	**27.64**	**22.26**
Interior Total[2]	**25.07**	**20.19**	**17.48**	**14.07**	**20.03**	**16.13**
Western Total[2]	**20.75**	**16.71**	**10.05**	**8.09**	**11.14**	**8.97**
East of Miss. River	**27.66**	**22.27**	**25.49**	**20.53**	**26.81**	**21.59**
West of Miss. River	**20.75**	**16.71**	**10.61**	**8.54**	**11.50**	**9.26**
U.S. Total	**26.92**	**21.67**	**15.67**	**12.62**	**19.85**	**15.98**

[1] Real prices are in 1987 dollars, calculated using implicit Gross Domestic Product price deflators. See Appendix D, Table D3.
[2] For a definition of coal-producing regions, see Appendix C.
[w] Withheld to avoid disclosure of individual company data.

Notes: Average mine price is calculated by dividing the total free on board (f.o.b.) mine value of the coal produced by the total production. A measure of dispersion of these average nominal prices at the State level (interquartile range) is given in Appendix D, Table D2. Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons, which are not required to provide these data.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 83. Average Mine Price of Coal by State and Underground Mining Method, 1993
(Nominal Dollars per Short Ton)

Coal-Producing State and Region	Continuous[1]	Conventional[1]	Longwall[1]	Shortwall[1]	Other[1 2]	Unknown[3]	Total
Alabama	$43.43	-	$42.15	-	-	-	$42.00
Colorado	20.53	$25.00	21.82	-	-	-	20.53
Illinois	25.54	24.71	27.74	$25.92	-	-	25.54
Indiana	w	-	-	-	-	-	w
Kentucky Total	25.34	24.16	25.46	-	$19.70	-	25.07
Eastern	25.70	24.79	26.63	-	19.70	-	25.42
Western	24.16	22.93	23.44	-	-	-	23.84
Maryland	w	-	w	-	-	-	w
Montana	-	w	-	-	-	-	w
New Mexico	-	-	w	-	-	-	w
Ohio	31.06	13.82	32.69	-	-	-	30.73
Oklahoma	w	-	-	-	-	-	w
Pennsylvania Total	27.08	32.72	27.02	-	36.31	-	27.35
Anthracite	-	35.96	-	-	36.31	-	36.02
Bituminous	27.08	32.20	27.02	-	-	-	27.29
Tennessee	w	w	-	-	-	-	w
Utah	20.90	20.15	21.11	-	-	-	20.81
Virginia	27.24	26.69	31.99	-	15.62	-	27.26
West Virginia Total	28.99	25.74	31.61	-	-	-	28.54
Northern	30.03	23.83	32.91	-	-	-	29.28
Southern	28.52	26.57	29.68	-	-	-	28.21
Wyoming	w	w	w	-	-	-	w
Appalachian Total[4]	**28.56**	**25.83**	**31.32**	-	**20.10**	-	**28.23**
Interior Total[4]	**25.24**	**23.31**	**26.61**	**25.92**	-	-	**25.07**
Western Total[4]	**20.74**	**20.65**	**21.37**	-	-	-	**20.75**
East of Miss. River	**27.91**	**25.30**	**30.68**	**25.92**	**20.10**	-	**27.66**
West of Miss. River	**20.73**	**20.65**	**21.37**	-	-	-	**20.75**
U.S. Total	**27.11**	**25.02**	**28.67**	**25.92**	**20.10**	-	**26.92**

[1] Calculated by multiplying reported mining method percentages by the individual mine production.
[2] Includes scoop loading and hand loading.
[3] Calculated by subtracting the sum of the reported mining methods from total underground production.
[4] For a definition of coal-producing regions, see Appendix C.
[w] Withheld to avoid disclosure of individual company data.

Notes: Average mine price is calculated by dividing the total free on board (f.o.b.) mine value of the coal produced by the total production. Excludes mines producing less than 10,000 short tons, which are not required to provide these data.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 84. Coal Production, Number of Mines, and Average Mine Price, by State and County, 1993
(Thousand Short Tons, Nominal Dollars per Short Ton)

Coal-Producing State and County	Number of Mines	Production	Average Mine Price
Alabama	**85**	**24,768**	**42.34**
Bibb	2	161	w
Blount	3	20	-
Cullman	3	704	w
Fayette	3	2,302	w
Jackson	2	116	w
Jefferson	15	6,318	$41.53
Marion	6	300	25.95
Shelby	2	386	w
Tuscaloosa	12	6,622	43.94
Walker	33	7,280	44.31
Winston	4	559	30.48
Alaska	**1**	**1,601**	**w**
Yukon River	1	1,601	w
Arizona	**2**	**12,173**	**w**
Navajo	2	12,173	w
Arkansas	**6**	**44**	**w**
Johnson	2	25	w
Scott	1	6	-
Sebastian	3	12	-
Colorado	**20**	**21,886**	**20.35**
Delta	1	1,176	w
Fremont	2	318	w
Garfield	1	1	-
Gunnison	3	4,260	w
Jackson	1	4	-
La Plata	1	174	w
Las Animas	1	720	w
Mesa	1	299	w
Moffat	3	7,351	w
Montrose	2	290	w
Rio Blanco	1	1,490	w
Routt	3	5,803	w
Illinois	**39**	**41,098**	**25.27**
Christian	1	1,545	w
Clinton	1	1,065	w
Franklin	3	4,078	w
Fulton	1	429	w
Gallatin	3	2,238	w
Jackson	1	25	w
Jefferson	2	2,682	w
Logan	1	1,498	w
Macoupin	3	4,383	w
McDonough	1	431	w
Perry	6	6,242	$18.20
Randolph	3	2,102	w
Saline	6	8,809	29.78
Schuyler	1	584	w
St Clair	1	242	w
Wabash	1	2,129	w
Washington	1	592	w
White	1	1,996	w
Williamson	2	27	w
Indiana	**56**	**29,295**	**22.89**
Clay	7	1,522	$22.60
Daviess	10	5,110	21.60
Dubois	1	502	w
Gibson	2	1,794	w
Greene	8	3,278	23.05
Knox	4	1,068	w
Monroe	1	41	w
Owen	1	165	w
Pike	5	3,855	w
Spencer	5	971	w
Sullivan	4	3,064	w
Vigo	1	1,274	w
Warrick	7	6,650	22.54
Iowa	**2**	**175**	**w**
Marion	2	175	w

See footnotes at end of table.

Table 84. Coal Production, Number of Mines, and Average Mine Price, by State and County, 1993 (Continued)

(Thousand Short Tons, Nominal Dollars per Short Ton)

Coal-Producing State and County	Number of Mines	Production	Average Mine Price
Kansas	2	341	w
Crawford	2	341	w
Kentucky	696	156,299	24.77
Bell	24	4,577	$26.41
Breathitt	8	4,596	23.41
Butler	4	60	w
Caldwell	1	183	w
Carter	1	4	-
Christian	3	1,579	w
Clay	8	718	24.22
Daviess	15	1,911	19.44
Floyd	62	6,648	24.31
Greenup	1	185	w
Harlan	83	10,774	w
Henderson	3	3,241	w
Hopkins	16	9,013	21.45
Jackson	3	89	w
Johnson	10	1,379	20.48
Knott	55	14,406	24.92
Knox	26	921	30.24
Laurel	3	195	w
Lawrence	1	3	-
Lee	3	46	w
Leslie	12	8,598	22.84
Letcher	42	6,980	21.40
Magoffin	4	680	22.83
Martin	32	11,777	32.73
McCreary	1	129	w
McLean	3	152	w
Muhlenberg	8	3,122	17.68
Ohio	7	2,213	18.29
Owsley	5	193	w
Perry	32	12,525	25.50
Pike	184	32,828	24.54
Rockcastle	1	2	-
Union	5	3,677	25.60
Webster	9	10,956	24.97
Whitley	19	1,342	27.07
Wolfe	2	597	w
Louisiana	2	3,134	w
De Soto	1	2,674	w
Red River	1	460	w
Maryland	21	3,355	25.21
Allegany	10	511	w
Garrett	11	2,844	w
Missouri	7	653	w
Barton	1	100	w
Bates	2	116	w
Ralls	2	189	w
Randolph	1	174	w
Vernon	1	73	w
Montana	8	35,917	11.05
Big Horn	4	21,223	$12.04
Musselshell	1	10	w
Richland	1	291	w
Rosebud	2	14,393	w
New Mexico	7	28,268	w
Colfax	2	1,699	w
McKinley	2	11,944	w
San Juan	3	14,625	w
North Dakota	8	31,973	7.63
Bowman	1	2,165	w
McLean	1	7,240	w
Mercer	2	16,392	w
Oliver	3	6,169	w
Williams	1	7	-
Ohio	135	28,816	28.04
Belmont	15	5,927	$23.75
Carroll	7	191	18.24
Columbiana	14	1,194	16.73
Coshocton	6	1,485	w

See footnotes at end of table.

Table 84. Coal Production, Number of Mines, and Average Mine Price, by State and County, 1993 (Continued)
(Thousand Short Tons, Nominal Dollars per Short Ton)

Coal-Producing State and County	Number of Mines	Production	Average Mine Price
Ohio (Continued)			
Guernsey	5	406	$25.89
Harrison	11	2,664	24.25
Hocking	1	6	-
Holmes	3	196	w
Jackson	4	1,267	w
Jefferson	18	1,915	25.70
Lawrence	1	12	w
Mahoning	1	3	-
Meigs	2	3,749	w
Monroe	1	822	w
Morgan	1	47	w
Muskingum	7	2,362	w
Noble	7	1,096	w
Perry	4	424	w
Stark	5	223	w
Tuscarawas	16	2,369	21.59
Vinton	6	2,459	26.56
Oklahoma	**17**	**1,758**	**24.91**
Craig	1	116	w
Latimer	1	407	w
Le Flore	5	946	$23.28
Muskogee	2	6	-
Nowata	2	41	w
Okmulgee	2	104	w
Rogers	2	113	w
Wagoner	2	24	w
Pennsylvania	**524**	**59,700**	**26.50**
Allegheny	7	53	w
Armstrong	39	4,831	$29.90
Beaver	2	195	w
Bedford	1	9	-
Blair	1	170	w
Butler	14	821	22.92
Cambria	20	3,708	27.83
Carbon	1	191	w
Centre	6	143	19.25
Clarion	11	1,362	w
Clearfield	66	5,111	23.86
Clinton	1	16	w
Columbia	8	228	w
Dauphin	1	2	-
Elk	10	484	25.29
Fayette	29	737	20.60
Greene	18	22,703	26.29
Indiana	28	3,575	32.02
Jefferson	30	1,710	27.73
Lackawanna	7	283	w
Lawrence	7	298	24.68
Luzerne	20	701	33.50
Lycoming	1	260	w
Mercer	3	64	w
Northumberland	22	231	w
Schuylkill	88	2,669	35.89
Snyder	1	*	-
Somerset	45	5,491	18.24
Venango	2	12	-
Washington	13	2,974	28.99
Westmoreland	22	669	21.68
Tennessee	**37**	**3,047**	**27.23**
Anderson	1	21	w
Bledsoe	1	18	w
Campbell	11	1,436	$28.44
Claiborne	5	248	w
Fentress	1	66	w
Marion	2	120	w
Morgan	1	159	w
Scott	1	253	w
Sequatchie	14	727	26.13

See footnotes at end of table.

Table 84. Coal Production, Number of Mines, and Average Mine Price, by State and County, 1993 (Continued)

(Thousand Short Tons, Nominal Dollars per Short Ton)

Coal-Producing State and County	Number of Mines	Production	Average Mine Price
Texas	**14**	**54,567**	**12.87**
Atascosa	1	3,121	w
Freestone	1	5,005	w
Grimes	1	3,545	w
Harrison	2	3,766	w
Hopkins	1	2,225	w
Leon	1	7,558	w
Milam	1	6,819	w
Panola	1	8,643	w
Robertson	1	1,782	w
Rusk	1	3,920	w
Titus	1	7,765	w
Webb	2	417	w
Utah	**15**	**21,847**	**20.81**
Carbon	9	10,239	$22.63
Emery	5	8,047	w
Sevier	1	3,561	w
Virginia	**237**	**39,317**	**26.80**
Buchanan	88	13,958	$26.07
Dickenson	35	5,517	30.88
Lee	19	2,524	25.19
Russell	12	1,553	w
Scott	1	53	w
Tazewell	20	2,862	23.55
Wise	62	12,850	26.76
Washington	**3**	**4,739**	**w**
King	1	222	w
Lewis	1	1,942	w
Thurston	1	2,576	w
West Virginia	**502**	**130,525**	**27.58**
Barbour	13	2,263	$23.95
Boone	43	15,832	29.22
Braxton	6	621	w
Brooke	2	1,719	w
Clay	4	1,902	w
Fayette	17	5,478	28.39
Gilmer	1	57	w
Grant	4	1,879	w
Greenbrier	20	1,072	30.39
Harrison	14	1,996	w
Kanawha	17	6,821	26.27
Lewis	1	28	w
Lincoln	2	1,879	w
Logan	48	11,754	26.24
Marion	6	2,472	w
Marshall	3	4,401	w
Mason	1	166	w
McDowell	77	5,385	20.84
Mercer	2	109	w
Mineral	3	202	w
Mingo	62	25,741	27.26
Monongalia	20	8,642	27.98
Nicholas	25	4,684	27.79
Ohio	1	161	w
Preston	24	2,208	21.10
Raleigh	24	5,093	32.37
Randolph	9	904	23.77
Taylor	1	5	-
Tucker	2	137	w
Upshur	12	1,752	18.38
Wayne	5	2,265	w
Webster	15	4,354	22.60
Wyoming	18	8,542	30.52
Wyoming	**29**	**210,129**	**7.32**
Campbell	16	181,581	$6.15
Carbon	3	4,288	w
Converse	2	10,206	w
Hot Springs	1	42	w
Lincoln	2	4,369	w
Sheridan	1	89	w
Sweetwater	4	9,554	w

See footnotes at end of table.

Table 84. Coal Production, Number of Mines, and Average Mine Price, by State and County, 1993 (Continued)
(Thousand Short Tons, Nominal Dollars per Short Ton)

Coal-Producing State and County	Number of Mines	Production	Average Mine Price
U.S. Total	2,475	945,424	19.85

* Data round to zero.
w Withheld to avoid disclosure of individual company data.
Notes: Average mine price is calculated by dividing the total free on board (f.o.b.) mine value of the coal produced by the total production and excludes mines producing less than 10,000 short tons, which are not required to provide these data. Coal production excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Totals may not equal sum of components due to independent rounding.
Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 85. Average Mine Price by State and Coal Rank, 1993
(Nominal Dollars per Short Ton)

Coal-Producing State and Region	Bituminous	Subbituminous	Lignite	Anthracite	Total
Alabama	$42.34	-	-	-	$42.34
Alaska	-	w	-	-	w
Arizona	w	-	-	-	w
Arkansas	-	-	-	w	w
Colorado	20.22	$20.57	-	-	20.35
Illinois	25.27	-	-	-	25.27
Indiana	22.89	-	-	-	22.89
Iowa	w	-	-	-	w
Kansas	w	-	-	-	w
Kentucky Total	24.77	-	-	-	24.77
Eastern	25.50	-	-	-	25.50
Western	22.36	-	-	-	22.36
Louisiana	-	-	w	-	w
Maryland	25.21	-	-	-	25.21
Missouri	w	-	-	-	w
Montana	-	w	w	-	11.05
New Mexico	24.04	22.24	-	-	22.96
North Dakota	-	-	$7.63	-	7.63
Ohio	28.04	-	-	-	28.04
Oklahoma	24.91	-	-	-	24.91
Pennsylvania Total	26.03	-	-	$32.94	26.50
Anthracite	-	-	-	32.94	32.94
Bituminous	26.03	-	-	-	26.03
Tennessee	27.23	-	-	-	27.23
Texas	25.46	-	12.77	-	12.87
Utah	20.81	-	-	-	20.81
Virginia	26.80	-	-	-	26.80
Washington	w	w	-	-	w
West Virginia Total	27.58	-	-	-	27.58
Northern	28.09	-	-	-	28.09
Southern	27.40	-	-	-	27.40
Wyoming	w	w	-	-	7.32
Appalachian Total[1]	**27.59**	**-**	**-**	**32.94**	**27.64**
Interior Total[1]	**23.67**	**-**	**13.04**	**w**	**20.03**
Western Total[1]	**21.05**	**9.33**	**7.66**	**-**	**11.14**
East of Miss. River	**26.76**	**-**	**-**	**32.94**	**26.81**
West of Miss. River	**21.26**	**9.33**	**11.11**	**w**	**11.50**
U.S. Total	**26.15**	**9.33**	**11.11**	**[2] 32.94**	**19.85**

[1] For a definition of coal-producing regions, see Appendix C.
[2] Does not include Arkansas.
w Withheld to avoid disclosure of individual company data.
Notes: Average mine price is calculated by dividing the total free on board (f.o.b.) mine value of the coal produced by the total production. Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons, which are not required to provide these data.
Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 86. Average Mine Price of U.S. Coal by Mine Production Range and Mine Type, 1993
(Nominal Dollars per Short Ton)

Mine Production Range (thousand short tons)	Underground	Surface	Total
Over 1,000	$27.98	$12.92	$17.22
500 to 1,000	28.19	25.66	26.86
200 to 500	25.00	24.32	24.74
100 to 200	24.53	23.48	24.09
50 to 100	24.01	23.48	23.79
10 to 50	24.93	24.36	24.61
U.S. Total	**26.92**	**15.67**	**19.85**

Notes: Average mine price is calculated by dividing the total free on board (f.o.b.) mine value of the coal produced by the total production. Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons, which are not required to provide these data.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 87. Average Mine Price of U.S. Coal by Coalbed Thickness and Mine Type, 1993
(Nominal Dollars per Short Ton)

Coalbed Thickness (Inches)	Underground	Surface	Total
7-12	-	w	w
13-18	-	$27.59	$27.59
19-24	w	w	22.29
25-30	$25.12	$24.89	24.92
31-36	25.31	24.17	24.76
37-42	25.42	24.44	25.03
43-48	27.79	23.71	26.41
49-54	29.02	23.60	26.88
55-60	29.42	23.06	27.43
61-66	28.54	23.14	27.12
67-72	27.85	22.80	25.66
73-78	29.12	22.69	27.26
79-84	27.43	22.34	25.82
85-90	24.28	21.35	22.46
91-96	27.13	16.17	23.57
97-102	24.45	21.67	22.53
103-108	23.64	20.31	23.53
109-114	w	w	w
115-120	$21.89	$24.00	$22.30
> 120	18.91	9.79	10.09
U.S. Total	**26.92**	**15.67**	**19.85**

w Withheld to avoid disclosure of individual company data.

Notes: Average mine price is calculated by dividing the total free on board (f.o.b.) mine value of the coal produced by the total production. Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons, which are not required to provide these data.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 88. Average Mine Price of Coal by State and Productivity Range, 1993
(Nominal Dollars per Short Ton)

Coal-Producing State and Region	Productivity Range (short tons per miner per hour)					
	>=16	8 to 16	4 to 8	2 to 4	0 to 2	Total
Alabama	w	w	$44.08	$38.93	$48.61	$42.34
Alaska	-	-	w	-	-	w
Arizona	-	-	w	-	-	w
Arkansas	-	-	-	-	w	w
Colorado	-	w	18.22	w	w	20.35
Illinois	-	-	21.20	w	w	25.27
Indiana	-	$18.70	22.18	w	w	22.89
Iowa	-	-	-	-	w	w
Kansas	-	-	w	w	-	w
Kentucky Total	$18.02	25.94	24.64	$24.91	$24.58	24.77
Eastern	w	28.95	25.44	25.33	w	25.50
Western	w	19.85	20.84	23.85	w	22.36
Louisiana	-	w	-	-	-	w
Maryland	-	-	w	26.19	w	25.21
Missouri	-	w	w	w	w	w
Montana	w	w	-	-	w	11.05
New Mexico	-	w	w	w	w	22.96
North Dakota	w	w	w	-	-	7.63
Ohio	-	w	$23.70	$31.99	w	28.04
Oklahoma	-	-	23.36	w	w	24.91
Pennsylvania Total	$12.27	$25.87	23.78	$25.97	$33.15	26.50
Anthracite	12.27	29.87	38.48	44.28	50.40	32.94
Bituminous	-	25.56	23.56	25.15	31.70	26.03
Tennessee	-	-	27.40	27.15	27.55	27.23
Texas	-	12.29	w	w	-	12.87
Utah	-	w	$20.60	w	w	20.81
Virginia	-	w	24.84	$26.91	w	26.80
Washington	-	-	w	w	-	w
West Virginia Total	-	$25.37	25.96	29.32	$29.07	27.58
Northern	-	w	25.36	29.81	29.40	28.09
Southern	-	w	26.12	29.07	28.95	27.40
Wyoming	6.10	w	w	w	w	7.32
Appalachian Total[1]	**16.02**	**26.06**	**25.60**	**28.30**	**33.47**	**27.64**
Interior Total[1]	**14.81**	**13.58**	**18.78**	**w**	**w**	**20.03**
Western Total[1]	**6.64**	**17.38**	**20.58**	**w**	**w**	**11.14**
East of Miss. River	**15.62**	**25.08**	**24.70**	**27.66**	**33.30**	**26.81**
West of Miss. River	**6.64**	**15.64**	**18.76**	**28.66**	**27.31**	**11.50**
U.S. Total	**6.73**	**18.10**	**22.84**	**27.69**	**33.02**	**19.85**

[1] For a definition of coal-producing regions, see Appendix C.
[w] Withheld to avoid disclosure of individual company data.
Notes: Average mine price is calculated by dividing the total free on board (f.o.b.) mine value of the coal produced by the total production. Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons, which are not required to provide these data.
Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 89. Average Mine Price of Underground Coal by State and Productivity Range, 1993
(Nominal Dollars per Short Ton)

Coal-Producing State and Region	Productivity Range (short tons per miner per hour)					
	>=16	8 to 16	4 to 8	2 to 4	0 to 2	Total
Alabama	-	-	-	$35.33	$49.65	$42.00
Colorado	-	w	$15.66	w	w	20.53
Illinois	-	-	19.96	w	w	25.54
Indiana	-	-	-	w	w	w
Kentucky Total	-	$25.95	23.89	$25.71	$25.03	25.07
Eastern	-	w	24.47	25.97	w	25.42
Western	-	w	20.27	25.05	w	23.84
Maryland	-	-	w	w	-	w
Montana	-	-	-	-	w	w
New Mexico	-	-	-	-	w	w
Ohio	-	-	w	36.48	w	30.73
Oklahoma	-	-	-	-	w	w
Pennsylvania Total	-	w	$25.02	25.54	$33.65	27.35
Anthracite	-	-	-	w	w	36.02
Bituminous	-	w	25.02	w	w	27.29
Tennessee	-	-	w	w	w	w
Utah	-	w	20.60	w	w	20.81
Virginia	-	-	w	$27.14	w	27.26
West Virginia Total	-	w	$25.98	29.70	w	28.54
Northern	-	-	26.56	30.24	w	29.28
Southern	-	w	25.74	29.40	w	28.21
Wyoming	-	-	w	-	w	w
Appalachian Total[1]	-	**27.12**	**24.95**	**28.37**	**34.38**	**28.23**
Interior Total[1]	-	**w**	**20.08**	**w**	**w**	**25.07**
Western Total[1]	-	**w**	**19.23**	**w**	**w**	**20.75**
East of Miss. River	-	**w**	**24.27**	**27.86**	**34.34**	**27.66**
West of Miss. River	-	**w**	**19.23**	**30.86**	**w**	**20.75**
U.S. Total	-	**24.72**	**23.05**	**27.92**	**33.99**	**26.92**

[1] For a definition of coal-producing regions, see Appendix C.
w Withheld to avoid disclosure of individual company data.
Notes: Average mine price is calculated by dividing the total free on board (f.o.b.) mine value of the coal produced by the total production. Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons, which are not required to provide these data.
Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 90. Average Mine Price of Surface Coal by State and Productivity Range, 1993

(Nominal Dollars per Short Ton)

Coal-Producing State and Region	Productivity Range (short tons per miner per hour)					
	>=16	8 to 16	4 to 8	2 to 4	0 to 2	Total
Alabama	w	w	$44.08	$44.23	$33.83	$42.91
Alaska	-	-	w	-	-	w
Arizona	-	-	w	-	-	w
Arkansas	-	-	-	-	w	w
Colorado	-	w	20.67	-	-	20.10
Illinois	-	-	22.90	w	w	24.18
Indiana	-	w	w	w	w	w
Iowa	-	-	-	-	w	w
Kansas	-	-	w	w	-	w
Kentucky Total	$18.02	$25.93	25.26	$22.59	$23.38	24.35
Eastern	w	w	26.32	23.44	w	25.63
Western	w	w	21.17	20.48	w	20.45
Louisiana	-	w	-	-	-	w
Maryland	-	-	w	w	w	w
Missouri	-	w	w	w	w	w
Montana	w	w	-	-	-	w
New Mexico	-	w	w	w	-	w
North Dakota	w	w	w	-	-	$7.63
Ohio	-	w	w	29.68	w	26.51
Oklahoma	-	-	w	w	w	w
Pennsylvania Total	$12.27	w	$21.58	26.47	w	25.09
Anthracite	12.27	w	38.48	w	w	32.71
Bituminous	-	w	20.87	w	w	23.55
Tennessee	-	-	w	w	w	w
Texas	-	$12.29	w	$25.46	w	12.87
Virginia	-	w	w	25.48	w	25.29
Washington	-	-	w	w	-	w
West Virginia Total	-	w	$25.95	26.75	w	25.57
Northern	-	w	23.20	25.21	w	23.17
Southern	-	w	26.38	27.21	w	26.02
Wyoming	w	w	w	w	-	w
Appalachian Total[1]	**16.02**	**24.78**	**26.16**	**28.10**	**28.19**	**26.65**
Interior Total[1]	**14.81**	**w**	**18.52**	**w**	**w**	**17.48**
Western Total[1]	**6.64**	**w**	**21.47**	**w**	**-**	**10.05**
East of Miss. River	**15.62**	**w**	**25.01**	**27.07**	**w**	**25.49**
West of Miss. River	**6.64**	**w**	**18.56**	**26.53**	**w**	**10.61**
U.S. Total	**6.73**	**16.63**	**22.72**	**27.04**	**27.74**	**15.67**

[1] For a definition of coal-producing regions, see Appendix C.

w Withheld to avoid disclosure of individual company data.

Notes: Average mine price is calculated by dividing the total free on board (f.o.b.) mine value of the coal produced by the total production. Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons, which are not required to provide these data.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table 91. Average Mine Price by State and Disposition, 1993
(Nominal Dollars per Short Ton)

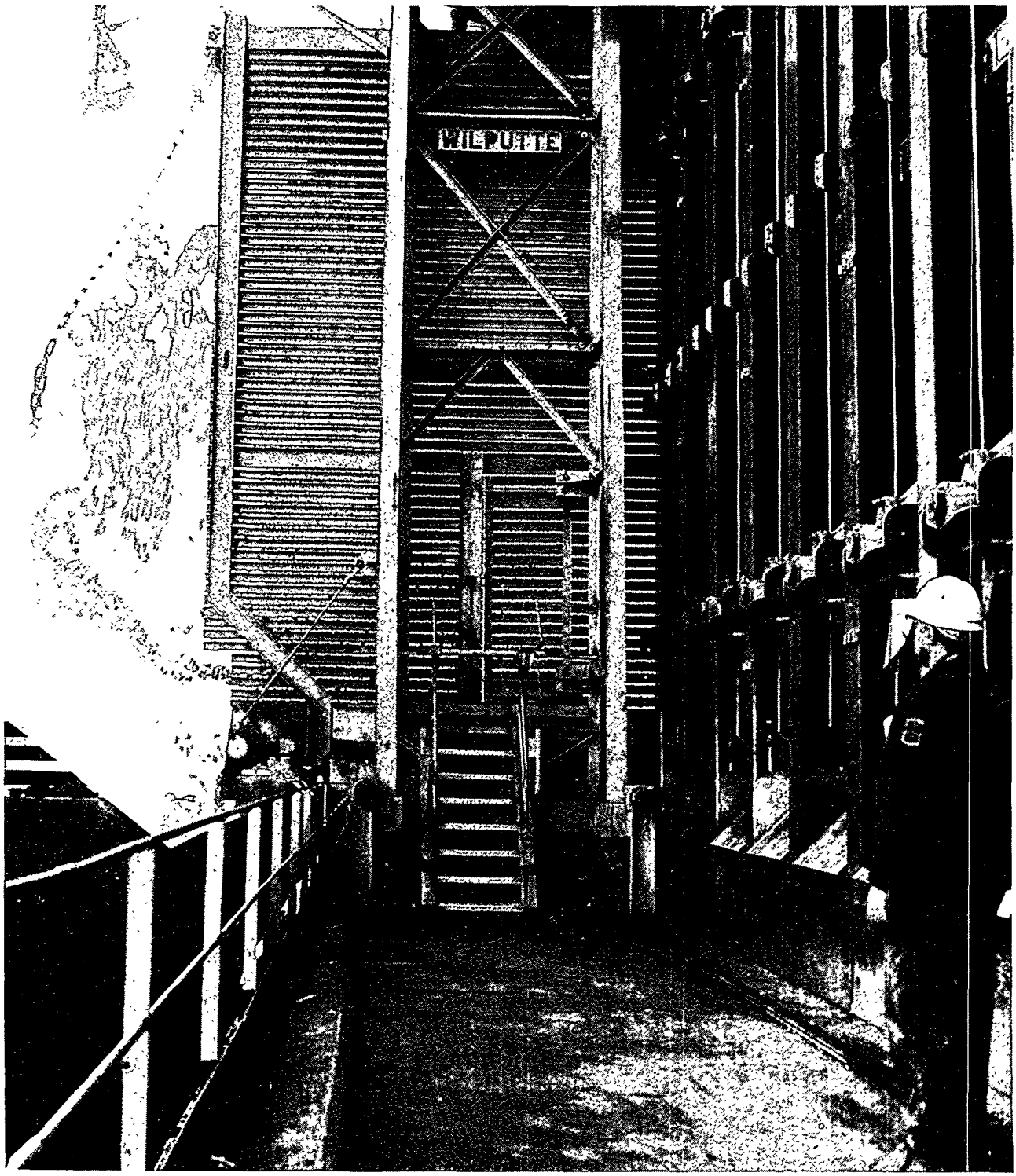
Coal-Producing State and Region	Open Market[1]	Captive[2]	Total
Alabama	42.44	35.87	42.34
Alaska	w	w	w
Arizona	w	-	w
Arkansas	w	-	w
Colorado	w	-	20.35
Illinois	w	w	25.27
Indiana	w	w	22.89
Iowa	w	-	w
Kansas	w	-	w
Kentucky Total	w	w	24.77
Eastern	w	w	25.50
Western	w	w	22.36
Louisiana	w	-	w
Maryland	25.21	-	25.21
Missouri	w	w	w
Montana	w	w	11.05
New Mexico	22.96	-	22.96
North Dakota	7.41	10.60	7.63
Ohio	23.85	42.17	28.04
Oklahoma	24.91	-	24.91
Pennsylvania Total	w	w	26.50
Anthracite	w	w	32.94
Bituminous	w	w	26.03
Tennessee	w	w	27.23
Texas	14.37	12.39	12.87
Utah	w	w	20.81
Virginia	w	w	26.80
Washington	w	w	w
West Virginia Total	27.53	28.53	27.58
Northern	28.05	28.57	28.09
Southern	27.36	28.50	27.40
Wyoming	6.85	13.28	7.32
Appalachian Total[3]	**27.26**	**31.67**	**27.64**
Interior Total[3]	**22.50**	**12.73**	**20.03**
Western Total[3]	**10.77**	**14.98**	**11.14**
East of Miss. River	**26.47**	**31.46**	**26.81**
West of Miss. River	**11.07**	**13.59**	**11.50**
U.S. Total	**19.98**	**18.28**	**19.85**

[1] Open Market includes all coal sold on the open market to other coal companies or consumers.
[2] Captive includes all coal used by the producing company or sold to affiliated or parent companies.
[3] For a definition of coal-producing regions, see Appendix C.
w Withheld to avoid disclosure of individual company data.

Notes: Average mine price is calculated by dividing the total free on board (f.o.b.) mine value of the coal produced by the total production. Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons, which are not required to provide these data.

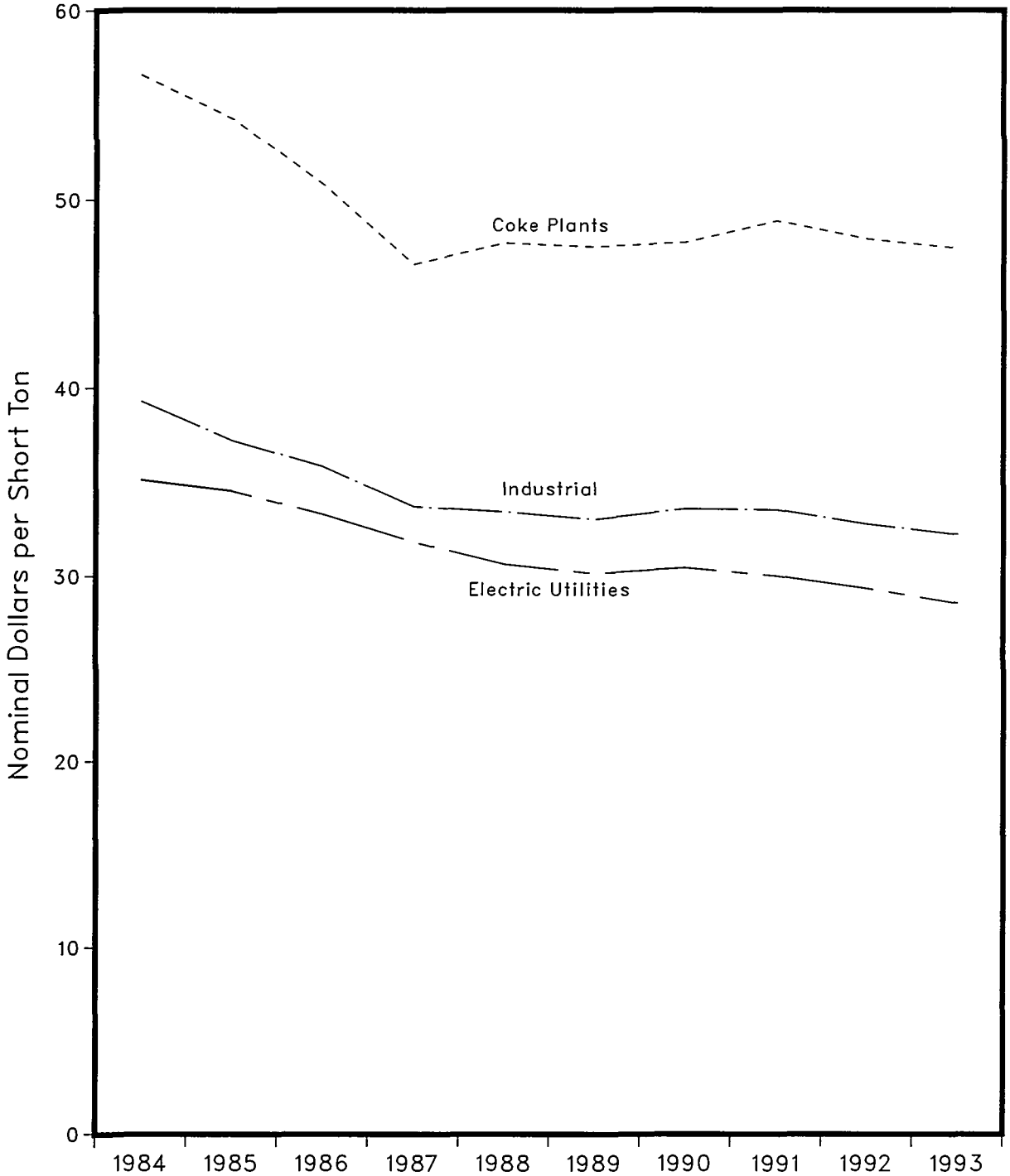
Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Consumer Prices



Metallurgical coal is used to make coke, as depicted in this photograph of glowing coke being pushed from a coke oven into a quenching car for cooling. The average price of coal delivered to U.S. coke plants in 1993 was $38.20.

Figure 15. U.S. Coal Prices by Sector, 1984-1993



Sources: • Electric Utilities: Federal Energy Regulatory Commission(FERC), FERC Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants." • Coke Plants: Energy Information Administration (EIA), Form EIA-5, "Coke Plant Report – Quarterly." • Industrial: EIA, Form EIA-3, "Quarterly Coal Consumption Report – Manufacturing Plants."

Table 92. Average Price of Coal Delivered to Electric Utilities by Census Division and State, 1984, 1989-1993
(Nominal Dollars per Short Ton)

Census Division and State	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
New England Total	**$43.34**	**$45.14**	**$47.13**	**$47.38**	**$44.54**	**$56.05**	**-4.0**	**-0.7**	**-2.8**
Connecticut	44.80	51.30	57.35	56.35	56.88	59.26	-12.7	-5.8	-3.1
Massachusetts	43.39	44.11	45.33	45.30	41.68	56.53	-1.6	1.0	-2.9
New Hampshire	42.39	44.69	46.20	47.39	46.18	54.20	-5.1	-2.1	-2.7
Middle Atlantic Total	**36.66**	**37.56**	**38.99**	**38.56**	**37.03**	**40.66**	**-2.4**	**-.2**	**-1.1**
New Jersey	47.50	46.62	47.76	48.37	46.84	52.02	1.9	.3	-1.0
New York	38.63	38.62	41.19	41.45	40.32	45.21	*	-1.1	-1.7
Pennsylvania	35.73	36.81	38.05	37.25	35.50	39.04	-2.9	.1	-1.0
East North Central Total	**30.98**	**32.05**	**32.63**	**33.17**	**34.10**	**39.34**	**-3.3**	**-2.4**	**-2.6**
Illinois	35.30	37.06	36.76	37.79	38.78	42.12	-4.7	-2.3	-1.9
Indiana	26.73	27.89	28.41	28.78	29.08	34.74	-4.1	-2.1	-2.9
Michigan	33.17	34.23	35.20	35.60	38.83	44.66	-3.1	-3.9	-3.3
Ohio	34.05	34.40	35.33	36.01	35.21	40.34	-1.0	-.8	-1.9
Wisconsin	22.96	25.92	26.19	26.18	28.10	34.18	-11.4	-4.9	-4.3
West North Central Total	**16.88**	**18.92**	**19.44**	**19.66**	**19.85**	**24.69**	**-10.8**	**-4.0**	**-4.1**
Iowa	17.53	19.58	19.62	19.89	21.77	27.39	-10.5	-5.3	-4.8
Kansas	17.69	20.99	22.06	22.23	22.00	26.44	-15.7	-5.3	-4.4
Minnesota	20.07	20.96	22.18	22.00	21.01	23.74	-4.2	-1.1	-1.8
Missouri	24.40	27.57	27.65	28.03	28.00	32.02	-11.5	-3.4	-3.0
Nebraska	12.92	12.77	12.73	12.88	14.32	22.81	1.2	-2.5	-6.1
North Dakota	9.38	9.45	9.37	9.10	9.13	11.37	-.8	.7	-2.1
South Dakota	13.30	13.68	13.65	13.97	15.24	14.63	-2.8	-3.3	-1.0
South Atlantic Total	**40.80**	**41.28**	**42.18**	**41.86**	**41.19**	**46.16**	**-1.1**	**-.2**	**-1.4**
Delaware	44.02	45.31	46.51	47.31	46.41	51.23	-2.8	-1.3	-1.7
Florida	43.58	45.03	45.87	45.72	44.26	52.99	-3.2	-.4	-2.1
Georgia	43.29	43.36	42.95	42.48	42.96	46.73	-.2	.2	-.8
Maryland	40.78	40.68	41.83	41.96	40.92	45.28	.2	-.1	-1.1
North Carolina	42.36	43.00	44.49	44.64	44.35	48.62	-1.5	-1.1	-1.5
South Carolina	40.17	39.13	41.37	43.54	43.08	49.26	2.6	-1.7	-2.2
Virginia	37.57	37.81	38.87	39.29	39.29	46.16	-.6	-1.1	-2.3
West Virginia	35.42	36.88	37.93	36.66	35.33	40.14	-3.9	.1	-1.4
East South Central Total	**33.30**	**33.05**	**33.93**	**33.98**	**33.73**	**40.38**	**.8**	**-.3**	**-2.1**
Alabama	42.56	41.67	43.82	44.58	44.84	49.04	2.1	-1.3	-1.6
Kentucky	27.29	27.01	27.19	27.58	26.13	33.58	1.0	1.1	-2.3
Mississippi	40.51	39.94	41.92	41.49	42.29	58.88	1.4	-1.1	-4.1
Tennessee	30.94	31.01	30.48	32.12	31.94	38.30	-.2	-.8	-2.3
West South Central Total	**22.14**	**22.55**	**22.98**	**22.91**	**22.69**	**27.07**	**-1.8**	**-.6**	**-2.2**
Arkansas	29.50	28.84	27.90	28.17	28.45	31.11	2.3	.9	-.6
Louisiana	25.65	24.93	27.09	27.78	26.64	38.48	2.9	-.9	-4.4
Oklahoma	21.32	21.47	23.17	24.98	24.03	29.80	-.7	-2.9	-3.6
Texas	20.91	21.58	21.66	21.19	21.12	24.55	-3.1	-.3	-1.8
Mountain Total	**22.11**	**21.64**	**22.22**	**22.19**	**21.80**	**21.03**	**2.2**	**.3**	**.5**
Arizona	27.78	28.31	29.16	29.98	28.81	25.66	-1.8	-.9	.9
Colorado	21.59	21.67	21.49	20.81	20.95	21.90	-.3	.8	-.2
Montana	11.78	12.14	11.44	11.47	9.81	12.53	-3.0	4.7	-.7
Nevada	32.34	32.32	31.28	33.16	33.80	29.80	*	-1.1	.9
New Mexico	24.61	23.83	25.02	24.03	22.61	16.88	3.3	2.1	4.3
Utah	27.34	27.54	27.40	26.80	28.05	30.64	-.7	-.6	-1.3
Wyoming	14.03	13.42	14.55	14.74	14.86	16.66	4.6	-1.4	-1.9
Pacific Total	**21.55**	**22.17**	**23.16**	**24.42**	**25.40**	**29.13**	**-2.8**	**-4.0**	**-3.3**
California	-	-	-	-	-	52.26	-	-	-100.0
Oregon	19.75	21.23	18.28	18.02	-	33.24	-7.0	-	-5.6
Washington	22.09	22.48	24.86	25.64	25.40	27.95	-1.7	-3.4	-2.6
U.S. Total	**28.58**	**29.36**	**30.02**	**30.45**	**30.15**	**35.12**	**-2.6**	**-1.3**	**-2.3**

* Data round to zero.
Note: Average prices are based on the cost including insurance and freight.
Source: Federal Energy Regulatory Commission, FERC Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants."

Table 93. Average Real Price of Coal Delivered to Electric Utilities by Census Division and State, 1984, 1989-1993

(Real Dollars per Short Ton)

Census Division and State	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
New England Total	**$34.90**	**$37.28**	**$40.04**	**$41.82**	**$41.05**	**$61.60**	**-6.4**	**-4.0**	**-6.1**
Connecticut	36.07	42.36	48.72	49.73	52.42	65.12	-14.8	-8.9	-6.3
Massachusetts	34.94	36.42	38.51	39.98	38.42	62.12	-4.1	-2.3	-6.2
New Hampshire	34.13	36.90	39.26	41.83	42.56	59.56	-7.5	-5.4	-6.0
Middle Atlantic Total	**29.52**	**31.02**	**33.12**	**34.03**	**34.13**	**44.69**	**-4.8**	**-3.6**	**-4.5**
New Jersey	38.24	38.50	40.57	42.70	43.17	57.16	-.6	-3.0	-4.4
New York	31.10	31.89	35.00	36.58	37.16	49.68	-2.5	-4.3	-5.1
Pennsylvania	28.77	30.40	32.33	32.88	32.72	42.90	-5.3	-3.2	-4.3
East North Central Total	**24.94**	**26.47**	**27.72**	**29.28**	**31.43**	**43.23**	**-5.8**	**-5.6**	**-5.9**
Illinois	28.43	30.60	31.23	33.35	35.74	46.28	-7.1	-5.6	-5.3
Indiana	21.53	23.03	24.13	25.40	26.80	38.18	-6.5	-5.3	-6.2
Michigan	26.71	28.26	29.90	31.42	35.79	49.08	-5.5	-7.0	-6.5
Ohio	27.42	28.40	30.02	31.79	32.45	44.33	-3.5	-4.1	-5.2
Wisconsin	18.49	21.40	22.26	23.11	25.90	37.56	-13.6	-8.1	-7.6
West North Central Total	**13.59**	**15.62**	**16.52**	**17.36**	**18.30**	**27.13**	**-13.0**	**-7.2**	**-7.4**
Iowa	14.11	16.17	16.67	17.55	20.07	30.10	-12.7	-8.4	-8.1
Kansas	14.24	17.33	18.74	19.62	20.28	29.06	-17.8	-8.4	-7.6
Minnesota	16.16	17.30	18.85	19.42	19.36	26.09	-6.6	-4.4	-5.2
Missouri	19.65	22.76	23.49	24.74	25.81	35.19	-13.7	-6.6	-6.3
Nebraska	10.40	10.54	10.82	11.37	13.20	25.07	-1.3	-5.8	-9.3
North Dakota	7.55	7.81	7.96	8.03	8.41	12.50	-3.3	-2.7	-5.4
South Dakota	10.71	11.29	11.60	12.33	14.04	16.08	-5.2	-6.5	-4.4
South Atlantic Total	**32.85**	**34.08**	**35.83**	**36.95**	**37.97**	**50.72**	**-3.6**	**-3.5**	**-4.7**
Delaware	35.44	37.42	39.51	41.76	42.78	56.29	-5.3	-4.6	-5.0
Florida	35.09	37.18	38.97	40.35	40.80	58.23	-5.6	-3.7	-5.5
Georgia	34.86	35.81	36.49	37.49	39.59	51.35	-2.6	-3.1	-4.2
Maryland	32.83	33.59	35.54	37.03	37.71	49.76	-2.3	-3.4	-4.5
North Carolina	34.10	35.51	37.80	39.40	40.88	53.43	-3.9	-4.4	-4.9
South Carolina	32.34	32.31	35.15	38.43	39.70	54.14	.1	-5.0	-5.6
Virginia	30.25	31.22	33.02	34.68	36.22	50.73	-3.1	-4.4	-5.6
West Virginia	28.52	30.45	32.23	32.35	32.57	44.11	-6.3	-3.3	-4.7
East South Central Total	**26.81**	**27.29**	**28.83**	**29.99**	**31.09**	**44.37**	**-1.7**	**-3.6**	**-5.4**
Alabama	34.26	34.41	37.23	39.35	41.32	53.89	-.4	-4.6	-4.9
Kentucky	21.97	22.30	23.10	24.35	24.09	36.90	-1.5	-2.3	-5.6
Mississippi	32.62	32.98	35.62	36.62	38.98	64.71	-1.1	-4.3	-7.3
Tennessee	24.91	25.61	25.89	28.35	29.44	42.09	-2.7	-4.1	-5.6
West South Central Total	**17.83**	**18.62**	**19.52**	**20.22**	**20.91**	**29.75**	**-4.3**	**-3.9**	**-5.5**
Arkansas	23.75	23.82	23.70	24.86	26.22	34.19	-.3	-2.4	-4.0
Louisiana	20.65	20.59	23.02	24.52	24.56	42.29	.3	-4.2	-7.6
Oklahoma	17.16	17.73	19.69	22.04	22.14	32.74	-3.2	-6.2	-6.9
Texas	16.84	17.82	18.41	18.71	19.47	26.98	-5.5	-3.6	-5.1
Mountain Total	**17.80**	**17.87**	**18.87**	**19.59**	**20.10**	**23.11**	**-.4**	**-3.0**	**-2.9**
Arizona	22.37	23.38	24.77	26.46	26.55	28.20	-4.3	-4.2	-2.5
Colorado	17.38	17.89	18.26	18.36	19.31	24.07	-2.8	-2.6	-3.5
Montana	9.48	10.02	9.72	10.12	9.04	13.77	-5.4	1.2	-4.0
Nevada	26.04	26.69	26.58	29.27	31.15	32.74	-2.4	-4.4	-2.5
New Mexico	19.81	19.68	21.26	21.21	20.83	18.55	.7	-1.2	.7
Utah	22.01	22.74	23.28	23.65	25.85	33.67	-3.2	-3.9	-4.6
Wyoming	11.30	11.08	12.36	13.01	13.70	18.31	2.0	-4.7	-5.2
Pacific Total	**17.35**	**18.31**	**19.67**	**21.55**	**23.41**	**32.01**	**-5.2**	**-7.2**	**-6.6**
California	-	-	-	-	-	57.42	-	-	-100.0
Oregon	15.90	17.53	15.53	15.91	-	36.53	-9.3	-	-8.8
Washington	17.79	18.56	21.12	22.63	23.41	30.72	-4.2	-6.6	-5.9
U.S. Total	**23.01**	**24.24**	**25.51**	**26.88**	**27.78**	**38.60**	**-5.1**	**-4.6**	**-5.6**

Notes: Real prices are in 1987 dollars, calculated using implicit Gross Domestic Product price deflators. See Appendix D, Table D3. Average prices are based on the cost including insurance and freight.

Source: Federal Energy Regulatory Commission, FERC Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants."

Table 94. Average Price of Coal Delivered to Other Industrial Plants By Census Division and State, 1984, 1989-1993
(Nominal Dollars per Short Ton)

Census Division and State	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
New England Total	**$57.83**	**$65.71**	**$66.74**	**$65.11**	**$64.78**	**$59.17**	**-12.0**	**-2.8**	**-0.3**
Connecticut	-	-	-	-	-	w	w	w	w
Maine	w	w	w	w	w	w	w	w	w
Massachusetts	w	w	w	w	w	w	w	w	w
New Hampshire	-	-	-	w	w	w	w	w	w
Vermont	-	-	-	-	w	-	w	w	w
Middle Atlantic Total	**w**	**w**	**w**	**w**	**w**	**w**	**w**	**w**	**w**
New Jersey	w	w	w	w	w	w	w	w	w
New York	42.15	43.95	43.79	44.07	43.81	48.12	-4.1	-1.0	-1.4
Pennsylvania	34.04	35.70	35.89	36.61	35.93	40.65	-4.6	-1.3	-1.9
East North Central Total	**34.54**	**35.05**	**35.98**	**36.16**	**35.34**	**40.18**	**-1.5**	**-.6**	**-1.7**
Illinois	29.42	29.24	30.81	31.28	31.17	39.86	.6	-1.4	-3.3
Indiana	30.91	31.58	33.01	32.83	32.88	34.03	-2.1	-1.5	-1.1
Michigan	41.46	42.17	43.69	43.39	41.46	49.48	-1.7	*	-1.9
Ohio	34.82	35.24	34.85	35.04	33.79	36.06	-1.2	.8	-.4
Wisconsin	40.85	42.27	43.31	43.41	42.18	49.59	-3.4	-.8	-2.1
West North Central Total	**18.00**	**17.76**	**18.34**	**18.41**	**18.02**	**29.24**	**1.4**	*	**-5.2**
Iowa	28.01	27.17	29.15	30.26	30.86	38.10	3.1	-2.4	-3.4
Kansas	33.06	31.96	30.81	28.69	28.41	37.83	3.4	3.8	-1.5
Minnesota	35.81	35.63	36.26	36.63	36.51	40.08	.5	-.5	-1.2
Missouri	32.12	31.48	31.28	30.18	29.56	35.64	2.0	2.1	-1.1
Nebraska	w	w	w	w	w	33.00	w	w	w
North Dakota	w	w	w	w	w	w	w	w	w
South Dakota	w	w	w	w	w	w	w	w	w
South Atlantic Total	**w**	**w**	**w**	**w**	**w**	**w**	**w**	**w**	**w**
Delaware	w	w	w	w	w	w	w	w	w
Florida	48.28	48.27	47.42	47.22	46.05	49.90	*	1.2	-.4
Georgia	45.20	45.18	44.95	44.90	42.97	44.85	*	1.3	.1
Maryland	32.18	32.83	33.71	28.71	31.62	32.09	-2.0	.4	*
North Carolina	43.44	43.46	43.05	44.86	42.63	48.00	*	.5	-1.1
South Carolina	43.35	43.31	43.19	43.79	42.18	47.12	.1	.7	-.9
Virginia	41.27	40.97	40.53	41.05	38.92	43.13	.7	1.5	-.5
West Virginia	32.91	31.93	32.08	31.88	30.85	36.89	3.1	1.6	-1.3
East South Central Total	**w**	**w**	**w**	**w**	**w**	**w**	**w**	**w**	**w**
Alabama	39.01	39.76	40.43	40.58	40.36	44.51	-1.9	-.8	-1.4
Kentucky	42.30	43.78	46.54	45.81	45.27	45.68	-3.4	-1.7	-.8
Mississippi	w	w	w	w	w	w	w	w	w
Tennessee	35.41	35.52	35.66	35.16	34.57	39.22	-.3	.6	-1.1
West South Central Total	**21.38**	**22.80**	**23.31**	**21.28**	**23.04**	**w**	**-6.2**	**-1.8**	**w**
Arkansas	44.06	44.61	45.09	45.39	44.31	44.71	-1.2	-.1	-.2
Louisiana	w	w	w	w	w	w	w	w	w
Oklahoma	w	w	w	w	w	37.36	w	w	w
Texas	17.58	18.14	18.61	16.79	18.45	27.84	-3.1	-1.2	-5.0
Mountain Total	**28.51**	**28.66**	**29.60**	**28.75**	**28.73**	**33.17**	**-.5**	**-.2**	**-1.7**
Arizona	40.51	40.95	40.09	39.54	39.78	w	-1.1	.4	w
Colorado	28.63	30.34	29.27	26.93	27.81	28.32	-5.6	.7	.1
Idaho	32.78	33.29	33.91	31.78	32.52	38.25	-1.5	.2	-1.7
Montana	w	w	w	w	w	w	w	w	w
Nevada	w	w	w	w	w	w	w	w	w
New Mexico	w	w	w	w	w	w	w	w	w
Utah	26.51	25.35	26.43	28.49	26.79	32.71	4.6	-.3	-2.3
Wyoming	23.43	23.67	25.19	24.91	24.14	w	-1.0	-.7	w
Pacific Total	**43.83**	**43.37**	**45.75**	**45.96**	**44.12**	**52.06**	**1.1**	**-.2**	**-1.9**
California	42.86	42.05	44.79	45.11	43.74	53.27	1.9	-.5	-2.4
Hawaii	w	w	w	w	-	46.24	w	w	w
Oregon	w	w	w	w	w	w	w	w	w
Washington	53.11	56.25	59.16	55.63	49.50	50.67	-5.6	1.8	.5
U.S. Total	**32.23**	**32.78**	**33.54**	**33.59**	**33.03**	**39.30**	**-1.7**	**-.6**	**-2.2**

* Data round to zero.
w Withheld to avoid disclosure of individual company data.
Notes: Price data are for manufacturing plants only. Average prices are based on the cost including insurance, freight, and taxes.
Source: Energy Information Administration, Form EIA-3, "Quarterly Coal Consumption - Manufacturing Plants."

Table 95. Average Real Price of Coal Delivered to Other Industrial Plants by Census Division and State, 1984, 1989-1993

(Real Dollars per Short Ton)

Census Division and State	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
New England Total	**$46.56**	**$54.26**	**$56.70**	**$57.46**	**$59.71**	**$65.02**	**-14.2**	**-6.0**	**-3.6**
Connecticut	-	-	-	-	-	w	w	w	w
Maine	w	w	w	w	w	w	w	w	w
Massachusetts	w	w	w	w	w	w	w	w	w
New Hampshire	-	-	-	w	w	w	w	w	w
Vermont	-	-	-	-	w	-	w	w	w
Middle Atlantic Total	**w**	**w**	**w**	**w**	**w**	**w**	**w**	**w**	**w**
New Jersey	w	w	w	w	w	w	w	w	w
New York	33.94	36.29	37.21	38.89	40.38	52.88	-6.5	-4.3	-4.8
Pennsylvania	27.41	29.48	30.50	32.31	33.12	44.67	-7.0	-4.6	-5.3
East North Central Total	**27.81**	**28.94**	**30.57**	**31.92**	**32.57**	**44.15**	**-3.9**	**-3.9**	**-5.0**
Illinois	23.69	24.15	26.18	27.61	28.73	43.80	-1.9	-4.7	-6.6
Indiana	24.89	26.08	28.04	28.98	30.30	37.39	-4.6	-4.8	-4.4
Michigan	33.38	34.83	37.12	38.30	38.21	54.38	-4.1	-3.3	-5.3
Ohio	28.04	29.10	29.61	30.92	31.14	39.63	-3.6	-2.6	-3.8
Wisconsin	32.89	34.91	36.80	38.31	38.87	54.49	-5.8	-4.1	-5.4
West North Central Total	**14.49**	**14.66**	**15.58**	**16.25**	**16.61**	**32.13**	**-1.2**	**-3.3**	**-8.5**
Iowa	22.55	22.43	24.76	26.71	28.44	41.87	.5	-5.6	-6.6
Kansas	26.61	26.39	26.18	25.32	26.19	41.57	.8	.4	-4.8
Minnesota	28.83	29.42	30.81	32.33	33.65	44.05	-2.0	-3.8	-4.6
Missouri	25.86	25.99	26.57	26.64	27.25	39.16	-.5	-1.3	-4.5
Nebraska	w	w	w	w	w	36.27	w	w	w
North Dakota	w	w	w	w	w	w	w	w	w
South Dakota	w	w	w	w	w	w	w	w	w
South Atlantic Total	**w**	**w**	**w**	**w**	**w**	**w**	**w**	**w**	**w**
Delaware	w	w	w	w	w	w	w	w	w
Florida	38.88	39.86	40.29	41.68	42.44	54.83	-2.4	-2.2	-3.7
Georgia	36.39	37.31	38.19	39.63	39.61	49.28	-2.4	-2.1	-3.3
Maryland	25.91	27.11	28.64	25.34	29.14	35.26	-4.4	-2.9	-3.4
North Carolina	34.98	35.89	36.57	39.60	39.29	52.75	-2.5	-2.9	-4.5
South Carolina	34.90	35.76	36.70	38.65	38.87	51.78	-2.4	-2.6	-4.3
Virginia	33.23	33.83	34.43	36.23	35.87	47.40	-1.8	-1.9	-3.9
West Virginia	26.50	26.37	27.26	28.14	28.43	40.54	.5	-1.7	-4.6
East South Central Total	**w**	**w**	**w**	**w**	**w**	**w**	**w**	**w**	**w**
Alabama	31.41	32.83	34.35	35.81	37.20	48.91	-4.3	-4.1	-4.8
Kentucky	34.06	36.15	39.54	40.43	41.72	50.20	-5.8	-4.9	-4.2
Mississippi	w	w	w	w	w	w	w	w	w
Tennessee	28.51	29.33	30.30	31.03	31.86	43.10	-2.8	-2.7	-4.5
West South Central Total	**17.22**	**18.83**	**19.81**	**18.78**	**21.24**	**w**	**-8.5**	**-5.1**	**w**
Arkansas	35.48	36.84	38.31	40.06	40.84	49.14	-3.7	-3.4	-3.5
Louisiana	w	w	w	w	w	w	w	w	w
Oklahoma	w	w	w	w	w	41.05	w	w	w
Texas	14.15	14.98	15.81	14.82	17.01	30.59	-5.5	-4.5	-8.2
Mountain Total	**22.96**	**23.66**	**25.15**	**25.37**	**26.48**	**36.45**	**-3.0**	**-3.5**	**-5.0**
Arizona	32.62	33.82	34.06	34.90	36.66	w	-3.5	-2.9	w
Colorado	23.05	25.05	24.87	23.77	25.63	31.12	-8.0	-2.6	-3.3
Idaho	26.39	27.49	28.81	28.05	29.97	42.03	-4.0	-3.1	-5.0
Montana	w	w	w	w	w	w	w	w	w
Nevada	w	w	w	w	w	w	w	w	w
New Mexico	w	w	w	w	w	w	w	w	w
Utah	21.35	20.93	22.45	25.14	24.69	35.95	2.0	-3.6	-5.6
Wyoming	18.87	19.55	21.40	21.99	22.25	w	-3.5	-4.0	w
Pacific Total	**35.29**	**35.81**	**38.87**	**40.56**	**40.66**	**57.21**	**-1.4**	**-3.5**	**-5.2**
California	34.51	34.72	38.05	39.82	40.31	58.53	-.6	-3.8	-5.7
Hawaii	w	w	w	w	-	50.81	w	w	w
Oregon	w	w	w	w	w	w	w	w	w
Washington	42.76	46.45	50.27	49.10	45.62	55.68	-7.9	-1.6	-2.9
U.S. Total	**25.95**	**27.07**	**28.49**	**29.65**	**30.44**	**43.18**	**-4.1**	**-3.9**	**-5.5**

w Withheld to avoid disclosure of individual company data.

Notes: Price data are for manufacturing plants only. Real prices are in 1987 dollars, calculated using implicit Gross Domestic Product price deflators. See Appendix D, Table D3. Average prices are based on the cost including insurance, freight, and taxes.

Source: Energy Information Administration, Form EIA-3, "Quarterly Coal Consumption - Manufacturing Plants."

Table 96. Average Price of Coal Delivered to Coke Plants by Census Division and State, 1984, 1989-1993
(Nominal Dollars per Short Ton)

Census Division and State	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change 1989-1993	Average Annual Percent Change 1984-1993
Middle Atlantic Total	w	w	w	w	w	w	w	w	w
New York	w	w	w	w	w	w	w	w	w
Pennsylvania	$46.41	$46.49	$46.86	$45.78	$44.77	$54.12	-0.2	0.9	-1.7
East North Central Total	**49.52**	**50.37**	**50.70**	**48.81**	**49.56**	**59.09**	**-1.7**	*	**-1.9**
Illinois	w	w	w	w	w	56.12	w	w	w
Indiana	52.29	53.72	53.31	49.39	51.47	61.60	-2.6	.4	-1.8
Michigan	-	-	w	w	w	w	w	w	w
Ohio	45.07	46.68	46.15	48.29	47.02	56.28	-3.4	-1.0	-2.4
West North Central Total	-	-	-	-	-	w	-	w	w
Missouri	-	-	-	-	-	w	-	w	w
South Atlantic Total	w	w	w	w	w	w	w	w	w
Maryland	-	-	w	w	w	w	w	w	w
Virginia	w	w	w	w	w	w	w	w	w
West Virginia	w	w	w	w	w	w	w	w	w
East South Central Total	w	w	w	w	w	w	w	w	w
Alabama	47.50	47.80	48.35	48.93	46.67	54.36	-.6	.4	-1.5
Kentucky	w	w	w	w	w	w	w	w	w
Tennessee	-	-	w	w	w	w	-	w	w
West South Central Total	-	-	-	-	-	w	-	w	w
Texas	-	-	-	-	-	w	-	w	w
Mountain Total	w	w	w	w	w	w	w	w	w
Utah	w	w	w	w	w	w	w	w	w
U.S. Total	**47.44**	**47.92**	**48.88**	**47.73**	**47.50**	**56.58**	**-1.0**	*	**-1.9**

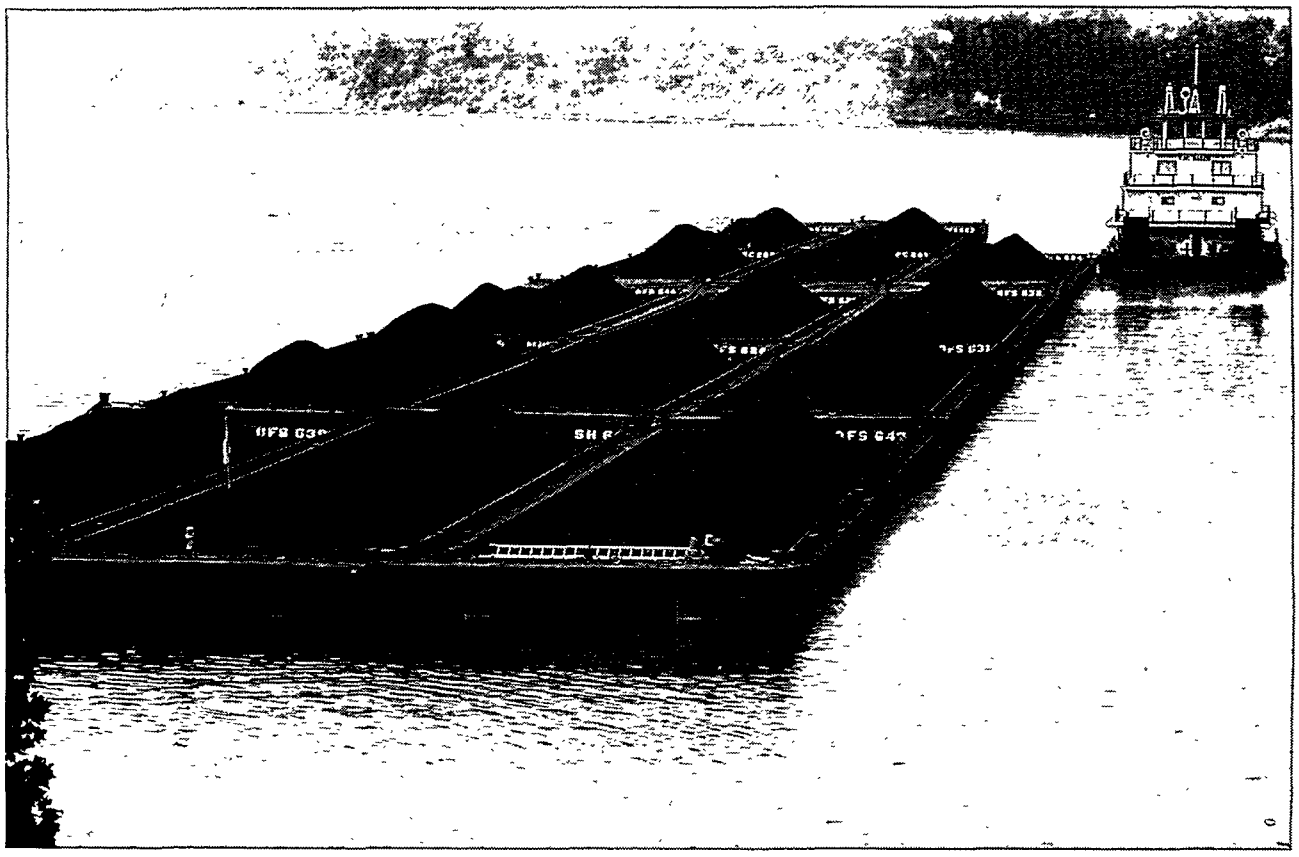
* Data round to zero.
w Withheld to avoid disclosure of individual company data.
Note: Average prices are based on the cost including insurance, freight, and taxes.
Source: Energy Information Administration, Form EIA-5, "Coke Plant Report - Quarterly."

Table 97. Average Real Price of Coal Delivered to Coke Plants by Census Division and State, 1984, 1989-1993
(Real Dollars per Short Ton)

Census Division and State	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change 1989-1993	Average Annual Percent Change 1984-1993
Middle Atlantic Total	w	w	w	w	w	w	w	w	w
New York	w	w	w	w	w	w	w	w	w
Pennsylvania	$37.37	$38.39	$39.81	$40.41	$41.27	$59.47	-2.7	-2.4	-5.0
East North Central Total	**39.87**	**41.60**	**43.08**	**43.08**	**45.67**	**64.93**	**-4.1**	**-3.3**	**-5.3**
Illinois	w	w	w	w	w	61.67	w	w	w
Indiana	42.10	44.36	45.30	43.59	47.44	67.69	-5.1	-2.9	-5.1
Michigan	-	-	w	w	w	w	w	w	w
Ohio	36.28	38.54	39.21	42.63	43.34	61.85	-5.8	-4.3	-5.8
West North Central Total	-	-	-	-	-	w	-	w	w
Missouri	-	-	-	-	-	w	-	w	w
South Atlantic Total	w	w	w	w	w	w	w	w	w
Maryland	-	-	w	w	w	w	w	w	w
Virginia	w	w	w	w	w	w	w	w	w
West Virginia	w	w	w	w	w	w	w	w	w
East South Central Total	w	w	w	w	w	w	w	w	w
Alabama	38.25	39.48	41.07	43.19	43.02	59.74	-3.1	-2.9	-4.8
Kentucky	w	w	w	w	w	w	w	w	w
Tennessee	-	-	w	w	w	w	-	w	w
West South Central Total	-	-	-	-	-	w	-	w	w
Texas	-	-	-	-	-	w	-	w	w
Mountain Total	w	w	w	w	w	w	w	w	w
Utah	w	w	w	w	w	w	w	w	w
U.S. Total	**38.20**	**39.57**	**41.53**	**42.13**	**43.77**	**62.17**	**-3.4**	**-3.3**	**-5.3**

w Withheld to avoid disclosure of individual company data.
Notes: Real prices are in 1987 dollars, calculated using implicit Gross Domestic Product price deflators. See Appendix D, Table D3. Average prices are based on the cost including insurance, freight, and taxes.
Source: Energy Information Administration, Form EIA-5, "Coke Plant Report - Quarterly."

Import Prices



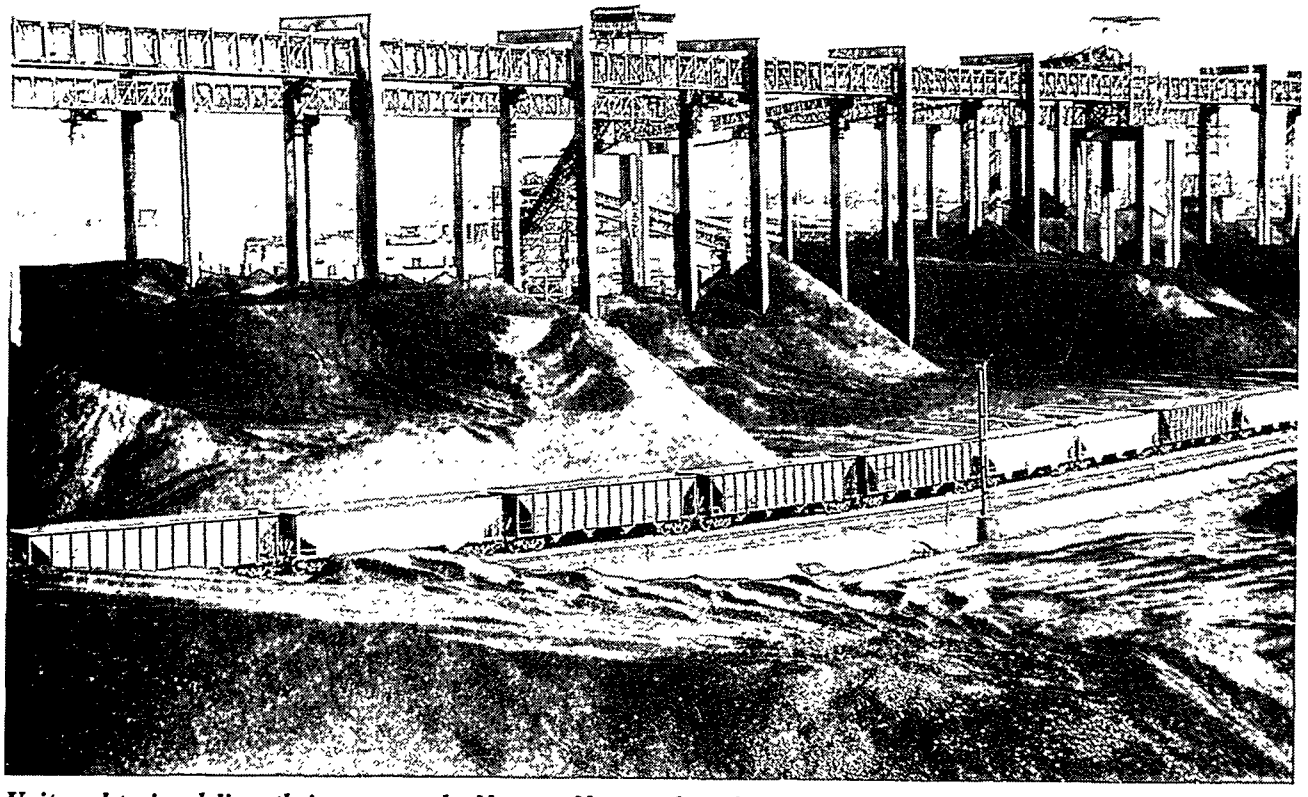
Barges transport coal on an inland waterway. Second only to rail, waterborne transportation accounted for 22 percent of total U.S. coal distribution in 1993.

Table 98. Average Price of U.S. Coal Imports by Continent and Country of Origin, 1984, 1989-1993
(Nominal Dollars per Short Ton)

Continent and Country of Origin	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
North America Total	**$29.00**	**$27.88**	**$25.10**	**$24.55**	**$26.07**	**$31.19**	**4.0**	**2.7**	**-0.8**
Canada	29.02	27.88	25.10	24.45	25.73	31.19	4.1	3.0	-.8
Mexico	21.19	-	-	38.36	31.26	-	-	-9.3	-
South America Total	**27.64**	**33.04**	**34.64**	**37.59**	**35.06**	**38.91**	**-16.3**	**-5.8**	**-3.7**
Colombia	27.26	32.25	32.87	36.87	35.49	38.91	-15.5	-6.4	-3.9
Venezuela	28.87	35.61	40.87	41.50	33.48	-	-18.9	-3.6	-
Europe Total	**32.08**	**34.12**	**-**	**37.17**	**44.34**	**34.14**	**-6.0**	**-7.8**	**-.7**
Denmark	32.08	-	-	36.35	-	-	-	-	-
Netherlands	-	-	-	-	44.34	50.00	-	-100.0	-100.0
Poland	-	-	-	-	-	34.14	-	-	-100.0
United Kingdom	-	34.12	-	37.19	-	29.35	-100.0	-	-100.0
Asia Total	**42.70**	**38.75**	**-**	**-**	**-**	**-**	**10.2**	**-**	**-**
India	-	23.65	-	-	-	-	-100.0	-	-
Indonesia	42.70	40.94	-	-	-	-	4.3	-	-
Malaysia	-	47.06	-	-	-	-	-100.0	-	-
Oceania & Australia Total	**31.56**	**36.07**	**37.97**	**41.73**	**34.44**	**30.40**	**-12.5**	**-2.2**	**.4**
Australia	31.56	36.07	37.97	41.73	34.44	30.40	-12.5	-2.2	4
Africa Total	**27.81**	**49.29**	**-**	**-**	**-**	**32.08**	**-43.6**	**-**	**-1.6**
South Africa, Rep of	-	49.29	-	-	-	32.08	-100.0	-	-100.0
Swaziland	27.81	-	-	-	-	-	-	-	-
Total[1]	**29.36**	**32.48**	**32.34**	**33.43**	**31.97**	**33.73**	**-9.6**	**-2.1**	**-1.5**
U.S. Total[2]	**29.89**	**33.46**	**33.12**	**34.45**	**34.14**	**35.37**	**-10.7**	**-3.3**	**-1.8**

[1] The average prices presented in this table, with the exception of U.S. Total, are considered to be representative prices for coal imports and fall within the range of $20 to $50 per short ton, inclusively.
[2] U.S. Total is the average price of all coal imports.
Notes: Average price is based on the customs import value. Coal imports include coal to Puerto Rico and the Virgin Islands.
Source: U.S. Department of Commerce, Bureau of the Census, "Monthly Report IM 145."

Export Prices



Unit coal trains deliver their cargo to the Newport News coal yard, a major coal shipping terminal.

Table 99. Average Price of U.S. Coal Exports by Destination, 1984, 1989-1993
(Nominal Dollars per Short Ton)

Continent and Country of Destination	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
North America Total	**$34.16**	**$33.06**	**$33.61**	**$32.71**	**$42.24**	**$49.25**	**3.3**	**-5.2**	**-4.0**
Canada[1]	33.86	33.00	33.48	32.63	42.30	49.32	2.6	-5.4	-4.1
Dominican Republic	36.64	36.28	36.80	36.41	36.38	-	1.0	.2	-
Mexico	44.03	43.48	43.64	37.55	41.79	45.80	1.3	1.3	-.4
Other[2]	30.77	39.26	33.46	30.80	31.15	29.15	-21.6	-.3	.6
South America Total	**43.77**	**45.54**	**46.24**	**46.26**	**43.86**	**47.43**	**-3.9**	*****	**-.9**
Argentina	43.21	45.44	45.59	45.80	44.54	48.69	-4.9	-.8	-1.3
Brazil	43.84	45.57	46.44	46.88	45.65	48.90	-3.8	-1.0	-1.2
Other[2]	39.46	42.96	38.80	36.79	30.92	43.80	-8.1	6.3	-1.1
Europe Total	**43.38**	**42.67**	**43.08**	**43.92**	**42.48**	**44.77**	**1.7**	**.5**	**-.3**
Belgium & Luxembourg	43.14	44.01	44.82	45.02	43.56	43.78	-2.0	-.2	-.2
Bulgaria	41.96	43.29	42.57	49.24	49.44	-	-3.1	-4.0	-
Denmark	34.95	32.69	32.95	34.37	33.28	40.88	6.9	1.2	-1.7
Finland	39.61	40.81	44.77	44.72	42.45	-	-2.9	-1.7	-
France	42.24	39.38	40.18	43.00	41.22	47.06	7.3	.6	-1.2
Germany	38.98	38.27	39.33	41.61	42.51	48.86	1.8	-2.1	-2.5
Ireland	35.84	36.81	39.53	38.54	37.42	44.70	-2.6	-1.1	-2.4
Italy	44.33	45.34	45.38	44.72	43.60	41.05	-2.2	.4	.8
Netherlands	44.22	43.34	43.18	42.93	40.81	44.87	2.0	2.0	-.2
Norway	-	47.95	32.11	-	39.88	-	-100.0	-100.0	-
Portugal	37.70	40.74	40.87	40.80	40.23	49.72	-7.4	-1.6	-3.0
Romania	36.28	41.62	45.89	47.53	45.40	47.18	-12.8	-5.4	-2.9
Spain	47.03	46.82	45.23	46.74	46.07	42.50	.4	.5	1.1
Sweden	45.96	46.66	47.72	48.20	44.84	48.39	-1.5	.6	-.6
Turkey	42.58	45.54	46.84	46.13	43.35	47.60	-6.5	-.4	-1.2
United Kingdom	45.90	45.54	46.35	47.30	45.61	49.04	.8	.1	-.7
Yugoslavia	39.60	45.04	46.61	46.11	44.27	49.09	-12.1	-2.7	-2.3
Other[2]	40.67	37.05	44.28	46.28	39.34	37.62	9.8	.8	.9
Asia Total	**40.58**	**42.65**	**43.24**	**43.32**	**42.17**	**44.78**	**-4.8**	**-.9**	**-1.1**
China (Mainland)	-	35.70	-	-	-	-	-100.0	-	-
China (Taiwan)	39.49	41.23	41.73	38.64	37.79	42.09	-4.2	1.1	-.7
Hong Kong	45.13	37.55	38.58	38.93	-	-	20.2	-	-
Israel	34.79	39.11	39.87	39.42	39.17	43.09	-11.0	-2.9	-2.3
Japan	40.88	42.91	43.39	44.26	42.97	47.09	-4.7	-1.2	-1.5
Korea, Republic of	42.12	44.93	45.95	46.38	44.78	45.65	-6.3	-1.5	-.9
Other[2]	37.31	38.71	40.44	38.02	37.27	44.20	-3.6	*	-1.9
Oceania & Australia Total	**34.46**	**34.50**	**-**	**36.60**	**34.98**	**40.00**	**-.1**	**-.4**	**-1.6**
Africa Total	**42.55**	**42.97**	**41.26**	**39.77**	**40.14**	**44.02**	**-1.0**	**1.5**	**-.4**
Algeria	44.32	46.35	46.50	47.67	46.02	49.60	-4.4	-.9	-1.2
Egypt	44.86	46.08	45.69	45.97	45.59	43.14	-2.6	-.4	.4
Morocco	33.86	33.80	33.73	31.34	30.97	-	.2	2.3	-
South Africa, Rep of	46.87	47.79	48.92	-	-	-	-1.9	-	-
Other[2]	40.53	-	40.81	-	39.92	-	-	.4	-
Total[3]	**41.53**	**41.44**	**42.35**	**42.25**	**42.42**	**46.42**	**.2**	**-.5**	**-1.2**
U.S. Total[4]	**41.41**	**41.34**	**42.39**	**42.63**	**42.52**	**50.72**	**.2**	**-.6**	**-2.2**

[1] Based on the U.S. - Canada Free Trade Agreement, as of January 1990, the U.S. Department of Commerce began reporting statistics on U.S. exports to Canada based on information on imports provided monthly by the Canadian government.
[2] Includes countries with exports less than or equal to 50,000 short tons in 1992.
[3] The average prices presented in this table, with the exception of U.S. Total, are considered to be representative prices for coal exports and fall within the range of $28 to $50 per short ton, inclusively.
[4] U.S. Total is the average price of all coal exports.
* Data round to zero.
Note: Average price is based on the free alongside ship (f.a.s.) value.
Source: U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545."

Table 100. Average Real Price of U.S. Coal Exports by Destination, 1984, 1989-1993
(Real Dollars per Short Ton)

Continent and Country of Destination	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
North America Total	**$27.50**	**$27.30**	**$28.55**	**$28.87**	**$38.93**	**$54.13**	**0.7**	**-8.3**	**-7.2**
Canada[1]	27.26	27.25	28.45	28.80	38.99	54.20	.1	-8.5	-7.3
Dominican Republic	29.50	29.96	31.27	32.13	33.53	-	-1.5	-3.1	-
Mexico	35.45	35.90	37.08	33.14	38.51	50.33	-1.3	-2.0	-3.8
Other[2]	24.77	32.42	28.43	27.19	28.71	32.03	-23.6	-3.6	-2.8
South America Total	**35.24**	**37.61**	**39.28**	**40.83**	**40.43**	**52.12**	**-6.3**	**-3.4**	**-4.3**
Argentina	34.79	37.53	38.74	40.43	41.05	53.50	-7.3	-4.0	-4.7
Brazil	35.29	37.63	39.46	41.38	42.07	53.74	-6.2	-4.3	-4.6
Other[2]	31.77	35.48	32.97	32.47	28.50	48.13	-10.4	2.8	-4.5
Europe Total	**34.93**	**35.23**	**36.60**	**38.77**	**39.15**	**49.20**	**-.9**	**-2.8**	**-3.7**
Belgium & Luxembourg	34.73	36.34	38.08	39.74	40.15	48.11	-4.4	-3.5	-3.5
Bulgaria	33.79	35.75	36.17	43.46	45.57	-	-5.5	-7.2	-
Denmark	28.14	26.99	28.00	30.34	30.67	44.92	4.3	-2.1	-5.1
Finland	31.89	33.70	38.04	39.47	39.12	-	-5.4	-5.0	-
France	34.01	32.51	34.14	37.96	38.00	51.72	4.6	-2.7	-4.5
Germany	31.39	31.61	33.42	36.73	39.18	53.69	-.7	-5.4	-5.8
Ireland	28.86	30.39	33.59	34.02	34.48	49.12	-5.0	-4.3	-5.7
Italy	35.69	37.44	38.55	39.47	40.19	45.11	-4.7	-2.9	-2.6
Netherlands	35.60	35.79	36.69	37.89	37.62	49.31	-.5	-1.4	-3.5
Norway	-	39.60	27.29	-	36.76	-	-100.0	-100.0	-
Portugal	30.35	33.64	34.72	36.01	37.08	54.63	-9.8	-4.9	-6.3
Romania	29.21	34.37	38.99	41.95	41.84	51.85	-15.0	-8.6	-6.2
Spain	37.87	38.66	38.43	41.25	42.46	46.70	-2.0	-2.8	-2.3
Sweden	37.01	38.53	40.54	42.55	41.33	53.18	-4.0	-2.7	-3.9
Turkey	34.29	37.60	39.80	40.71	39.95	52.30	-8.8	-3.8	-4.6
United Kingdom	36.96	37.60	39.38	41.75	42.04	53.89	-1.7	-3.2	-4.1
Yugoslavia	31.88	37.19	39.60	40.70	40.80	53.94	-14.3	-6.0	-5.7
Other[2]	32.75	30.59	37.62	40.85	36.26	41.35	7.0	-2.5	-2.5
Asia Total	**32.68**	**35.22**	**36.74**	**38.23**	**38.86**	**49.21**	**-7.2**	**-4.2**	**-4.4**
China (Mainland)	-	29.48	-	-	-	-	-100.0	-	-
China (Taiwan)	31.80	34.05	35.45	34.10	34.83	46.25	-6.6	-2.3	-4.1
Hong Kong	36.34	31.01	32.78	34.36	-	-	17.2	-	-
Israel	28.01	32.29	33.88	34.79	36.10	47.35	-13.3	-6.1	-5.7
Japan	32.92	35.44	36.87	39.06	39.61	51.75	-7.1	-4.5	-4.9
Korea, Republic of	33.91	37.10	39.04	40.94	41.27	50.16	-8.6	-4.8	-4.3
Other[2]	30.04	31.97	34.36	33.56	34.35	48.57	-6.0	-3.3	-5.2
Oceania & Australia Total	**27.75**	**28.49**	**-**	**32.31**	**32.24**	**43.96**	**-2.6**	**-3.7**	**-5.0**
Africa Total	**34.26**	**35.48**	**35.06**	**35.10**	**36.99**	**48.37**	**-3.4**	**-1.9**	**-3.8**
Algeria	35.68	38.28	39.51	42.07	42.42	54.51	-6.8	-4.2	-4.6
Egypt	36.12	38.05	38.82	40.57	42.02	47.41	-5.1	-3.7	-3.0
Morocco	27.26	27.91	28.66	27.66	28.55	-	-2.3	-1.1	-
South Africa, Rep of	37.74	39.46	41.56	-	-	-	-4.3	-	-
Other[2]	32.64	-	34.67	-	36.79	-	-	-2.9	-
Total[3]	**33.43**	**34.22**	**35.98**	**37.29**	**39.10**	**51.01**	**-2.3**	**-3.8**	**-4.6**
U.S. Total[4]	**33.34**	**34.14**	**36.02**	**37.62**	**39.19**	**55.73**	**-2.3**	**-3.9**	**-5.5**

[1] Based on the U.S. - Canada Free Trade Agreement, as of January 1990, the U.S. Department of Commerce began reporting statistics on U.S. exports to Canada based on information on imports provided monthly by the Canadian government.

[2] Includes countries with exports less than or equal to 50,000 short tons in 1992.

[3] The average prices presented in this table, with the exception of U.S. Total, are considered to be representative prices for coal exports and fall within the range of $28 to $50 (nominal) per short ton, inclusively.

[4] U.S. Total is the average price of all coal exports.

Notes: Real prices are in 1987 dollars, calculated using implicit Gross Domestic Product price deflators. See Appendix D, Table D3. Average prices are based on the free alongside ship (f.a.s.) value.

Source: U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545."

Table 101. Average Price of U.S. Metallurgical Coal Exports by Destination, 1984, 1989-1993

(Nominal Dollars per Short Ton)

Continent and Country of Destination	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
North America Total	$36.03	$36.43	$38.54	$37.93	$46.04	$45.57	-1.1	-5.9	-2.6
Canada[1]	35.66	36.34	38.43	37.93	46.06	31.33	-1.9	-6.2	1.4
Dominican Republic	-	-	-	-	36.38	-	-	-100.0	-
Mexico	45.16	47.92	49.20	43.67	-	46.22	-5.8	-	-.3
Other[2]	-	-	-	49.93	-	49.60	-	-	-100.0
South America Total	43.91	45.65	46.44	46.84	45.54	49.01	-3.8	-.9	-1.2
Argentina	43.63	45.45	45.62	45.80	44.54	48.99	-4.0	-.5	-1.3
Brazil	43.94	45.65	46.48	46.95	45.65	48.64	-3.7	-.9	-1.1
Other[2]	-	47.40	49.78	48.84	48.84	49.90	-100.0	-100.0	-100 0
Europe Total	45.57	46.57	46.91	47.29	45.18	47.78	-2.1	.2	-.5
Belgium & Luxembourg	45.88	47.02	47.52	47.96	45.07	46.48	-2.4	.4	-.1
Bulgaria	41.99	43.29	42.57	49.44	49.90	-	-3.0	-4.2	-
Denmark	36.29	-	29.37	-	34.97	-	-	.9	-
Finland	39.61	40.81	46.21	44.72	42.41	-	-2.9	-1.7	-
France	45.17	44.39	43.96	45.29	43.46	47.48	1.7	1.0	-.5
Germany	46.17	45.79	48.55	45.69	45.72	-	.8	.2	-
Ireland	-	-	-	-	36.20	-	-	-100.0	-
Italy	45.93	47.44	48.28	47.70	46.20	48.00	-3.2	-.1	-.5
Netherlands	46.17	47.00	47.11	47.12	44.83	46.14	-1.8	.7	*
Norway	-	47.95	-	-	-	-	-100.0	-	-
Portugal	38.43	44.33	48.11	45.79	43.30	49.72	-13.3	-2.9	-2.8
Romania	36.26	41.62	46.47	47.53	45.41	47.18	-12.9	-5.5	-2.9
Spain	47.47	48.48	48.45	48.24	46.78	48.78	-2.1	.4	-.3
Sweden	45.96	46.67	47.76	48.61	46.84	49.17	-1.5	-.5	-.7
Turkey	42.58	45.54	46.87	46.16	43.35	47.51	-6.5	-.4	-1.2
United Kingdom	46.64	47.72	48.46	48.49	46.44	49.00	-2.3	.1	-.5
Yugoslavia	48.31	45.04	46.61	46.11	44.27	49.09	7.3	2.2	-.2
Other[2]	-	37.00	44.32	48.05	43.93	43.49	-100.0	-100.0	-100.0
Asia Total	44.04	45.39	46.00	46.18	44.36	48.41	-3.0	-.2	-1.0
China (Taiwan)	44.86	45.63	46.80	47.48	45.50	49.29	-1.7	-.3	-1.0
Hong Kong	45.13	-	-	-	-	-	-	-	-
Israel	-	40.13	42.18	43.64	39.92	43.09	-100.0	-100.0	-100.0
Japan	43.53	44.98	45.52	45.60	43.83	49.19	-3.2	-.2	-1.3
Korea, Republic of	45.67	47.13	47.54	48.07	46.23	48.22	-3.1	-.3	-.6
Other[2]	-	-	-	-	-	50.00	-	-	-100.0
Africa Total	45.25	46.29	45.03	46.67	45.56	44.02	-2.2	-.2	.3
Algeria	44.32	46.35	46.50	47.67	46.02	49.60	-4.4	-.9	-1.2
Egypt	44.86	46.09	45.70	45.98	45.59	43.14	-2.6	-.4	.4
Morocco	-	34.22	34.54	-	33.11	-	-100.0	-100.0	-
South Africa, Rep of	46.87	47.79	48.92	-	-	-	-1.9	-	-
Other[2]	40.53	-	-	-	-	-	-	-	-
Total[3]	44.11	45.36	46.07	46.29	45.11	47.82	-2.8	-.6	-.9
U.S. Total[4]	44.11	45.41	46.15	46.51	45.19	52.41	-2.9	-.6	-1.9

[1] Based on the U.S. - Canada Free Trade Agreement, as of January 1990, the U.S. Department of Commerce began reporting statistics on U.S. exports to Canada based on information on imports provided monthly by the Canadian government.

[2] Includes countries with exports less than or equal to 50,000 short tons in 1992.

[3] The average prices presented in this table, with the exception of U.S. Total, are considered to be representative prices for coal exports and fall within the range of $28 to $50 per short ton, inclusively.

[4] U.S. Total is the average price of all coal exports.

* Data round to zero.

Note: Average price is based on the free alongside ship (f.a.s.) value.

Source: U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545."

Table 102. Average Real Price of U.S. Metallurgical Coal Exports by Destination, 1984, 1989-1993
(Real Dollars per Short Ton)

Continent and Country of Destination	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
North America Total	**$29.01**	**$30.08**	**$32.75**	**$33.48**	**$42.43**	**$50.08**	**-3.5**	**-9.1**	**-5.9**
Canada[1]	28.71	30.01	32.65	33.48	42.45	34.43	-4.3	-9.3	-2.0
Dominican Republic	-	-	-	-	33.53	-	-	-100.0	-
Mexico	36.36	39.57	41.80	38.54	-	50.79	-8.1	-	-3.6
Other[2]	-	-	-	44.07	-	54.50	-	-	-100.0
South America Total	**35.36**	**37.69**	**39.46**	**41.34**	**41.97**	**53.86**	**-6.2**	**-4.2**	**-4.6**
Argentina	35.13	37.53	38.76	40.43	41.05	53.83	-6.4	-3.8	-4.6
Brazil	35.38	37.70	39.49	41.44	42.07	53.45	-6.1	-4.2	-4.5
Other[2]	-	39.14	42.29	43.11	45.01	54.83	-100.0	-100.0	-100.0
Europe Total	**36.69**	**38.46**	**39.85**	**41.74**	**41.64**	**52.50**	**-4.6**	**-3.1**	**-3.9**
Belgium & Luxembourg	36.94	38.83	40.38	42.33	41.54	51.07	-4.9	-2.9	-3.5
Bulgaria	33.81	35.75	36.17	43.64	45.99	-	-5.4	-7.4	-
Denmark	29.22	-	24.95	-	32.23	-	-	-2.4	-
Finland	31.89	33.70	39.26	39.47	39.09	-	-5.4	-5.0	-
France	36.37	36.66	37.35	39.98	40.06	52.17	-.8	-2.4	-3.9
Germany	37.18	37.81	41.25	40.32	42.14	-	-1.7	-3.1	-
Ireland	-	-	-	-	33.37	-	-	-100.0	-
Italy	36.98	39.17	41.02	42.10	42.59	52.74	-5.6	-3.5	-3.9
Netherlands	37.17	38.81	40.02	41.59	41.32	50.71	-4.2	-2.6	-3.4
Norway	-	39.60	-	-	-	-	-100.0	-	-
Portugal	30.94	36.61	40.87	40.41	39.91	54.63	-15.5	-6.2	-6.1
Romania	29.20	34.37	39.48	41.95	41.85	51.85	-15.0	-8.6	-6.2
Spain	38.22	40.03	41.16	42.58	43.11	53.60	-4.5	-3.0	-3.7
Sweden	37.01	38.54	40.58	42.90	43.17	54.03	-4.0	-3.8	-4.1
Turkey	34.29	37.60	39.82	40.74	39.95	52.21	-8.8	-3.8	-4.6
United Kingdom	37.55	39.41	41.17	42.80	42.80	53.85	-4.7	-3.2	-3.9
Yugoslavia	38.90	37.19	39.60	40.70	40.80	53.94	4.6	-1.2	-3.6
Other[2]	-	30.55	37.66	42.41	40.49	47.79	-100.0	-100.0	-100.0
Asia Total	**35.46**	**37.48**	**39.08**	**40.76**	**40.89**	**53.20**	**-5.4**	**-3.5**	**-4.4**
China (Taiwan)	36.12	37.68	39.76	41.90	41.94	54.17	-4.1	-3.7	-4.4
Hong Kong	36.34	-	-	-	-	-	-	-	-
Israel	-	33.14	35.84	38.51	36.79	47.35	-100.0	-100.0	-100.0
Japan	35.05	37.14	38.67	40.25	40.39	54.06	-5.6	-3.5	-4.7
Korea, Republic of	36.77	38.92	40.39	42.42	42.61	52.99	-5.5	-3.6	-4.0
Other[2]	-	-	-	-	-	54.95	-	-	-100.0
Africa Total	**36.44**	**38.23**	**38.26**	**41.19**	**41.99**	**48.37**	**-4.7**	**-3.5**	**-3.1**
Algeria	35.68	38.28	39.51	42.07	42.42	54.51	-6.8	-4.2	-4.6
Egypt	36.12	38.06	38.82	40.58	42.02	47.41	-5.1	-3.7	-3.0
Morocco	-	28.26	29.34	-	30.52	-	-100.0	-100.0	-
South Africa, Rep of	37.74	39.46	41.56	-	-	-	-4.3	-	-
Other[2]	32.64	-	-	-	-	-	-	-	-
Total[3]	**35.52**	**37.46**	**39.14**	**40.85**	**41.58**	**52.55**	**-5.2**	**-3.9**	**-4.3**
U.S. Total[4]	**35.51**	**37.50**	**39.21**	**41.05**	**41.65**	**57.60**	**-5.3**	**-3.9**	**-5.2**

[1] Based on the U.S. - Canada Free Trade Agreement, as of January 1990, the U.S. Department of Commerce began reporting statistics on U.S. exports to Canada based on information on imports provided monthly by the Canadian government.
[2] Includes countries with exports less than or equal to 50,000 short tons in 1992.
[3] The average prices presented in this table, with the exception of U.S. Total, are considered to be representative prices for coal exports and fall within the range of $28 to $50 (nominal) per short ton, inclusively.
[4] U.S. Total is the average price of all coal exports.
Notes: Real prices are in 1987 dollars, calculated using implicit Gross Domestic Product price deflators. See Appendix D, Table D3. Average prices are based on the free alongside ship (f.a.s.) value.
Source: U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545."

Table 103. Average Price of U.S. Steam Coal Exports by Destination, 1984, 1989-1993

(Nominal Dollars per Short Ton)

Continent and Country of Destination	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
North America Total	**$31.85**	**$31.42**	**$30.49**	**$30.49**	**$39.50**	**$49.29**	**1.4**	**-5.2**	**-4.7**
Canada[1]	31.66	31.35	30.28	30.30	39.55	49.33	1.0	-5.4	-4.8
Dominican Republic	36.64	36.28	36.80	36.41	36.38	-	1.0	.2	-
Mexico	40.40	38.19	39.16	37.46	41.79	40.39	5.8	-.8	*
Other[2]	30.77	39.26	33.46	30.73	31.15	29.08	-21.6	-.3	.6
South America Total	**40.05**	**42.38**	**39.13**	**37.16**	**30.27**	**44.53**	**-5.5**	**7.2**	**-1.2**
Argentina	37.81	38.57	35.95	-	34.99	47.79	-2.0	2.0	-2.6
Brazil	40.61	42.95	43.64	42.44	-	49.40	-5.4	-	-2.1
Other[2]	39.46	36.96	36.32	35.83	30.27	35.25	6.8	6.8	1.3
Europe Total	**37.47**	**36.99**	**37.74**	**38.55**	**36.78**	**41.16**	**1.3**	**.5**	**-1.0**
Belgium & Luxembourg	34.09	36.35	37.08	37.64	33.58	41.76	-6.2	.4	-2.2
Bulgaria	41.51	-	-	48.99	48.99	-	-	-4.0	-
Denmark	34.34	32.69	33.14	34.37	33.20	40.88	5.1	.8	-1.9
Finland	40.85	-	40.82	-	45.02	-	-	-2.4	-
France	31.83	33.64	33.93	37.07	34.76	45.09	-5.4	-2.2	-3.8
Germany	34.19	35.82	34.95	35.27	35.68	48.86	-4.5	-1.1	-3.9
Ireland	35.84	36.81	39.53	38.54	37.61	44.70	-2.6	-1.2	-2.4
Italy	40.26	41.32	41.71	40.76	39.82	37.72	-2.6	.3	.7
Netherlands	40.21	39.24	39.59	39.14	36.52	44.71	2.5	2.4	-1.2
Norway	-	-	32.11	-	39.88	-	-	-100.0	-
Portugal	37.62	40.38	40.52	39.96	39.22	-	-6.8	-1.0	-
Romania	36.29	-	42.64	-	38.78	-	-	-1.6	-
Spain	39.22	38.47	34.32	34.92	34.13	38.26	1.9	3.5	.3
Sweden	-	34.53	41.64	35.00	39.64	45.05	-100.0	-100.0	-100.0
Turkey	40.84	40.72	46.38	39.30	39.90	47.87	.3	.6	-1.8
United Kingdom	40.87	38.96	39.69	42.67	34.87	49.51	4.9	4.0	-2.1
Yugoslavia	29.03	-	40.97	-	35.00	-	-	-4.6	-
Other[2]	40.67	42.07	40.79	39.95	37.06	34.45	-3.3	2.3	1.8
Asia Total	**36.52**	**38.27**	**39.18**	**38.09**	**37.34**	**41.53**	**-4.6**	**-.5**	**-1.4**
China (Mainland)	-	35.70	-	-	-	-	-100.0	-	-
China (Taiwan)	39.01	40.63	41.16	37.81	36.12	41.97	-4.0	1.9	-.8
Hong Kong	-	37.55	38.58	38.93	-	-	-100.0	-	-
Israel	34.79	38.89	39.41	39.02	38.84	43.09	-10.5	-2.7	-2.3
Japan	35.45	35.98	36.05	37.80	38.86	42.93	-1.5	-2.3	-2.1
Korea, Republic of	34.34	37.24	39.97	39.63	37.98	33.94	-7.8	-2.5	.1
Other[2]	37.31	38.71	40.44	38.02	37.27	39.96	-3.6	*	-.8
Oceania & Australia Total	**34.46**	**34.50**	**-**	**36.60**	**34.98**	**40.00**	**-.1**	**-.4**	**-1.6**
Africa Total	**33.86**	**33.78**	**33.56**	**31.34**	**30.90**	**-**	**.2**	**2.3**	**-**
Egypt	40.88	39.92	40.81	35.91	-	-	2.4	-	-
Morocco	33.86	33.77	33.53	31.34	30.90	-	.2	2.3	-
Other[2]	-	-	40.81	-	39.92	-	-	-100.0	-
Total[3]	**36.10**	**35.86**	**36.86**	**36.28**	**37.35**	**45.69**	**.7**	**-.8**	**-2.6**
U.S. Total[4]	**36.03**	**35.73**	**36.91**	**36.81**	**37.64**	**46.77**	**.8**	**-1.1**	**-2.8**

[1] Based on the U.S. - Canada Free Trade Agreement, as of January 1990, the U.S. Department of Commerce began reporting statistics on U.S. exports to Canada based on information on imports provided monthly by the Canadian government.

[2] Includes countries with exports less than or equal to 50,000 short tons in 1992.

[3] The average prices presented in this table, with the exception of U.S. Total, are considered to be representative prices for coal exports and fall within the range of $28 to $50 per short ton, inclusively.

[4] U.S. Total is the average price of all coal exports.

* Data round to zero.

Notes: Average price is based on the free alongside ship (f.a.s.) value. Steam coal includes bituminous, subbituminous, lignite, and anthracite.

Source: U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545."

Table 104. Average Real Price of U.S. Steam Coal Exports by Destination, 1984, 1989-1993
(Real Dollars per Short Ton)

Continent and Country of Destination	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change 1989-1993	Average Annual Percent Change 1984-1993
North America Total	**$25.64**	**$25.94**	**$25.91**	**$26.91**	**$36.41**	**$54.17**	**-1.1**	**-8.4**	**-8.0**
Canada[1]	25.49	25.89	25.73	26.75	36.46	54.21	-1.5	-8.5	-8.0
Dominican Republic	29.50	29.96	31.27	32.13	33.53	-	-1.5	-3.1	-
Mexico	32.53	31.54	33.27	33.06	38.51	44.38	3.1	-4.1	-3.4
Other[2]	24.77	32.42	28.43	27.12	28.71	31.96	-23.6	-3.6	-2.8
South America Total	**32.25**	**35.00**	**33.25**	**32.80**	**27.90**	**48.93**	**-7.8**	**3.7**	**-4.5**
Argentina	30.45	31.85	30.54	-	32.25	52.51	-4.4	-1.4	-5.9
Brazil	32.70	35.47	37.08	37.46	-	54.29	-7.8	-	-5.5
Other[2]	31.77	30.52	30.86	31.62	27.90	38.74	4.1	3.3	-2.2
Europe Total	**30.17**	**30.54**	**32.06**	**34.02**	**33.90**	**45.23**	**-1.2**	**-2.9**	**-4.4**
Belgium & Luxembourg	27.45	30.01	31.50	33.22	30.95	45.88	-8.5	-2.9	-5.5
Bulgaria	33.42	-	-	43.24	45.15	-	-	-7.2	-
Denmark	27.65	26.99	28.16	30.34	30.60	44.92	2.4	-2.5	-5.2
Finland	32.89	-	34.68	-	41.49	-	-	-5.6	-
France	25.63	27.78	28.83	32.72	32.04	49.55	-7.8	-5.4	-7.1
Germany	27.53	29.58	29.69	31.13	32.89	53.69	-6.9	-4.3	-7.1
Ireland	28.86	30.39	33.59	34.02	34.67	49.12	-5.0	-4.5	-5.7
Italy	32.41	34.12	35.44	35.97	36.70	41.45	-5.0	-3.0	-2.7
Netherlands	32.38	32.40	33.63	34.54	33.66	49.13	-.1	-1.0	-4.5
Norway	-	-	27.29	-	36.76	-	-	-100.0	-
Portugal	30.29	33.34	34.43	35.27	36.15	-	-9.1	-4.3	-
Romania	29.22	-	36.23	-	35.74	-	-	-4.9	-
Spain	31.58	31.77	29.16	30.82	31.46	42.05	-.6	.1	-3.1
Sweden	-	28.52	35.38	30.89	36.53	49.51	-100.0	-100.0	-100.0
Turkey	32.88	33.63	39.41	34.69	36.78	52.61	-2.2	-2.8	-5.1
United Kingdom	32.90	32.17	33.72	37.66	32.14	54.41	2.3	.6	-5.4
Yugoslavia	23.37	-	34.81	-	32.26	-	-	-7.7	-
Other[2]	32.75	34.74	34.66	35.26	34.16	37.86	-5.7	-1.0	-1.6
Asia Total	**29.40**	**31.60**	**33.28**	**33.62**	**34.42**	**45.64**	**-7.0**	**-3.9**	**-4.8**
China (Mainland)	-	29.48	-	-	-	-	-100.0	-	-
China (Taiwan)	31.41	33.55	34.97	33.37	33.29	46.12	-6.4	-1.4	-4.2
Hong Kong	-	31.01	32.78	34.36	-	-	-100.0	-	-
Israel	28.01	32.12	33.48	34.44	35.80	47.35	-12.8	-5.9	-5.7
Japan	28.54	29.71	30.63	33.36	35.81	47.17	-3.9	-5.5	-5.4
Korea, Republic of	27.65	30.75	33.96	34.98	35.00	37.30	-10.1	-5.7	-3.3
Other[2]	30.04	31.97	34.36	33.56	34.35	43.92	-6.0	-3.3	-4.1
Oceania & Australia Total	**27.75**	**28.49**	**-**	**32.31**	**32.24**	**43.96**	**-2.6**	**-3.7**	**-5.0**
Africa Total	**27.27**	**27.89**	**28.51**	**27.66**	**28.48**	**-**	**-2.3**	**-1.1**	**-**
Egypt	32.92	32.96	34.68	31.69	-	-	-.1	-	-
Morocco	27.26	27.89	28.49	27.66	28.48	-	-2.3	-1.1	-
Other[2]	-	-	34.67	-	36.79	-	-	-100.0	-
Total[3]	**29.07**	**29.61**	**31.32**	**32.02**	**34.43**	**50.21**	**-1.8**	**-4.1**	**-5.9**
U.S. Total[4]	**29.01**	**29.50**	**31.36**	**32.49**	**34.69**	**51.39**	**-1.6**	**-4.4**	**-6.1**

[1] Based on the U.S. - Canada Free Trade Agreement, as of January 1990, the U.S. Department of Commerce began reporting statistics on U.S. exports to Canada based on information on imports provided monthly by the Canadian government.
[2] Includes countries with exports less than or equal to 50,000 short tons in 1992.
[3] The average prices presented in this table, with the exception of U.S. Total, are considered to be representative prices for coal exports and fall within the range of $28 to $50 (nominal) per short ton, inclusively.
[4] U.S. Total is the average price of all coal exports.

Notes: Real prices are in 1987 dollars, calculated using implicit Gross Domestic Product price deflators. See Appendix D, Table D3. Average prices are based on the free alongside ship (f.a.s.) value. Steam coal includes bituminous, subbituminous, lignite, and anthracite.

Source: U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545."

Table 105. Estimate of Recoverable Reserves of Coal by Sulfur Range, State, and Mine Type

(Million Short Tons Remaining as of January 1, 1992)

State and Type of Mining	Sulfur Content (pounds of sulfur per million Btu)						Total
	<= 0.40	0.41 - 0.60	0.61 - 0.83	0.84 - 1.67	1.68 - 2.50	> 2.50	
Alabama	-	428	386	2,075	200	-	3,089
Surface	-	259	273	1,685	139	-	2,356
Underground	-	169	112	391	61	-	733
Alaska, Southern	2,458	95	-	-	-	-	2,552
Surface	390	42	-	-	-	-	432
Underground	2,067	53	-	-	-	-	2,120
Alaska, Northern	-	-	-	-	-	-	-
Surface	-	-	-	-	-	-	-
Underground	-	-	-	-	-	-	-
Arizona	-	158	-	-	-	-	158
Surface	-	106	-	-	-	-	106
Underground	-	51	-	-	-	-	51
Arkansas[1]	-	8	163	45	6	7	228
Surface	-	2	73	24	1	1	101
Underground	-	7	90	20	5	6	127
Colorado[1]	3,711	2,338	3,688	329	97	-	10,163
Surface	291	127	3,326	41	14	-	3,799
Underground	3,420	2,212	363	288	83	-	6,365
Georgia	1	1	*	*	*	*	2
Surface	*	*	*	*	*	*	1
Underground	*	*	*	*	*	*	1
Idaho	*	1	*	*	-	-	2
Surface	-	-	-	-	-	-	-
Underground	*	1	*	*	-	-	2
Illinois	-	-	888	2,784	5,483	20,936	30,091
Surface	-	-	37	195	1,693	2,746	4,672
Underground	-	-	851	2,589	3,789	18,190	25,419
Indiana	-	318	188	685	1,141	2,065	4,396
Surface	-	69	30	117	163	335	714
Underground	-	249	158	568	978	1,730	3,682
Iowa	-	-	-	-	408	720	1,128
Surface	-	-	-	-	320	-	320
Underground	-	-	-	-	87	720	807
Kansas	-	-	-	-	226	458	684
Surface	-	-	-	-	226	458	684
Underground	-	-	-	-	-	-	-
Kentucky, Eastern	222	2,052	1,509	877	218	113	4,991
Surface	37	330	299	227	45	23	961
Underground	185	1,722	1,210	650	173	89	4,030
Kentucky, Western	-	-	-	159	2,753	6,468	9,380
Surface	-	-	-	127	941	1,297	2,365
Underground	-	-	-	32	1,812	5,171	7,015
Louisiana	-	-	-	359	-	-	359
Surface	-	-	-	359	-	-	359
Underground	-	-	-	-	-	-	-
Maryland	-	32	59	121	210	-	422
Surface	-	3	8	13	34	-	58
Underground	-	29	51	108	177	-	364
Michigan	-	-	8	23	16	11	59
Surface	-	-	1	2	1	*	3
Underground	-	-	8	21	16	11	55
Missouri	-	-	-	-	170	3,685	3,855
Surface	-	-	-	-	150	3,015	3,166
Underground	-	-	-	-	20	670	689
Montana	33,650	16,846	16,798	4,820	2,023	1,372	75,508
Surface	18,086	7,013	9,521	2,449	1,610	906	39,585
Underground	15,563	9,833	7,277	2,371	412	466	35,923
New Mexico[1]	-	802	934	696	64	-	2,496
Surface	-	236	716	470	-	-	1,421
Underground	-	565	219	226	64	-	1,074
North Carolina	-	-	*	2	2	1	5
Surface	-	-	-	-	-	-	-
Underground	-	-	*	2	2	1	5
North Dakota	441	760	1,393	3,481	868	374	7,316
Surface	441	760	1,393	3,481	868	374	7,316
Underground	-	-	-	-	-	-	-
Ohio	82	170	338	1,056	2,653	7,494	11,794
Surface	20	97	170	420	873	2,330	3,910
Underground	62	73	168	636	1,780	5,164	7,883

See footnotes at end of table.

Coal Quality and Emissions

Estimates of recoverable U.S. coal reserves as of January 1, 1992, were 265 billion short tons (Table 105). Low-sulfur coal (0 to 0.60 pounds of sulfur per million Btu), medium-sulfur coal (0.61 to 1.67 pounds of sulfur per million Btu), and high-sulfur coal (greater than 1.67 pounds of sulfur per million Btu) accounted for 38 percent, 32 percent, and 30 percent of total recoverable reserves, respectively.

Nationally, the Btu, sulfur, and ash content of coal delivered to electric utility plants has declined over the last 10 years because (1) the use of low-sulfur coal increased, (2) coal cleaning increased, and (3) more advanced anti-pollution equipment and more efficient clean-burning technologies were introduced (Table 106).

The average Btu per pound of coal delivered to electric utilities in 1993 was 10,315, down from 10,395 in 1992. An increase in low-Btu-coal receipts from the Powder River Basin (PRB) and a decrease in coal receipts from the Appalachia and Interior coal-producing regions led to this decrease.

The average sulfur content (measured as percent sulfur by weight) of coal received at electric utilities in 1993 was 1.18 percent, down from 1.29 percent in 1992. An increase in receipts of low-sulfur coal from the PRB contributed to this decrease. In comparison, the quality of coal received at manufacturing and coke plants in 1993 showed an increase in the sulfur content (Table 107).

Nationally, over the last 5 years, sulfur dioxide emissions have decreased at an average annual rate of 2 percent. Carbon dioxide emissions have increased at an average annual rate of 1 percent, and nitrogen oxides emissions have remained about the same. These figures might seem by themselves to show only a slight gain in environmental quality over the last 5 years. However, when they are considered in the context of coal consumption at electric utility plants rising 47 million short tons (6 percent) over the same period, they do show a significant downward trend in emissions from coal-fired power plants. Table 109 presents a comparison of emissions from different types of fossil-fuel electric utility plants.

Table 105. Estimate of Recoverable Reserves of Coal by Sulfur Range, State, and Mine Type (Continued)

(Million Short Tons Remaining as of January 1, 1992)

State and Type of Mining	Sulfur Content (pounds of sulfur per million Btu)						Total
	<= 0.40	0.41 - 0.60	0.61 - 0.83	0.84 - 1.67	1.68 - 2.50	> 2.50	
Oklahoma	-	222	123	179	114	183	821
Surface	-	67	25	34	34	83	244
Underground	-	154	98	145	80	100	577
Oregon	4	1	3	-	1	1	9
Surface	1	*	1	-	*	*	2
Underground	3	1	2	-	1	1	7
Pennsylvania, Anthracite	181	468	96	17	2	*	764
Surface	86	263	62	11	1	*	423
Underground	95	205	35	6	1	-	341
Pennsylvania, Bituminous	-	287	820	5,076	4,212	1,542	11,936
Surface	-	24	69	327	242	144	806
Underground	-	263	751	4,750	3,969	1,398	11,131
South Dakota	-	-	104	1	172	-	277
Surface	-	-	104	1	172	-	277
Underground	-	-	-	-	-	-	-
Tennessee	-	108	63	228	101	-	500
Surface	-	39	24	95	41	-	198
Underground	-	69	39	134	60	-	302
Texas	-	-	600	5,768	3,462	382	10,212
Surface	-	-	600	5,768	3,462	382	10,212
Underground	-	-	-	-	-	-	-
Utah	387	694	566	883	229	307	3,066
Surface	8	32	19	85	35	34	212
Underground	379	661	548	798	194	274	2,854
Virginia[1]	214	691	437	145	-	-	1,487
Surface	45	206	169	48	-	-	468
Underground	169	485	269	97	-	-	1,020
Washington	63	92	86	502	-	-	743
Surface	-	-	-	68	-	-	68
Underground	63	92	86	434	-	-	675
West Virginia	671	6,684	2,810	4,122	2,554	3,256	20,097
Surface	121	1,526	590	462	183	110	2,992
Underground	551	5,157	2,220	3,660	2,371	3,147	17,105
Wyoming	6,941	17,892	10,327	7,487	1,180	2,269	46,096
Surface	4,588	9,126	4,273	2,362	539	2,236	23,125
Underground	2,353	8,766	6,055	5,125	641	33	22,972
U.S. Total	49,025	51,146	42,385	41,920	28,562	51,644	264,682
Surface	24,115	20,328	21,778	18,871	11,788	14,476	111,356
Underground	24,909	30,818	20,608	23,049	16,774	37,169	153,326

[1] Data include minor amounts of anthracite (all occurring in heat content categories greater than 23.00 million short tons) as follows: Arkansas 52.2, Colorado 13.4, New Mexico 1.2, and Virginia 70.5, expressed in million short tons.

* Data round to zero.

Note: Totals may not equal sum of components due to independent rounding.

Source: Energy Information Administration, *U.S. Coal Reserves: An Update by Heat and Sulfur Content* (DOE/EIA-0529(92)).

Table 106. Average Quality of Coal Received at Electric Utilities by Census Division and State, 1984, 1989-1993

Census Division and State and Quality[1]	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
New England									
Btu	13,033	13,120	13,176	13,136	13,109	13,301	-1	*	*
Sulfur	1.11	1.18	1.17	1.24	1.26	1.43	-5.6	-3.2	-2.8
Ash	7.62	7.66	7.52	7.43	7.59	7.39	-.5	.1	.3
Connecticut									
Btu	13,144	13,167	13,238	13,233	13,308	13,136	*	*	*
Sulfur	.55	.55	.55	.54	.53	.55	*	.9	.2
Ash	6.95	6.25	6.07	6.36	6.13	6.65	11.1	3.2	.5
Massachusetts									
Btu	12,951	13,070	13,141	13,062	13,009	13,233	-1	*	*
Sulfur	1.03	1.17	1.22	1.23	1.23	1.12	-11.6	-4.3	-.9
Ash	8.10	8.26	8.14	7.89	8.07	7.32	-1.8	.1	1.1
New Hampshire									
Btu	13,179	13,260	13,247	13,303	13,359	13,541	-1	*	*
Sulfur	1.62	1.61	1.43	1.81	2.00	2.53	1.1	-5.0	-4.8
Ash	6.75	6.52	6.43	6.75	6.80	7.71	3.5	-.2	-1.5
Middle Atlantic									
Btu	12,556	12,555	12,455	12,409	12,432	12,357	*	*	*
Sulfur	1.96	1.99	2.04	2.05	1.95	2.01	-1.9	.1	-.3
Ash	11.29	11.45	12.28	12.38	12.23	12.91	-1.4	-2.0	-1.5
New Jersey									
Btu	13,397	13,465	13,402	13,429	13,319	13,212	-1	*	*
Sulfur	1.29	1.29	1.27	1.16	1.18	1.48	-.1	2.2	-1.5
Ash	7.21	6.84	7.31	7.36	7.36	8.16	5.4	-.5	-1.4
New York									
Btu	12,914	12,978	12,923	12,846	12,824	12,553	*	*	*
Sulfur	1.55	1.65	1.77	1.84	1.69	1.96	-6.3	-2.2	-2.6
Ash	8.15	8.02	8.88	9.13	9.06	11.00	1.6	-2.6	-3.3
Pennsylvania									
Btu	12,443	12,399	12,302	12,241	12,273	12,262	*	*	*
Sulfur	2.07	2.12	2.14	2.16	2.06	2.05	-2.2	.1	.1
Ash	12.11	12.56	13.30	13.46	13.34	13.59	-3.5	-2.4	-1.3
East North Central									
Btu	10,885	11,005	10,971	10,988	11,044	11,093	-1	*	*
Sulfur	1.61	1.77	1.82	1.82	1.83	2.10	-9.2	-3.2	-2.9
Ash	8.41	8.72	8.75	8.93	9.03	9.75	-3.6	-1.8	-1.6
Illinois									
Btu	10,362	10,666	10,721	10,789	10,705	10,594	-3	-1	*
Sulfur	1.63	1.91	2.00	2.07	2.01	2.02	-14.5	-5.1	-2.3
Ash	7.51	8.19	8.54	8.81	8.65	8.85	-8.3	-3.5	-1.8
Indiana									
Btu	10,539	10,628	10,570	10,562	10,698	10,787	-1	*	*
Sulfur	1.78	1.88	1.98	2.06	2.22	2.39	-5.2	-5.3	-3.3
Ash	8.23	8.43	8.45	8.58	8.94	9.84	-2.4	-2.0	-2.0
Michigan									
Btu	10,853	10,995	11,052	11,131	11,278	11,670	-1	-1	-1
Sulfur	.68	.69	.70	.70	.67	1.20	-1.9	.1	-6.2
Ash	6.61	6.76	6.58	6.79	6.89	8.42	-2.2	-1.0	-2.6
Ohio									
Btu	12,049	11,983	11,945	11,882	11,835	11,760	1	*	*
Sulfur	2.39	2.57	2.63	2.44	2.46	2.57	-6.7	-.6	-.8
Ash	11.01	11.24	11.39	11.47	11.49	11.62	-2.0	-1.0	-.6
Wisconsin									
Btu	9,490	9,725	9,643	9,642	9,705	9,954	-2	-1	-1
Sulfur	.49	.71	.81	.81	.86	1.51	-30.8	-12.9	-11.7
Ash	6.11	6.18	6.20	6.33	6.38	7.78	-1.1	-1.1	-2.6
West North Central									
Btu	8,366	8,602	8,665	8,701	8,676	8,912	-3	-1	-1
Sulfur	.63	.91	.92	.96	1.00	1.29	-31.0	-10.9	-7.7
Ash	6.74	7.18	7.23	7.41	7.52	8.62	-6.1	-2.7	-2.7
Iowa									
Btu	8,660	8,867	8,890	8,892	8,940	8,972	-2	-1	*
Sulfur	.52	.67	.67	.70	.78	.83	-23.0	-9.6	-5.1
Ash	5.47	5.78	5.99	5.98	5.93	6.71	-5.4	-2.0	-2.2

See footnotes at end of table.

Table 106. Average Quality of Coal Received at Electric Utilities by Census Division and State, 1984, 1989-1993 (Continued)

Census Division and State and Quality[1]	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Kansas									
Btu	8,654	8,900	8,998	8,948	8,876	8,790	-3	-1	*
Sulfur	.43	.49	.59	.58	.64	.86	-12.4	-9.6	-7.4
Ash	5.19	5.74	5.63	5.81	6.00	7.26	-9.5	-3.6	-3.7
Minnesota									
Btu	8,844	8,838	8,802	8,788	8,767	8,677	*	*	*
Sulfur	.44	.45	.48	.51	.51	.82	-3.1	-4.0	-6.8
Ash	6.40	6.57	7.08	7.58	7.09	9.22	-2.6	-2.5	-4.0
Missouri									
Btu	9,860	10,321	10,298	10,400	10,368	10,707	-4	-1	-1
Sulfur	1.02	1.80	1.84	2.01	2.09	2.56	-43.4	-16.5	-9.7
Ash	6.54	7.71	8.00	8.33	8.92	10.50	-15.1	-7.4	-5.1
Nebraska									
Btu	8,561	8,553	8,542	8,561	8,664	8,898	*	*	*
Sulfur	.35	.37	.35	.35	.36	.39	-3.6	-.4	-1.1
Ash	5.11	5.00	4.97	5.05	5.15	5.49	2.3	-.1	-.8
North Dakota									
Btu	6,570	6,558	6,606	6,636	6,580	6,522	*	*	*
Sulfur	.74	.87	.83	.81	.73	.68	-15.1	.2	1.0
Ash	9.47	9.29	9.17	9.26	9.16	9.12	1.9	.9	.4
South Dakota									
Btu	6,057	6,034	6,025	6,096	6,137	6,102	*	*	*
Sulfur	.90	.92	.87	.90	.89	.85	-1.4	.4	.7
Ash	8.82	9.34	9.04	8.44	7.74	7.97	-5.5	3.3	1.1
South Atlantic									
Btu	12,465	12,461	12,425	12,395	12,422	12,360	*	*	*
Sulfur	1.39	1.52	1.51	1.52	1.50	1.53	-8.3	-1.8	-1.0
Ash	9.81	9.95	9.94	9.99	10.08	10.60	-1.4	-.7	-.9
Delaware									
Btu	13,027	13,064	13,053	13,035	12,943	12,987	*	*	*
Sulfur	.94	1.03	.96	.97	1.04	.98	-8.8	-2.6	-.5
Ash	9.08	8.83	8.66	8.71	8.99	8.60	2.7	.2	.6
Florida									
Btu	12,332	12,370	12,351	12,364	12,383	12,228	*	*	*
Sulfur	1.57	1.68	1.73	1.73	1.75	1.84	-6.9	-2.8	-1.8
Ash	8.04	8.33	8.42	8.44	8.58	9.53	-3.4	-1.6	-1.9
Georgia									
Btu	12,148	12,039	11,936	11,893	12,100	12,125	1	*	*
Sulfur	1.37	1.68	1.63	1.63	1.68	1.80	-18.3	-4.8	-2.9
Ash	9.94	10.29	10.00	9.81	10.13	10.03	-3.4	-.5	-.1
Maryland									
Btu	12,752	12,753	12,796	12,734	12,698	12,618	*	*	*
Sulfur	1.31	1.36	1.34	1.44	1.43	1.54	-3.9	-2.3	-1.8
Ash	10.02	10.47	10.46	10.48	10.46	11.25	-4.3	-1.1	-1.3
North Carolina									
Btu	12,465	12,456	12,506	12,544	12,531	12,477	*	*	*
Sulfur	.96	.92	.94	.96	.92	.89	4.6	1.2	.8
Ash	10.12	10.17	9.96	9.89	9.93	10.28	-.5	.5	-.2
South Carolina									
Btu	12,802	12,817	12,724	12,655	12,618	12,529	*	*	*
Sulfur	1.17	1.14	1.19	1.19	1.12	1.26	2.0	1.0	-.8
Ash	8.92	8.77	9.09	9.21	9.16	9.92	1.7	-.6	-1.2
Virginia									
Btu	12,817	12,830	12,768	12,714	12,693	12,621	*	*	*
Sulfur	1.00	1.03	1.00	.96	.94	.96	-3.0	1.5	.4
Ash	9.60	9.48	9.79	9.84	9.44	9.89	1.3	.4	-.3
West Virginia									
Btu	12,489	12,524	12,505	12,452	12,395	12,334	*	*	*
Sulfur	1.94	2.05	1.92	1.89	1.85	1.79	-5.4	1.2	.9
Ash	11.61	11.32	11.41	11.55	11.71	12.11	2.6	-.2	-.5
East South Central									
Btu	11,988	11,933	11,924	11,855	11,800	11,735	*	*	*
Sulfur	1.91	1.99	2.01	2.10	2.18	2.05	-4.1	-3.3	-.8
Ash	10.92	10.70	10.83	11.12	11.36	11.48	2.0	-1.0	-.5
Alabama									
Btu	12,092	12,061	12,107	12,094	12,023	12,030	*	*	*
Sulfur	1.33	1.43	1.40	1.51	1.64	1.51	-7.3	-5.2	-1.4
Ash	11.79	11.80	11.77	11.74	11.87	12.04	-.1	-.2	-.2

See footnotes at end of table.

Table 106. Average Quality of Coal Received at Electric Utilities by Census Division and State, 1984, 1989-1993 (Continued)

Census Division and State and Quality[1]	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Kentucky									
Btu	11,697	11,620	11,552	11,558	11,493	11,436	1	*	*
Sulfur	2.39	2.44	2.53	2.59	2.74	2.56	-2.1	-3.4	-0.8
Ash	11.64	11.60	11.80	12.12	12.47	12.18	.3	-1.7	-.5
Mississippi									
Btu	12,338	12,507	12,555	12,543	12,654	12,115	-1	-1	*
Sulfur	1.41	1.69	1.56	1.64	1.56	1.44	-16.6	-2.5	-.3
Ash	8.52	8.31	8.09	7.84	7.77	9.32	2.5	2.3	-1.0
Tennessee									
Btu	12,268	12,182	12,169	11,966	11,895	11,805	1	1	*
Sulfur	1.92	2.02	2.04	2.00	1.99	1.95	-5.0	-.9	-.2
Ash	9.14	8.31	8.59	9.46	9.56	10.52	10.0	-1.1	-1.5
West South Central									
Btu	7,646	7,648	7,662	7,701	7,692	7,727	*	*	*
Sulfur	.64	.65	.65	.65	.62	.53	-1.4	.8	2.1
Ash	10.06	10.25	10.42	10.04	10.01	9.78	-1.9	.1	.3
Arkansas									
Btu	8,665	8,724	8,734	8,740	8,720	8,592	-1	*	*
Sulfur	.32	.32	.32	.34	.34	.37	.4	-1.2	-1.5
Ash	5.06	5.12	5.14	5.26	5.26	5.67	-1.2	-.9	-1.2
Louisiana									
Btu	8,092	8,122	8,223	8,194	8,187	8,508	*	*	-1
Sulfur	.52	.50	.49	.49	.48	.45	3.8	2.2	1.6
Ash	7.13	7.20	7.24	7.47	7.27	5.97	-1.0	-.5	2.0
Oklahoma									
Btu	8,621	8,700	8,792	8,894	8,825	8,603	-1	-1	*
Sulfur	.37	.42	.44	.47	.45	.42	-11.7	-4.5	-1.2
Ash	5.21	5.24	5.27	5.50	5.43	5.36	-.7	-1.0	-.3
Texas									
Btu	7,284	7,234	7,225	7,291	7,287	7,331	1	*	*
Sulfur	.75	.76	.75	.74	.71	.59	-1.9	1.2	2.7
Ash	11.95	12.33	12.56	11.80	11.84	11.72	-3.1	.2	.2
Mountain									
Btu	9,751	9,722	9,777	9,792	9,771	9,645	*	*	*
Sulfur	.54	.55	.53	.55	.55	.56	-1.6	-.4	-.5
Ash	11.19	11.15	10.90	11.00	11.12	11.32	.4	.2	-.1
Arizona									
Btu	10,271	10,303	10,356	10,482	10,596	10,595	*	-1	*
Sulfur	.49	.51	.51	.49	.49	.49	-3.1	.2	*
Ash	12.08	12.19	12.49	11.95	11.22	11.34	-.9	1.8	.7
Colorado									
Btu	9,888	9,920	9,888	9,808	9,848	9,655	*	*	*
Sulfur	.38	.38	.37	.38	.37	.40	.4	.6	-.5
Ash	6.97	7.01	6.76	6.95	6.93	6.78	-.5	.1	.3
Montana									
Btu	8,496	8,576	8,522	8,564	8,509	8,512	-1	*	*
Sulfur	.65	.66	.65	.63	.66	.73	-1.2	-.3	-1.3
Ash	8.99	8.92	8.81	8.84	9.46	8.95	.8	-1.3	*
Nevada									
Btu	11,012	11,051	11,121	11,122	11,117	11,191	*	*	*
Sulfur	.49	.49	.50	.53	.52	.55	-1.1	-1.7	-1.4
Ash	9.73	9.67	9.80	9.82	9.51	9.60	.6	.6	.1
New Mexico									
Btu	8,992	9,013	9,092	9,117	9,129	9,035	*	*	*
Sulfur	.81	.81	.80	.79	.79	.79	-.1	.5	.2
Ash	22.77	22.49	22.26	21.84	21.43	21.30	1.3	1.5	.7
Utah									
Btu	11,489	11,384	11,469	11,483	11,322	11,427	1	*	*
Sulfur	.48	.47	.46	.49	.49	.52	1.8	-.5	-.9
Ash	10.47	11.24	10.52	10.13	11.59	11.73	-6.8	-2.5	-1.2
Wyoming									
Btu	8,779	8,840	8,756	8,811	8,788	8,646	-1	*	*
Sulfur	.51	.52	.51	.54	.52	.52	-1.4	-.5	-.2
Ash	7.78	7.54	7.64	7.69	7.87	7.78	3.1	-.3	*

See footnotes at end of table.

Table 106. Average Quality of Coal Received at Electric Utilities by Census Division and State, 1984, 1989-1993 (Continued)

Census Division and State and Quality[1]	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Pacific									
Btu	8,283	8,550	8,122	8,169	8,161	8,217	-3	*	*
Sulfur	.63	.59	.57	.64	.66	.78	6.8	-1.1	-2.3
Ash	12.58	11.39	12.22	13.00	13.57	13.66	10.5	-1.9	-.9
California									
Btu	-	-	-	-	-	11,390	-	-	-100
Sulfur	-	-	-	-	-	.40	-	-	-100.0
Ash	-	-	-	-	-	7.94	-	-	-100.0
Oregon									
Btu	8,801	9,642	8,429	8,348	-	8,327	-9	-	1
Sulfur	.38	.40	.32	.31	-	.34	-5.2	-	1.3
Ash	4.98	4.42	4.60	4.57	-	4.80	12.9	-	.4
Washington									
Btu	8,125	8,189	8,014	8,135	8,161	8,100	-1	*	*
Sulfur	.71	.66	.66	.70	.66	.84	8.2	1.8	-1.8
Ash	14.90	13.69	14.88	14.62	13.57	14.72	8.8	2.3	.1
U.S. Total									
Btu	10,315	10,395	10,378	10,465	10,425	10,552	-1	*	*
Sulfur	1.18	1.29	1.30	1.35	1.33	1.47	-8.7	-2.9	-2.4
Ash	9.55	9.71	9.76	9.85	9.93	10.36	-1.6	-.9	-.9

[1] Quality units are: Btu (per pound); Sulfur (percent by weight); and Ash (percent by weight).
* Data round to zero.
Source: Federal Energy Regulatory Commission, FERC Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants."

Table 107. Average Quality of Coal Received at Manufacturing and Coke Plants by Census Division and State, 1992-1993

Census Division and State and Quality[1]	1993	1992	Percent Change 1992-1993
New England			
Btu	13,992	13,136	6.5
Sulfur	.78	.63	24.8
Ash	5.48	5.45	.5
Maine			
Btu	13,062	13,146	-.6
Sulfur	1.29	1.41	-8.2
Ash	7.18	7.13	.7
Massachusetts			
Btu	13,992	13,136	6.5
Sulfur	.78	.63	24.8
Ash	5.48	5.45	.5
Middle Atlantic			
Btu	12,367	12,458	-.7
Sulfur	1.06	1.19	-11.6
Ash	7.37	7.93	-7.1
New Jersey			
Btu	11,685	12,646	-7.6
Sulfur	.83	.84	-1.4
Ash	10.71	10.79	-.7
New York[2]			
Btu	13,044	13,194	-1.1
Sulfur	1.69	1.57	8.2
Ash	7.73	7.50	3.0
Pennsylvania[2]			
Btu	12,117	12,127	-.1
Sulfur	.99	1.12	-11.7
Ash	7.30	7.97	-8.4
East North Central			
Btu	11,192	11,227	-.3
Sulfur	2.37	1.29	83.8
Ash	7.01	7.01	.1
Illinois[2]			
Btu	11,312	9,746	16.1
Sulfur	4.81	1.65	191.4
Ash	7.03	7.52	-6.5
Indiana[2]			
Btu	9,091	11,610	-21.7
Sulfur	1.24	1.27	-2.2
Ash	6.90	6.48	6.5
Michigan[2]			
Btu	12,547	12,773	-1.8
Sulfur	1.05	.72	45.8
Ash	6.98	7.48	-6.6
Ohio[2]			
Btu	12,201	11,005	10.9
Sulfur	1.40	1.26	10.5
Ash	7.10	7.14	-.6
Wisconsin			
Btu	11,745	11,945	-1.7
Sulfur	1.83	1.57	16.4
Ash	7.25	7.08	2.4
West North Central			
Btu	8,589	8,634	-.5
Sulfur	.90	.91	-1.1
Ash	6.46	6.70	-3.7
Iowa			
Btu	10,344	10,420	-.7
Sulfur	1.13	1.15	-1.5
Ash	6.41	6.33	1.2
Kansas			
Btu	12,479	12,803	-2.5
Sulfur	3.14	3.92	-19.9
Ash	11.78	12.72	-7.4

See footnotes at end of table.

Table 107. Average Quality of Coal Received at Manufacturing and Coke Plants by Census Division and State, 1992-1993 (Continued)

Census Division and State and Quality[1]	1993	1992	Percent Change 1992-1993
Minnesota			
Btu	10,003	10,089	-0.8
Sulfur	.51	.55	-6.9
Ash	4.56	5.36	-14.8
Missouri[2]			
Btu	11,527	11,646	-1.0
Sulfur	2.01	2.21	-9.1
Ash	10.11	10.23	-1.2
Nebraska			
Btu	9,979	9,702	2.9
Sulfur	.37	.38	-2.3
Ash	5.20	5.26	-1.1
North Dakota			
Btu	7,172	7,159	.2
Sulfur	.70	.64	8.7
Ash	6.16	6.32	-2.6
South Dakota			
Btu	8,159	9,909	-17.7
Sulfur	.39	.91	-57.0
Ash	5.42	8.25	-34.3
South Atlantic			
Btu	12,669	13,030	-2.8
Sulfur	1.11	.93	20.0
Ash	7.63	7.75	-1.5
Delaware			
Btu	13,087	13,217	-1.0
Sulfur	2.00	1.78	12.3
Ash	9.26	7.45	24.4
Florida			
Btu	12,742	12,892	-1.2
Sulfur	.97	.97	-.7
Ash	9.46	9.48	-.2
Georgia			
Btu	12,870	12,879	-.1
Sulfur	1.30	1.04	24.7
Ash	7.73	8.18	-5.5
Maryland[2]			
Btu	12,422	12,408	.1
Sulfur	1.93	1.97	-2.3
Ash	13.32	13.29	.2
North Carolina			
Btu	13,321	13,383	-.5
Sulfur	.92	.94	-2.9
Ash	6.89	6.86	.5
South Carolina			
Btu	12,955	13,099	-1.1
Sulfur	1.22	1.06	15.8
Ash	8.67	8.52	1.8
Virginia[2]			
Btu	12,069	13,137	-8.1
Sulfur	.98	.75	30.0
Ash	7.29	7.10	2.7
West Virginia[2]			
Btu	12,131	12,854	-5.6
Sulfur	1.06	.81	30.6
Ash	6.32	7.14	-11.5
East South Central			
Btu	11,824	11,655	1.4
Sulfur	.74	.84	-11.9
Ash	4.54	6.70	-32.3
Alabama[2]			
Btu	10,871	9,808	10.8
Sulfur	.71	.79	-10.0
Ash	4.25	6.53	-34.9
Kentucky[2]			
Btu	10,237	13,059	-21.6
Sulfur	.90	.66	34.9
Ash	6.04	6.51	-7.2

See footnotes at end of table.

Table 107. Average Quality of Coal Received at Manufacturing and Coke Plants by Census Division and State, 1992-1993 (Continued)

Census Division and State and Quality[1]	1993	1992	Percent Change 1992-1993
Mississippi			
Btu	12,013	12,205	-1.6
Sulfur	2.52	1.70	48.2
Ash	10.33	8.13	27.1
Tennessee[2]			
Btu	13,059	13,198	-1.1
Sulfur	1.08	1.21	-10.4
Ash	8.38	7.36	13.9
West South Central			
Btu	8,794	8,900	-1.2
Sulfur	1.05	1.19	-11.5
Ash	11.55	12.03	-4.0
Arkansas			
Btu	12,850	12,798	.4
Sulfur	1.97	2.42	-18.4
Ash	9.78	10.00	-2.2
Louisiana			
Btu	9,255	9,086	1.9
Sulfur	.39	.33	20.1
Ash	5.83	5.07	14.9
Oklahoma			
Btu	11,263	12,220	-7.8
Sulfur	.89	1.08	-17.6
Ash	6.86	7.01	-2.0
Texas[2]			
Btu	8,153	8,134	.2
Sulfur	1.09	1.22	-10.6
Ash	12.98	13.79	-5.9
Mountain			
Btu	10,066	10,506	-4.2
Sulfur	.54	.79	-31.0
Ash	6.81	6.72	1.4
Arizona			
Btu	9,188	11,136	-17.5
Sulfur	.46	.65	-29.3
Ash	11.17	11.79	-5.3
Colorado			
Btu	10,557	10,624	-.6
Sulfur	.54	.67	-20.3
Ash	6.52	8.16	-20.1
Idaho			
Btu	6,138	9,980	-38.5
Sulfur	.71	.69	2.8
Ash	6.03	4.88	23.5
Montana			
Btu	8,065	10,012	-19.4
Sulfur	.46	.43	7.4
Ash	9.31	12.94	-28.1
Nevada			
Btu	6,994	12,589	-44.4
Sulfur	.28	.88	-68.6
Ash	4.63	7.88	-41.2
New Mexico			
Btu	12,776	12,859	-.6
Sulfur	.74	.82	-9.8
Ash	9.95	8.36	19.0
Utah[2]			
Btu	11,530	12,200	-5.5
Sulfur	.44	.99	-55.3
Ash	7.12	6.98	2.1
Wyoming			
Btu	10,071	9,984	.9
Sulfur	.72	.72	.3
Ash	5.12	4.57	11.9

See footnotes at end of table.

Table 107. Average Quality of Coal Received at Manufacturing and Coke Plants by Census Division and State, 1992-1993 (Continued)

Census Division and State and Quality[1]	1993	1992	Percent Change 1992-1993
Pacific			
Btu	12,325	11,933	3.3
Sulfur	.49	.51	-4.0
Ash	8.33	8.40	-.9
California			
Btu	12,441	12,082	3.0
Sulfur	.49	.51	-4.0
Ash	8.35	8.46	-1.3
Hawaii			
Btu	8,594	8,650	-.6
Sulfur	.51	.52	-1.4
Ash	17.14	15.85	8.2
Oregon			
Btu	10,216	9,959	2.6
Sulfur	.51	.54	-4.9
Ash	5.94	5.49	8.1
Washington			
Btu	12,151	11,909	2.0
Sulfur	.56	.56	-.3
Ash	9.47	10.11	-6.4
U.S. Total			
Btu	10,885	11,096	-1.9
Sulfur	1.23	1.07	14.5
Ash	6.36	7.45	-14.7

[1] Quality units are: Btu (per pound); Sulfur (percent by weight); and Ash (percent by weight).
[2] Includes sulfur and ash data for coke plants.
Notes: Btu data are for manufacturing plants only. The national average of coke plant data ranges from .51 to 1.70 for sulfur and 2.6 to 10.1 for ash.
Sources: Energy Information Administration, Form EIA-3A, "Annual Coal Quality Report - Manufacturing Plants;" and Form EIA-5A, "Annual Coal Quality Report - Coke Plants."

Table 108. Estimated Emissions from Coal-Fired Electric Generation, by Census Division and State, 1989-1993
(Thousand Short Tons)

Census Division and State	1993	1992	1991	1990	1989	Percent Change 1992-1993	Average Annual Percent Change 1989-1993
New England							
Sulfur Dioxide	119	140	146	152	158	-14.6	-6.8
Nitrogen Oxides	47	51	53	52	54	-8.5	-3.4
Carbon Dioxide	15,286	16,526	17,387	16,973	17,482	-7.5	-3.3
Connecticut							
Sulfur Dioxide	8	9	9	10	9	-10.3	-2.9
Nitrogen Oxides	4	5	5	6	5	-8.9	-3.3
Carbon Dioxide	1,986	2,205	2,267	2,583	2,301	-9.9	-3.6
Massachusetts							
Sulfur Dioxide	72	88	103	100	103	-18.4	-8.6
Nitrogen Oxides	26	31	33	31	33	-15.8	-6.2
Carbon Dioxide	9,734	10,926	11,713	11,165	11,983	-10.9	-5.1
New Hampshire							
Sulfur Dioxide	40	43	33	42	46	-7.7	-3.7
Nitrogen Oxides	17	16	16	15	15	5.7	2.0
Carbon Dioxide	3,565	3,395	3,407	3,225	3,198	5.0	2.8
Middle Atlantic							
Sulfur Dioxide	1,383	1,469	1,481	1,524	1,542	-5.8	-2.7
Nitrogen Oxides	347	362	366	383	406	-4.0	-3.8
Carbon Dioxide	130,307	134,485	134,531	137,414	143,965	-3.1	-2.5
New Jersey							
Sulfur Dioxide	56	55	57	69	74	1.6	-6.8
Nitrogen Oxides	27	27	26	33	38	1.6	-8.0
Carbon Dioxide	6,222	6,250	6,176	7,992	9,288	-.4	-9.5
New York							
Sulfur Dioxide	211	253	249	263	258	-16.3	-4.9
Nitrogen Oxides	53	61	63	63	65	-13.2	-4.8
Carbon Dioxide	22,726	26,096	26,098	25,881	26,605	-12.9	-3.9
Pennsylvania							
Sulfur Dioxide	1,116	1,161	1,175	1,192	1,209	-3.9	-2.0
Nitrogen Oxides	267	274	277	288	303	-2.5	-3.1
Carbon Dioxide	101,358	102,139	102,257	103,541	108,072	-.8	-1.6
East North Central							
Sulfur Dioxide	4,661	4,759	5,040	5,182	5,320	-2.0	-3.3
Nitrogen Oxides	1,453	1,382	1,431	1,419	1,408	5.1	.8
Carbon Dioxide	392,429	373,551	381,713	376,964	370,815	5.0	1.4
Illinois							
Sulfur Dioxide	790	817	827	893	857	-3.3	-2.0
Nitrogen Oxides	271	220	245	248	236	23.1	3.6
Carbon Dioxide	62,197	52,323	57,079	57,527	53,509	18.9	3.8
Indiana							
Sulfur Dioxide	1,204	1,168	1,370	1,454	1,504	3.1	-5.4
Nitrogen Oxides	408	404	412	412	372	.9	2.4
Carbon Dioxide	108,574	105,018	106,357	105,643	97,640	3.4	2.7
Michigan							
Sulfur Dioxide	354	343	375	365	371	3.2	-1.2
Nitrogen Oxides	233	224	238	235	241	4.4	-.8
Carbon Dioxide	65,084	63,294	67,036	66,866	69,444	2.8	-1.6
Ohio							
Sulfur Dioxide	2,131	2,170	2,183	2,193	2,306	-1.8	-2.0
Nitrogen Oxides	424	424	417	408	435	.1	-.6
Carbon Dioxide	126,012	122,699	120,337	117,142	120,730	2.7	1.1
Wisconsin							
Sulfur Dioxide	181	259	286	278	282	-30.0	-10.4
Nitrogen Oxides	116	110	119	115	124	5.1	-1.7
Carbon Dioxide	30,562	30,217	30,904	29,786	29,493	1.1	.9
West North Central							
Sulfur Dioxide	1,016	1,195	1,294	1,336	1,419	-15.0	-8.0
Nitrogen Oxides	649	620	655	647	649	4.6	*
Carbon Dioxide	188,637	180,692	185,036	188,285	185,349	4.4	.4
Iowa							
Sulfur Dioxide	175	174	182	179	185	1.0	-1.4
Nitrogen Oxides	115	109	115	110	105	5.7	2.3
Carbon Dioxide	26,237	24,612	25,604	28,667	27,478	6.6	-1.1

See footnotes at end of table.

Table 108. Estimated Emissions from Coal-Fired Electric Generation, by Census Division and State, 1989-1993 (Continued)
(Thousand Short Tons)

Census Division and State	1993	1992	1991	1990	1989	Percent Change 1992-1993	Average Annual Percent Change 1989-1993
Kansas							
Sulfur Dioxide	70	66	76	87	97	6.5	-7.7
Nitrogen Oxides	107	79	86	91	89	34.8	4.8
Carbon Dioxide	31,609	26,207	27,713	28,428	27,277	20.6	3.8
Minnesota							
Sulfur Dioxide	87	77	80	84	101	12.9	-3.5
Nitrogen Oxides	115	103	116	110	112	11.8	.5
Carbon Dioxide	32,770	29,665	30,313	31,262	32,140	10.5	.5
Missouri							
Sulfur Dioxide	463	664	726	779	849	-30.3	-14.0
Nitrogen Oxides	178	203	207	208	223	-12.3	-5.4
Carbon Dioxide	45,067	50,189	51,159	51,551	52,493	-10.2	-3.7
Nebraska							
Sulfur Dioxide	58	52	53	51	47	12.1	5.7
Nitrogen Oxides	66	56	61	63	58	17.3	3.1
Carbon Dioxide	16,806	14,315	15,473	14,580	13,478	17.4	5.7
North Dakota							
Sulfur Dioxide	131	130	145	126	111	.9	4.3
Nitrogen Oxides	57	59	58	55	51	-3.8	2.4
Carbon Dioxide	33,298	32,865	31,733	30,999	29,706	1.3	2.9
South Dakota							
Sulfur Dioxide	31	32	33	31	30	-3.5	.7
Nitrogen Oxides	11	11	12	10	10	-.1	1.0
Carbon Dioxide	2,850	2,841	3,042	2,798	2,777	.3	.7
South Atlantic							
Sulfur Dioxide	3,050	3,139	3,104	3,197	3,256	-2.8	-1.6
Nitrogen Oxides	941	907	905	934	985	3.7	-1.1
Carbon Dioxide	334,732	307,981	312,545	323,246	334,097	8.7	*
Delaware							
Sulfur Dioxide	39	31	39	41	44	26.9	-2.9
Nitrogen Oxides	16	12	15	16	17	37.0	-.6
Carbon Dioxide	5,790	4,327	6,561	6,583	6,748	33.8	-3.8
Florida							
Sulfur Dioxide	460	533	514	472	511	-13.7	-2.6
Nitrogen Oxides	197	199	199	184	202	-1.2	-.6
Carbon Dioxide	62,486	51,313	62,015	60,208	60,800	21.8	.7
Georgia							
Sulfur Dioxide	687	766	774	853	813	-10.3	-4.1
Nitrogen Oxides	147	142	157	179	168	3.4	-3.3
Carbon Dioxide	59,140	55,732	56,701	64,291	60,360	6.1	-.5
Maryland							
Sulfur Dioxide	236	228	224	250	246	3.5	-1.0
Nitrogen Oxides	70	66	61	66	65	5.7	1.8
Carbon Dioxide	25,016	23,724	22,693	23,570	23,637	5.4	1.4
North Carolina							
Sulfur Dioxide	421	368	322	328	342	14.4	5.3
Nitrogen Oxides	166	152	134	130	148	9.5	2.9
Carbon Dioxide	58,988	53,833	46,689	46,554	50,327	9.6	4.0
South Carolina							
Sulfur Dioxide	178	150	159	163	155	18.7	3.4
Nitrogen Oxides	69	61	61	60	62	14.1	2.8
Carbon Dioxide	27,039	23,627	23,898	23,448	24,480	14.4	2.5
Virginia							
Sulfur Dioxide	178	165	162	149	166	7.4	1.7
Nitrogen Oxides	59	55	55	53	60	7.4	-.4
Carbon Dioxide	24,883	22,788	22,500	21,505	24,965	9.2	-.1
West Virginia							
Sulfur Dioxide	850	897	909	942	978	-5.2	-3.4
Nitrogen Oxides	217	221	223	245	264	-1.9	-4.8
Carbon Dioxide	71,390	72,637	71,489	77,088	82,780	-1.7	-3.6
East South Central							
Sulfur Dioxide	2,297	2,148	2,075	2,116	2,082	6.9	2.5
Nitrogen Oxides	677	599	589	582	563	12.9	4.7
Carbon Dioxide	219,866	194,727	189,588	186,444	176,608	12.9	5.6

See footnotes at end of table.

Table 108. Estimated Emissions from Coal-Fired Electric Generation, by Census Division and State, 1989-1993 (Continued)
(Thousand Short Tons)

Census Division and State	1993	1992	1991	1990	1989	Percent Change 1992-1993	Average Annual Percent Change 1989-1993
Alabama							
Sulfur Dioxide	548	523	519	508	541	4.7	0.3
Nitrogen Oxides	188	169	165	151	154	11.2	5.1
Carbon Dioxide	67,926	61,786	59,268	54,545	54,088	9.9	5.9
Kentucky							
Sulfur Dioxide	826	749	723	726	707	10.4	4.0
Nitrogen Oxides	287	258	256	252	244	11.0	4.1
Carbon Dioxide	83,029	74,549	73,398	71,445	67,607	11.4	5.3
Mississippi							
Sulfur Dioxide	88	94	97	105	93	-5.8	-1.3
Nitrogen Oxides	26	23	26	28	26	15.1	.1
Carbon Dioxide	9,476	8,201	9,199	9,946	9,181	15.5	.8
Tennessee							
Sulfur Dioxide	834	783	736	776	741	6.6	3.0
Nitrogen Oxides	176	150	142	151	139	17.7	6.1
Carbon Dioxide	59,435	50,191	47,723	50,508	45,732	18.4	6.8
West South Central							
Sulfur Dioxide	783	755	730	730	718	3.8	2.2
Nitrogen Oxides	622	606	612	584	604	2.6	.7
Carbon Dioxide	215,416	208,874	207,321	202,798	203,343	3.1	1.4
Arkansas							
Sulfur Dioxide	62	66	66	69	66	-5.9	-1.5
Nitrogen Oxides	56	64	64	63	59	-12.5	-1.4
Carbon Dioxide	20,128	22,161	21,949	21,591	20,698	-9.2	-.7
Louisiana							
Sulfur Dioxide	116	110	103	98	104	6.2	2.9
Nitrogen Oxides	79	77	73	70	75	1.9	1.1
Carbon Dioxide	23,653	22,852	21,126	19,961	21,973	3.5	1.9
Oklahoma							
Sulfur Dioxide	104	107	103	102	92	-2.8	3.1
Nitrogen Oxides	96	91	90	86	86	6.4	2.9
Carbon Dioxide	32,336	30,937	29,257	27,867	26,915	4.5	4.7
Texas							
Sulfur Dioxide	500	472	458	461	456	6.0	2.3
Nitrogen Oxides	390	374	386	365	384	4.5	.4
Carbon Dioxide	139,299	132,925	134,988	133,378	133,757	4.8	1.0
Mountain							
Sulfur Dioxide	452	455	428	439	435	-.7	.9
Nitrogen Oxides	508	520	504	523	533	-2.2	-1.2
Carbon Dioxide	201,553	194,127	181,465	171,070	181,374	3.8	2.7
Arizona							
Sulfur Dioxide	130	125	119	115	114	3.8	3.3
Nitrogen Oxides	102	96	91	92	93	6.8	2.4
Carbon Dioxide	31,194	26,537	23,690	24,659	25,292	17.5	5.4
Colorado							
Sulfur Dioxide	83	85	82	86	80	-2.7	.8
Nitrogen Oxides	99	98	100	103	102	.7	-.9
Carbon Dioxide	32,520	32,055	31,518	23,020	31,874	1.4	.5
Montana							
Sulfur Dioxide	20	22	20	18	20	-7.6	.3
Nitrogen Oxides	42	52	55	50	55	-18.9	-6.2
Carbon Dioxide	15,908	19,692	18,737	17,232	18,557	-19.2	-3.8
Nevada							
Sulfur Dioxide	52	57	54	53	52	-7.9	-.1
Nitrogen Oxides	45	47	46	43	44	-3.3	.6
Carbon Dioxide	18,763	19,501	19,512	17,865	18,463	-3.8	.4
New Mexico							
Sulfur Dioxide	58	58	50	60	67	-1.1	-3.9
Nitrogen Oxides	94	94	82	103	112	*	-4.3
Carbon Dioxide	28,411	18,047	15,770	17,607	16,987	57.4	13.7
Utah							
Sulfur Dioxide	31	30	28	31	30	4.1	1.3
Nitrogen Oxides	43	50	50	51	51	-13.5	-4.2
Carbon Dioxide	32,888	32,441	30,276	32,466	30,163	1.4	2.2

See footnotes at end of table.

Table 108. Estimated Emissions from Coal-Fired Electric Generation, by Census Division and State, 1989-1993 (Continued)
(Thousand Short Tons)

Census Division and State	1993	1992	1991	1990	1989	Percent Change 1992-1993	Average Annual Percent Change 1989-1993
Wyoming							
Sulfur Dioxide	78	78	75	76	71	0.1	2.3
Nitrogen Oxides	84	84	80	81	77	-.6	2.1
Carbon Dioxide	41,869	45,853	41,962	38,221	40,037	-8.7	1.1
Pacific							
Sulfur Dioxide	83	85	71	65	65	-1.8	6.5
Nitrogen Oxides	45	48	42	33	34	-6.4	7.6
Carbon Dioxide	13,447	14,562	11,959	9,565	9,330	-7.7	9.6
Alaska							
Sulfur Dioxide	1	1	1	1	1	1.5	2.5
Oregon							
Sulfur Dioxide	13	14	11	5	2	-9.1	63.3
Nitrogen Oxides	13	13	12	6	2	-1.8	59.0
Carbon Dioxide	3,685	4,007	3,246	1,495	-	-8.0	-
Washington							
Sulfur Dioxide	70	70	59	59	62	-.3	2.9
Nitrogen Oxides	33	35	30	28	32	-8.1	.6
Carbon Dioxide	9,762	10,555	8,713	8,070	9,330	-7.5	1.1
U.S. Total							
Sulfur Dioxide	13,844	14,144	14,370	14,740	14,995	-2.1	-2.0
Nitrogen Oxides	5,288	5,096	5,158	5,156	5,236	3.8	.3
Carbon Dioxide	1,711,673	1,625,526	1,621,545	1,612,759	1,622,363	5.3	1.3

* Data round to zero.

Notes: Estimates are derived from the Form EIA-767, "Steam-Electric Plant Operation and Design Report." (See Explanatory Notes for methodology.) Totals may not equal sum of components due to independent rounding.

Source: Energy Information Administration, Form EIA-767, "Steam-Electric Plant Operation and Design Report."

Table 109. Estimated Emissions from Fossil-Fuel Electric Generation by Census Division, State, and Fuel, 1993
(Thousand Short Tons)

Census Division and State	Coal			Petroleum			Gas			Other		
	Sulfur Dioxide	Nitrogen Oxides	Carbon Dioxide	Sulfur Dioxide	Nitrogen Oxides	Carbon Dioxide	Sulfur Dioxide	Nitrogen Oxides	Carbon Dioxide	Sulfur Dioxide	Nitrogen Oxides	Carbon Dioxide
New England Total	**119**	**47**	**15,286**	**107**	**21**	**13,551**	*	**6**	**1,681**	**1**	**1**	**969**
Connecticut	8	4	1,986	19	5	3,833	0	*	35	1	1	738
Maine	0	0	0	6	1	740	0	0	0	0	0	0
Massachusetts	72	26	9,734	70	13	7,807	*	6	1,600	*	*	102
New Hampshire	40	17	3,565	12	1	1,144	0	*	8	*	*	21
Rhode Island	0	0	0	*	*	26	0	*	23	0	0	0
Vermont	0	0	0	*	0	*	0	*	15	*	*	109
Middle Atlantic Total	**1,383**	**347**	**130,307**	**87**	**28**	**19,594**	*	**31**	**12,893**	*	*	**45**
New Jersey	56	27	6,222	3	2	1,012	*	5	1,508	*	*	5
New York	211	53	22,726	69	21	14,610	*	24	10,883	0	*	2
Pennsylvania	1,116	267	101,358	15	5	3,972	*	1	502	*	*	38
East North Central Total	**4,661**	**1,453**	**392,429**	**8**	**3**	**2,230**	*	**6**	**2,138**	**1**	**1**	**785**
Illinois	790	271	62,197	4	2	1,104	*	2	958	0	0	0
Indiana	1,204	408	108,574	*	*	163	*	1	335	0	0	0
Michigan	354	233	65,084	3	1	713	*	2	608	0	*	*
Ohio	2,131	424	126,012	*	*	218	0	*	83	1	1	518
Wisconsin	181	116	30,562	*	*	32	*	1	154	*	*	267
West North Central Total	**1,016**	**649**	**188,637**	**2**	*	**315**	*	**7**	**1,882**	**1**	**1**	**1,098**
Iowa	175	115	26,237	*	*	28	*	1	225	*	*	110
Kansas	70	107	31,609	*	*	52	*	4	1,130	0	0	0
Minnesota	87	115	32,770	*	*	20	*	1	228	1	1	987
Missouri	463	178	45,067	1	*	167	*	1	219	0	*	*
Nebraska	58	66	16,806	*	*	14	0	*	76	0	*	*
North Dakota	131	57	33,298	*	*	27	0	0	*	0	0	0
South Dakota	31	11	2,850	*	*	7	0	*	4	0	0	0
South Atlantic Total	**3,050**	**941**	**334,732**	**297**	**65**	**37,523**	*	**32**	**9,853**	**1**	*	**292**
Delaware	39	16	5,790	10	4	1,841	0	*	71	1	*	168
District of Columbia	0	0	0	1	*	210	0	0	0	*	*	8
Florida	460	197	62,486	239	53	29,299	*	31	9,286	*	*	32
Georgia	687	147	59,140	1	*	145	*	*	160	*	*	3
Maryland	236	70	25,016	32	5	3,856	*	1	288	*	*	82
North Carolina	421	166	58,988	*	*	123	0	0	0	0	0	0
South Carolina	178	69	27,039	*	*	67	0	*	16	*	0	1
Virginia	178	59	24,883	11	2	1,815	0	*	25	0	0	0
West Virginia	850	217	71,390	*	*	167	0	*	7	0	0	0
East South Central Total	**2,297**	**677**	**219,866**	**53**	**6**	**3,292**	*	**5**	**1,756**	**0**	**0**	**0**
Alabama	548	188	67,926	*	*	57	*	1	193	0	0	0
Kentucky	826	287	83,029	*	*	99	0	*	13	0	0	0
Mississippi	88	26	9,476	53	6	3,060	*	5	1,550	0	0	0
Tennessee	834	176	59,435	*	*	75	0	0	0	0	0	0
West South Central Total	**783**	**622**	**215,416**	**3**	**1**	**729**	*	**254**	**85,476**	**0**	**0**	**0**
Arkansas	62	56	20,128	*	*	52	*	4	1,292	0	0	0
Louisiana	116	79	23,653	3	1	380	*	42	14,342	0	0	0
Oklahoma	104	96	32,336	*	*	11	*	25	7,342	0	0	0
Texas	500	390	139,299	*	*	286	*	184	62,501	0	0	0
Mountain Total	**452**	**508**	**201,553**	**1**	**1**	**403**	*	**11**	**3,880**	**0**	*	*
Arizona	130	102	31,194	*	*	45	*	2	586	0	0	0
Colorado	83	99	32,520	*	*	5	*	1	286	0	*	*
Montana	20	42	15,908	*	*	11	0	*	7	0	0	0
Nevada	52	45	18,763	1	*	235	*	4	1,090	0	0	0
New Mexico	58	94	28,411	*	*	34	*	4	1,637	0	0	0
Utah	31	43	32,888	*	*	24	*	*	269	0	0	0
Wyoming	78	84	41,869	*	*	49	0	*	5	0	0	0
Pacific Contiguous Total	**83**	**45**	**13,447**	**4**	**3**	**1,738**	*	**71**	**27,024**	*	*	**690**
California	0	0	0	4	3	1,726	*	71	27,024	0	0	0
Oregon	13	13	3,685	*	*	6	0	0	0	0	0	0
Washington	70	33	9,762	*	*	7	0	*	1	*	*	690
Pacific Noncontiguous Total	**1**	**0**	0	**20**	**9**	**4,754**	**0**	**0**	**0**	**0**	**0**	**0**
Alaska	1	0	0	*	*	1	0	0	0	0	0	0
Hawaii	0	0	0	20	9	4,753	0	0	0	0	0	0
U.S. Total	**13,844**	**5,288**	**1,711,673**	**583**	**136**	**84,129**	**1**	**424**	**146,584**	**4**	**4**	**3,880**

* Data round to zero.

Notes: Estimates are derived from the Form EIA-767, "Steam-Electric Plant Operation and Design Report." (See Technical Notes for methodology.) Totals may not equal sum of components due to independent rounding.

Source: Energy Information Administration, Form EIA-767, "Steam-Electric Plant Operation and Design Report."

Appendix A

Major Coal Producing States

The Kemmerer mine, located in the Hams Fork Basin region of southwestern Wyoming, is the largest and deepest open-pit coal mine in the United States. In 1993, over 3.5 million short tons were produced at this mine. Wyoming remains the largest coal-producing State, with production of over 210 million short tons in 1993.

Appendix A

Major Coal Producing States

Table A1. Alabama Coal Statistics, 1984, 1989-1993

Category	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Supply (thousand short tons)									
Recoverable Reserves	426,635	467,741	470,434	489,395	507,724	659,495	-8.8	-4.3	-4.7
Productive Capacity[1]	27,916	29,815	30,195	NA	NA	29,670	-6.4	NA	-.7
Production Total	24,768	25,796	27,269	29,030	27,992	27,088	-4.0	-3.0	-1.0
Underground	15,557	15,944	17,070	17,540	16,327	13,180	-2.4	-1.2	1.8
Surface	9,211	9,852	10,199	11,490	11,665	13,908	-6.5	-5.7	-4.5
Capacity Utilization[2]	88.46	86.26	89.97	NA	NA	91.06	2.5	NA	-.3
Ratio of Recoverable Reserves to Production	17.2	18.1	17.3	16.9	18.1	24.3	-5.0	-1.3	-3.8
Number of Miners	5,399	5,386	6,314	6,534	6,505	8,581	.2	-4.5	-5.0
Productivity Total[2]	2.35	2.49	2.17	2.23	2.25	1.63	-5.4	1.1	4.1
Underground	2.09	2.17	1.90	2.01	2.00	1.18	-3.8	1.0	6.5
Surface	3.01	3.28	2.84	2.69	2.72	2.55	-8.2	2.5	1.8
Producer/Distributor Stocks	1,698	2,185	2,233	2,764	2,802	-	-22.3	-11.8	-
Imports[3]	88	-	-	-	-	-	-	-	-
Distribution (thousand short tons)									
Distribution Total	25,556	25,491	27,679	28,735	28,836	NA	.3	-3.0	NA
Domestic Distribution Total	19,668	19,560	20,667	20,545	20,093	NA	.5	-.5	NA
Within State	18,716	18,849	20,150	19,535	18,778	NA	-.7	-.1	NA
To Other States	952	711	517	1,010	1,315	NA	33.9	-7.8	NA
Foreign Distribution Total	5,888	5,931	7,012	8,190	8,743	NA	-.7	-9.4	NA
Metallurgical	5,841	5,789	6,476	7,724	8,723	NA	.9	-9.5	NA
Steam	47	142	536	466	20	NA	-66.9	24.2	NA
Overseas Total[4]	5,888	5,931	7,012	8,190	8,743	NA	-.7	-9.4	NA
Metallurgical	5,841	5,789	6,476	7,724	8,723	NA	.9	-9.5	NA
Steam	47	142	536	466	20	NA	-66.9	24.2	NA
Demand (thousand short tons)									
Consumption Total	33,047	31,510	29,349	27,640	27,537	23,876	4.9	4.7	3.7
Electric Utility	27,533	24,988	23,700	22,010	21,884	17,786	10.2	5.9	5.0
Industrial	2,268	3,136	2,468	2,237	2,275	3,046	-27.7	-.1	-3.2
Coke	3,206	3,297	3,166	3,288	3,314	2,921	-2.8	-.8	1.0
Residential/Commercial	40	89	17	105	63	122	-54.8	-10.6	-11.6
Consumer Stocks Total	2,797	4,529	4,671	4,372	4,189	6,497	-38.2	-9.6	-8.9
Electric Utility	2,331	4,071	4,247	3,869	3,721	5,779	-42.7	-11.0	-9.6
All Other	466	458	424	503	468	719	1.6	-.1	-4.7
Coal Prices (nominal dollars per short ton)									
Mine Total	$42.34	$40.82	$41.14	$43.04	$41.18	$42.90	3.7	.7	-.1
Underground	42.00	40.70	40.19	42.48	38.96	43.76	3.2	1.9	-.4
Surface	42.91	41.02	42.72	43.90	44.31	42.09	4.6	-.8	.2
Consumer									
Electric Utility	42.56	41.67	43.82	44.58	44.84	49.04	2.1	-1.3	-1.6
Industrial	39.01	39.76	40.43	40.58	40.36	44.51	-1.9	-.8	-1.4
Coke	47.50	47.80	48.35	48.93	46.67	54.36	-.6	.4	-1.5

[1] For 1984, the Form EIA-7A solicited data on "Daily Productive Capacity." To obtain annual productive capacity for a mine in 1984, each mine's daily productive capacity was multiplied by the number of days worked during the year.

[2] Capacity utilization (percent) is the ratio of total production to annual productive capacity as reported by mining companies on Form EIA-7A. Productivity (short tons per miner per hour) is calculated by dividing total coal production by the total direct labor hours worked by all employees engaged in production, preparation, processing, development, maintenance, repair, and shop or yard work at mining operations.

[3] Imports for 1992 and 1993 include imports to electric utilities, manufacturing plants and coke plants. Imports for 1984 through 1991 include only imports to electric utilities.

[4] Includes Mexico.

NA Not available.

Notes: Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration, Form EIA-3, "Quarterly Coal Consumption Report - Manufacturing Plants;" Form EIA-5, "Coke Plant Report - Quarterly;" Form EIA-6, "Coal Distribution Report;" Form EIA-7A, "Coal Production Report;" Form EIA-759, "Monthly Power Plant Report;" and U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545" and "Monthly Report IM 145."

Table A2. Arizona Coal Statistics, 1984, 1989-1993

Category	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Supply (thousand short tons)									
Recoverable Reserves	w	w	w	w	w	w	w	w	w
Productive Capacity[1]	w	w	w	NA	NA	w	-	NA	w
Production Total	12,173	12,512	13,203	11,304	11,935	11,522	-2.7	0.5	0.6
Surface	12,173	12,512	13,203	11,304	11,935	11,522	-2.7	.5	.6
Capacity Utilization[2]	w	w	w	NA	NA	w	-2.7	NA	w
Ratio of Recoverable Reserves to Production	w	w	w	w	w	w	w	w	w
Number of Miners	876	888	900	951	780	909	-1.3	2.9	-.4
Productivity Total[2]	6.21	6.29	6.64	5.93	6.25	6.38	-1.3	-.1	-.3
Surface	6.21	6.29	6.64	5.93	6.25	6.38	-1.3	-.1	-.3
Producer/Distributor Stocks	1,590	1,555	1,461	1,191	1,333	-	2.2	4.5	-
Distribution (thousand short tons)									
Distribution Total	12,138	12,418	12,933	11,446	11,939	NA	-2.3	.4	NA
Domestic Distribution Total	12,138	12,418	12,933	11,446	11,939	NA	-2.3	.4	NA
Within State	7,566	7,441	7,869	7,275	7,795	NA	1.7	-.7	NA
To Other States	4,572	4,977	5,064	4,171	4,144	NA	-8.1	2.5	NA
Demand (thousand short tons)									
Consumption Total	18,991	17,915	16,805	16,419	16,871	15,406	6.0	3.0	2.3
Electric Utility	18,316	17,280	16,116	15,758	16,182	13,601	6.0	3.1	3.4
Industrial	674	632	689	660	689	w	6.8	-.5	w
Residential/Commercial	1	4	*	*	w	w	-73.7	w	w
Consumer Stocks Total	3,717	3,596	4,229	3,129	3,411	w	3.3	2.2	w
Electric Utility	3,687	3,543	4,177	3,090	3,367	3,593	4.0	2.3	.3
All Other	30	53	52	39	44	w	-43.3	-8.9	w
Coal Prices (nominal dollars per short ton)									
Mine Total	w	w	w	w	w	w	w	w	w
Surface	w	w	w	w	w	w	w	w	w
Consumer									
Electric Utility	$27.78	$28.31	$29.16	$29.98	$28.81	$25.66	-1.8	-.9	.9
Industrial	40.51	40.95	40.09	39.54	39.78	w	-1.1	.4	w

[1] For 1984, the Form EIA-7A solicited data on "Daily Productive Capacity." To obtain annual productive capacity for a mine in 1984, each mine's daily productive capacity was multiplied by the number of days worked during the year.

[2] Capacity utilization (percent) is the ratio of total production to annual productive capacity as reported by mining companies on Form EIA-7A. Productivity (short tons per miner per hour) is calculated by dividing total coal production by the total direct labor hours worked by all employees engaged in production, preparation, processing, development, maintenance, repair, and shop or yard work at mining operations.

* Data round to zero.

W Withheld to avoid disclosure of individual company data.

NA Not available.

Notes: Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration, Form EIA-3, "Quarterly Coal Consumption Report - Manufacturing Plants;" Form EIA-5, "Coke Plant Report - Quarterly;" Form EIA-6, "Coal Distribution Report;" Form EIA-7A, "Coal Production Report;" Form EIA-759, "Monthly Power Plant Report;" and U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545" and "Monthly Report IM 145."

Table A3. Colorado Coal Statistics, 1984, 1989-1993

Category	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Supply (thousand short tons)									
Recoverable Reserves	608,815	608,067	617,752	546,239	662,076	864,465	0.1	-2.1	-3.8
Productive Capacity[1]	30,040	25,848	23,593	NA	NA	19,895	16.2	NA	4.7
Production Total	21,886	19,226	17,834	18,910	17,123	17,967	13.8	6.3	2.2
Underground	12,843	10,246	9,601	10,628	8,511	6,411	25.3	10.8	8.0
Surface	9,043	8,981	8,233	8,281	8,612	11,556	.7	1.2	-2.7
Capacity Utilization[2]	72.84	74.35	75.58	NA	NA	90.21	-2.0	NA	-2.3
Ratio of Recoverable Reserves to Production	27.8	31.6	34.6	28.9	38.7	48.1	-12.0	-7.9	-5.9
Number of Miners	1,775	1,610	2,037	2,009	2,019	2,835	10.2	-3.2	-5.1
Productivity Total[2]	5.85	5.27	5.05	4.24	4.08	3.24	10.9	9.4	6.8
Underground	5.21	4.52	4.23	3.26	2.91	2.05	15.4	15.6	10.9
Surface	7.07	6.52	6.51	6.86	6.74	4.78	8.5	1.2	4.4
Producer/Distributor Stocks	1,155	955	850	1,274	817	-	21.0	9.0	-
Distribution (thousand short tons)									
Distribution Total	21,465	18,864	17,757	18,386	16,898	NA	13.8	6.2	NA
Domestic Distribution Total	20,338	18,195	17,132	18,019	16,866	NA	11.8	4.8	NA
Within State	11,181	11,241	10,911	10,703	10,762	NA	-.5	1.0	NA
To Other States	9,157	6,954	6,222	7,316	6,104	NA	31.7	10.7	NA
Foreign Distribution Total	1,128	669	625	367	32	NA	68.6	142.9	NA
Metallurgical	-	-	-	290	32	NA	-	-100.0	NA
Steam	1,128	669	625	77	-	NA	68.6	-	NA
Overseas Total[3]	1,128	669	625	367	32	NA	68.6	142.9	NA
Metallurgical	-	-	-	290	32	NA	-	-	NA
Steam	1,128	669	625	77	-	NA	68.6	-	NA
Demand (thousand short tons)									
Consumption Total	17,070	16,696	16,218	16,710	16,393	14,740	2.2	1.0	1.6
Electric Utility	16,252	15,902	15,416	15,924	15,686	13,758	2.2	.9	1.9
Industrial	780	735	738	729	643	856	6.1	4.9	-1.0
Residential/Commercial	38	58	65	58	w	w	-35.6	w	w
Consumer Stocks Total	3,454	3,439	3,487	3,334	3,970	w	.4	-3.4	w
Electric Utility	3,428	3,410	3,466	3,298	3,921	4,850	.5	-3.3	-3.8
All Other	25	29	21	36	50	w	-13.2	-15.7	w
Coal Prices (nominal dollars per short ton)									
Mine Total	$20.35	$21.33	$22.18	$21.75	$23.64	$23.07	-4.6	-3.7	-1.4
Underground	20.53	21.80	24.09	24.27	26.02	27.36	-5.8	-5.8	-3.1
Surface	20.10	20.80	19.96	18.53	21.29	20.69	-3.3	-1.4	-.3
Consumer									
Electric Utility	21.59	21.67	21.49	20.81	20.95	21.90	-.3	.8	-.2
Industrial	28.63	30.34	29.27	26.93	27.81	28.32	-5.6	.7	.1

[1] For 1984, the Form EIA-7A solicited data on "Daily Productive Capacity." To obtain annual productive capacity for a mine in 1984, each mine's daily productive capacity was multiplied by the number of days worked during the year.

[2] Capacity utilization (percent) is the ratio of total production to annual productive capacity as reported by mining companies on Form EIA-7A. Productivity (short tons per miner per hour) is calculated by dividing total coal production by the total direct labor hours worked by all employees engaged in production, preparation, processing, development, maintenance, repair, and shop or yard work at mining operations.

[3] Includes Mexico.

[w] Withheld to avoid disclosure of individual company data.

[NA] Not available.

Notes: Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration, Form EIA-3, "Quarterly Coal Consumption Report - Manufacturing Plants;" Form EIA-5, "Coke Plant Report - Quarterly;" Form EIA-6, "Coal Distribution Report;" Form EIA-7A, "Coal Production Report;" Form EIA-759, "Monthly Power Plant Report;" and U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545" and "Monthly Report IM 145."

Table A4. Illinois Coal Statistics, 1984, 1989-1993

Category	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Supply (thousand short tons)									
Recoverable Reserves	1,063,832	1,199,313	1,256,524	1,173,982	1,380,697	1,395,905	-11.3	-6.3	-3.0
Productive Capacity[1]	69,320	75,787	75,710	NA	NA	70,146	-8.5	NA	-.1
Production Total	41,098	59,857	60,258	60,393	59,267	63,769	-31.3	-8.7	-4.8
Underground	33,096	46,965	43,134	41,671	39,337	38,502	-29.5	-4.2	-1.7
Surface	8,002	12,892	17,124	18,722	19,930	25,267	-37.9	-20.4	-12.0
Capacity Utilization[2]	59.28	78.98	79.58	NA	NA	90.89	-24.9	NA	-4.6
Ratio of Recoverable Reserves to Production	25.9	20.0	20.8	19.4	23.3	21.9	29.2	2.7	1.9
Number of Miners	7,303	8,323	9,102	10,018	10,003	13,339	-12.3	-7.6	-6.5
Productivity Total[2]	3.23	3.42	3.18	2.94	2.77	2.22	-5.5	3.9	4.2
Underground	3.11	3.21	2.88	2.70	2.41	1.91	-3.2	6.6	5.5
Surface	3.86	4.47	4.30	3.64	3.96	2.96	-13.6	-.6	3.0
Producer/Distributor Stocks	713	1,969	1,418	1,955	2,385	-	-63.8	-26.0	-
Imports[3]	51	54	-	-	-	-	-5.7	-	-
Distribution (thousand short tons)									
Distribution Total	42,000	58,913	58,553	60,592	59,464	NA	-28.7	-8.3	NA
Domestic Distribution Total	41,330	57,670	57,290	60,222	58,976	NA	-28.3	-8.5	NA
Within State	15,206	18,167	18,787	18,700	17,588	NA	-16.3	-3.6	NA
To Other States	26,124	39,503	38,503	41,522	41,388	NA	-33.9	-10.9	NA
Foreign Distribution Total	670	1,242	1,263	370	488	NA	-46.1	8.2	NA
Metallurgical	109	614	546	237	10	NA	-82.2	80.6	NA
Steam	561	629	717	133	478	NA	-10.9	4.1	NA
Canada Total	-	-	4	-	16	NA	-	-	NA
Steam	-	-	4	-	16	NA	-	-	NA
Overseas Total[4]	670	1,242	1,259	370	472	NA	-46.1	9.1	NA
Metallurgical	109	614	546	237	10	NA	-82.2	80.6	NA
Steam	561	629	713	133	462	NA	-10.9	4.9	NA
Demand (thousand short tons)									
Consumption Total	38,135	31,599	34,677	33,904	32,374	38,298	20.7	4.2	*
Electric Utility	31,744	25,264	27,754	27,396	25,758	32,054	25.6	5.4	-.1
Industrial	3,970	3,736	4,426	3,888	3,770	3,325	6.2	1.3	2.0
Coke	w	w	w	w	w	2,499	w	w	w
Residential/Commercial	w	w	w	w	w	420	w	w	w
Consumer Stocks Total	w	w	w	w	w	8,544	w	w	w
Electric Utility	4,019	7,399	6,977	7,398	8,204	7,484	-45.7	-16.3	-6.7
All Other	w	w	w	w	w	1,060	w	w	w
Coal Prices (nominal dollars per short ton)									
Mine Total	$25.27	$27.66	$28.35	$27.73	$28.17	$29.89	-8.6	-2.7	-1.8
Underground	25.54	27.93	29.05	28.30	28.66	31.39	-8.5	-2.8	-2.3
Surface	24.18	26.69	26.59	26.45	27.20	27.60	-9.4	-2.9	-1.5
Consumer									
Electric Utility	35.30	37.06	36.76	37.79	38.78	42.12	-4.7	-2.3	-1.9
Industrial	29.42	29.24	30.81	31.28	31.17	39.86	.6	-1.4	-3.3
Coke	w	w	w	w	w	56.12	w	w	w

[1] For 1984, the Form EIA-7A solicited data on "Daily Productive Capacity." To obtain annual productive capacity for a mine in 1984, each mine's daily productive capacity was multiplied by the number of days worked during the year.

[2] Capacity utilization (percent) is the ratio of total production to annual productive capacity as reported by mining companies on Form EIA-7A. Productivity (short tons per miner per hour) is calculated by dividing total coal production by the total direct labor hours worked by all employees engaged in production, preparation, processing, development, maintenance, repair, and shop or yard work at mining operations.

[3] Imports for 1992 and 1993 include imports to electric utilities, manufacturing plants and coke plants. Imports for 1984 through 1991 include only imports to electric utilities.

[4] Includes Mexico.

* Data round to zero.

W Withheld to avoid disclosure of individual company data.

NA Not available.

Notes: Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration, Form EIA-3, "Quarterly Coal Consumption Report - Manufacturing Plants;" Form EIA-5, "Coke Plant Report - Quarterly;" Form EIA-6, "Coal Distribution Report;" Form EIA-7A, "Coal Production Report;" Form EIA-759, "Monthly Power Plant Report;" and U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545" and "Monthly Report IM 145."

Table A5. Indiana Coal Statistics, 1984, 1989-1993

Category	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Supply (thousand short tons)									
Recoverable Reserves	379,294	404,549	419,790	444,020	474,909	496,520	-6.2	-5.5	-2.9
Productive Capacity[1]	43,955	42,990	45,155	NA	NA	39,622	2.2	NA	1.1
Production Total	29,295	30,466	31,468	35,907	33,641	37,555	-3.8	-3.4	-2.7
Underground	2,583	2,641	2,832	3,037	2,519	2,246	-2.2	.6	1.6
Surface	26,713	27,825	28,636	32,870	31,122	35,309	-4.0	-3.7	-3.0
Capacity Utilization[2]	66.60	70.86	69.66	NA	NA	94.74	-6.0	NA	-3.8
Ratio of Recoverable Reserves to Production	12.9	13.3	13.3	12.4	14.1	13.2	-2.5	-2.1	-.2
Number of Miners	3,331	3,652	3,919	4,195	3,684	5,477	-8.8	-2.5	-5.4
Productivity Total[2]	4.46	4.09	4.02	3.84	3.86	2.93	8.9	3.6	4.8
Underground	2.49	2.80	2.97	2.90	2.47	1.90	-11.1	.2	3.0
Surface	4.82	4.28	4.17	3.96	4.04	3.04	12.8	4.5	5.3
Producer/Distributor Stocks	527	1,016	525	559	360	-	-48.1	9.9	-
Imports[3]	594	-	-	-	-	-	-	-	-
Distribution (thousand short tons)									
Distribution Total	29,664	31,393	31,412	36,122	33,727	NA	-5.5	-3.2	NA
Domestic Distribution Total	29,475	31,216	31,204	35,967	33,546	NA	-5.6	-3.2	NA
Within State	23,913	24,655	22,619	25,301	24,089	NA	-3.0	-.2	NA
To Other States	5,562	6,561	8,585	10,666	9,458	NA	-15.2	-12.4	NA
Foreign Distribution Total	188	177	208	155	180	NA	6.5	1.1	NA
Steam	188	177	208	155	180	NA	6.5	1.1	NA
Canada Total	-	-	3	1	3	NA	-	-	NA
Steam	-	-	3	1	3	NA	-	-	NA
Overseas Total[4]	188	177	204	154	177	NA	6.5	1.5	NA
Steam	188	177	204	154	177	NA	6.5	1.5	NA
Demand (thousand short tons)									
Consumption Total	60,353	58,765	60,790	61,701	57,388	53,571	2.7	1.3	1.3
Electric Utility	48,836	46,937	47,720	47,654	42,378	38,398	4.0	3.6	2.7
Industrial	4,587	4,263	4,404	4,629	4,738	5,054	7.6	-.8	-1.1
Coke	6,591	7,153	8,234	8,867	9,754	9,462	-7.8	-9.3	-3.9
Residential/Commercial	339	411	433	551	518	657	-17.5	-10.1	-7.1
Consumer Stocks Total	7,798	12,507	11,387	12,226	9,398	15,022	-37.6	-4.5	-7.0
Electric Utility	6,935	11,294	9,953	10,610	8,043	12,245	-38.6	-3.6	-6.1
All Other	863	1,214	1,434	1,616	1,355	2,777	-28.9	-10.7	-12.2
Coal Prices (nominal dollars per short ton)									
Mine Total	$22.89	$23.41	$23.58	$23.91	$23.55	$24.98	-2.2	-.7	-1.0
Underground	w	w	w	w	w	w	w	w	w
Surface	w	w	w	w	w	w	w	w	w
Consumer									
Electric Utility	$26.73	$27.89	$28.41	$28.78	$29.08	$34.74	-4.1	-2.1	-2.9
Industrial	30.91	31.58	33.01	32.83	32.88	34.03	-2.1	-1.5	-1.1
Coke	52.29	53.72	53.31	49.39	51.47	61.60	-2.6	.4	-1.8

[1] For 1984, the Form EIA-7A solicited data on "Daily Productive Capacity." To obtain annual productive capacity for a mine in 1984, each mine's daily productive capacity was multiplied by the number of days worked during the year.

[2] Capacity utilization (percent) is the ratio of total production to annual productive capacity as reported by mining companies on Form EIA-7A. Productivity (short tons per miner per hour) is calculated by dividing total coal production by the total direct labor hours worked by all employees engaged in production, preparation, processing, development, maintenance, repair, and shop or yard work at mining operations.

[3] Imports for 1992 and 1993 include imports to electric utilities, manufacturing plants and coke plants. Imports for 1984 through 1991 include only imports to electric utilities.

[4] Includes Mexico.

[w] Withheld to avoid disclosure of individual company data.

[NA] Not available.

Notes: Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration, Form EIA-3, "Quarterly Coal Consumption Report - Manufacturing Plants;" Form EIA-5, "Coke Plant Report - Quarterly;" Form EIA-6, "Coal Distribution Report;" Form EIA-7A, "Coal Production Report;" Form EIA-759, "Monthly Power Plant Report;" and U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545" and "Monthly Report IM 145."

Table A6. Kentucky Coal Statistics, 1984, 1989-1993

Category	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Supply (thousand short tons)									
Recoverable Reserves	1,828,072	1,452,789	1,632,076	1,585,081	1,513,216	1,885,830	25.8	4.8	-0.3
Productive Capacity[1]	204,805	195,352	199,282	NA	NA	164,378	4.8	NA	2.5
Production Total	156,299	161,068	158,980	173,322	167,389	159,541	-3.0	-1.7	-.2
Underground	92,207	96,053	97,332	105,290	99,067	79,142	-4.0	-1.8	1.7
Surface	64,092	65,016	61,647	68,032	68,322	80,399	-1.4	-1.6	-2.5
Capacity Utilization[2]	76.11	82.15	79.45	NA	NA	95.37	-7.3	NA	-2.5
Ratio of Recoverable Reserves to Production	11.7	9.0	10.3	9.1	9.0	11.8	29.7	6.6	-.1
Number of Miners	24,063	24,624	26,642	30,498	30,656	37,876	-2.3	-5.9	-4.9
Productivity Total[2]	3.25	3.20	3.01	2.83	2.78	2.24	1.5	3.9	4.2
Underground	2.93	2.91	2.71	2.54	2.54	1.94	.9	3.6	4.7
Surface	3.84	3.75	3.66	3.43	3.23	2.64	2.3	4.4	4.2
Producer/Distributor Stocks	3,216	3,796	4,646	4,114	4,509	-	-15.3	-8.1	-
Distribution (thousand short tons)									
Domestic Distribution Total	150,874	147,825	142,811	157,587	140,042	NA	2.1	1.9	NA
Within State	28,136	27,941	24,831	29,679	26,849	NA	.7	1.2	NA
To Other States	122,738	119,883	117,980	127,908	113,193	NA	2.4	2.0	NA
Foreign Distribution Total	9,521	14,036	15,478	15,690	12,607	NA	-32.2	-6.8	NA
Metallurgical	3,310	4,971	4,354	7,104	4,846	NA	-33.4	-9.1	NA
Steam	6,212	9,065	11,124	8,586	7,760	NA	-31.5	-5.4	NA
Canada Total	1,416	2,078	1,560	1,727	1,538	NA	-31.8	-2.0	NA
Metallurgical	1,356	1,373	1,125	1,106	1,447	NA	-1.2	-1.6	NA
Steam	60	705	435	621	91	NA	-91.5	-9.9	NA
Overseas Total[3]	8,106	11,958	13,918	13,963	11,069	NA	-32.2	-7.5	NA
Metallurgical	1,954	3,599	3,229	5,998	3,399	NA	-45.7	-12.9	NA
Steam	6,152	8,359	10,689	7,966	7,670	NA	-26.4	-5.4	NA
Demand (thousand short tons)									
Consumption Total	39,095	34,704	34,517	34,449	32,792	28,863	12.6	4.5	3.4
Electric Utility	35,264	31,715	31,432	30,867	29,109	25,014	11.2	4.9	3.9
Industrial	2,392	1,648	2,044	2,253	2,168	2,152	45.1	2.5	1.2
Coke	w	w	w	w	w	w	w	w	w
Residential/Commercial	w	w	w	w	w	w	w	w	w
Consumer Stocks Total	w	w	w	w	w	w	w	w	w
Electric Utility	3,990	5,415	5,881	7,612	4,299	10,457	-26.3	-1.8	-10.1
All Other	w	w	w	w	w	w	w	w	w
Coal Prices (nominal dollars per short ton)									
Mine Total	$24.77	$24.50	$25.45	$25.19	$24.97	$28.13	1.1	-.2	-1.4
Underground	25.07	25.18	25.92	25.24	25.06	29.15	-.4	*	-1.7
Surface	24.35	23.50	24.70	25.11	24.84	27.10	3.6	-.5	-1.2
Consumer									
Electric Utility	27.29	27.01	27.19	27.58	26.13	33.58	1.0	1.1	-2.3
Industrial	42.30	43.78	46.54	45.81	45.27	45.68	-3.4	-1.7	-.8
Coke	w	w	w	w	w	w	w	w	w

[1] For 1984, the Form EIA-7A solicited data on "Daily Productive Capacity." To obtain annual productive capacity for a mine in 1984, each mine's daily productive capacity was multiplied by the number of days worked during the year.

[2] Capacity utilization (percent) is the ratio of total production to annual productive capacity as reported by mining companies on Form EIA-7A. Productivity (short tons per miner per hour) is calculated by dividing total coal production by the total direct labor hours worked by all employees engaged in production, preparation, processing, development, maintenance, repair, and shop or yard work at mining operations.

[3] Includes Mexico.

* Data round to zero.

w Withheld to avoid disclosure of individual company data.

NA Not available.

Notes: Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration, Form EIA-3, "Quarterly Coal Consumption Report - Manufacturing Plants;" Form EIA-5, "Coke Plant Report - Quarterly;" Form EIA-6, "Coal Distribution Report;" Form EIA-7A, "Coal Production Report;" Form EIA-759, "Monthly Power Plant Report;" and U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545" and "Monthly Report IM 145."

Table A7. Montana Coal Statistics, 1984, 1989-1993

Category	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Supply (thousand short tons)									
Recoverable Reserves	1,284,806	1,351,609	1,392,795	1,872,492	1,513,688	1,807,289	-4.9	-4.0	-3.7
Productive Capacity[1]	50,849	48,582	48,604	NA	NA	36,511	4.7	NA	3.7
Production Total	35,917	38,889	38,237	37,616	37,742	33,000	-7.6	-1.2	.9
Underground	10	10	3	-	-	-	7.9	-	-
Surface	35,907	38,879	38,235	37,616	37,742	33,000	-7.6	-1.2	.9
Capacity Utilization[2]	70.64	80.03	78.65	NA	NA	90.38	-11.7	NA	-2.7
Ratio of Recoverable Reserves to Production	35.8	34.8	36.4	49.8	40.1	54.8	2.9	-2.8	-4.6
Number of Miners	660	715	794	821	682	1,112	-7.7	-.8	-5.6
Productivity Total[2]	19.49	20.16	18.99	18.78	18.94	14.27	-3.3	.7	3.5
Underground	1.06	-	-	-	-	-	-	-	-
Surface	19.59	20.16	18.99	18.78	18.94	14.27	-2.8	.8	3.6
Producer/Distributor Stocks	876	694	571	613	586	-	26.3	10.6	-
Distribution (thousand short tons)									
Distribution Total	35,916	38,866	38,119	37,866	37,489	NA	-7.6	-1.1	NA
Domestic Distribution Total	35,795	38,804	37,812	37,294	37,073	NA	-7.8	-.9	NA
Within State	9,115	11,159	10,578	9,742	10,384	NA	-18.3	-3.2	NA
To Other States	26,680	27,645	27,234	27,552	26,689	NA	-3.5	*	NA
Foreign Distribution Total	121	62	306	572	330	NA	96.3	-22.2	NA
Steam	121	62	306	572	330	NA	96.3	-22.2	NA
Canada Total	54	-	10	417	330	NA	-	-36.4	NA
Steam	54	-	10	417	330	NA	-	-36.4	NA
Overseas Total[3]	67	62	297	155	-	NA	8.9	-	NA
Steam	67	62	297	155	-	NA	8.9	-	NA
Demand (thousand short tons)									
Consumption Total	9,247	11,040	10,549	9,676	10,458	5,283	-16.2	-3.0	6.4
Electric Utility	8,869	10,768	10,223	9,399	10,208	5,113	-17.6	-3.4	6.3
Industrial	w	w	w	w	w	w	w	w	w
Residential/Commercial	w	w	w	w	w	w	w	w	w
Consumer Stocks Total	w	w	w	w	w	w	w	w	w
Electric Utility	721	735	741	767	813	657	-1.9	-2.9	1.0
All Other	w	w	w	w	w	w	w	w	w
Coal Prices (nominal dollars per short ton)									
Mine Total	$11.05	$10.20	$10.76	$9.42	$10.27	$13.57	8.3	1.8	-2.3
Underground	w	-	-	-	-	-	-	-	-
Surface	w	10.20	10.76	9.42	10.27	13.57	w	w	w
Consumer									
Electric Utility	$11.78	12.14	11.44	11.47	9.81	12.53	-3.0	4.7	-.7
Industrial	w	w	w	w	w	w	w	w	w

[1] For 1984, the Form EIA-7A solicited data on "Daily Productive Capacity." To obtain annual productive capacity for a mine in 1984, each mine's daily productive capacity was multiplied by the number of days worked during the year.

[2] Capacity utilization (percent) is the ratio of total production to annual productive capacity as reported by mining companies on Form EIA-7A. Productivity (short tons per miner per hour) is calculated by dividing total coal production by the total direct labor hours worked by all employees engaged in production, preparation, processing, development, maintenance, repair, and shop or yard work at mining operations.

[3] Includes Mexico.

* Data round to zero.

W Withheld to avoid disclosure of individual company data.

NA Not available.

Notes: Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration, Form EIA-3, "Quarterly Coal Consumption Report - Manufacturing Plants;" Form EIA-5, "Coke Plant Report - Quarterly;" Form EIA-6, "Coal Distribution Report;" Form EIA-7A, "Coal Production Report;" Form EIA-759, "Monthly Power Plant Report;" and U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545" and "Monthly Report IM 145."

Table A8. New Mexico Coal Statistics, 1984, 1989-1993

Category	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Supply (thousand short tons)									
Recoverable Reserves	1,472,927	1,494,541	1,608,287	1,526,520	1,410,747	1,520,973	-1.4	1.1	-0.3
Productive Capacity[1]	33,360	29,512	28,187	NA	NA	23,233	13.0	NA	4.1
Production Total	28,268	24,549	21,518	24,292	23,702	21,279	15.1	4.5	3.2
Underground	719	93	25	76	45	552	NM	99.9	3.0
Surface	27,549	24,456	21,492	24,217	23,657	20,727	12.6	3.9	3.2
Capacity Utilization[2]	84.74	83.18	76.34	NA	NA	91.55	1.9	NA	-.8
Ratio of Recoverable Reserves to Production	52.1	60.9	74.7	62.8	59.5	71.5	-14.4	-3.3	-3.4
Number of Miners	1,762	1,683	1,650	1,472	1,470	1,760	4.7	4.6	*
Productivity Total[2]	6.68	6.68	6.25	7.64	7.93	5.92	-.1	-4.2	1.3
Underground	1.63	.40	.71	4.27	1.03	1.43	307.8	12.3	1.5
Surface	7.26	7.11	6.31	7.66	8.03	6.46	2.2	-2.5	1.3
Producer/Distributor Stocks	2,343	1,648	1,760	2,401	2,119	-	42.2	2.5	-
Distribution (thousand short tons)									
Distribution Total	27,942	24,827	22,378	23,380	22,650	NA	12.5	5.4	NA
Domestic Distribution Total	27,942	24,823	22,378	23,380	22,650	NA	12.6	5.4	NA
Within State	14,938	14,829	13,130	15,232	15,111	NA	.7	-.3	NA
To Other States	13,004	9,993	9,248	8,149	7,539	NA	30.1	14.6	NA
Foreign Distribution Total	-	5	-	-	-	NA	-100.0	-	NA
Steam	-	5	-	-	-	NA	-100.0	-	NA
Overseas Total[3]	-	5	-	-	-	NA	-100.0	-	NA
Steam	-	5	-	-	-	NA	-100.0	-	NA
Demand (thousand short tons)									
Consumption Total	15,012	14,832	12,858	15,111	15,295	13,979	1.2	-.5	.8
Electric Utility	14,942	14,775	12,809	15,065	15,250	13,896	1.1	-.5	.8
Industrial	w	w	w	w	w	w	w	w	w
Residential/Commercial	w	w	w	w	w	w	w	w	w
Consumer Stocks Total	w	w	w	w	w	w	w	w	w
Electric Utility	1,506	1,570	1,399	1,538	1,403	2,216	-4.0	1.8	-4.2
All Other	w	w	w	w	w	w	w	w	w
Coal Prices (nominal dollars per short ton)									
Mine Total	$22.96	$23.14	$23.25	$22.43	$23.42	$19.40	-.8	-.5	1.9
Underground	w	w	w	w	w	w	w	w	w
Surface	w	w	w	w	w	w	w	w	w
Consumer									
Electric Utility	$24.61	$23.83	$25.02	$24.03	$22.61	$16.88	3.3	2.1	4.3
Industrial	w	w	w	w	w	w	w	w	w

[1] For 1984, the Form EIA-7A solicited data on "Daily Productive Capacity." To obtain annual productive capacity for a mine in 1984, each mine's daily productive capacity was multiplied by the number of days worked during the year.

[2] Capacity utilization (percent) is the ratio of total production to annual productive capacity as reported by mining companies on Form EIA-7A. Productivity (short tons per miner per hour) is calculated by dividing total coal production by the total direct labor hours worked by all employees engaged in production, preparation, processing, development, maintenance, repair, and shop or yard work at mining operations.

[3] Includes Mexico.

* Data round to zero.

W Withheld to avoid disclosure of individual company data.

NM Not meaningful as value is greater than 500.

NA Not available.

Notes: Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration, Form EIA-3, "Quarterly Coal Consumption Report - Manufacturing Plants;" Form EIA-5, "Coke Plant Report - Quarterly;" Form EIA-6, "Coal Distribution Report;" Form EIA-7A, "Coal Production Report;" Form EIA-759, "Monthly Power Plant Report;" and U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545" and "Monthly Report IM 145."

Table A9. North Dakota Coal Statistics, 1984, 1989-1993

Category	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Supply (thousand short tons)									
Recoverable Reserves	1,411,026	1,335,164	1,385,624	1,414,294	1,360,556	1,622,188	5.7	0.9	-1.5
Productive Capacity[1]	36,371	36,986	35,976	NA	NA	26,705	-1.7	NA	3.5
Production Total	31,973	31,744	29,530	29,213	29,566	22,112	.7	2.0	4.2
Surface	31,973	31,744	29,530	29,213	29,566	22,112	.7	2.0	4.2
Capacity Utilization[2]	87.89	85.83	82.08	NA	NA	82.79	2.4	NA	.7
Ratio of Recoverable Reserves to Production	44.1	42.1	46.9	48.4	46.0	73.4	4.9	-1.0	-5.5
Number of Miners	782	744	814	931	850	1,186	5.1	-2.1	-4.5
Productivity Total[2]	17.66	18.12	17.64	16.12	15.69	10.10	-2.5	3.0	6.4
Surface	17.66	18.12	17.64	16.12	15.69	10.10	-2.5	3.0	6.4
Producer/Distributor Stocks	1,607	1,614	1,619	1,830	1,752	-	-.5	-2.1	-
Distribution (thousand short tons)									
Distribution Total	32,372	31,702	29,741	29,206	29,860	NA	2.1	2.0	NA
Domestic Distribution Total	32,372	31,702	29,741	29,206	29,860	NA	2.1	2.0	NA
Within State	30,215	29,573	27,405	27,137	27,847	NA	2.2	2.1	NA
To Other States	2,157	2,129	2,337	2,069	2,013	NA	1.3	1.7	NA
Demand (thousand short tons)									
Consumption Total	30,302	30,301	28,597	28,114	27,401	19,657	*	2.5	4.9
Electric Utility	23,290	23,192	22,174	21,579	20,538	16,953	.4	3.2	3.6
Industrial	w	w	w	w	w	w	w	w	w
Residential/Commercial	w	w	w	w	w	w	w	w	w
Consumer Stocks Total	w	w	w	w	w	w	w	w	w
Electric Utility	2,417	2,194	1,999	2,828	3,731	2,469	10.2	-10.3	-.2
All Other	w	w	w	w	w	w	w	w	w
Coal Prices (nominal dollars per short ton)									
Mine Total	$7.63	$7.48	$7.84	$7.67	$7.36	$9.48	2.0	.9	-2.4
Surface	7.63	7.48	7.84	7.67	7.36	9.48	2.0	.9	-2.4
Consumer									
Electric Utility	9.38	9.45	9.37	9.10	9.13	11.37	-.8	.7	-2.1
Industrial	w	w	w	w	w	w	w	w	w

[1] For 1984, the Form EIA-7A solicited data on "Daily Productive Capacity." To obtain annual productive capacity for a mine in 1984, each mine's daily productive capacity was multiplied by the number of days worked during the year.

[2] Capacity utilization (percent) is the ratio of total production to annual productive capacity as reported by mining companies on Form EIA-7A. Productivity (short tons per miner per hour) is calculated by dividing total coal production by the total direct labor hours worked by all employees engaged in production, preparation, processing, development, maintenance, repair, and shop or yard work at mining operations.

* Data round to zero.

w Withheld to avoid disclosure of individual company data.

NA Not available.

Notes: Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration, Form EIA-3, "Quarterly Coal Consumption Report - Manufacturing Plants;" Form EIA-5, "Coke Plant Report - Quarterly;" Form EIA-6, "Coal Distribution Report;" Form EIA-7A, "Coal Production Report;" Form EIA-759, "Monthly Power Plant Report;" and U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545" and "Monthly Report IM 145."

Table A10. Ohio Coal Statistics, 1984, 1989-1993

Category	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change 1989-1993	Average Annual Percent Change 1984-1993
Supply (thousand short tons)									
Recoverable Reserves	519,768	575,973	590,604	691,984	814,583	891,148	-9.8	-10.6	-5.8
Productive Capacity[1]	42,236	41,329	47,397	NA	NA	42,649	2.2	NA	-.1
Production Total	28,816	30,403	30,569	35,252	33,689	39,256	-5.2	-3.8	-3.4
Underground	10,437	12,031	12,237	12,920	10,824	14,111	-13.3	-.9	-3.3
Surface	18,379	18,371	18,333	22,332	22,865	25,145	*	-5.3	-3.4
Capacity Utilization[2]	67.94	73.19	64.27	NA	NA	91.71	-7.2	NA	-3.3
Ratio of Recoverable Reserves to Production	18.0	18.9	19.3	19.6	24.2	22.7	-4.8	-7.1	-2.5
Number of Miners	3,866	4,515	5,293	5,866	7,374	9,803	-14.4	-14.9	-9.8
Productivity Total[2]	3.46	3.04	2.67	2.80	2.33	2.01	14.0	10.4	6.2
Underground	3.27	3.01	2.55	2.34	2.00	1.55	8.7	13.1	8.6
Surface	3.58	3.06	2.76	3.17	2.52	2.41	17.1	9.2	4.5
Producer/Distributor Stocks	550	1,087	821	887	377	-	-49.3	9.9	-
Imports[3]	2	15	-	-	-	-	-86.6	-	-
Distribution (thousand short tons)									
Distribution Total	28,315	29,550	30,023	34,335	32,970	NA	-4.2	-3.7	NA
Domestic Distribution Total	28,315	29,549	30,001	34,209	32,658	NA	-4.2	-3.5	NA
Within State	24,370	26,941	27,061	28,301	26,189	NA	-9.5	-1.8	NA
To Other States	3,944	2,608	2,940	5,908	6,469	NA	51.3	-11.6	NA
Foreign Distribution Total	-	2	22	126	313	NA	-100.0	-100.0	NA
Steam	-	2	22	126	313	NA	-100.0	-100.0	NA
Canada Total	-	*	3	55	7	NA	-100.0	-	NA
Steam	-	*	3	55	7	NA	-100.0	-	NA
Overseas Total[4]	-	1	19	72	306	NA	-100.0	-	NA
Steam	-	1	19	72	306	NA	-100.0	-	NA
Demand (thousand short tons)									
Consumption Total	59,031	58,671	58,578	59,205	61,016	57,049	.6	-.8	.4
Electric Utility	51,456	50,358	49,577	48,848	50,479	45,025	2.2	.5	1.5
Industrial	4,100	3,970	4,813	4,753	4,727	5,967	3.3	-3.5	-4.1
Coke	2,892	3,755	3,698	4,949	5,265	5,102	-23.0	-13.9	-6.1
Residential/Commercial	584	588	489	654	545	955	-.8	1.7	-5.3
Consumer Stocks Total	7,630	10,804	10,618	10,471	7,055	12,079	-29.4	2.0	-5.0
Electric Utility	7,249	10,395	10,213	9,956	6,607	11,062	-30.3	2.3	-4.6
All Other	381	408	405	515	449	1,018	-6.7	-4.0	-10.3
Coal Prices (nominal dollars per short ton)									
Mine Total	$28.04	$26.93	$27.75	$28.65	$30.49	$33.17	4.1	-2.1	-1.8
Underground	30.73	30.11	31.52	33.93	37.30	42.22	2.0	-4.7	-3.5
Surface	26.51	24.84	25.22	25.57	27.24	28.06	6.7	-.7	-.6
Consumer									
Electric Utility	34.05	34.40	35.33	36.01	35.21	40.34	-1.0	-.8	-1.9
Industrial	34.82	35.24	34.85	35.04	33.79	36.06	-1.2	.8	-.4
Coke	45.07	46.68	46.15	48.29	47.02	56.28	-3.4	-1.0	-2.4

[1] For 1984, the Form EIA-7A solicited data on "Daily Productive Capacity." To obtain annual productive capacity for a mine in 1984, each mine's daily productive capacity was multiplied by the number of days worked during the year.

[2] Capacity utilization (percent) is the ratio of total production to annual productive capacity as reported by mining companies on Form EIA-7A. Productivity (short tons per miner per hour) is calculated by dividing total coal production by the total direct labor hours worked by all employees engaged in production, preparation, processing, development, maintenance, repair, and shop or yard work at mining operations.

[3] Imports for 1992 and 1993 include imports to electric utilities, manufacturing plants and coke plants. Imports for 1984 through 1991 include only imports to electric utilities.

[4] Includes Mexico.

* Data round to zero.

NA Not available.

Notes: Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration, Form EIA-3, "Quarterly Coal Consumption Report - Manufacturing Plants;" Form EIA-5, "Coke Plant Report - Quarterly;" Form EIA-6, "Coal Distribution Report;" Form EIA-7A, "Coal Production Report;" Form EIA-759, "Monthly Power Plant Report;" and U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545" and "Monthly Report IM 145."

Table A11. Pennsylvania Coal Statistics, 1984, 1989-1993

Category	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Supply (thousand short tons)									
Recoverable Reserves	939,706	937,427	985,784	1,126,272	1,184,077	1,451,497	0.2	-5.6	-4.7
Productive Capacity[1]	82,148	82,968	80,418	NA	NA	86,959	-1.0	NA	-.6
Production Total	59,700	68,981	65,381	70,514	70,596	77,494	-13.4	-4.1	-2.8
Underground	36,934	45,112	40,953	40,530	39,607	37,480	-18.1	-1.7	-.2
Surface	22,766	23,868	24,429	29,984	30,989	40,014	-4.6	-7.4	-6.1
Capacity Utilization[2]	71.79	82.20	80.17	NA	NA	88.16	-12.7	NA	-2.3
Ratio of Recoverable Reserves to Production	15.7	13.6	15.1	16.0	16.8	18.7	15.8	-1.6	-1.9
Number of Miners	10,940	12,659	13,506	15,903	15,469	24,797	-13.6	-8.3	-8.7
Productivity Total[2]	2.80	2.67	2.43	2.24	2.28	1.67	4.7	5.2	5.9
Underground	2.91	2.81	2.38	2.12	2.16	1.32	3.6	7.8	9.2
Surface	2.63	2.45	2.53	2.42	2.47	2.22	7.5	1.6	1.9
Producer/Distributor Stocks	1,826	2,903	2,844	2,558	2,146	-	-37.1	-3.9	-
Distribution (thousand short tons)									
Domestic Distribution Total	53,482	61,208	58,151	62,917	61,867	NA	-12.6	-3.6	NA
Within State	33,456	37,696	36,260	40,216	40,133	NA	-11.3	-4.4	NA
To Other States	20,026	23,512	21,891	22,702	21,733	NA	-14.8	-2.0	NA
Foreign Distribution Total	5,508	6,440	7,303	6,884	10,455	NA	-14.5	-14.8	NA
Metallurgical	1,919	1,266	1,331	522	1,813	NA	51.6	1.4	NA
Steam	3,589	5,175	5,972	6,362	8,642	NA	-30.6	-19.7	NA
Canada Total	597	1,599	2,338	2,692	4,920	NA	-62.7	-41.0	NA
Metallurgical	10	-	8	42	147	NA	-	-48.8	NA
Steam	587	1,599	2,330	2,650	4,773	NA	-63.3	-40.8	NA
Overseas Total[3]	4,911	4,841	4,966	4,192	5,535	NA	1.4	-2.9	NA
Metallurgical	1,909	1,266	1,323	480	1,666	NA	50.8	3.5	NA
Steam	3,002	3,575	3,642	3,712	3,869	NA	-16.0	-6.1	NA
Demand (thousand short tons)									
Consumption Total	56,158	56,074	54,931	57,319	58,526	58,498	.1	-1.0	-.4
Electric Utility	40,257	40,407	40,662	41,465	43,241	40,836	-.4	-1.8	-.1
Industrial	4,311	4,173	4,049	4,090	3,995	4,639	3.3	1.9	-.8
Coke	10,333	9,868	8,812	10,456	9,877	11,546	4.7	1.1	-1.2
Residential/Commercial	1,257	1,626	1,408	1,308	1,413	1,477	-22.7	-2.9	-1.8
Consumer Stocks Total	12,265	15,976	15,546	15,426	11,870	18,603	-23.2	.8	-4.5
Electric Utility	11,110	14,866	14,412	14,363	11,069	16,110	-25.3	.1	-4.0
All Other	1,155	1,110	1,135	1,063	801	2,493	4.1	9.6	-8.2
Coal Prices (nominal dollars per short ton)									
Mine Total	$26.50	$28.61	$29.40	$30.15	$29.33	$33.48	-7.4	-2.5	-2.6
Underground	27.35	30.23	31.72	33.23	31.75	37.88	-9.5	-3.6	-3.5
Surface	25.09	25.48	25.42	25.91	26.19	29.32	-1.5	-1.1	-1.7
Consumer									
Electric Utility	35.73	36.81	38.05	37.25	35.50	39.04	-2.9	.1	-1.0
Industrial	34.04	35.70	35.89	36.61	35.93	40.65	-4.6	-1.3	-1.9
Coke	46.41	46.49	46.86	45.78	44.77	54.12	-.2	.9	-1.7

[1] For 1984, the Form EIA-7A solicited data on "Daily Productive Capacity." To obtain annual productive capacity for a mine in 1984, each mine's daily productive capacity was multiplied by the number of days worked during the year.

[2] Capacity utilization (percent) is the ratio of total production to annual productive capacity as reported by mining companies on Form EIA-7A. Productivity (short tons per miner per hour) is calculated by dividing total coal production by the total direct labor hours worked by all employees engaged in production, preparation, processing, development, maintenance, repair, and shop or yard work at mining operations.

[3] Includes Mexico.

NA Not available.

Notes: Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration, Form EIA-3, "Quarterly Coal Consumption Report - Manufacturing Plants;" Form EIA-5, "Coke Plant Report - Quarterly;" Form EIA-6, "Coal Distribution Report;" Form EIA-7A, "Coal Production Report;" Form EIA-759, "Monthly Power Plant Report;" and U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545" and "Monthly Report IM 145."

Table A12. Texas Coal Statistics, 1984, 1989-1993

Category	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Supply (thousand short tons)									
Recoverable Reserves	1,104,864	1,188,240	1,225,124	1,209,492	1,135,326	876,931	-7.0	-0.7	2.6
Productive Capacity[1]	57,115	58,541	59,579	NA	NA	42,837	-2.4	NA	3.2
Production Total	54,567	55,071	53,825	55,755	53,854	41,145	-.9	.3	3.2
Surface	54,567	55,071	53,825	55,755	53,854	41,145	-.9	.3	3.2
Capacity Utilization[2]	95.54	94.07	90.34	NA	NA	96.05	1.5	NA	*
Ratio of Recoverable Reserves to Production	20.3	21.6	22.8	21.7	21.1	21.3	-6.1	-1.0	-.6
Number of Miners	1,841	2,001	2,149	2,131	2,109	2,274	-8.0	-3.3	-2.3
Productivity Total[2]	8.42	7.34	7.17	7.48	7.31	5.86	14.6	3.6	4.1
Surface	8.42	7.34	7.17	7.48	7.31	5.86	14.6	3.6	4.1
Producer/Distributor Stocks	1,237	543	400	930	514	-	128.0	24.5	-
Imports[3]	156	80	-	-	-	-	95.9	-	-
Distribution (thousand short tons)									
Distribution Total	54,224	54,447	54,243	55,024	54,201	NA	-.4	*	NA
Domestic Distribution Total	54,224	54,447	54,243	55,016	54,201	NA	-.4	*	NA
Within State	54,224	54,447	54,243	55,016	54,201	NA	-.4	*	NA
To Other States	-	-	-	*	-	NA	-	-	NA
Foreign Distribution Total	-	-	-	9	-	NA	-	-	NA
Steam	-	-	-	9	-	NA	-	-	NA
Overseas Total[4]	-	-	-	9	-	NA	-	-	NA
Steam	-	-	-	9	-	NA	-	-	NA
Demand (thousand short tons)									
Consumption Total	96,809	91,568	92,064	91,415	90,989	72,452	5.7	1.6	3.3
Electric Utility	92,135	87,333	87,856	87,248	86,701	66,957	5.5	1.5	3.6
Industrial	4,667	4,225	4,198	4,157	4,275	4,996	10.4	2.2	-.8
Coke	-	-	-	-	-	w	-	-	-
Residential/Commercial	6	10	11	10	w	w	-36.8	w	w
Consumer Stocks Total	9,172	10,392	10,932	9,619	w	w	-11.7	w	w
Electric Utility	8,125	10,143	10,474	8,531	9,329	6,694	-19.9	-3.4	2.2
All Other	1,047	248	458	1,088	w	w	321.5	w	w
Coal Prices (nominal dollars per short ton)									
Mine Total	$12.87	$12.42	$12.21	$11.20	$10.91	$11.14	3.6	4.2	1.6
Surface	12.87	12.42	12.21	11.20	10.91	11.14	3.6	4.2	1.6
Consumer									
Electric Utility	20.91	21.58	21.66	21.19	21.12	24.55	-3.1	-.3	-1.8
Industrial	17.58	18.14	18.61	16.79	18.45	27.84	-3.1	-1.2	-5.0
Coke	-	-	-	-	-	w	-	-	-

[1] For 1984, the Form EIA-7A solicited data on "Daily Productive Capacity." To obtain annual productive capacity for a mine in 1984, each mine's daily productive capacity was multiplied by the number of days worked during the year.

[2] Capacity utilization (percent) is the ratio of total production to annual productive capacity as reported by mining companies on Form EIA-7A. Productivity (short tons per miner per hour) is calculated by dividing total coal production by the total direct labor hours worked by all employees engaged in production, preparation, processing, development, maintenance, repair, and shop or yard work at mining operations.

[3] Imports for 1992 and 1993 include imports to electric utilities, manufacturing plants and coke plants. Imports for 1984 through 1991 include only imports to electric utilities.

[4] Includes Mexico.

* Data round to zero.

w Withheld to avoid disclosure of individual company data.

NA Not available.

Notes: Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration, Form EIA-3, "Quarterly Coal Consumption Report - Manufacturing Plants;" Form EIA-5, "Coke Plant Report - Quarterly;" Form EIA-6, "Coal Distribution Report;" Form EIA-7A, "Coal Production Report;" Form EIA-759, "Monthly Power Plant Report;" and U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545" and "Monthly Report IM 145."

Table A13. Utah Coal Statistics, 1984, 1989-1993

Category	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Supply (thousand short tons)									
Recoverable Reserves	446,729	488,109	508,872	505,042	518,620	533,259	-8.5	-3.7	-1.9
Productive Capacity[1]	25,933	25,534	25,482	NA	NA	13,553	1.6	NA	7.5
Production Total	21,847	21,339	21,945	22,058	20,102	12,323	2.4	2.1	6.6
Underground	21,847	21,339	21,945	22,058	20,102	12,323	2.4	2.1	6.6
Capacity Utilization[2]	84.22	83.57	86.12	NA	NA	90.92	.8	NA	-.8
Ratio of Recoverable Reserves to Production	20.4	22.9	23.2	22.9	25.8	43.3	-10.6	-5.6	-8.0
Number of Miners	1,769	1,997	2,277	2,434	2,169	2,525	-11.4	-5.0	-3.9
Productivity Total[2]	5.96	5.46	4.80	4.74	4.75	2.94	9.1	5.8	8.2
Underground	5.96	5.46	4.80	4.74	4.75	2.94	9.1	5.8	8.2
Producer/Distributor Stocks	1,203	1,827	1,676	1,484	883	-	-34.2	8.0	-
Distribution (thousand short tons)									
Distribution Total	22,243	21,052	21,444	21,506	20,578	NA	5.7	2.0	NA
Domestic Distribution Total	19,283	18,792	19,358	19,756	18,402	NA	2.6	1.2	NA
Within State	13,418	13,035	13,605	14,107	12,945	NA	2.9	.9	NA
To Other States	5,866	5,758	5,753	5,649	5,457	NA	1.9	1.8	NA
Foreign Distribution Total	2,959	2,260	2,086	1,751	2,177	NA	31.0	8.0	NA
Metallurgical	-	-	-	190	*	NA	-	-100.0	NA
Steam	2,959	2,260	2,086	1,560	2,176	NA	31.0	8.0	NA
Canada Total	346	-	-	-	-	NA	-	-	NA
Steam	346	-	-	-	-	NA	-	-	NA
Overseas Total[3]	2,613	2,260	2,086	1,751	2,177	NA	15.6	4.7	NA
Metallurgical	-	-	-	190	*	NA	-	-	NA
Steam	2,613	2,260	2,086	1,560	2,176	NA	15.6	4.7	NA
Demand (thousand short tons)									
Consumption Total	15,848	15,719	14,834	15,738	15,044	7,905	.8	1.3	8.0
Electric Utility	13,995	13,857	12,829	13,563	12,949	5,712	1.0	2.0	10.5
Industrial	727	525	508	676	686	608	38.4	1.4	2.0
Coke	w	w	w	w	w	w	w	w	w
Residential/Commercial	w	w	w	w	w	w	w	w	w
Consumer Stocks Total	w	w	w	w	w	w	w	w	w
Electric Utility	3,264	3,153	4,123	3,697	3,202	618	3.5	.5	20.3
All Other	w	w	w	w	w	w	w	w	w
Coal Prices (nominal dollars per short ton)									
Mine Total	$20.81	$21.11	$22.59	$18.53	$21.46	$29.20	-1.4	-.8	-3.7
Underground	20.81	21.11	22.59	18.53	21.46	29.20	-1.4	-.8	-3.7
Consumer									
Electric Utility	27.34	27.54	27.40	26.80	28.05	30.64	-.7	-.6	-1.3
Industrial	26.51	25.35	26.43	28.49	26.79	32.71	4.6	-.3	-2.3
Coke	w	w	w	w	w	w	w	w	w

[1] For 1984, the Form EIA-7A solicited data on "Daily Productive Capacity." To obtain annual productive capacity for a mine in 1984, each mine's daily productive capacity was multiplied by the number of days worked during the year.

[2] Capacity utilization (percent) is the ratio of total production to annual productive capacity as reported by mining companies on Form EIA-7A. Productivity (short tons per miner per hour) is calculated by dividing total coal production by the total direct labor hours worked by all employees engaged in production, preparation, processing, development, maintenance, repair, and shop or yard work at mining operations.

[3] Includes Mexico.

* Data round to zero.

W Withheld to avoid disclosure of individual company data.

NA Not available.

Notes: Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration, Form EIA-3, "Quarterly Coal Consumption Report - Manufacturing Plants;" Form EIA-5, "Coke Plant Report - Quarterly;" Form EIA-6, "Coal Distribution Report;" Form EIA-7A, "Coal Production Report;" Form EIA-759, "Monthly Power Plant Report;" and U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545" and "Monthly Report IM 145."

Table A14. Virginia Coal Statistics, 1984, 1989-1993

Category	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Supply (thousand short tons)									
Recoverable Reserves	335,883	365,823	411,849	423,584	419,716	611,621	-8.2	-5.4	-6.4
Productive Capacity[1]	50,879	54,471	55,271	NA	NA	43,069	-6.6	NA	1.9
Production Total	39,317	43,024	41,954	46,917	43,006	40,368	-8.6	-2.2	-.3
Underground	30,166	34,715	34,138	39,150	36,044	32,896	-13.1	-4.3	-.9
Surface	9,151	8,308	7,816	7,767	6,962	7,473	10.1	7.1	2.3
Capacity Utilization[2]	77.07	78.70	75.65	NA	NA	92.66	-2.1	NA	-2.0
Ratio of Recoverable Reserves to Production	8.5	8.5	9.8	9.0	9.8	15.1	.5	-3.3	-6.2
Number of Miners	8,339	9,138	10,055	10,342	10,371	14,091	-8.7	-5.3	-5.7
Productivity Total[2]	2.41	2.37	2.23	2.24	2.21	1.61	1.6	2.2	4.6
Underground	2.19	2.20	2.12	2.14	2.15	1.49	-.2	.5	4.3
Surface	3.55	3.50	2.95	2.89	2.59	2.41	1.4	8.3	4.4
Producer/Distributor Stocks	1,389	1,714	2,154	1,844	1,095	-	-19.0	6.1	-
Imports[3]	34	46	-	-	-	-	-24.5	-	-
Distribution (thousand short tons)									
Distribution Total	41,639	45,728	43,495	48,038	42,533	NA	-8.9	-.5	NA
Domestic Distribution Total	27,388	28,504	25,390	28,863	27,799	NA	-3.9	-.4	NA
Within State	6,076	6,082	5,457	5,638	4,992	NA	-.1	5.0	NA
To Other States	21,312	22,422	19,933	23,226	22,807	NA	-4.9	-1.7	NA
Foreign Distribution Total	14,251	17,224	18,105	19,174	14,733	NA	-17.3	-.8	NA
Metallurgical	13,512	14,021	14,404	16,435	12,871	NA	-3.6	1.2	NA
Steam	739	3,203	3,700	2,740	1,863	NA	-76.9	-20.6	NA
Canada Total	1,229	1,331	1,404	1,244	990	NA	-7.6	5.6	NA
Metallurgical	1,229	-	-	-	-	NA	-	-	NA
Steam	-	1,331	1,404	1,244	990	NA	-100.0	-	NA
Overseas Total[4]	13,021	15,893	16,701	17,931	13,743	NA	-18.1	-1.3	NA
Metallurgical	12,283	14,021	14,404	16,435	12,871	NA	-12.4	-1.2	NA
Steam	739	1,873	2,296	1,496	873	NA	-60.5	-4.1	NA
Demand (thousand short tons)									
Consumption Total	13,584	13,418	13,980	13,105	14,279	12,168	1.2	-1.2	1.2
Electric Utility	9,447	8,661	8,568	8,228	9,573	7,323	9.1	-.3	2.9
Industrial	2,863	3,592	4,301	3,756	3,576	3,563	-20.3	-5.4	-2.4
Coke	w	w	w	w	w	w	w	w	w
Residential/Commercial	w	w	w	w	w	w	w	w	w
Consumer Stocks Total	w	w	w	w	w	w	w	w	w
Electric Utility	1,418	1,922	1,685	1,639	1,368	2,119	-26.2	.9	-4.4
All Other	w	w	w	w	w	w	w	w	w
Coal Prices (nominal dollars per short ton)									
Mine Total	$26.80	$27.55	$27.45	$28.05	$27.64	$31.17	-2.7	-.8	-1.7
Underground	27.26	27.88	27.76	28.39	28.31	31.21	-2.2	-.9	-1.5
Surface	25.29	26.17	26.12	26.32	24.11	30.99	-3.4	1.2	-2.2
Consumer									
Electric Utility	37.57	37.81	38.87	39.29	39.29	46.16	-.6	-1.1	-2.3
Industrial	41.27	40.97	40.53	41.05	38.92	43.13	.7	1.5	-.5
Coke	w	w	w	w	w	w	w	w	w

[1] For 1984, the Form EIA-7A solicited data on "Daily Productive Capacity." To obtain annual productive capacity for a mine in 1984, each mine's daily productive capacity was multiplied by the number of days worked during the year.

[2] Capacity utilization (percent) is the ratio of total production to annual productive capacity as reported by mining companies on Form EIA-7A. Productivity (short tons per miner per hour) is calculated by dividing total coal production by the total direct labor hours worked by all employees engaged in production, preparation, processing, development, maintenance, repair, and shop or yard work at mining operations.

[3] Imports for 1992 and 1993 include imports to electric utilities, manufacturing plants and coke plants. Imports for 1984 through 1991 include only imports to electric utilities.

[4] Includes Mexico.

W Withheld to avoid disclosure of individual company data.

NA Not available.

Notes: Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration, Form EIA-3, "Quarterly Coal Consumption Report - Manufacturing Plants;" Form EIA-5, "Coke Plant Report - Quarterly;" Form EIA-6, "Coal Distribution Report;" Form EIA-7A, "Coal Production Report;" Form EIA-759, "Monthly Power Plant Report;" and U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545" and "Monthly Report IM 145."

Table A15. West Virginia Coal Statistics, 1984, 1989-1993

Category	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Supply (thousand short tons)									
Recoverable Reserves	1,930,903	2,043,062	2,122,087	2,115,125	2,313,423	2,935,158	-5.5	-4.4	-4.5
Productive Capacity[1]	191,706	198,083	200,114	NA	NA	142,455	-3.2	NA	3.3
Production Total	130,525	162,164	167,352	169,205	153,580	131,008	-19.5	-4.0	*
Underground	87,997	115,212	119,821	123,306	113,202	106,215	-23.6	-6.1	-2.1
Surface	42,528	46,952	47,530	45,898	40,378	24,793	-9.4	1.3	6.2
Capacity Utilization[2]	67.91	81.70	83.42	NA	NA	91.46	-16.9	NA	-3.3
Ratio of Recoverable Reserves to Production	14.8	12.6	12.7	12.5	15.1	22.4	17.4	-.4	-4.5
Number of Miners	22,979	26,017	28,310	29,578	29,482	39,636	-11.7	-6.0	-5.9
Productivity Total[2]	3.27	3.27	3.11	2.96	2.77	1.88	-.1	4.2	6.4
Underground	2.92	2.99	2.83	2.70	2.59	1.79	-2.3	3.1	5.6
Surface	4.35	4.27	4.18	4.02	3.49	2.38	1.8	5.6	6.9
Producer/Distributor Stocks	4,059	7,405	6,464	5,250	3,251	-	-45.2	5.7	-
Distribution (thousand short tons)									
Domestic Distribution Total	102,659	112,917	111,785	118,032	102,864	NA	-9.1	*	NA
Within State	22,887	26,644	27,191	32,957	30,151	NA	-14.1	-6.7	NA
To Other States	79,772	86,273	84,593	85,075	72,713	NA	-7.5	2.3	NA
Foreign Distribution Total	33,159	50,806	53,792	48,733	36,082	NA	-34.7	-2.1	NA
Metallurgical	27,627	35,353	35,891	29,995	27,031	NA	-21.8	.5	NA
Steam	5,532	15,453	17,900	18,739	9,051	NA	-64.2	-11.6	NA
Canada Total	4,108	8,911	7,464	6,992	5,444	NA	-53.9	-6.8	NA
Metallurgical	4,071	8,021	7,351	5,067	5,165	NA	-49.3	-5.8	NA
Steam	37	890	113	1,925	279	NA	-95.8	-39.7	NA
Overseas Total[3]	29,052	41,895	46,328	41,741	30,638	NA	-30.7	-1.3	NA
Metallurgical	23,556	27,332	28,540	24,928	21,866	NA	-13.8	1.9	NA
Steam	5,495	14,564	17,787	16,813	8,772	NA	-62.3	-11.0	NA
Demand (thousand short tons)									
Consumption Total	32,046	32,019	31,843	34,896	37,186	36,158	.1	-3.6	-1.3
Electric Utility	27,782	28,050	27,557	29,873	32,391	31,058	-.9	-3.8	-1.2
Industrial	2,406	2,266	2,310	2,918	2,712	2,922	6.2	-2.9	-2.1
Coke	w	w	w	w	w	w	w	w	w
Residential/Commercial	w	w	w	w	w	w	w	w	w
Consumer Stocks Total	w	w	w	w	w	w	w	w	w
Electric Utility	4,001	7,863	7,707	6,874	3,729	9,127	-49.1	1.8	-8.8
All Other	w	w	w	w	w	w	w	w	w
Coal Prices (nominal dollars per short ton)									
Mine Total	$27.58	$28.15	$28.62	$28.62	$28.69	$34.18	-2.0	-1.0	-2.3
Underground	28.54	29.14	29.63	29.75	29.49	34.85	-2.0	-.8	-2.2
Surface	25.57	25.72	26.08	25.55	26.42	31.28	-.6	-.8	-2.2
Consumer									
Electric Utility	35.42	36.88	37.93	36.66	35.33	40.14	-3.9	.1	-1.4
Industrial	32.91	31.93	32.08	31.88	30.85	36.89	3.1	1.6	-1.3
Coke	w	w	w	w	w	w	w	w	w

[1] For 1984, the Form EIA-7A solicited data on "Daily Productive Capacity." To obtain annual productive capacity for a mine in 1984, each mine's daily productive capacity was multiplied by the number of days worked during the year.

[2] Capacity utilization (percent) is the ratio of total production to annual productive capacity as reported by mining companies on Form EIA-7A. Productivity (short tons per miner per hour) is calculated by dividing total coal production by the total direct labor hours worked by all employees engaged in production, preparation, processing, development, maintenance, repair, and shop or yard work at mining operations.

[3] Includes Mexico.

* Data round to zero.

W Withheld to avoid disclosure of individual company data.

NA Not available.

Notes: Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration, Form EIA-3, "Quarterly Coal Consumption Report - Manufacturing Plants;" Form EIA-5, "Coke Plant Report - Quarterly;" Form EIA-6, "Coal Distribution Report;" Form EIA-7A, "Coal Production Report;" Form EIA-759, "Monthly Power Plant Report;" and U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545" and "Monthly Report IM 145."

Table A16. Wyoming Coal Statistics, 1984, 1989-1993

Category	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Supply (thousand short tons)									
Recoverable Reserves	6,830,720	6,750,718	6,336,075	6,563,528	6,287,739	5,927,441	1.2	2.1	1.6
Productive Capacity[1]	277,875	253,312	250,251	NA	NA	143,143	9.7	NA	7.6
Production Total	210,129	190,172	193,854	184,249	171,558	130,914	10.5	5.2	5.4
Underground	2,136	2,511	2,418	1,722	1,645	1,345	-14.9	6.7	5.3
Surface	207,993	187,661	191,437	182,527	169,913	129,569	10.8	5.2	5.4
Capacity Utilization[2]	75.62	75.07	77.46	NA	NA	91.46	.7	NA	-2.1
Ratio of Recoverable Reserves to Production	32.5	35.5	32.7	35.6	36.6	45.3	-8.4	-2.9	-3.6
Number of Miners	3,159	3,326	3,301	3,330	3,351	4,476	-5.0	-1.5	-3.8
Productivity Total[2]	24.46	21.50	21.87	21.41	20.28	13.77	13.8	4.8	6.6
Underground	3.56	4.19	4.17	2.80	3.21	2.42	-14.9	2.7	4.4
Surface	26.03	22.76	23.11	22.84	21.38	14.48	14.4	5.0	6.7
Producer/Distributor Stocks	998	2,794	2,918	3,185	3,001	-	-64.3	-24.1	-
Distribution (thousand short tons)									
Distribution Total	211,713	190,260	194,407	184,386	171,565	NA	11.3	5.4	NA
Domestic Distribution Total	210,739	188,983	193,425	183,712	171,487	NA	11.5	5.3	NA
Within State	25,519	26,388	25,284	25,387	24,269	NA	-3.3	1.3	NA
To Other States	185,220	162,595	168,141	158,325	147,218	NA	13.9	5.9	NA
Foreign Distribution Total	974	1,277	982	674	78	NA	-23.8	87.8	NA
Steam	974	1,277	982	674	78	NA	-23.8	87.8	NA
Canada Total	-	-	20	62	-	NA	-	-	NA
Steam	-	-	20	62	-	NA	-	-	NA
Overseas Total[3]	974	1,277	962	612	78	NA	-23.8	87.8	NA
Steam	974	1,277	962	612	78	NA	-23.8	87.8	NA
Demand (thousand short tons)									
Consumption Total	26,171	27,339	25,150	25,514	23,952	20,756	-4.3	2.2	2.6
Electric Utility	24,111	25,114	23,115	23,526	21,908	18,805	-4.0	2.4	2.8
Industrial	1,873	2,126	1,896	1,857	1,908	w	-11.9	-.4	w
Residential/Commercial	187	99	138	130	w	w	88.0	w	w
Consumer Stocks Total	1,841	2,242	2,835	3,293	3,410	w	-17.9	-14.3	w
Electric Utility	1,728	2,153	2,767	3,215	3,337	4,642	-19.7	-15.2	-10.4
All Other	113	89	68	78	74	w	27.0	11.3	w
Coal Prices (nominal dollars per short ton)									
Mine Total	$7.32	$8.14	$8.09	$8.43	$8.63	$11.89	-10.1	-4.0	-5.3
Underground	w	w	w	w	w	w	w	w	w
Surface	w	w	w	w	w	w	w	w	w
Consumer									
Electric Utility	$14.03	$13.42	$14.55	$14.74	$14.86	$16.66	4.6	-1.4	-1.9
Industrial	23.43	23.67	25.19	24.91	24.14	w	-1.0	-.7	w

[1] For 1984, the Form EIA-7A solicited data on "Daily Productive Capacity." To obtain annual productive capacity for a mine in 1984, each mine's daily productive capacity was multiplied by the number of days worked during the year.

[2] Capacity utilization (percent) is the ratio of total production to annual productive capacity as reported by mining companies on Form EIA-7A. Productivity (short tons per miner per hour) is calculated by dividing total coal production by the total direct labor hours worked by all employees engaged in production, preparation, processing, development, maintenance, repair, and shop or yard work at mining operations.

[3] Includes Mexico.

w Withheld to avoid disclosure of individual company data.

NA Not available.

Notes: Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration, Form EIA-3, "Quarterly Coal Consumption Report - Manufacturing Plants;" Form EIA-5, "Coke Plant Report - Quarterly;" Form EIA-6, "Coal Distribution Report;" Form EIA-7A, "Coal Production Report;" Form EIA-759, "Monthly Power Plant Report;" and U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545" and "Monthly Report IM 145."

Table A17. All Other States Coal Statistics, 1984, 1989-1993

Category	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Supply (thousand short tons)									
Recoverable Reserves	506,419	514,739	577,615	588,588	687,954	841,476	-1.6	-7.4	-5.5
Productive Capacity[1]	23,567	28,144	29,465	NA	NA	31,643	-16.3	NA	-3.2
Production Total	18,848	22,284	22,807	25,140	25,986	29,581	-15.4	-7.7	-4.9
Underground	4,523	4,367	5,717	6,617	6,606	7,648	3.6	-9.0	-5.7
Surface	14,325	17,917	17,089	18,523	19,380	21,933	-20.0	-7.3	-4.6
Capacity Utilization[2]	79.48	78.65	76.94	NA	NA	92.75	1.0	NA	-1.7
Ratio of Recoverable Reserves to Production	26.9	23.1	25.3	23.4	26.5	28.4	16.3	.4	-.6
Number of Miners	2,478	2,918	3,539	4,297	4,523	7,171	-15.1	-14.0	-11.1
Productivity Total[2]	3.59	3.40	3.09	2.84	2.82	2.11	5.5	6.2	6.1
Underground	3.05	2.40	2.27	1.95	1.83	1.69	26.9	13.5	6.8
Surface	3.80	3.78	3.52	3.39	3.44	2.30	.6	2.5	5.7
Producer/Distributor Stocks	297	289	612	580	1,070	-	2.9	-27.4	-
Imports[3]	4,571	1,779	1,967	1,366	1,215	783	157.0	39.3	21.6
Distribution (thousand short tons)									
Distribution Total	374,259	415,136	411,964	434,912	418,988	NA	-9.8	-2.8	NA
Domestic Distribution Total	17,914	20,654	21,561	23,417	41,711	NA	-13.3	-19.0	NA
Within State	100	143	106	142	260	NA	-30.3	-21.3	NA
To Other States	17,814	20,511	21,454	23,276	41,451	NA	-13.1	-19.0	NA
Foreign Distribution Total	1,142	1,250	1,083	1,651	13,361	NA	-8.6	-45.9	NA
Metallurgical	50	-	*	*	2,037	NA	-	-60.4	NA
Steam	1,092	1,250	1,083	1,651	11,324	NA	-12.6	-44.3	NA
Canada Total	1	-	23	*	402	NA	-	-78.3	NA
Steam	1	-	23	*	402	NA	-	-78.3	NA
Overseas Total[4]	1,142	1,250	1,060	1,650	12,959	NA	-8.7	-45.5	NA
Metallurgical	50	-	*	*	2,037	NA	-	-60.4	NA
Steam	1,092	1,250	1,060	1,650	10,922	NA	-12.7	-43.8	NA
Demand (thousand short tons)									
Consumption Total	365,045	350,253	351,883	354,565	351,616	312,104	4.2	.9	1.8
Electric Utility	329,279	315,259	314,762	315,146	312,655	272,108	4.4	1.3	2.1
Industrial	31,970	31,728	31,954	33,065	32,533	29,984	.8	-.4	.7
Coke	1,243	1,148	2,806	3,740	4,401	6,320	8.3	-27.1	-16.5
Residential/Commercial	2,552	2,119	2,360	2,614	2,028	3,691	20.4	5.9	-4.0
Consumer Stocks Total	48,850	68,257	71,836	71,991	64,269	86,559	-28.4	-6.6	-6.1
Electric Utility	45,411	64,006	67,654	66,880	59,718	79,605	-29.0	-6.6	-6.0
All Other	3,439	4,251	4,182	5,111	4,551	6,954	-19.1	-6.8	-7.5
Coal Prices (nominal dollars per short ton)									
Mine Total	$23.14	$24.39	$25.57	$25.18	$24.88	$27.44	-5.1	-1.8	-1.9
Underground	26.72	27.26	26.50	28.25	27.63	30.13	-2.0	-.8	-1.3
Surface	22.02	23.69	25.26	24.09	23.95	26.50	-7.1	-2.1	-2.0
Consumer									
Electric Utility	30.68	31.79	32.31	33.18	33.31	38.79	-3.5	-2.0	-2.6
Industrial	38.95	39.35	39.70	40.30	39.20	44.45	-1.0	-.1	-1.4
Coke	58.19	53.10	56.62	53.79	52.45	60.37	9.6	2.6	-.4

[1] For 1984, the Form EIA-7A solicited data on "Daily Productive Capacity." To obtain annual productive capacity for a mine in 1984, each mine's daily productive capacity was multiplied by the number of days worked during the year.

[2] Capacity utilization (percent) is the ratio of total production to annual productive capacity as reported by mining companies on Form EIA-7A. Productivity (short tons per miner per hour) is calculated by dividing total coal production by the total direct labor hours worked by all employees engaged in production, preparation, processing, development, maintenance, repair, and shop or yard work at mining operations.

[3] Imports for 1992 and 1993 include imports to electric utilities, manufacturing plants and coke plants. Imports for 1984 through 1991 include only imports to electric utilities.

[4] Includes Mexico.

* Data round to zero.

NA Not available.

Notes: Other States include Alaska, Arkansas, California, Georgia, Iowa, Kansas, Louisiana, Maryland, Missouri, Oklahoma, Tennessee, and Washington. Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration, Form EIA-3, "Quarterly Coal Consumption Report - Manufacturing Plants;" Form EIA-5, "Coke Plant Report - Quarterly;" Form EIA-6, "Coal Distribution Report;" Form EIA-7A, "Coal Production Report;" Form EIA-759, "Monthly Power Plant Report;" and U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545" and "Monthly Report IM 145."

Table A18. Total U.S. Coal Statistics, 1984, 1989-1993

Category	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Supply (thousand short tons)									
Recoverable Reserves	21,535,283	21,626,971	21,998,540	22,761,328	22,679,827	24,598,747	-0.4	-1.3	-1.5
Productive Capacity[1]	1,261,873	1,241,054	1,248,479	NA	NA	968,719	1.7	NA	3.0
Production Total	945,424	997,545	995,984	1,029,076	980,729	895,921	-5.2	-.9	.6
Underground	351,053	407,239	407,225	424,546	393,835	352,050	-13.8	-2.8	*
Surface	594,371	590,306	588,759	604,529	586,893	543,870	.7	.3	1.0
Capacity Utilization[2]	74.77	80.20	79.58	NA	NA	91.94	-6.8	NA	-2.3
Ratio of Recoverable Reserves to Production	22.8	21.7	22.1	22.1	23.1	27.5	5.1	-.4	-2.0
Number of Miners	101,322	110,196	120,602	131,310	131,497	177,848	-8.0	-6.3	-6.1
Productivity Total[2]	4.70	4.36	4.09	3.83	3.70	2.64	7.7	6.1	6.6
Underground	2.95	2.93	2.69	2.54	2.46	1.72	.8	4.6	6.2
Surface	7.23	6.59	6.38	5.94	5.61	4.03	9.7	6.5	6.7
Producer/Distributor Stocks	25,284	33,993	32,971	33,418	29,000	34,090	-25.6	-3.4	-3.3
Imports[3]	5,496	1,973	1,967	1,366	1,215	783	178.6	45.8	24.2
Distribution (thousand short tons)									
Distribution Total	959,445	998,647	994,146	1,023,935	981,699	NA	-3.9	-.6	NA
Domestic Distribution Total	883,934	897,267	885,882	919,589	882,034	NA	-1.5	*	NA
Within State	339,034	355,232	345,486	365,065	352,341	NA	-4.6	-1.0	NA
To Other States	544,900	542,035	540,395	554,524	529,692	NA	.5	.7	NA
Foreign Distribution Total	75,510	101,380	108,264	104,346	99,580	NA	-25.5	-6.7	NA
Metallurgical	52,369	62,013	63,003	62,496	57,364	NA	-15.5	-2.3	NA
Steam	23,142	39,367	45,261	41,849	42,216	NA	-41.2	-13.9	NA
Canada Total	7,751	13,919	12,828	13,189	13,650	NA	-44.3	-13.2	NA
Metallurgical	6,666	9,394	8,483	6,215	6,759	NA	-29.0	-.3	NA
Steam	1,085	4,525	4,345	6,975	6,892	NA	-76.0	-37.0	NA
Overseas Total[4]	67,759	87,461	95,436	91,156	85,929	NA	-22.5	-5.8	NA
Metallurgical	45,702	52,619	54,520	56,282	50,605	NA	-13.1	-2.5	NA
Steam	22,057	34,842	40,916	34,875	35,324	NA	-36.7	-11.1	NA
Demand (thousand short tons)									
Consumption Total	925,944	892,421	887,621	895,480	889,699	791,296	3.8	1.0	1.8
Electric Utility	813,508	779,860	772,268	773,549	766,888	664,399	4.3	1.5	2.3
Industrial	74,892	74,042	75,405	76,330	76,134	73,745	1.1	-.4	.2
Coke	31,323	32,366	33,854	38,877	40,508	44,022	-3.2	-6.2	-3.7
Residential/Commercial	6,221	6,153	6,094	6,724	6,167	9,130	1.1	.2	-4.2
Consumer Stocks Total	120,458	163,692	167,711	168,210	146,087	197,211	-26.4	-4.7	-5.3
Electric Utility	111,341	154,130	157,876	156,166	135,860	179,727	-27.8	-4.8	-5.2
All Other	9,117	9,562	9,835	12,044	10,227	17,483	-4.6	-2.8	-7.0
Coal Prices (nominal dollars per short ton)									
Mine Total	$19.85	$21.03	$21.49	$21.76	$21.82	$25.61	-5.6	-2.3	-2.8
Underground	26.92	27.83	28.56	28.58	28.44	33.36	-3.3	-1.4	-2.3
Surface	15.67	16.34	16.60	16.98	17.38	20.59	-4.1	-2.6	-3.0
Consumer									
Electric Utility	28.58	29.36	30.02	30.45	30.15	35.12	-2.6	-1.3	-2.3
Industrial	32.23	32.78	33.54	33.59	33.03	39.30	-1.7	-.6	-2.2
Coke	47.44	47.92	48.88	47.73	47.50	56.58	-1.0	*	-1.9

[1] For 1984, the Form EIA-7A solicited data on "Daily Productive Capacity." To obtain annual productive capacity for a mine in 1984, each mine's daily productive capacity was multiplied by the number of days worked during the year.

[2] Capacity utilization (percent) is the ratio of total production to annual productive capacity as reported by mining companies on Form EIA-7A. Productivity (short tons per miner per hour) is calculated by dividing total coal production by the total direct labor hours worked by all employees engaged in production, preparation, processing, development, maintenance, repair, and shop or yard work at mining operations.

[3] Imports for 1992 and 1993 include imports to electric utilities, manufacturing plants and coke plants. Imports for 1984 through 1991 include only imports to electric utilities.

[4] Includes Mexico.

* Data round to zero.

NA Not available.

Notes: Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration, Form EIA-3, "Quarterly Coal Consumption Report - Manufacturing Plants;" Form EIA-5, "Coke Plant Report - Quarterly;" Form EIA-6, "Coal Distribution Report;" Form EIA-7A, "Coal Production Report;" Form EIA-759, "Monthly Power Plant Report;" and U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545" and "Monthly Report IM 145."

Appendix B

Metric Tables

Haul trucks such as this one, with capacities of approximately 100 tons, are used at surface mines as a link from the production area of the mine to the shipping area.

Appendix B

Metric Tables

In response to requests from international users of U.S. coal statistics, certain summary data have been converted from the customary short tons to metric. This enables U.S. statistics to be compared with data published by countries using the metric system. The conversion to metric tons is made by multiplying short tons by 0.907185.

The data converted to metric tons are from Tables ES3, 1, 15, 24, 34, 48, 67, 68, 76, 80, 92, 94, 96, 98, and 99.

Table B1. Trends in U.S. Coal Production, Imports, Consumption, Exports, and Stocks, 1984, 1989-1993
(Million Metric Tons)

Activity	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Production	858	905	904	934	890	813	-5.2	-0.9	0.6
Imports	7	3	3	2	3	1	92.2	26.5	21.3
Producer and Distributor Stocks[1]	23	31	30	30	26	31	-25.6	-3.4	-3.3
Consumption	840	810	805	812	807	718	3.8	1.0	1 8
Exports	68	93	99	96	91	74	-27.3	-7.3	-1 0
Consumer Stocks[1]	109	148	152	153	133	179	-26.4	-4.7	-5 3

[1] Reported as of the last day of the quarter.

Sources: • Production: Energy Information Administration (EIA), Form EIA-7A, "Coal Production Report;" U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report;" and State Mining Agency Coal Production Reports. • Imports: U.S. Department of Commerce, Bureau of the Census, "Monthly Report IM 145." • Producer and Distributor Stocks: EIA, Form EIA-6, "Coal Distribution Report." • Exports: U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545."
• Consumption and Consumer Stocks: EIA, Form EIA-759, "Monthly Power Plant Report;" Form EIA-3, Quarterly Coal Consumption Report - Manufacturing Plants;" Form EIA-5, "Coke Plant Report - Quarterly;" and Form EIA-6, "Coal Distribution Report."

Table B2. Coal Production by State, 1984, 1989-1993
(Thousand Metric Tons)

Coal-Producing State and Region	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Alabama	22,469	23,401	24,738	26,335	25,394	24,574	-4.0	-3.0	-1.0
Alaska	1,452	1,392	1,303	1,548	1,436	779	4.3	.3	7.2
Arizona	11,043	11,351	11,977	10,254	10,828	10,452	-2.7	.5	.6
Arkansas	40	53	47	53	63	74	-24.1	-10.6	-6.5
California	-	94	51	55	37	-	-100.0	-	-
Colorado	19,854	17,442	16,179	17,155	15,534	16,299	13.8	6.3	2.2
Georgia	-	-	-	-	-	113	-	-	-
Illinois	37,283	54,301	54,665	54,787	53,767	57,850	-31.3	-8.7	-4.8
Indiana	26,576	27,639	28,547	32,574	30,519	34,069	-3.8	-3.4	-2.7
Iowa	159	262	312	346	390	478	-39.4	-20.1	-11.5
Kansas	310	329	377	654	776	1,205	-5.9	-20.5	-14.0
Kentucky Total	141,792	146,119	144,224	157,235	151,852	144,733	-3.0	-1.7	-.2
Eastern	109,036	108,302	106,340	116,479	114,069	106,389	.7	-1.1	.3
Western	32,756	37,817	37,884	40,756	37,784	38,344	-13.4	-3.5	-1.7
Louisiana	2,843	2,939	2,858	2,890	2,706	-	-3.3	1.2	-
Maryland	3,044	3,031	3,423	3,163	3,062	3,722	.4	-.1	-2.2
Missouri	592	2,618	2,090	2,401	3,064	6,108	-77.4	-33.7	-22.8
Montana	32,583	35,280	34,688	34,125	34,239	29,937	-7.6	-1.2	.9
New Mexico	25,644	22,270	19,520	22,038	21,502	19,304	15.1	4.5	3.2
North Dakota	29,005	28,797	26,790	26,502	26,822	20,059	.7	2.0	4.2
Ohio	26,141	27,581	27,732	31,980	30,562	35,613	-5.2	-3.8	-3.4
Oklahoma	1,595	1,580	1,670	1,540	1,590	4,209	1.0	.1	-10.2
Pennsylvania Total	54,159	62,578	59,313	63,969	64,044	70,301	-13.4	-4.1	-2.8
Anthracite	3,906	3,160	3,125	3,181	3,037	3,775	23.6	6.5	.4
Bituminous	50,253	59,419	56,188	60,788	61,007	66,526	-15.4	-4.7	-3.1
Tennessee	2,764	3,154	3,892	5,618	5,879	6,634	-12.3	-17.2	-9.3
Texas	49,502	49,960	48,829	50,580	48,856	37,326	-.9	.3	3.2
Utah	19,819	19,359	19,908	20,011	18,237	11,179	2.4	2.1	6.6
Virginia	35,668	39,030	38,060	42,562	39,014	36,622	-8.6	-2.2	-.3
Washington	4,300	4,764	4,666	4,537	4,571	3,512	-9.7	-1.5	2.3
West Virginia Total	118,411	147,112	151,819	153,500	139,325	118,848	-19.5	-4.0	*
Northern	30,665	45,379	47,314	51,384	50,819	50,810	-32.4	-11.9	-5.4
Southern	87,746	101,734	104,504	102,116	88,507	68,038	-13.7	-.2	2.9
Wyoming	190,626	172,522	175,862	167,148	155,635	118,763	10.5	5.2	5.4
Appalachian Total[1]	**371,690**	**414,189**	**415,317**	**443,607**	**421,349**	**402,816**	**-10.3**	**-3.1**	**-.9**
Interior Total[1]	**151,658**	**177,499**	**177,280**	**186,582**	**179,514**	**179,664**	**-14.5**	**-4.1**	**-1.9**
Western Total[1]	**334,327**	**313,270**	**310,945**	**303,373**	**288,840**	**230,286**	**6.7**	**3.7**	**4.2**
East of Miss. River	**468,306**	**533,946**	**536,413**	**571,724**	**543,418**	**533,080**	**-12.3**	**-3.6**	**-1.4**
West of Miss. River	**389,369**	**371,012**	**367,129**	**361,838**	**346,285**	**279,686**	**4.9**	**3.0**	**3.7**
U.S. Total	**857,675**	**904,958**	**903,542**	**933,562**	**889,702**	**812,766**	**-5.2**	**-.9**	**.6**

[1] For a definition of coal-producing regions, see Appendix C.

* Data round to zero.

Notes: Coal production excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table B3. Productive Capacity of Coal Mines by State, 1984, 1989-1993
(Thousand Metric Tons)

Coal-Producing State and Region	1993	1992	1991	1990	1989	1984[1]	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Alabama	25,325	27,048	27,392	NA	NA	26,917	-6.4	NA	-0.7
Alaska	w	w	w	NA	NA	w	w	NA	w
Arizona	w	w	w	NA	NA	w	w	NA	w
Arkansas	w	w	w	NA	NA	w	w	NA	w
California	-	w	w	NA	NA	-	w	NA	-
Colorado	27,252	23,449	21,403	NA	NA	18,049	16.2	NA	4.7
Georgia	-	-	-	NA	NA	w	-	NA	w
Illinois	62,886	68,753	68,683	NA	NA	63,635	-8.5	NA	-.1
Indiana	39,875	39,000	40,964	NA	NA	35,945	2.2	NA	1.1
Iowa	w	w	w	NA	NA	710	w	NA	w
Kansas	w	w	w	NA	NA	1,266	w	NA	w
Kentucky Total	185,796	177,220	180,786	NA	NA	149,121	4.8	NA	2.5
Eastern	142,717	135,212	132,040	NA	NA	106,985	5.5	NA	3.3
Western	43,079	42,008	48,747	NA	NA	42,136	2.5	NA	.2
Louisiana	w	w	w	NA	NA	-	w	NA	w
Maryland	3,563	3,539	3,854	NA	NA	3,826	.7	NA	-.8
Missouri	w	w	w	NA	NA	6,446	w	NA	w
Montana	46,129	44,073	44,093	NA	NA	33,122	4.7	NA	3.7
New Mexico	30,264	26,773	25,571	NA	NA	21,077	13.0	NA	4.1
North Dakota	32,995	33,553	32,637	NA	NA	24,226	-1.7	NA	3.5
Ohio	38,315	37,493	42,997	NA	NA	38,690	2.2	NA	-.1
Oklahoma	2,197	2,256	2,112	NA	NA	4,367	-2.6	NA	-7.3
Pennsylvania Total	74,524	75,267	72,954	NA	NA	78,888	-1.0	NA	-.6
Anthracite	5,267	3,758	3,668	NA	NA	3,817	40.2	NA	3.6
Bituminous	69,256	71,509	69,286	NA	NA	75,072	-3.1	NA	-.9
Tennessee	3,414	3,567	4,680	NA	NA	6,929	-4.3	NA	-7.6
Texas	51,814	53,108	54,049	NA	NA	38,861	-2.4	NA	3.2
Utah	23,526	23,164	23,117	NA	NA	12,295	1.6	NA	7.5
Virginia	46,156	49,415	50,141	NA	NA	39,071	-6.6	NA	1.9
Washington	w	w	w	NA	NA	w	w	NA	w
West Virginia Total	173,913	179,697	181,541	NA	NA	129,233	-3.2	NA	3.3
Northern	54,445	56,981	58,710	NA	NA	54,773	-4.4	NA	-.1
Southern	119,468	122,716	122,831	NA	NA	74,460	-2.6	NA	5.4
Wyoming	252,084	229,801	227,024	NA	NA	129,857	9.7	NA	7.6
Appalachian Total[2]	**507,927**	**511,239**	**515,599**	**NA**	**NA**	**w**	**-.6**	**NA**	**w**
Interior Total[2]	**204,968**	**213,225**	**222,702**	**NA**	**NA**	**w**	**-3.9**	**NA**	**w**
Western Total[2]	**431,858**	**401,401**	**394,300**	**NA**	**NA**	**254,733**	**7.6**	**NA**	**6.0**
East of Miss. River	**653,767**	**661,000**	**673,992**	**NA**	**NA**	**572,369**	**-1.1**	**NA**	**1.5**
West of Miss. River	**490,986**	**464,865**	**458,609**	**NA**	**NA**	**306,438**	**5.6**	**NA**	**5.4**
U.S. Total	**1,144,753**	**1,125,866**	**1,132,601**	**NA**	**NA**	**878,807**	**1.7**	**NA**	**3.0**

[1] For 1984, Form EIA-7A solicited data on "Daily Productive Capacity." To obtain annual productive capacity for a mine in 1984, each mine's daily productive capacity was multiplied by the number of days worked during the year.
[2] For a definition of coal-producing regions, see Appendix C.
[w] Withheld to avoid disclosure of individual company data.
[NA] Not available.

Notes: Productive capacity is the maximum amount of coal that can be produced as reported by mining companies on Form EIA-7A. Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons, which are not required to provide these data.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report."

Table B4. Recoverable Coal Reserves by State, 1984, 1989-1993
(Million Metric Tons)

Coal-Producing State and Region	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Alabama	387	424	427	444	461	598	-8.8	-4.3	-4.7
Alaska	w	w	w	w	w	w	w	w	w
Arizona	w	w	w	w	w	w	w	w	w
Arkansas	w	w	w	w	w	w	w	w	w
California	-	w	w	w	w	-	w	w	w
Colorado	552	552	560	496	601	784	.1	-2.1	-3.8
Georgia	-	-	-	-	-	w	-	-	w
Illinois	965	1,088	1,140	1,065	1,253	1,266	-11.3	-6.3	-3.0
Indiana	344	367	381	403	431	450	-6.2	-5.5	-2.9
Iowa	w	w	w	w	w	7	w	w	w
Kansas	w	w	w	w	25	35	w	w	w
Kentucky Total	1,658	1,318	1,481	1,438	1,373	1,711	25.8	4.8	-.3
Eastern	1,222	866	983	902	847	1,140	41.1	9.6	.8
Western	436	452	497	536	526	571	-3.5	-4.6	-2.9
Louisiana	w	w	w	w	w	-	w	w	w
Maryland	60	53	78	77	79	62	12.1	-6.6	-.3
Missouri	w	w	w	w	w	311	w	w	w
Montana	1,166	1,226	1,264	1,699	1,373	1,640	-4.9	-4.0	-3.7
New Mexico	1,336	1,356	1,459	1,385	1,280	1,380	-1.4	1.1	-.3
North Dakota	1,280	1,211	1,257	1,283	1,234	1,472	5.7	.9	-1.5
Ohio	472	523	536	628	739	808	-9.8	-10.6	-5.8
Oklahoma	42	44	36	34	21	54	-4.3	18.1	-2.8
Pennsylvania Total	852	850	894	1,022	1,074	1,317	.2	-5.6	-4.7
Anthracite	59	64	69	70	55	61	-7.0	2.1	-.2
Bituminous	793	787	825	952	1,020	1,256	.8	-6.1	-5.0
Tennessee	27	39	51	57	65	97	-31.4	-19.9	-13.3
Texas	1,002	1,078	1,111	1,097	1,030	796	-7.0	-.7	2.6
Utah	405	443	462	458	470	484	-8.5	-3.7	-1.9
Virginia	305	332	374	384	381	555	-8.2	-5.4	-6.4
Washington	w	w	w	w	w	w	w	w	w
West Virginia Total	1,752	1,853	1,925	1,919	2,099	2,663	-5.5	-4.4	-4.5
Northern	747	871	939	924	1,073	1,380	-14.3	-8.6	-6.6
Southern	1,005	982	986	995	1,026	1,283	2.3	-.5	-2.7
Wyoming	6,197	6,124	5,748	5,954	5,704	5,377	1.2	2.1	1.6
Appalachian Total[1]	**5,076**	**4,941**	**5,268**	**5,433**	**5,743**	**w**	**2.7**	**-3.0**	**w**
Interior Total[1]	**2,994**	**3,228**	**3,370**	**3,340**	**3,544**	**w**	**-7.3**	**-4.1**	**w**
Western Total[1]	**11,466**	**11,450**	**11,319**	**11,876**	**11,287**	**11,583**	**.1**	**.4**	**-.1**
East of Miss. River	**6,822**	**6,848**	**7,286**	**7,437**	**7,953**	**9,527**	**-.4**	**-3.8**	**-3.6**
West of Miss. River	**12,715**	**12,772**	**12,671**	**13,212**	**12,622**	**12,789**	**-.4**	**.2**	**-.1**
U.S. Total	**19,536**	**19,620**	**19,957**	**20,649**	**20,575**	**22,316**	**-.4**	**-1.3**	**-1.5**

[1] For a definition of coal-producing regions, see Appendix C.
[w] Withheld to avoid disclosure of individual company data.
Notes: Recoverable reserves represent the quantity of coal that can be recovered (i.e., mined) from existing coal reserves at reporting mines. Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons, which are not required to provide these data. Totals may not equal sum of components due to independent rounding.
Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table B5. U.S. Coal Imports by Continent and Country of Origin, 1984, 1989-1993
(Metric Tons)

Continent and Country of Origin	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
North America Total	**955,786**	**926,102**	**848,646**	**888,336**	**963,128**	**241,590**	**3.2**	**-0.2**	**16.5**
Canada	953,696	926,102	848,646	882,708	911,150	241,590	3.0	1.1	16.5
Guatemala	4	-	-	-	-	-	-	-	-
Mexico	2,086	-	-	5,628	51,978	-	-	-55.2	-
South America Total	**4,912,696**	**2,088,277**	**2,192,038**	**1,534,039**	**1,538,125**	**244,162**	**135.3**	**33.7**	**39.6**
Argentina	-	-	-	-	240	-	-	-100.0	-
Colombia	3,734,915	1,599,502	1,706,814	1,295,594	1,214,321	244,161	133.5	32.4	35.4
Venezuela	1,177,781	488,775	485,224	238,445	323,564	-	141.0	38.1	-
Europe Total	**56**	**81**	**5**	**4,892**	**10,468**	**99,238**	**-30.9**	**-72.9**	**-56.4**
Czechoslovakia	-	-	5	-	-	-	-	-	-
Denmark	54	-	-	118	-	-	-	-	-
France	-	-	-	-	9	-	-	-100.0	-
Germany	-	-	-	1	300	-	-	-100.0	-
Italy	-	-	-	-	-	10	-	-	-100.0
Netherlands	-	-	-	-	10,159	15	-	-100.0	-100.0
Norway	-	-	-	42	-	-	-	-	-
Poland	2	-	-	-	-	99,175	-	-	-69.9
United Kingdom	-	81	-	4,731	-	38	-100.0	-	-100.0
Asia Total	**642,359**	**338,513**	**6,254**	**2**	**43,350**	**15**	**89.8**	**96.2**	**227.1**
China (Mainland)	-	258	183	-	43,267	2	-100.0	-100.0	-100.0
Hong Kong	-	1	-	-	37	-	-100.0	-100.0	-
India	-	60,014	-	-	-	-	-100.0	-	-
Indonesia	642,359	229,779	6,025	-	-	6	179.5	-	262.1
Japan	-	-	1	2	-	7	-	-	-100.0
Korea, Republic of	-	-	-	-	46	-	-	-100.0	-
Malaysia	-	48,461	-	-	-	-	-100.0	-	-
Thailand	-	-	45	-	-	-	-	-	-
Oceania & Australia Total	**95,664**	**91,613**	**28,219**	**21,586**	**31,429**	**25,618**	**4.4**	**32.1**	**15.8**
Australia	90,787	91,613	28,219	21,586	31,429	25,618	-.9	30.4	15.1
New Zealand	4,877	-	-	-	-	-	-	-	-
Africa Total	**23,967**	**5,227**	**-**	**-**	**-**	**555,604**	**358.5**	**-**	**-29.5**
South Africa, Rep of	18,433	5,227	-	-	-	555,604	252.6	-	-31.5
Swaziland	5,534	-	-	-	-	-	-	-	-
Total	**6,630,528**	**3,449,813**	**3,075,162**	**2,448,855**	**2,586,500**	**1,166,227**	**92.2**	**26.5**	**21.3**

Note: Coal imports include coal to Puerto Rico and the Virgin Islands.
Source: U.S. Department of Commerce, Bureau of the Census, "Monthly Report IM 145."

Table B6. Coal Mining Productivity by State, 1984, 1989-1993
(Metric Tons of Coal Produced per Miner per Hour)

Coal-Producing State and Region	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Alabama	2.14	2.26	1.97	2.02	2.04	1.48	-5.4	1.1	4.1
Alaska	6.71	6.29	6.19	7.67	7.02	4.03	6.7	-1.1	5.8
Arizona	5.63	5.71	6.03	5.38	5.67	5.78	-1.3	-.1	-.3
Arkansas	1.26	1.52	2.06	1.33	1.59	1.86	-17.4	-5.6	-4.3
California	-	10.09	10.26	16.04	7.45	-	-100.0	-	-
Colorado	5.30	4.78	4.58	3.84	3.70	2.94	10.9	9.4	6.8
Georgia	-	-	-	-	-	1.69	-	-	-
Illinois	2.93	3.10	2.89	2.66	2.52	2.02	-5.5	3.9	4.2
Indiana	4.04	3.71	3.65	3.48	3.50	2.66	8.9	3.6	4.8
Iowa	.65	1.03	1.17	1.31	1.37	1.53	-36.9	-17.0	-9.1
Kansas	2.09	2.00	1.95	1.84	2.42	2.39	4.2	-3.6	-1.5
Kentucky Total	2.94	2.90	2.73	2.57	2.52	2.03	1.5	3.9	4.2
Eastern	2.88	2.82	2.63	2.41	2.34	1.93	2.4	5.3	4.6
Western	3.16	3.17	3.05	3.14	3.29	2.36	-.2	-1.0	3.3
Louisiana	11.02	11.27	11.40	11.94	13.64	-	-2.3	-5.2	-
Maryland	3.10	2.64	2.82	2.66	2.72	2.12	17.2	3.3	4.3
Missouri	1.67	2.81	2.44	2.71	3.11	2.32	-40.6	-14.4	-3.6
Montana	17.68	18.29	17.23	17.04	17.18	12.94	-3.3	.7	3.5
New Mexico	6.06	6.06	5.67	6.93	7.19	5.37	-.1	-4.2	1.3
North Dakota	16.02	16.43	16.00	14.62	14.23	9.16	-2.5	3.0	6.4
Ohio	3.14	2.76	2.43	2.54	2.11	1.82	14.0	10.4	6.2
Oklahoma	2.54	1.97	2.08	1.89	1.95	1.63	28.9	6.9	5.0
Pennsylvania Total	2.54	2.43	2.21	2.03	2.07	1.51	4.7	5.2	5.9
Anthracite	1.68	1.21	1.26	.93	1.02	.93	38.9	13.3	6.8
Bituminous	2.64	2.55	2.29	2.15	2.17	1.56	3.5	5.0	6.0
Tennessee	2.24	1.98	1.71	1.65	1.56	1.40	12.9	9.5	5.4
Texas	7.63	6.66	6.50	6.78	6.63	5.31	14.6	3.6	4.1
Utah	5.41	4.96	4.35	4.30	4.31	2.67	9.1	5.8	8.2
Virginia	2.18	2.15	2.02	2.03	2.00	1.46	1.6	2.2	4.6
Washington	3.62	4.09	3.60	3.09	3.03	2.83	-11.4	4.6	2.8
West Virginia Total	2.97	2.97	2.82	2.69	2.52	1.70	-.1	4.2	6.4
Northern	2.70	2.88	2.57	2.44	2.41	2.05	-6.1	2.9	3.1
Southern	3.07	3.01	2.95	2.83	2.59	1.51	2.0	4.4	8.2
Wyoming	22.19	19.50	19.84	19.42	18.39	12.49	13.8	4.8	6.6
Appalachian Total[1]	**2.73**	**2.67**	**2.48**	**2.36**	**2.26**	**1.68**	**2.0**	**4.8**	**5.5**
Interior Total[1]	**4.01**	**3.79**	**3.61**	**3.52**	**3.48**	**2.54**	**5.9**	**3.6**	**5.2**
Western Total[1]	**12.27**	**11.55**	**11.27**	**10.72**	**10.55**	**7.53**	**6.3**	**3.8**	**5.6**
East of Miss. River	**2.82**	**2.78**	**2.60**	**2.48**	**2.39**	**1.80**	**1.3**	**4.3**	**5.1**
West of Miss. River	**11.01**	**10.01**	**9.79**	**9.44**	**9.27**	**6.41**	**10.0**	**4.4**	**6.2**
U.S. Total	**4.26**	**3.96**	**3.71**	**3.47**	**3.36**	**2.39**	**7.7**	**6.1**	**6.6**

[1] For a definition of coal-producing regions, see Appendix C.

Notes: Productivity is calculated by dividing total coal production by the total direct labor hours worked by all mine employees. Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons, which are not required to provide these data.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table B7. Coal Consumption by Census Division and State, 1984, 1989-1993
(Thousand Metric Tons)

Census Division and State	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change 1989-1993	Average Annual Percent Change 1984-1993
New England Total	**5,883**	**6,620**	**6,361**	**6,143**	**6,369**	**5,433**	**-11.1**	**-2.0**	**0.9**
Connecticut	715	770	777	881	807	53	-7.1	-3.0	33.4
Maine	407	777	339	240	246	181	-47.6	13.4	9.4
Massachusetts	3,457	3,862	4,038	3,934	4,210	3,994	-10.5	-4.8	-1.6
New Hampshire	1,295	1,189	1,193	1,076	1,073	1,146	8.9	4.8	1.4
Rhode Island	3	4	4	5	25	8	-33.1	-41.2	-10.1
Vermont	5	18	11	7	8	50	-70.9	-9.4	-22.2
Middle Atlantic Total	**63,856**	**64,790**	**64,042**	**66,961**	**69,106**	**66,759**	**-1.4**	**-1.9**	**-.5**
New Jersey	2,135	2,130	2,110	2,747	3,216	2,899	.2	-9.7	-3.3
New York	10,776	11,790	12,100	12,215	12,796	10,791	-8.6	-4.2	*
Pennsylvania	50,945	50,870	49,832	51,999	53,094	53,069	.1	-1.0	-.4
East North Central Total	**191,082**	**182,035**	**189,223**	**190,163**	**186,505**	**179,876**	**5.0**	**.6**	**.7**
Illinois	34,595	28,667	31,459	30,757	29,370	34,743	20.7	4.2	*
Indiana	54,751	53,310	55,148	55,974	52,062	48,599	2.7	1.3	1.3
Michigan	29,226	28,626	30,734	31,491	31,647	28,497	2.1	-2.0	.3
Ohio	53,552	53,225	53,141	53,710	55,353	51,754	.6	-.8	.4
Wisconsin	18,957	18,208	18,741	18,231	18,073	16,283	4.1	1.2	1.7
West North Central Total	**109,715**	**104,785**	**105,875**	**105,477**	**103,641**	**90,146**	**4.7**	**1.4**	**2.2**
Iowa	17,407	16,322	17,001	16,265	15,536	12,360	6.6	2.9	3.9
Kansas	15,772	12,906	13,500	13,766	13,574	14,120	22.2	3.8	1.2
Minnesota	16,620	15,354	15,416	16,672	16,583	12,028	8.2	*	3.6
Missouri	21,211	22,843	23,381	23,438	23,902	25,045	-7.1	-2.9	-1.8
Nebraska	8,769	7,450	8,037	7,499	6,883	6,295	17.7	6.2	3.8
North Dakota	27,490	27,488	25,943	25,505	24,858	17,832	*	2.5	4.9
South Dakota	2,445	2,422	2,598	2,332	2,305	2,466	1.0	1.5	-.1
South Atlantic Total	**136,604**	**130,796**	**130,701**	**135,583**	**138,807**	**124,800**	**4.4**	**-.4**	**1.0**
Delaware	2,219	1,605	1,983	2,080	2,138	2,552	38.2	.9	-1.5
District of Columbia	46	46	60	63	54	90	1.8	-3.9	-7.1
Florida	23,977	23,921	23,590	22,891	23,085	14,041	.2	.9	6.1
Georgia	24,567	23,116	24,455	27,276	25,327	25,466	6.3	-.8	-.4
Maryland	9,315	8,811	9,715	10,154	10,470	9,612	5.7	-2.9	-.3
North Carolina	23,369	21,840	18,940	19,187	20,175	20,336	7.0	3.7	1.5
South Carolina	11,715	10,238	10,388	10,385	10,869	8,862	14.4	1.9	3.1
Virginia	12,323	12,173	12,682	11,888	12,954	11,039	1.2	-1.2	1.2
West Virginia	29,072	29,047	28,887	31,658	33,735	32,802	.1	-3.6	-1.3
East South Central Total	**94,371**	**85,097**	**82,359**	**82,668**	**79,520**	**72,877**	**10.9**	**4.4**	**2.9**
Alabama	29,980	28,585	26,625	25,074	24,981	21,660	4.9	4.7	3.7
Kentucky	35,467	31,483	31,313	31,251	29,748	26,184	12.6	4.5	3.4
Mississippi	3,656	3,161	3,458	3,773	3,475	3,898	15.6	1.3	-.7
Tennessee	25,268	21,868	20,962	22,569	21,315	21,135	15.5	4.3	2.0
West South Central Total	**127,729**	**122,660**	**121,232**	**119,275**	**118,018**	**92,529**	**4.1**	**2.0**	**3.6**
Arkansas	10,384	11,374	11,123	10,970	10,476	8,560	-8.7	-.2	2.2
Louisiana	12,407	12,405	11,762	11,383	11,314	6,219	*	2.3	8.0
Oklahoma	17,115	15,812	14,828	13,992	13,686	12,024	8.2	5.7	4.0
Texas	87,823	83,069	83,519	82,931	82,543	65,728	5.7	1.6	3.3
Mountain Total	**100,401**	**101,752**	**95,415**	**97,212**	**96,354**	**77,572**	**-1.3**	**1.0**	**2.9**
Arizona	17,228	16,252	15,245	14,895	15,305	13,976	6.0	3.0	2.3
Colorado	15,485	15,146	14,713	15,159	14,872	13,372	2.2	1.0	1.6
Idaho	479	485	610	498	484	445	-1.1	-.2	.8
Montana	8,389	10,015	9,570	8,778	9,487	4,793	-16.2	-3.0	6.4
Nevada	7,081	7,338	7,340	6,751	6,955	6,303	-3.5	.4	1.3
New Mexico	13,619	13,455	11,664	13,709	13,875	12,682	1.2	-.5	.8
Utah	14,377	14,260	13,457	14,277	13,648	7,172	.8	1.3	8.0
Wyoming	23,742	24,801	22,815	23,145	21,729	18,829	-4.3	2.2	2.6
Pacific Total	**10,362**	**11,055**	**10,029**	**8,884**	**8,274**	**7,378**	**-6.3**	**5.8**	**3.8**
Alaska	783	718	728	711	271	739	9.0	30.4	.6
California	2,226	2,559	2,554	2,630	2,314	1,514	-13.0	-1.0	4.4
Hawaii	66	42	33	25	29	35	55.8	22.6	7.4
Oregon	1,904	1,927	1,760	848	359	622	-1.2	51.7	13.2
Washington	5,383	5,808	4,954	4,669	5,300	4,469	-7.3	.4	2.1
U.S. Total	**840,003**	**809,591**	**805,236**	**812,366**	**807,121**	**717,852**	**3.8**	**1.0**	**1.8**

* Data round to zero.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration, Form EIA-759, "Monthly Power Plant Report;" Form EIA-3, "Quarterly Coal Consumption Report - Manufacturing Plants;" Form EIA-5, "Coke Plant Report - Quarterly;" and Form EIA-6, "Coal Distribution Report."

Table B8. Year-End Consumer Coal Stocks by Census Division and State, 1984, 1989-1993
(Thousand Metric Tons)

Census Division and State	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
New England Total	**897**	**1,137**	**1,029**	**1,039**	**987**	**886**	**-21.1**	**-2.4**	**0.1**
Connecticut	w	w	w	w	w	w	w	w	w
Maine	w	w	w	w	w	w	w	w	w
Massachusetts	w	w	w	w	w	w	w	w	w
New Hampshire	w	w	w	w	w	w	w	w	w
Rhode Island	-	-	-	w	w	w	w	w	w
Vermont	-	-	-	-	w	w	w	w	w
Middle Atlantic Total	**12,755**	**17,678**	**16,553**	**17,033**	**12,933**	**20,165**	**-27.8**	**-.3**	**-5.0**
New Jersey	w	w	w	w	w	w	w	w	w
New York	w	w	w	w	w	w	w	w	w
Pennsylvania	11,127	14,493	14,104	13,994	10,768	16,876	-23.2	.8	-4.5
East North Central Total	**27,363**	**39,609**	**39,172**	**41,196**	**35,310**	**49,055**	**-30.9**	**-6.2**	**-6.3**
Illinois	w	w	w	w	w	7,751	w	w	w
Indiana	7,074	11,347	10,330	11,091	8,526	13,627	-37.6	-4.5	-7.0
Michigan	w	w	w	w	w	w	w	w	w
Ohio	6,922	9,801	9,632	9,499	6,400	10,958	-29.4	2.0	-5.0
Wisconsin	2,896	3,660	w	w	w	w	-20.9	w	w
West North Central Total	**13,515**	**18,808**	**w**	**w**	**w**	**w**	**-28.1**	**w**	**w**
Iowa	3,465	4,406	4,657	4,463	4,151	4,830	-21.4	-4.4	-3.6
Kansas	1,836	2,503	3,012	3,395	2,980	3,333	-26.6	-11.4	-6.4
Minnesota	1,134	2,043	2,443	2,119	1,944	3,639	-44.5	-12.6	-12.1
Missouri	3,360	5,841	w	w	w	w	-42.5	w	w
Nebraska	w	w	w	w	w	2,020	w	w	w
North Dakota	w	w	w	w	w	w	w	w	w
South Dakota	w	w	w	w	w	w	w	w	w
South Atlantic Total	**17,320**	**26,565**	**27,172**	**26,691**	**19,941**	**28,802**	**-34.8**	**-3.5**	**-5.5**
Delaware	w	w	w	w	w	w	w	w	w
Florida	3,212	3,739	4,427	4,511	4,074	2,817	-14.1	-5.8	1.5
Georgia	2,655	4,387	4,916	5,175	4,700	6,443	-39.5	-13.3	-9.4
Maryland	w	w	w	w	w	w	w	w	w
North Carolina	2,776	4,277	4,415	4,227	2,718	4,390	-35.1	.5	-5.0
South Carolina	1,717	2,223	2,033	2,101	1,963	1,516	-22.7	-3.3	1.4
Virginia	w	w	w	w	w	w	w	w	w
West Virginia	w	w	w	w	w	w	w	w	w
East South Central Total	**8,416**	**13,063**	**13,631**	**15,283**	**11,390**	**22,846**	**-35.6**	**-7.3**	**-10.5**
Alabama	2,538	4,109	4,237	3,966	3,800	5,894	-38.2	-9.6	-8.9
Kentucky	w	w	w	w	w	w	w	w	w
Mississippi	w	w	w	w	w	w	w	w	w
Tennessee	1,703	2,981	w	w	w	w	-42.9	w	w
West South Central Total	**13,703**	**15,330**	**16,617**	**15,040**	**w**	**15,864**	**-10.6**	**w**	**-1.6**
Arkansas	1,706	1,444	1,964	1,574	1,952	2,727	18.2	-3.3	-5.1
Louisiana	1,814	1,592	2,087	2,271	2,496	w	14.0	-7.7	w
Oklahoma	1,862	2,867	2,648	2,469	2,635	3,931	-35.1	-8.3	-8.0
Texas	8,320	9,427	9,917	8,726	w	w	-11.7	w	w
Mountain Total	**w**	**w**	**w**	**w**	**w**	**w**	**w**	**w**	**w**
Arizona	3,372	3,263	3,837	2,839	3,095	w	3.3	2.2	w
Colorado	3,133	3,120	3,163	3,025	3,602	w	.4	-3.4	w
Idaho	78	92	71	127	112	69	-14.9	-8.5	1.4
Montana	w	w	w	w	w	w	w	w	w
Nevada	w	w	w	w	w	w	w	w	w
New Mexico	w	w	w	w	w	w	w	w	w
Utah	w	w	w	w	w	w	w	w	w
Wyoming	1,670	2,034	2,571	2,987	3,094	w	-17.9	-14.3	w
Pacific Total	**833**	**1,387**	**1,846**	**2,024**	**1,569**	**w**	**-39.9**	**-14.6**	**w**
Alaska	4	5	7	2	w	w	-11.7	w	w
California	84	99	126	110	145	w	-15.1	-12.8	w
Hawaii	w	w	w	w	w	37	w	w	w
Oregon	w	w	w	w	w	w	w	w	w
Washington	416	667	1,083	1,250	956	960	-37.6	-18.8	-8.9
U.S. Total	**109,278**	**148,499**	**152,145**	**152,598**	**132,528**	**178,906**	**-26.4**	**-4.7**	**-5.3**

w Withheld to avoid disclosure of individual company data.
Notes: Totals may not equal sum of components due to independent rounding. Stocks for Residential and Commercial Sector are not included.
Sources: Energy Information Administration, Form EIA-759, "Monthly Power Plant Report;" Form EIA-5, "Coke Plant Report - Quarterly;" and Form EIA-3, "Quarterly Coal Consumption Report - Manufacturing Plants."

Table B9. U.S. Coal Exports by Destination, 1984, 1989-1993
(Thousand Metric Tons)

Continent and Country of Destination	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
North America Total	**8,363**	**13,908**	**10,391**	**14,387**	**15,370**	**18,726**	**-39.9**	**-14.1**	**-8.6**
Canada[1]	8,064	13,734	10,140	14,071	15,220	18,547	-41.3	-14.7	-8.8
Dominican Republic	45	77	118	74	35	*	-41.0	6.5	154.8
Mexico	226	70	84	191	57	142	225.3	40.9	5.3
Other[2]	28	27	49	50	58	37	1.5	-16.6	-3.0
South America Total	**5,216**	**6,141**	**6,950**	**6,262**	**6,699**	**4,905**	**-15.0**	**-6.1**	**.7**
Argentina	476	304	390	581	673	351	56.5	-8.3	3.4
Brazil	4,715	5,778	6,397	5,304	5,153	4,269	-18.4	-2.2	1.1
Other[2]	26	58	163	377	873	284	-56.2	-58.6	-23.5
Europe Total	**34,088**	**51,941**	**59,439**	**52,964**	**46,815**	**29,765**	**-34.4**	**-7.6**	**1.5**
Belgium & Luxembourg	4,744	6,528	6,771	7,711	6,436	3,540	-27.3	-7.3	3.3
Bulgaria	822	546	858	80	87	-	50.5	75.0	-
Denmark	305	3,477	4,225	2,892	2,883	557	-91.2	-43.0	-6.5
Finland	229	186	481	86	94	*	23.1	24.9	264.8
France	3,603	7,312	8,626	6,241	5,912	3,439	-50.7	-11.6	.5
Germany	461	910	1,581	959	675	829	-49.4	-9.1	-6.3
Ireland	894	1,314	1,191	1,322	1,132	221	-32.0	-5.7	16.8
Italy	6,276	8,476	10,227	10,838	10,196	6,917	-25.9	-11.4	-1.1
Netherlands	5,046	8,299	8,732	7,592	5,512	4,974	-39.2	-2.2	.1
Norway	92	107	181	161	128	116	-14.8	-8.1	-2.6
Portugal	1,353	1,342	1,478	1,620	1,292	224	.8	1.1	22.1
Romania	653	683	1,040	1,559	1,417	604	-4.3	-17.6	.9
Spain	3,687	4,114	4,258	3,439	3,030	2,092	-10.4	5.0	6.5
Sweden	668	1,057	1,124	785	666	1,299	-36.8	.1	-7.1
Turkey	1,456	1,805	1,983	1,921	1,530	1,335	-19.3	-1.2	1.0
United Kingdom	3,730	5,076	5,598	4,697	4,094	2,589	-26.5	-2.3	4.1
Yugoslavia	71	659	888	846	1,370	535	-89.2	-52.3	-20.1
Other[2]	*	49	194	214	361	494	-99.8	-86.6	-60.5
Asia Total	**17,690**	**18,633**	**19,766**	**20,616**	**20,624**	**19,595**	**-5.1**	**-3.8**	**-1.1**
China (Mainland)	-	124	-	-	-	-	-100.0	-	-
China (Taiwan)	3,117	3,230	4,125	4,177	4,080	2,287	-3.5	-6.5	3.5
Hong Kong	17	323	545	108	-	-	-94.7	-	-
Israel	770	748	591	580	442	268	3.1	14.9	12.4
Japan	10,776	11,162	11,130	12,100	12,561	14,810	-3.4	-3.8	-3.5
Korea, Republic of	3,008	3,041	3,366	3,628	3,480	2,152	-1.1	-3.6	3.8
Other[2]	2	6	10	23	62	78	-62.7	-55.5	-32.0
Oceania & Australia Total	**1**	*	*	**2**	*	**1**	**239.1**	**20.9**	**1.3**
Africa Total	**2,245**	**2,378**	**2,309**	**1,753**	**1,949**	**928**	**-5.6**	**3.6**	**10.3**
Algeria	371	555	474	435	671	606	-33.1	-13.8	-5.3
Egypt	788	770	698	586	531	322	2.3	10.4	10.5
Morocco	533	668	919	682	747	-	-20.3	-8.1	-
South Africa, Rep of	515	385	217	50	-	*	33.6	-	227.1
Other[2]	38	-	2	-	*	*	-	315.6	170.3
Total	**67,603**	**93,001**	**98,855**	**95,984**	**91,458**	**73,920**	**-27.3**	**-7.3**	**-1.0**

[1] Based on the U.S. - Canada Free Trade Agreement, as of January 1990, the U.S. Department of Commerce began reporting statistics on U.S. exports to Canada based on information on imports provided monthly by the Canadian government.
[2] Includes countries with exports less than or equal to 50,000 short tons (45,359 metric tons) in 1992.
* Data round to zero.
Note: Total may not equal sum of components due to independent rounding.
Source: U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545."

Table B10. Average Mine Price by State, 1984, 1989-1993
(Nominal Dollars per Metric Ton)

Coal-Producing State and Region	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Alabama	$46.67	$45.00	$45.34	$47.44	$45.40	$47.29	3.7	0.7	-0.1
Alaska	w	w	w	w	w	w	w	w	w
Arizona	w	w	w	w	w	w	w	w	w
Arkansas	w	w	w	w	w	w	w	w	w
California	-	w	w	w	w	-	w	w	w
Colorado	22.44	23.51	24.45	23.98	26.06	$25.43	-4.6	-3.7	-1.4
Georgia	-	-	-	-	-	w	-	-	w
Illinois	27.86	30.49	31.25	30.56	31.05	$32.95	-8.6	-2.7	-1.8
Indiana	25.23	25.81	26.00	26.36	25.96	27.53	-2.2	-.7	-1.0
Iowa	w	w	w	w	w	27.91	w	w	w
Kansas	w	w	w	w	29.76	29.66	w	w	w
Kentucky Total	27.31	27.01	28.05	27.77	27.52	31.00	1.1	-.2	-1.4
Eastern	28.11	27.55	29.07	28.49	28.44	31.54	2.0	-.3	-1.3
Western	24.64	25.46	25.22	25.71	24.78	29.55	-3.2	-.1	-2.0
Louisiana	w	w	w	w	w	-	w	w	w
Maryland	27.79	27.99	28.36	28.63	27.26	30.90	-.7	.5	-1.2
Missouri	w	w	w	w	w	27.07	w	w	w
Montana	12.18	11.24	11.86	10.38	11.33	14.96	8.3	1.8	-2.3
New Mexico	25.31	25.51	25.63	24.72	25.81	21.38	-.8	-.5	1.9
North Dakota	8.41	8.25	8.64	8.46	8.11	10.45	2.0	.9	-2.4
Ohio	30.91	29.69	30.59	31.58	33.61	36.56	4.1	-2.1	-1.8
Oklahoma	27.46	28.40	31.44	33.50	31.37	35.42	-3.3	-3.3	-2.8
Pennsylvania Total	29.21	31.53	32.40	33.24	32.33	36.90	-7.4	-2.5	-2.6
Anthracite	36.31	37.74	40.05	43.43	47.32	53.16	-3.8	-6.4	-4.1
Bituminous	28.70	31.24	32.03	32.76	31.68	36.04	-8.1	-2.4	-2.5
Tennessee	30.01	29.88	29.48	30.82	29.74	31.96	.4	.2	-.7
Texas	14.19	13.69	13.46	12.34	12.02	12.28	3.6	4.2	1.6
Utah	22.94	23.27	24.91	20.43	23.66	32.18	-1.4	-.8	-3.7
Virginia	29.55	30.37	30.26	30.92	30.46	34.36	-2.7	-.8	-1.7
Washington	w	w	w	w	w	w	w	w	w
West Virginia Total	30.40	31.03	31.55	31.54	31.62	$37.68	-2.0	-1.0	-2.3
Northern	30.96	32.00	33.24	32.03	30.97	35.31	-3.3	*	-1.4
Southern	30.20	30.60	30.78	31.30	32.00	39.45	-1.3	-1.4	-2.9
Wyoming	8.06	8.97	8.92	9.29	9.51	13.11	-10.1	-4.0	-5.3
Appalachian Total[1]	30.47	30.81	31.63	31.84	31.68	w	-1.1	-1.0	w
Interior Total[1]	22.08	23.82	24.10	23.64	23.49	w	-7.3	-1.5	w
Western Total[1]	12.28	12.78	12.91	12.79	13.36	$16.02	-3.9	-2.1	-2.9
East of Miss. River	29.56	30.13	30.84	30.97	30.81	34.63	-1.9	-1.0	-1.7
West of Miss. River	12.68	13.21	13.29	13.01	13.51	16.13	-4.0	-1.6	-2.6
U.S. Total	21.88	23.18	23.69	23.99	24.06	28.23	-5.6	-2.3	-2.8

[1] For a definition of coal-producing regions, see Appendix C.
* Data round to zero.
w Withheld to avoid disclosure of individual company data.

Notes: Average mine price is calculated by dividing the total free on board (f.o.b.) mine value of the coal produced by the total production. A measure of dispersion of these average prices at the State level (interquartile range) is given in Appendix D, Table D2. Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons, which are not required to provide these data.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Table B11. Average Price of Coal Delivered to Electric Utilities by Census Division and State, 1984, 1989-1993
(Nominal Dollars per Metric Ton)

Census Division and State	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
New England Total	**$47.78**	**$49.76**	**$51.95**	**$52.23**	**$49.10**	**$61.79**	**-4.0**	**-0.7**	**-2.8**
Connecticut	49.38	56.55	63.21	62.11	62.70	65.33	-12.7	-5.8	-3.1
Massachusetts	47.83	48.62	49.97	49.93	45.95	62.31	-1.6	1.0	-2.9
New Hampshire	46.73	49.26	50.93	52.24	50.91	59.75	-5.1	-2.1	-2.7
Middle Atlantic Total	**40.41**	**41.41**	**42.97**	**42.50**	**40.82**	**44.82**	**-2.4**	**-.2**	**-1.1**
New Jersey	52.36	51.39	52.64	53.32	51.63	57.34	1.9	.3	-1.0
New York	42.58	42.57	45.41	45.69	44.45	49.83	*	-1.1	-1.7
Pennsylvania	39.39	40.58	41.94	41.06	39.14	43.04	-2.9	.1	-1.0
East North Central Total	**34.15**	**35.33**	**35.97**	**36.56**	**37.59**	**43.37**	**-3.3**	**-2.4**	**-2.6**
Illinois	38.92	40.85	40.52	41.66	42.74	46.42	-4.7	-2.3	-1.9
Indiana	29.47	30.75	31.31	31.72	32.05	38.29	-4.1	-2.1	-2.9
Michigan	36.57	37.73	38.80	39.24	42.80	49.23	-3.1	-3.9	-3.3
Ohio	37.54	37.92	38.95	39.70	38.81	44.47	-1.0	-.8	-1.9
Wisconsin	25.31	28.57	28.87	28.86	30.98	37.67	-11.4	-4.9	-4.3
West North Central Total	**18.60**	**20.86**	**21.43**	**21.68**	**21.88**	**27.22**	**-10.8**	**-4.0**	**-4.1**
Iowa	19.32	21.58	21.63	21.92	24.00	30.20	-10.5	-5.3	-4.8
Kansas	19.49	23.14	24.31	24.51	24.25	29.15	-15.7	-5.3	-4.4
Minnesota	22.12	23.10	24.45	24.26	23.15	26.17	-4.2	-1.1	-1.8
Missouri	26.90	30.39	30.48	30.90	30.87	35.30	-11.5	-3.4	-3.0
Nebraska	14.24	14.07	14.03	14.20	15.79	25.15	1.2	-2.5	-6.1
North Dakota	10.34	10.42	10.32	10.03	10.06	12.53	-.8	.7	-2.1
South Dakota	14.66	15.07	15.04	15.40	16.79	16.13	-2.8	-3.3	-1.0
South Atlantic Total	**44.98**	**45.50**	**46.49**	**46.15**	**45.41**	**50.88**	**-1.1**	**-.2**	**-1.4**
Delaware	48.53	49.95	51.27	52.15	51.16	56.47	-2.8	-1.3	-1.7
Florida	48.04	49.63	50.56	50.39	48.79	58.41	-3.2	-.4	-2.1
Georgia	47.72	47.80	47.35	46.83	47.35	51.51	-.2	.2	-.8
Maryland	44.95	44.84	46.11	46.25	45.11	49.91	.2	-.1	-1.1
North Carolina	46.69	47.40	49.04	49.21	48.89	53.60	-1.5	-1.1	-1.5
South Carolina	44.28	43.14	45.60	48.00	47.49	54.31	2.6	-1.7	-2.2
Virginia	41.41	41.67	42.85	43.31	43.31	50.88	-.6	-1.1	-2.3
West Virginia	39.05	40.65	41.81	40.41	38.95	44.25	-3.9	.1	-1.4
East South Central Total	**36.71**	**36.43**	**37.40**	**37.46**	**37.18**	**44.51**	**.8**	**-.3**	**-2.1**
Alabama	46.91	45.93	48.31	49.14	49.42	54.05	2.1	-1.3	-1.6
Kentucky	30.08	29.77	29.98	30.41	28.81	37.02	1.0	1.1	-2.3
Mississippi	44.66	44.02	46.21	45.74	46.62	64.91	1.4	-1.1	-4.1
Tennessee	34.11	34.18	33.59	35.41	35.21	42.22	-.2	-.8	-2.3
West South Central Total	**24.40**	**24.86**	**25.33**	**25.26**	**25.01**	**29.84**	**-1.8**	**-.6**	**-2.2**
Arkansas	32.52	31.79	30.75	31.05	31.36	34.29	2.3	.9	-.6
Louisiana	28.27	27.48	29.86	30.62	29.37	42.42	2.9	-.9	-4.4
Oklahoma	23.50	23.66	25.55	27.53	26.48	32.85	-.7	-2.9	-3.6
Texas	23.05	23.79	23.88	23.36	23.28	27.07	-3.1	-.3	-1.8
Mountain Total	**24.37**	**23.85**	**24.49**	**24.46**	**24.04**	**23.19**	**2.2**	**.3**	**.5**
Arizona	30.63	31.20	32.14	33.04	31.76	28.28	-1.8	-.9	.9
Colorado	23.80	23.88	23.69	22.94	23.10	24.14	-.3	.8	-.2
Montana	12.98	13.38	12.61	12.64	10.81	13.81	-3.0	4.7	-.7
Nevada	35.64	35.63	34.48	36.55	37.26	32.84	*	-1.1	.9
New Mexico	27.12	26.27	27.58	26.49	24.92	18.61	3.3	2.1	4.3
Utah	30.13	30.35	30.20	29.54	30.92	33.77	-.7	-.6	-1.3
Wyoming	15.47	14.79	16.03	16.24	16.38	18.36	4.6	-1.4	-1.9
Pacific Total	**23.75**	**24.44**	**25.53**	**26.91**	**28.00**	**32.11**	**-2.8**	**-4.0**	**-3.3**
California	-	-	-	-	-	57.60	-	-	-100.0
Oregon	21.77	23.40	20.15	19.86	-	36.64	-7.0	-	-5.6
Washington	24.35	24.78	27.41	28.27	28.00	30.81	-1.7	-3.4	-2.6
U.S. Total	**31.51**	**32.36**	**33.10**	**33.57**	**33.23**	**38.72**	**-2.6**	**-1.3**	**-2.3**

* Data round to zero.
Note: Average prices are based on the cost including insurance and freight.
Source: Federal Energy Regulatory Commission, FERC Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants."

Table B12. Average Price of Coal Delivered to Other Industrial Plants by Census Division and State, 1984, 1989-1993

(Nominal Dollars per Metric Ton)

Census Division and State	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
New England Total	**$63.75**	**$72.43**	**$73.57**	**$71.77**	**$71.41**	**$65.23**	**-12.0**	**-2.8**	**-0.3**
Connecticut	-	-	-	-	-	w	w	w	w
Maine	w	w	w	w	w	w	w	w	w
Massachusetts	w	w	w	w	w	w	w	w	w
New Hampshire	-	-	-	w	w	w	w	w	w
Vermont	-	-	-	-	w	-	w	w	w
Middle Atlantic Total	**w**	**w**	**w**	**w**	**w**	**w**	**w**	**w**	**w**
New Jersey	w	w	w	w	w	w	w	w	w
New York	46.47	48.44	48.27	48.57	48.30	53.04	-4.1	-1.0	-1.4
Pennsylvania	37.53	39.35	39.57	40.36	39.61	44.81	-4.6	-1.3	-1.9
East North Central Total	**38.07**	**38.64**	**39.66**	**39.86**	**38.95**	**44.29**	**-1.5**	**-.6**	**-1.7**
Illinois	32.43	32.23	33.96	34.48	34.36	43.94	.6	-1.4	-3.3
Indiana	34.07	34.81	36.38	36.19	36.24	37.51	-2.1	-1.5	-1.1
Michigan	45.70	46.49	48.16	47.83	45.70	54.55	-1.7	*	-1.9
Ohio	38.38	38.84	38.41	38.62	37.24	39.75	-1.2	.8	-.4
Wisconsin	45.02	46.60	47.74	47.85	46.49	54.66	-3.4	-.8	-2.1
West North Central Total	**19.84**	**19.57**	**20.21**	**20.29**	**19.87**	**32.23**	**1.4**	*	**-5.2**
Iowa	30.87	29.94	32.13	33.36	34.02	42.00	3.1	-2.4	-3.4
Kansas	36.44	35.23	33.96	31.63	31.32	41.70	3.4	3.8	-1.5
Minnesota	39.47	39.27	39.97	40.38	40.25	44.18	.5	-.5	-1.2
Missouri	35.40	34.70	34.48	33.27	32.59	39.29	2.0	2.1	-1.1
Nebraska	w	w	w	w	w	36.38	w	w	w
North Dakota	w	w	w	w	w	w	w	w	w
South Dakota	w	w	w	w	w	w	w	w	w
South Atlantic Total	**w**	**w**	**w**	**w**	**w**	**w**	**w**	**w**	**w**
Delaware	w	w	w	w	w	w	w	w	w
Florida	53.22	53.20	52.27	52.06	50.76	55.00	*	1.2	-.4
Georgia	49.82	49.80	49.55	49.49	47.37	49.44	*	1.3	.1
Maryland	35.47	36.18	37.16	31.64	34.85	35.37	-2.0	.4	*
North Carolina	47.89	47.91	47.45	49.45	46.99	52.91	*	.5	-1.1
South Carolina	47.78	47.74	47.61	48.27	46.49	51.94	.1	.7	-.9
Virginia	45.49	45.16	44.67	45.25	42.90	47.54	.7	1.5	-.5
West Virginia	36.28	35.20	35.37	35.14	34.00	40.66	3.1	1.6	-1.3
East South Central Total	**w**	**w**	**w**	**w**	**w**	**w**	**w**	**w**	**w**
Alabama	43.00	43.83	44.57	44.73	44.49	49.07	-1.9	-.8	-1.4
Kentucky	46.63	48.26	51.30	50.50	49.90	50.36	-3.4	-1.7	-.8
Mississippi	w	w	w	w	w	w	w	w	w
Tennessee	39.04	39.16	39.31	38.76	38.11	43.23	-.3	.6	-1.1
West South Central Total	**23.57**	**25.13**	**25.70**	**23.46**	**25.40**	**w**	**-6.2**	**-1.8**	**w**
Arkansas	48.57	49.18	49.71	50.03	48.85	49.29	-1.2	-.1	-.2
Louisiana	w	w	w	w	w	w	w	w	w
Oklahoma	w	w	w	w	w	41.18	w	w	w
Texas	19.38	19.99	20.51	18.51	20.34	30.69	-3.1	-1.2	-5.0
Mountain Total	**31.43**	**31.59**	**32.63**	**31.69**	**31.67**	**36.57**	**-.5**	**-.2**	**-1.7**
Arizona	44.65	45.14	44.20	43.59	43.85	w	-1.1	.4	w
Colorado	31.56	33.44	32.27	29.68	30.65	31.22	-5.6	.7	.1
Idaho	36.13	36.70	37.38	35.03	35.84	42.16	-1.5	.2	-1.7
Montana	w	w	w	w	w	w	w	w	w
Nevada	w	w	w	w	w	w	w	w	w
New Mexico	w	w	w	w	w	w	w	w	w
Utah	29.23	27.94	29.13	31.40	29.53	36.06	4.6	-.3	-2.3
Wyoming	25.83	26.09	27.76	27.46	26.61	w	-1.0	-.7	w
Pacific Total	**48.31**	**47.80**	**50.43**	**50.66**	**48.63**	**57.39**	**1.1**	**-.2**	**-1.9**
California	47.25	46.35	49.37	49.73	48.22	58.71	1.9	-.5	-2.4
Hawaii	w	w	w	w	-	50.97	w	w	w
Oregon	w	w	w	w	w	w	w	w	w
Washington	58.54	62.00	65.22	61.32	54.57	55.85	-5.6	1.8	.5
U.S. Total	**35.53**	**36.14**	**36.97**	**37.03**	**36.41**	**43.32**	**-1.7**	**-.6**	**-2.2**

* Data round to zero.
w Withheld to avoid disclosure of individual company data.
Notes: Price data are for manufacturing plants only. Average prices are based on the cost including insurance, freight, and taxes.
Source: Energy Information Administration, Form EIA-3, "Quarterly Coal Consumption - Manufacturing Plants."

Table B13. Average Price of Coal Delivered to Coke Plants by Census Division and State, 1984, 1989-1993
(Nominal Dollars per Metric Ton)

Census Division and State	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
Middle Atlantic Total	w	w	w	w	w	w	w	w	w
New York	w	w	w	w	w	w	w	w	w
Pennsylvania	$51.16	$51.25	$51.65	$50.46	$49.35	$59.66	-0.2	0.9	-1.7
East North Central Total	**54.58**	**55.53**	**55.89**	**53.81**	**54.63**	**65.14**	**-1.7**	*	**-1.9**
Illinois	w	w	w	w	w	61.86	w	w	w
Indiana	57.64	59.21	58.77	54.45	56.73	67.90	-2.6	.4	-1.8
Michigan	-	-	w	w	w	w	w	w	w
Ohio	49.68	51.45	50.87	53.24	51.83	62.04	-3.4	-1.0	-2.4
West North Central Total	-	-	-	-	-	w	-	w	w
Missouri	-	-	-	-	-	w	-	w	w
South Atlantic Total	w	w	w	w	w	w	w	w	w
Maryland	-	-	w	w	w	w	w	w	w
Virginia	w	w	w	w	w	w	w	w	w
West Virginia	w	w	w	w	w	w	w	w	w
East South Central Total	w	w	w	w	w	w	w	w	w
Alabama	52.36	52.70	53.29	53.94	51.45	59.92	-.6	.4	-1.5
Kentucky	w	w	w	w	w	w	w	w	w
Tennessee	-	-	w	w	w	w	-	w	w
West South Central Total	-	-	-	-	-	w	-	w	w
Texas	-	-	-	-	-	w	-	w	w
Mountain Total	w	w	w	w	w	w	w	w	w
Utah	w	w	w	w	w	w	w	w	w
U.S. Total	**52.30**	**52.82**	**53.88**	**52.61**	**52.35**	**62.36**	**-1.0**	*	**-1.9**

* Data round to zero.
w Withheld to avoid disclosure of individual company data.
Note: Average prices are based on the cost including insurance, freight, and taxes.
Source: Energy Information Administration, Form EIA-5, "Coke Plant Report - Quarterly."

Table B14. Average Price of U.S. Coal Imports by Continent and Country of Origin, 1984, 1989-1993
(Nominal Dollars per Metric Ton)

Continent and Country of Origin	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
North America Total	**$31.97**	**$30.73**	**$27.67**	**$27.07**	**$28.74**	**$34.38**	**4.0**	**2.7**	**-0.8**
Canada	31.98	30.73	27.67	26.95	28.36	34.38	4.1	3.0	-.8
Mexico	23.35	-	-	42.29	34.46	-	-	-9.3	-
South America Total	**30.46**	**36.42**	**38.19**	**41.43**	**38.65**	**42.89**	**-16.3**	**-5.8**	**-3.7**
Colombia	30.04	35.55	36.24	40.64	39.12	42.89	-15.5	-6.4	-3.9
Venezuela	31.82	39.25	45.06	45.75	36.90	-	-18.9	-3.6	-
Europe Total	**35.65**	**37.49**	**-**	**40.98**	**48.88**	**37.63**	**-4.9**	**-7.6**	**-.6**
Denmark	35.65	-	-	40.05	-	-	-	-	-
Netherlands	-	-	-	-	48.88	56.67	-	-100.0	-100.0
Poland	-	-	-	-	-	37.63	-	-	-100.0
United Kingdom	-	37.49	-	41.00	-	32.14	-100.0	-	-100.0
Asia Total	**47.07**	**42.71**	**-**	**-**	**-**	**-**	**10.2**	**-**	**-**
India	-	26.07	-	-	-	-	-100.0	-	-
Indonesia	47.07	45.13	-	-	-	-	4.3	-	-
Malaysia	-	51.87	-	-	-	-	-100.0	-	-
Oceania & Australia Total	**34.79**	**39.76**	**41.86**	**46.00**	**37.96**	**33.51**	**-12.5**	**-2.2**	**.4**
Australia	34.79	39.76	41.86	46.00	37.96	33.51	-12.5	-2.2	.4
Africa Total	**30.66**	**54.33**	**-**	**-**	**-**	**35.36**	**-43.6**	**-**	**-1.6**
South Africa, Rep of	-	54.33	-	-	-	35.36	-100.0	-	-100.0
Swaziland	30.66	-	-	-	-	-	-	-	-
Total[1]	**32.37**	**35.80**	**35.65**	**36.85**	**35.24**	**37.19**	**-9.6**	**-2.1**	**-1.5**
U.S. Total[2]	**32.94**	**36.88**	**36.51**	**37.98**	**37.63**	**38.98**	**-10.7**	**-3.3**	**-1.8**

[1] The average prices presented in this table, with the exception of U.S. Total, are considered to be representative prices for coal imports and fall within the range of $20 to $50 per short ton ($18.14 to $45.36 per metric ton), inclusively.
[2] U.S. Total is the average price of all coal imports.
Notes: Average price is based on the customs import value. Coal imports include coal to Puerto Rico and the Virgin Islands.
Source: U.S. Department of Commerce, Bureau of the Census, "Monthly Report IM 145."

Table B15. Average Price of U.S. Coal Exports by Destination, 1984, 1989-1993
(Nominal Dollars per Metric Ton)

Continent and Country of Destination	1993	1992	1991	1990	1989	1984	Percent Change 1992-1993	Average Annual Percent Change	
								1989-1993	1984-1993
North America Total	$37.65	$36.44	$37.05	$36.06	$46.56	$54.29	3.3	-5.2	-4.0
Canada[1]	37.33	36.37	36.91	35.97	46.63	54.37	2.6	-5.4	-4.1
Dominican Republic	40.39	40.00	40.57	40.13	40.10	-	1.0	.2	-
Mexico	48.54	47.93	48.11	41.39	46.06	50.49	1.3	1.3	-.4
Other[2]	33.92	43.26	36.88	33.95	34.33	32.13	-21.6	-.3	.6
South America Total	48.25	50.20	50.97	50.99	48.35	52.28	-3.9	*	-.9
Argentina	47.63	50.09	50.26	50.49	49.09	53.67	-4.9	-.8	-1.3
Brazil	48.32	50.23	51.20	51.68	50.32	53.91	-3.8	-1.0	-1.2
Other[2]	43.51	47.36	42.77	40.55	34.08	48.28	-8.1	6.3	-1.1
Europe Total	47.82	47.03	47.49	48.41	46.82	49.35	1.7	.5	-.3
Belgium & Luxembourg	47.55	48.51	49.40	49.63	48.02	48.26	-2.0	-.2	-.2
Bulgaria	46.25	47.72	46.92	54.28	54.50	-	-3.1	-4.0	-
Denmark	38.53	36.03	36.32	37.89	36.68	45.06	6.9	1.2	-1.7
Finland	43.66	44.99	49.35	49.30	46.79	-	-2.9	-1.7	-
France	46.56	43.40	44.29	47.40	45.44	51.88	7.3	.6	-1.2
Germany	42.97	42.19	43.36	45.87	46.86	53.86	1.8	-2.1	-2.5
Ireland	39.51	40.57	43.57	42.49	41.24	49.27	-2.6	-1.1	-2.4
Italy	48.86	49.97	50.02	49.30	48.06	45.25	-2.2	.4	.8
Netherlands	48.75	47.78	47.60	47.32	44.99	49.46	2.0	2.0	-.2
Norway	-	52.86	35.40	-	43.96	-	-100.0	-100.0	-
Portugal	41.56	44.91	45.05	44.97	44.35	54.80	-7.4	-1.6	-3.0
Romania	39.99	45.88	50.58	52.40	50.04	52.01	-12.8	-5.4	-2.9
Spain	51.84	51.61	49.85	51.52	50.79	46.84	.4	.5	1.1
Sweden	50.66	51.44	52.60	53.14	49.43	53.34	-1.5	.6	-.6
Turkey	46.94	50.20	51.63	50.85	47.78	52.47	-6.5	-.4	-1.2
United Kingdom	50.60	50.20	51.09	52.14	50.28	54.06	.8	.1	-.7
Yugoslavia	43.65	49.65	51.38	50.83	48.80	54.11	-12.1	-2.7	-2.3
Other[2]	44.91	40.84	48.81	51.02	43.36	41.47	10.0	.9	.9
Asia Total	44.74	47.02	47.67	47.75	46.48	49.36	-4.8	-.9	-1.1
China (Mainland)	-	39.35	-	-	-	-	-100.0	-	-
China (Taiwan)	43.53	45.45	46.00	42.59	41.66	46.40	-4.2	1.1	-.7
Hong Kong	49.75	41.40	42.53	42.91	-	-	20.2	-	-
Israel	38.35	43.11	43.95	43.45	43.18	47.50	-11.0	-2.9	-2.3
Japan	45.06	47.30	47.83	48.78	47.37	51.91	-4.7	-1.2	-1.5
Korea, Republic of	46.43	49.53	50.65	51.13	49.36	50.32	-6.3	-1.5	-.9
Other[2]	41.12	42.67	44.58	41.94	41.08	48.79	-3.6	*	-1.9
Oceania & Australia Total	37.99	38.08	-	40.34	38.57	44.09	-.2	-.4	-1.6
Africa Total	46.90	47.37	45.49	43.84	44.24	48.52	-1.0	1.5	-.4
Algeria	48.85	51.10	51.26	52.55	50.73	54.67	-4.4	-.9	-1.2
Egypt	49.45	50.80	50.36	50.67	50.25	47.56	-2.6	-.4	.4
Morocco	37.32	37.26	37.18	34.54	34.14	-	.2	2.3	-
South Africa, Rep of	51.67	52.68	53.92	-	-	-	-1.9	-	-
Other[2]	44.68	-	44.99	-	43.96	-	-	.4	-
Total[3]	45.77	45.68	46.69	46.57	46.76	51.17	.2	-.5	-1.2
U.S. Total[4]	45.65	45.57	46.73	46.99	46.87	55.90	.2	-.6	-2.2

[1] Based on the U.S. - Canada Free Trade Agreement, as of January 1990, the U.S. Department of Commerce began reporting statistics on U.S. exports to Canada based on information on imports provided monthly by the Canadian government.
[2] Includes countries with exports less than or equal to 50,000 short tons in 1992.
[3] The average prices presented in this table, with the exception of U.S. Total, are considered to be representative prices for coal exports and fall within the range of $28 to $50 per short ton ($25.40 to $45.36 per metric ton), inclusively.
[4] U.S. Total is the average price of all coal exports.
* Data round to zero.
Note: Average price is based on the free alongside ship (f.a.s.) value.
Source: U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545."

Appendix C

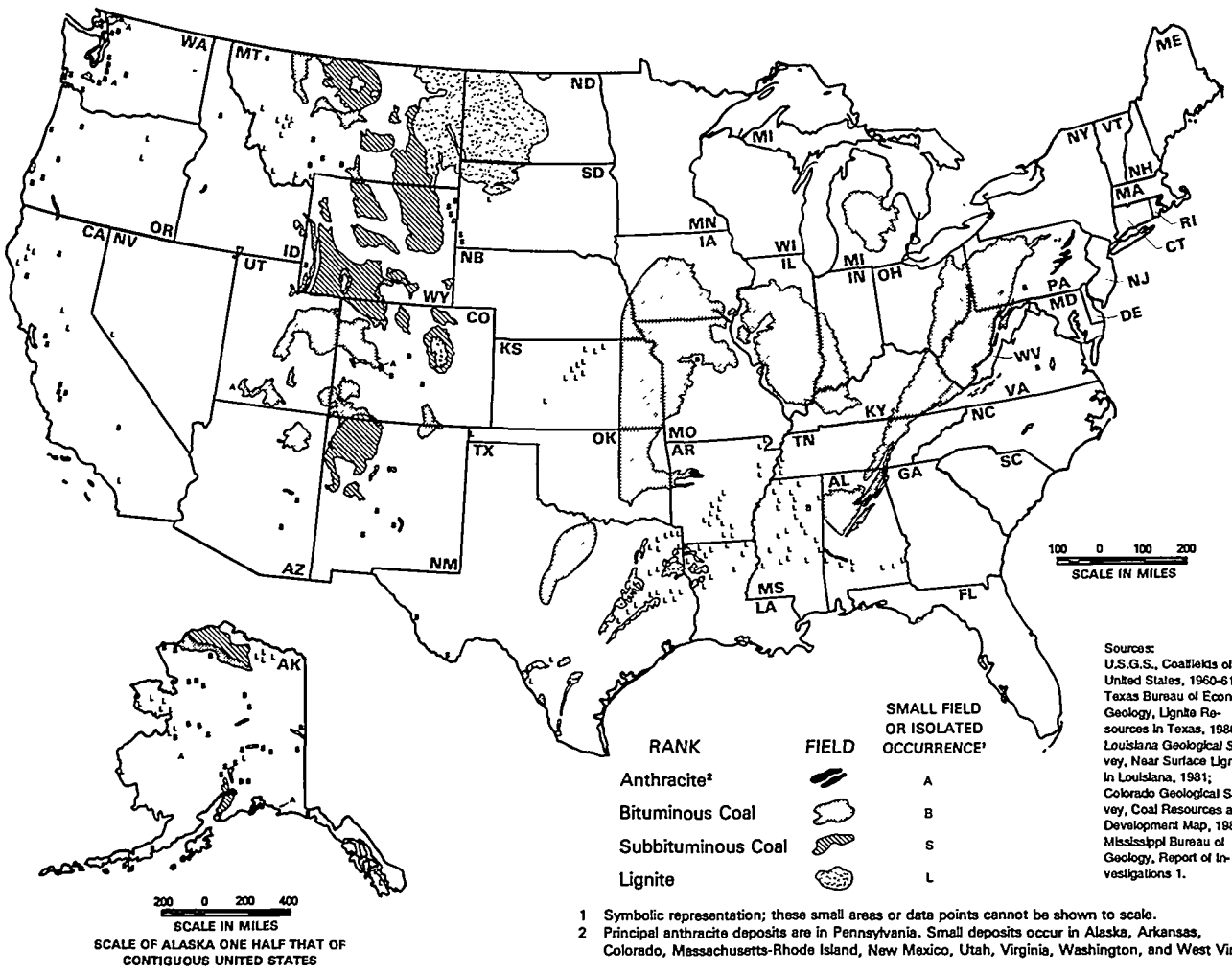
Reference Tables and Maps

Testing for methane gas at an underground mine. This is done routinely as part of required safety procedures.

Appendix C

Reference Tables and Maps

Figure C1. Coal-Bearing Areas of the United States



1 Symbolic representation; these small areas or data points cannot be shown to scale.
2 Principal anthracite deposits are in Pennsylvania. Small deposits occur in Alaska, Arkansas, Colorado, Massachusetts-Rhode Island, New Mexico, Utah, Virginia, Washington, and West Virginia.

Coal-Producing Regions

Appalachian

Alabama, Georgia, Eastern Kentucky, Maryland, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia.

Interior

Arkansas, Illinois, Indiana, Iowa, Kansas, Western Kentucky, Louisiana, Missouri, Oklahoma, Texas.

Western

Alaska, Arizona, California, Colorado, Montana, New Mexico, North Dakota, Utah, Washington, Wyoming.

Table C1. Classification of Coals by Rank

Principles

The lower rank coals can be classified based on heat content. The heat content of the higher rank coals is generally above 14,000 Btu per pound for each coal rank group (except for meta-anthracite, which trends slightly lower), and heat content ranges vary within a relatively narrow range. Since heat content is not a dependable criterion for these higher rank coals, their rank categories are instead described by degree of metamorphism, or "coalification," a property that is measured by fixed carbon content. Finally, the agglomerating character of bituminous coals is a critical attribute for certain coal consumers, and thus agglomerating character has come to define the distinctions between certain adjacent coal groups. Some high-volatile C bituminous and subbituminous A coals can be distinguished only on the basis of agglomerating character.

Coal Rank	Coal Group	Basis of Classification		
		Fixed Carbon Percentage [1]		
Coals Classified by Fixed Carbon		Equal to or Greater than	Less than	Agglomerating Character
I. Anthracitic	1. Meta-anthracite	98	--	Non-agglomerating
	2. Anthracite	92	98	Non-agglomerating
	3. Semianthracite [2]	86	92	Non-agglomerating
II. Bituminous	1. Low-volatile bituminous	78	86	Commonly agglomerating [3]
	2. Medium-volatile bituminous	69 [4]	78	Commonly agglomerating [3]
	3. High-volatile A bituminous	--	69 [4]	Commonly agglomerating [3]
		Heat Content in Btu per Pound [5]		
Coals Classified by Heat Content		Equal to or Greater than	Less than	
II. Bituminous	4. High-volatile B bituminous	13,000	14,000	Commonly agglomerating [3]
	5. High-volatile C bituminous	11,500	13,000	Commonly agglomerating [3]
	6. High-volatile C bituminous	10,500	11,500	Agglomerating
III. Subbituminous	1. Subbituminous A	10,500	11,500	Non-agglomerating
	2. Subbituminous B	9,500	10,500	Non-agglomerating
	3. Subbituminous C	8,300	9,500	Non-agglomerating
IV. Lignitic	1. Lignite A	6,300	8,300	Non-agglomerating
	2. Lignite B	--	6,300	Non-agglomerating

[1] Percentages are based on dry mineral-matter-free coal. Volatile matter (not shown) is the complement of fixed carbon; that is, the percentages of fixed carbon and volatile matter sum to 100 percent. As fixed carbon percentage decreases, therefore, volatile matter percentage increases by the same amount.

[2] If agglomerating, classify in low-volatile group of the bituminous class.

[3] There may be nonagglomerating varieties in the bituminous class, most notably in the high-volatile C bituminous group.

[4] Coals having 69 percent or more fixed carbon are classified according to fixed carbon, regardless of Btu value. Coals with less than 69 percent fixed carbon, but with 14,000 or more Btu per pound, are classified as high-volatile A bituminous.

[5] Calorific values in Btu per pound, on a moist mineral-matter-free basis.

Note: Terms in this table are defined in the Glossary.

Source: Adapted from American Society for Testing and Materials 1988, Standard Classification of Coal by Rank, ASTM Designation D 388-91a.

Table C2. Approximate Heat Content of Coal
(Million Btu per Short Ton)

Coal Rank Sector	1980	1981	1982	1983	1984	1985	1986
Anthracite							
Production	22.869	23.291	23.289	22.734	23.107	22.428	23.084
Consumption	21.405	22.080	22.518	21.583	22.322	20.817	21.512
Non-electric utility users	22.719	23.749	24.578	24.536	25.128	23.031	24.399
Electric utilities	17.652	18.168	18.160	16.516	17.018	16.784	15.578
Imports and exports	25.400	25.400	25.400	25.400	25.400	25.400	25.400
Bituminous Coal and Lignite							
Production	22.411	22.301	22.233	22.048	22.005	21.867	21.908
Consumption	21.950	21.710	21.670	21.576	21.570	21.368	21.462
Residential and commercial	22.488	22.010	22.226	22.438	22.406	22.568	22.669
Coke plants	26.800	26.800	26.800	26.800	26.800	26.800	26.800
Other industrial and transportation	22.690	22.572	22.695	22.680	22.525	22.013	22.185
Electric utilities	21.301	21.091	21.200	21.141	21.108	20.965	21.091
Imports	25.000	25.000	25.000	25.000	25.000	25.000	25.000
Exports	26.404	26.176	26.231	26.300	26.410	26.320	26.308
Coal Coke	24.800	24.800	24.800	24.800	24.800	24.800	24.800

	1987	1988	1989	1990	1991	1992	1993
Anthracite							
Production	23.108	23.266	23.385	22.574	22.573	22.572	22.573
Consumption	22.435	22.423	22.623	21.668	21.410	21.423	21.492
Non-electric utility users	26.293	26.021	27.196	25.199	25.268	24.617	24.566
Electric utilities	15.962	17.312	16.310	16.140	15.858	16.944	16.534
Imports and exports	25.400	25.400	25.400	25.400	25.400	25.400	25.400
Bituminous Coal and Lignite							
Production	21.918	21.817	21.759	21.819	21.678	21.643	21.393
Consumption	21.514	21.324	21.268	21.330	21.146	21.142	20.992
Residential and commercial	22.800	23.135	22.917	22.678	22.635	22.768	22.803
Coke plants	26.800	26.800	26.800	26.800	26.800	26.800	26.800
Other industrial and transportation	22.360	22.341	22.324	22.444	22.448	22.242	22.183
Electric utilities	21.143	20.905	20.854	20.935	20.761	20.792	20.644
Imports	25.000	25.000	25.000	25.000	25.000	25.000	25.000
Exports	26.304	26.308	26.166	26.207	26.192	26.165	26.341
Coal Coke	24.800	24.800	24.800	24.800	24.800	24.800	24.800

Note: Values for 1993 are preliminary.
Source: Calculated by Energy Information Administration. See *Monthly Energy Review* DOE/EIA-0035 Appendix A for detailed description.

Appendix D

Explanatory Notes

A miner installs roof bolts, which help ensure support of the roof strata at underground mines.

Appendix D

Explanatory Notes

Data Sources

All data in this report were collected by the Energy Information Administration (EIA), U.S. Department of Energy (DOE), except: import and export data, which were collected by the Bureau of the Census (Census Bureau), U.S. Department of Commerce; supplemental export data which were collected by King's Publishing Company, Knoxville, Tennessee; Federal and Indian land leasing data which were collected by the U.S. Department of the Interior (Bureau of Land Management and Minerals Management Service); miner profile data were collected by the Bituminous Coal Operators Association, Washington, D.C., and the U.S. Department of Labor (Bureau of Labor Statistics); and miner injury and fatality data which were collected by the U.S. Department of Labor (Mine Safety and Health Administration).

The following is a mapping of Tables from *Coal Production 1992* to the *Coal Industry Annual 1993*:

Coal Production **1992**	*Coal Industry Annual* **1993**
Table 1	Table 3
Table 2	NA
Table 3	Table 4
Table 4	Table 6
Table 5	Table 9
Table 6	Table 10
Table 7	NA
Table 8	NA
Table 9	NA
Table 10	Table 7
Table 11	Table 8
Table 12	Table 5
Table 13	Table 6
Table 14	Table 6
Table 15	NA
Table 16	NA
Table 17	Table 82
Table 18	Table 91
Table 19	Table 84
Table 20	Table 85
Table 21	Table 81
Table 22	Table 86
Table 23	Tables 51,52
Table 24	Tables 51,52
Table 25	Tables 51,52
Table 26	Tables 39,40,41
Table 27	Tables 42,43,44
Table 28	Tables 48,49,50
Table 29	Table 56
Table 30	Table 26
Table 31	Table 24
Table 32	Table 29
Table 33	Table 17
Table A1	NA
Table A2	NA
Table A3	NA
Table A4	NA
Table B1	NA
Table B2	NA
Table B3	NA
Table B4	NA
Table B5	Table 1
Table C1	Table C1
Table D1	Table D1
Table D2	Table D2
Table D3	NA

Coal Surveys

As early as the 1880's, the U.S. Geological Survey began collecting coal data under a voluntary reporting system. The responsibility for gathering this information was transferred to the Bureau of Mines in the 1920's, initially under the U.S. Department of Commerce and later under the U.S. Department of the Interior, which published the data in its *Minerals Yearbook*. Except for a brief period from 1937 to 1943, when bituminous coal data were collected under the mandatory authority of the Bituminous Coal Act, the Bureau of Mines continued to conduct voluntary coal surveys until the Department of Energy was created.

Coal Production Report (Form EIA-7A)

The Energy Information Administration (EIA) began collecting annual coal production data on October 1, 1977. The 1993 coal production and identification data in this report were collected on Form EIA-7A, "Coal Production Report," from companies that produced, processed, or prepared coal in 1993. All other data collected on Form EIA-7A are reported for only those companies that owned a mining operation that produced, processed, or prepared 10 thousand short tons or more of coal in 1993, and preparation plants with 5 thousand or more employee hours.

So that the EIA may fulfill its data collection functions as specified in the Federal Energy Administration Act of 1974 (Public Law 93-275), response to this survey is mandatory. The respondents to this survey are compared with lists of mining operations maintained by various State coal mining/licensing agencies and the Mine Safety and Health Administration (MSHA), U.S. Department of Labor, to identify new respondents. No sampling procedures are used. In 1993, there were 2,685 mining operations that produced, processed, or prepared 10 thousand or more short tons of coal. Of these mining operations, 78.3 percent (2,103) responded to the EIA-7A survey. In 1993, there were 2,030 mines that produced 10 thousand or more short tons of coal. Of these mines, 78.4 percent (1,592) responded to the EIA-7A survey and they accounted for 910 million short tons, or 96.3 percent of the 1993 production total. All of the data were collected by mail and were edited to ensure that they were complete and accurate.

As in all surveys, data from Form EIA-7A, "Coal Production Report," are subject to various sources of error: (1) coverage (the list of respondents may not be complete or, on the other hand, there may be double counting), (2) nonresponse (all units that are surveyed may not respond or may not provide all the information requested), (3) respondents (respondents may commit errors in reporting the data), (4) processing (the data collection agency may lose or incorrectly transcribe the submissions), (5) concept (the data collection elements may not measure the items they were intended to measure), and (6) adjustment (errors may be made in estimating values for missing data).

Because the annual coal production survey (Form EIA-7A) is not a sample survey, the estimates shown in this report are not subject to sampling error.[1] It is not possible to present estimates of nonsampling error, but precautionary steps were taken at each stage of the survey design to minimize the possible occurrence of these errors. These steps are described below.

The forms are logged within 24 hours of receipt and assigned to a team of data editors consisting of Coal Data Systems Branch personnel. The editors screen the forms for legibility, completeness, and consistency. Names and address changes are updated in the files. The reported data are compared to data from previous years and with secondary sources such as Mine Safety and Health Administration and State mining agency reports. Inconsistencies are identified and the respondents contacted for clarification.

Computer edits are generated to identify keypunch errors, errors made by coders, out-of-range codes, and unlikely data combinations. Errors are corrected to conform to the data on the submissions or revised after telephone conversations with company representatives. All changes to reported data are documented.

Data from Form EIA-7A are maintained on an automated database at the EIA computing facility in Washington, D.C. The survey forms are filed by EIA identification number organized by State and county.

The survey forms were sent via regular mail in January with a due date of March 1, 1994. Nonresponse letters were mailed March 8 to those mining operations that had not submitted their forms. Subsequent to the letter, attempts were made to contact, by telephone, those nonrespondents whose reported 1992 production was 100 thousand short tons or more.

Some forms could not be delivered. Where possible, address corrections were obtained. In some instances, mining operations that had reported in earlier surveys or operated only in 1993 were no longer in business. Unobtainable data were derived from a secondary source: the Form 7000-2, "Quarterly Mine Employment and Coal Production Report," collected by the Mine Safety and Health Administration. / Missing production quantity data were derived from the secondary source for 657 mines, which produced 34.4 million short tons, or 3.6 percent of total production. The received and generated data sources for total U.S. coal production are shown in Table D1. Of the mines whose production exceeded 10 thousand or more short tons, missing production quantity data were derived from the secondary source for 438 mines, representing 3.5 percent (33.5 million short tons).

Missing *coalbed classification*, *coalbed thickness*, and *coal rank/group* data were estimated using State mining agency production reports, geological data, and previous years' reports for these mines.

When a mine had a missing *production value*, its production was multiplied by the county-level average mine price to estimate the value. County-level average mine prices were calculated by dividing the total value for the appropriate disposition (open/captive) and type of mining (underground or surface) by the corresponding total production. All missing production was

[1]Sampling error is a measure of the variation that occurs by chance because a sample rather than a complete enumeration of units is surveyed.

Table D1. Sources of Data for Total U.S. Coal Production and Number of Mining Operations
(Thousand Short Tons)

Coal-Producing State	Received		Generated Data Sources				Total	
	Form EIA-7A		Derived From State Mining Agency Coal Production Reports		Derived From Mine Safety and Health Administration Data		Number of Operations	Production
	Number of Operations	Production	Number of Operations	Production	Number of Operations	Production		
Alabama	74	24,352	-	-	21	416	95	24,768
Alaska	1	1,601	-	-	-	-	1	1,601
Arizona	3	12,173	-	-	-	-	3	12,173
Arkansas	3	33	-	-	3	11	6	44
Colorado	25	21,886	-	-	-	-	25	21,886
Illinois	44	41,091	-	-	7	7	51	41,098
Indiana	52	28,778	-	-	11	517	63	29,295
Iowa	1	168	-	-	1	7	2	175
Kansas	2	341	-	-	-	-	2	341
Kentucky Total	667	143,825	-	-	337	12,475	1,004	156,299
Eastern	600	110,019	-	-	301	10,173	901	120,191
Western	67	33,806	-	-	36	2,302	103	36,108
Louisiana	2	3,134	-	-	-	-	2	3,134
Maryland	20	3,331	-	-	2	24	22	3,355
Missouri	5	637	-	-	2	16	7	653
Montana	7	35,907	-	-	1	10	8	35,917
New Mexico	9	28,268	-	-	-	-	9	28,268
North Dakota	8	31,973	-	-	1	0	9	31,973
Ohio	138	27,590	-	-	31	1,226	169	28,816
Oklahoma	12	1,406	-	-	5	352	17	1,758
Pennsylvania Total	507	55,764	-	-	212	3,935	719	59,700
Anthracite	161	3,533	-	-	75	772	236	4,306
Bituminous	346	52,231	-	-	137	3,163	483	55,394
Tennessee	36	2,421	-	-	31	626	67	3,047
Texas	14	54,567	-	-	-	-	14	54,567
Utah	19	21,847	-	-	1	0	20	21,847
Virginia	237	35,436	-	-	87	3,881	324	39,317
Washington	3	4,739	-	-	-	-	3	4,739
West Virginia Total	508	119,602	-	-	211	10,923	719	130,525
Northern	142	32,586	-	-	48	1,216	190	33,802
Southern	366	87,016	-	-	163	9,707	529	96,723
Wyoming	29	210,129	-	-	-	-	29	210,129
U.S. Total	**2,426**	**910,998**	**-**	**-**	**964**	**34,426**	**3,390**	**945,424**

Note: Coal production excludes silt, culm, refuse bank, slurry dam, and dredge production except for Pennsylvania anthracite. Number of mining operations includes preparation plants. All available State mining agency production data were reviewed, but none were included in this report because production data reported on Form EIA-7A to the Energy Information Administration and on Form 7000-1 to the Mine Safety and Health Administration were found to be complete. Totals may not equal sum of components because of independent rounding.

Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report"; U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

classified as open market unless information was available to classify it as captive. Of those mines whose production was 10 thousand or more short tons, value data were estimated for 531 mines, representing 5.2 percent (49 million short tons) of the production total.

When an underground mine had unreported *mining method,* it was assumed that the mining method was conventional.

Employment data include *direct labor hours, number of production days worked, average length of a production shift, average number of miners per shift,* and *average number of shifts per day.* Of those mines whose production exceeded 10 thousand or more short tons, one or more of these data elements were derived from secondary sources or estimated for 573 mines representing 4.4 percent (41.5 million short tons) of their production total. Of the mining operations that produced, processed, or prepared 10 thousand or more short tons, one or more of these data elements were derived from secondary sources or estimated for 582 mining operations, or 21.7 percent of the total operations in this category.

Missing *direct labor hours* were estimated using county- or State-level productivity-per-hour averages. The averages were calculated by dividing the total production at the county or State level by total direct labor hours at the same level for the appropriate type of mining (underground or surface). The quantity of production for the mine with missing data was divided by this productivity average to derive direct labor hours.

Missing *average number of production days worked* and *length of a production shift* were derived by using the

corresponding county- or State-level average for the appropriate type of mining (underground or surface).

Missing *average number of miners per shift* was estimated as the average number of miners working daily. The average number of miners working daily was calculated by multiplying the average length of a production shift by the number of production days worked, and then dividing this number into the total direct labor hours. Missing *average number of shifts per day* was estimated as one shift per day.

Missing *recoverable coal reserves* data were estimated by using the mine's 1992 recoverable reserves minus the mine's 1993 production. If this calculation could not be made, the mine's projected production for 1994 was used. If recoverable coal reserves for 1992 and 1993 and projected production for 1994 were all missing, no estimate was made. In 1993, recoverable reserves were reported by or estimated for 1,434 mines, representing 892.9 million short tons, or 71 percent of the mines whose production exceeded 10 thousand or more short tons.

Missing *recovery percentage* data were estimated by using 1993 recovery percentage averages at the State level for the appropriate type of mining (underground or surface).

Missing *productive capacity* data were estimated by assuming productive capacity was equal to 1993 production. If productive capacity was reported as less than annual production, productive capacity was equated to 1993 production. There were 737 in-scope mines with production of 205.4 million short tons for which 1993 production was used as a proxy for productive capacity, resulting in 100 percent capacity utilization.

These mines included the MSHA generated mines, mines with productive capacity less than 1993 production, and mines that did not report productive capacity and could not be contacted. If these mines were excluded from the calculation of percent utilization, the U.S. total becomes 68.69 versus 73.72, when those mines are included.

In 1993, there were 30 mines that produced 0.7 million short tons of refuse bituminous and subbituminous coal. Those operations are not included in this report.

In order to protect the confidentiality of individual respondent's data, a policy was implemented to ensure that the reporting of survey data on mine prices and recoverable reserves in this publication would not associate those data with a particular company. The final phase in the data quality assurance and control procedures is determining which data must be suppressed (withheld) during publication to provide the necessary confidentiality for mines or companies that represent a significant portion of a reported data cell. All withholding analysis is done based upon production volumes. These procedures are performed as follows:

1. Primary Withholding Based on the Number of Respondents in a Cell -- All cells with three or fewer active coal mining operations are suppressed.

2. Residual Withholding Dominance Rule Phase 1 -- All cells containing between 4 and 10 active coal mining operations are examined. A cell is suppressed if any single respondent accounts for 75 percent or more of the volume for all respondents included in that cell.

3. Residual Withholding Dominance Rule Phase 2 -- All cells in which two active coal mining operations represent 90 percent or more of the volume for all respondents included in that cell are suppressed.

4. Complementary Suppression -- All tables are reviewed to identify cells which should have data withheld to prevent disclosure of already suppressed cells. An example of cells to be withheld during complementary suppression is underground price, if the surface price is withheld during primary or residual suppression. Because the total price is published, if the underground price is not withheld, the surface price could be calculated using the total price, the underground price, and the underground, surface, and total volumes.

5. Most complementary suppression involves type of mining considerations. Other complementary suppression is based on regional level data. A State or region must be withheld during complementary suppression because an already withheld State could be calculated using other States and the regional total. Cells are also selected for complementary suppression that represent the smallest volumes or that were withheld in prior years.

6. Inter-table effects are also examined regarding complementary suppression. For example, States that are withheld in one State table can influence the complementary suppression of an associated State table. This analysis is very similar to that done at the regional level, except that two tables are involved rather than one. Finally, similar tables are reviewed to ensure that all like suppressed cells are consistently withheld (suppressed) in all tables in which they appear.

The withholding/suppression of data is performed as an adjunct to the quality assurance (QA) procedures. The work is performed by survey editors, and the QA staff and is reviewed by the survey manager before being submitted to division-level QA review.

All sensitive cells identified in withholding analysis are denoted with the symbol/letter "W." The use of the symbol/letter applies to primary, complementary and inter-table suppressions as well as all withheld data. The symbol/letter "W" is footnoted as follows: "W Withheld to avoid disclosure of individual company data."

Table D2. Interquartile Range and Average Mine Price by State and Mine Type, 1993
(Dollars per Short Ton)

Coal-Producing State and Region	Underground		Surface		Total	
	Average Mine Price	Interquartile Range	Average Mine Price	Interquartile Range	Average Mine Price	Interquartile Range
Alabama	42.00	13.09	42.91	14.20	42.34	13.09
Alaska	-	-	w	w	w	w
Arizona	-	-	w	w	w	w
Arkansas	-	-	w	w	w	w
Colorado	20.53	2.51	20.10	2.24	20.35	5.83
Illinois	25.54	6.37	24.18	16.11	25.27	7.89
Indiana	w	w	w	w	22.89	5.25
Iowa	-	-	w	w	w	w
Kansas	-	-	w	w	w	w
Kentucky Total	25.07	5.96	24.35	7.43	24.77	6.93
Eastern	25.42	6.29	25.63	8.08	25.50	7.50
Western	23.84	5.18	20.45	3.30	22.36	4.69
Louisiana	-	-	w	w	w	w
Maryland	w	w	w	w	25.21	.00
Missouri	-	-	w	w	w	w
Montana	w	w	w	w	11.05	9.30
New Mexico	w	w	w	w	22.96	4.72
North Dakota	-	-	7.63	.81	7.63	.81
Ohio	30.73	20.55	26.51	9.41	28.04	15.48
Oklahoma	w	w	w	w	24.91	3.05
Pennsylvania Total	27.35	3.74	25.09	7.24	26.50	3.65
Anthracite	36.02	2.21	32.71	39.29	32.94	32.96
Bituminous	27.29	3.74	23.55	7.17	26.03	3.40
Tennessee	w	w	w	w	27.23	3.89
Texas	-	-	12.87	5.33	12.87	5.33
Utah	20.81	2.36	-	-	20.81	2.36
Virginia	27.26	11.66	25.29	5.25	26.80	9.73
Washington	-	-	w	w	w	w
West Virginia Total	28.54	7.65	25.57	5.64	27.58	7.45
Northern	29.29	10.02	23.17	4.89	28.09	11.75
Southern	28.21	6.26	26.02	4.02	27.40	4.83
Wyoming	w	w	w	w	7.32	3.38
Appalachian Total[1]	**28.23**	**6.96**	**26.65**	**8.61**	**27.64**	**7.78**
Interior Total[1]	**25.07**	**4.87**	**17.48**	**8.17**	**20.03**	**10.51**
Western Total[1]	**20.75**	**5.86**	**10.05**	**8.51**	**11.14**	**13.49**
U.S. Total	**26.92**	**8.37**	**15.67**	**15.29**	**19.85**	**17.75**

[1] For a definition of coal-producing regions, see Appendix C.
w Withheld to avoid disclosure of individual company data.
Note: Excludes silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons of coal during the year. Average Mine Price is calculated by dividing the total free on board (f.o.b) mine value of the coal produced by the total production.
Sources: Energy Information Administration, Form EIA-7A, "Coal Production Report;" State Mining Agency Coal Production Reports; and/or U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

The interquartile range is a measure of dispersion of State-level average mine prices. Two States may have the same average mine price, but the spread about this price may be totally different. For a fixed average mine price, a larger interquartile range suggests a broader distribution of coal prices than a smaller interquartile range. The summary statistics (Table D2) given in this publication are weighted by production.

The interquartile range (weighted by production) is computed in the following manner:

- Each cell is sorted according to average mine price, from the lowest to the highest.
- For each cell, the corresponding mine's production according to increasing average mine price is divided by that particular cell's total production and multiplied by 100. These percentages are then added as a cumulative percentage of production.
- The first quartile (Q1) is the associated mine price for which the cumulative percentage of production first passes 25 percent. Thus, at least 25 percent of that cell's total production is identified with prices at or lower than Q1.
- The third quartile (Q3), is the associated mine price for which the cumulative percentage of production first passes 75 percent. Thus, at least 75 percent of that cell's total production is identified with prices at or lower than Q3.

The interquartile range is Q3-Q1.

Quarterly Coal Consumption Report - Manufacturing Plants (Form EIA-3)

Form EIA-3 is used to survey U.S. manufacturers that consume 1 thousand tons or more of coal per year for all uses other than coke production. These data were collected on a monthly basis until 1980, when the reporting cycle was revised to a quarterly schedule. Data on manufacturers' coal stocks, receipts, prices, and consumption are reported.

Through the end of 1988, all manufacturers that consumed coal were required to file Form EIA-3. Beginning with the first quarter of 1989, only those manufacturers that consumed 1 thousand or more tons in the past year were required to report. In 1993, 768 manufacturers responded to the EIA-3 survey. The response rate for the current year was 100 percent. In order to identify undercoverage problems, the data from this survey are compared with shipments to *manufacturers* reported on EIA's "Coal Distribution Report," Form EIA-6. At present, the coal receipts reported by *manufacturers* on Form EIA-3 cover approximately 97 percent of the coal shipments to *manufacturers* on Form EIA-6. Consequently, the coal consumption data gathered on the Form EIA-3 do not represent the total consumption at manufacturing plants. See Technical Note 5 for data adjustment procedures for coal consumption for the other industrial sector.

Current year data from this survey are preliminary and unrevised in the January - March, April - June, and July - September issues of the *Quarterly Coal Report* (DOE/EIA-0121). In the October - December issue, any revisions necessary for the entire year are applied and the data are considered final.

The respondent list of manufacturers for Form EIA-3 is compared with lists of coal-consuming manufacturing plants from State Air Quality and Energy Offices. When new respondents are found, they are added to the survey mailing list.

Annual Coal Quality Report - Manufacturing Plants (Form EIA-3A)

Form EIA-3A contains questions on the origin of coal (State or Country), the quantity of coal receipts, the Btu, sulfur and ash content of the coal receipts, and the basis used to determine the coal quality data. The threshold for the annual collection will be the same as for the EIA-3: manufacturing plants that consume in excess of 1,000 short tons of coal per year. In 1993, 768 manufacturers responded to the EIA-3A survey. The response rate for the current year was was 100 percent.

Coke Plant Report (Form EIA-5)

Form EIA-5, a quarterly report of coal receipts, carbonization, and stocks, and of coke and breeze production, distribution, and stocks, is used to survey all U.S. coke plants.

Coke plants were surveyed monthly and a supplemental survey was taken annually until 1981, when the reporting cycle was revised to a quarterly schedule with an annual supplemental survey. In 1985, collection of the annual supplement was ended.

In 1993, there were 33 respondents to the EIA-5 survey, and the response rate was 100 percent. The respondent list for this survey is updated by continuous monitoring of the industry literature.

Current year data from this survey are preliminary and unrevised in the January - March, April - June, and July - September issues of the *Quarterly Coal Report* (DOE/EIA-0121). In the October - December issue, any revisions necessary for the entire year are applied and the data are considered final.

Annual Coal Quality Report - Coke Plants (Form EIA-5A)

This form contains questions on the origin of coal (State or Country), the quantity of coal receipts, the volatile matter, sulfur and ash content, and the basis used to determine the coal quality data. There is no threshold for this form. In 1993, there were 33 respondents to the EIA-5A survey, and the response rate was 100 percent.

Coal Distribution Report (Form EIA-6)

Form EIA-6 is used to survey all U.S. companies (producers and/or distributors) that own or purchase and distribute more than 50 thousand short tons annually.[2] Data on coal production and purchases, distribution by consumer category, and method of transportation are reported.

In 1993, there were over 1,100 respondents to the EIA-6 survey. Until the end of 1988, coal distribution companies were required to report production on a Bureau of Mines district basis. For the year 1989, re-

[2]For the States of Arkansas, Maryland, Oklahoma, and the anthracite portion of Pennsylvania, the threshold is 10,000 tons.

spondents were required to report on a BOM district/State basis. Beginning with the first quarter of 1990, respondents were required to report on a State basis. The response rate for the current quarter was 100 percent. The annual production total reported on Form EIA-6 exceeds 99 percent of total production as reported by all mines on Form EIA-7A, "Coal Production Report," due to the difference in reporting thresholds. The data gathered on the Form EIA-6 only represent the domestic coal distributed during the quarter. Therefore, imported coal distributed during the quarter is not included.

Current year data from this survey are preliminary and unrevised in the January - March, April - June, and July - September issued of the *Quarterly Coal Report* (DOE/EIA-0121). In the October - December issue, any revisions necessary for the entire year are applied and the data are considered final.

The respondent list for this survey is updated by comparing it with lists of coal producers from the Mine Safety and Health Administration (MSHA), U.S. Department of Labor, and from similar lists maintained by various State agencies. Also, new respondents are frequently identified on Form EIA-6 itself when other companies are named as sources of coal purchases.

Electric Utility Surveys

Coal data appear in this report from three surveys of electric utilities - from all generating electric utilities and from fossil-fueled plants.

The Census Bureau collected and published the results of a census taken every 5 years from 1902 to 1937 on the electric light and power industries and some data on industrial production of electric energy. The U.S. Geological Survey collected data on capacity and generation of electric utilities from 1920 to 1936, when this activity was turned over to the Federal Power Commission (FPC).

All data are presented as reported on the surveys. No estimates or other adjustments are made for missing data. The data are maintained in a computer system and are edited to ensure that they are reasonable, consistent, and complete. For additional information from these surveys and for other electric utility data, see the EIA publication, *Electric Power Monthly* (DOE/EIA-0226).

Monthly Power Plant Report (Form EIA-759)

Form EIA-759 (which, until 1982, was called FPC Form 4) is used to survey all generating electric utilities. The Federal Power Act and FPC Order Number 141 define the legislative authority to collect power production data. Consumption and stocks of coal and other fuels at each plant are reported. The respondents to Form EIA-759, approximately 3 thousand plants, account for 100 percent of total electric utility generation.

Current year data from this survey are considered final.

Monthly Report of Cost and Quality of Fuels for Electric Plants (FERC Form 423)

Federal Energy Regulatory Commission (FERC) Form 423 is used to survey all fossil-fueled plants with a total steam-generating capacity of 50 megawatts or more. It is submitted by approximately 230 electric utilities. (Before 1983, this form was called FPC Form 423, and all fossil-fueled plants with a total generating capacity of 25 megawatts or more were surveyed.) In 1972, the FPC issued Order Number 453, which included the legislative authority to create FERC Form 423. Cost, quality, and source of fuels (by State or country of origin), including coal, are reported. Current year data from this survey are considered final.

Steam-Electric Plant Operation and Design Report (Form EIA-767)

The Form EIA-767 is a mandatory restricted-universe census of all electric power plants with a total existing or planned organic- or nuclear-fueled steam-electric generator nameplate rating of 10 or more megawatts. The entire form is filed by approximately 700 power plants with a nameplate capacity of 100 or more megawatts. An additional 200 power plants with a nameplate capacity between 10 and 100 megawatts submit information only on fuel consumption/quality, boiler/generator configuration, and flue-gas desulfurization equipment, if applicable. The Form EIA-767 is used to collect data annually on plant operations and equipment design (including boiler, generator, cooling system, flue gas desulfurization, flue gas particulate collectors, and stack data). Data from the Form EIA-767 are used for economic, regulatory, and environmental analyses conducted by the DOE, the FERC, the Environmental Protection Agency, and the Department of Commerce.

Form EIA-767 data for 1993 are preliminary. Data for prior years are final.

Annual Nonutility Power Producer Report (Form EIA-867)

The Form EIA-867 is a restricted-universe census used to collect annual data from all existing and planned nonutility power producers in the United States. In 1992, the reporting threshold of the Form EIA-867 was lowered to include all facilities with a combined nameplate capacity of 1 or more megawatts. Previously data were collected every 3 years from facilities with a nameplate capacity between 1 and 5 megawatts. For the purpose of this data collection, a nonutility power producer is an enterprise that has electric generating capacity and is not an electric utility. They include qualifying cogenerators, qualifying small power producers, and other nonutility generators (including independent power producers) without a designated franchised service area. The form is used to collect data on the installed capacity, energy consumption, generation, and electric energy sales to electric utilities from approximately 2,000 facilities.

Form EIA-867 data for 1993 are preliminary. Data for prior years are final.

Export and Import Data

Export and import data (except imports to electric utilities, manufacturing plants and coke plants, which are reported on the FERC Form 423, EIA-3A, and EIA-5A, respectively.) are obtained from the Census Bureau--export data from the monthly EM 545 (formerly EM 522) report, import data from the monthly IM 145 report. The Census Bureau compiles these data monthly from documents filed with the U.S. Customs Service as required by law. They include shippers' export declaration forms, import entry forms, and warehouse withdrawal forms. No sampling procedures are used. The Census Bureau publication *Guide to Foreign Trade Statistics* describes the foreign trade statistics program, including the EM 545 and IM 145 monthly reports. Data from these surveys are considered final at the time of publication.

Foreign distribution of U.S. coal, major exporting State, and destination, along with foreign distribution of metallurgical and steam coal (Tables 62, 63, and 64, respectively), was determined using EIA-6 distribution data by origin State, and coal export data from King's COALBASE (King Publishing Corporation, Knoxville, Tennessee) which gives the metallurgical and steam as well as the destination country data. The percentage of metallurgical and steam coal for each country of destination are applied to the EIA-6 export figures for each State of origin to derive coal distribution data that links State of origin to countries of destination by type of coal. The King's destination country data are considered to be more accurate than the Census country of destination data because it accounts for transhipments through intermediate countries to final destination countries, whereas the Census data would designate the destination as the intermediate country.

Copies of the survey forms and instructions used to collect data appearing in this publication can be obtained by calling EIA's National Energy Information Center at (202) 586-8800.

Technical Notes

1. Differences in Related Coal Data

Coal Production versus Coal Distribution. Coal production represents newly-mined coal. Coal distribution represents shipments of newly-mined coal and coal from producer/distributor stockpiles (previously mined coal).

Coal Distribution versus Coal Receipts. Differences in coal distribution data and coal receipts data are due to the time lag between distribution and receipt of coal shipments, and due to the survey threshold differences. In addition, coal distributed includes only domestic coal, whereas receipts include imported coal.

Foreign Distribution of U.S. Coal versus U.S. Coal Exports. Foreign distribution of U.S. coal does not equal U.S. coal exports due to reporting time differences and survey threshold differences.

Receipts of Imported Coal versus U.S. Coal Imports. Receipts of imported coal at electric utilities and manufacturing and coke plants does not equal U.S. coal imports due to reporting time differences. In addition, it does not include receipts at independent power producers.

2. Other Industrial Plants and Manufacturing

The *other industrial plants* end-use sector includes the *manufacturing*, agriculture, forestry and fishing, mining, and construction industries. Manufacturing accounts for approximately 97 percent of the coal receipts and consumption and 100 percent of the coal stocks in

the *other industrial plants* sector as reported herein. Data sources for the *other industrial plants* sector and the *manufacturing* sector are Forms EIA-6 and EIA-3, respectively. The source statement in each table identifies the survey used to collect coal data for the *other industrial plants* sector, and the following technical notes describe the methodology used when data were derived.

3. Residential and Commercial

To reduce the reporting burden to coal users, the EIA does not conduct any survey of coal data from residential and commercial users of coal. Shipments of coal to this sector, reported by producers and distributors of coal on Form EIA-6, are equated to coal receipts and consumption by the *residential and commercial* sector, assuming no stock changes.

4. Consumer Prices

Prices are derived for each end-use sector as follows:

Electric Utilities. Prices are reported for each plant in cents-per-million Btu on FERC Form 423. The price per ton of coal is calculated at each plant using cents-per-million Btu and the average Btu content per pound of coal for the appropriate rank of coal. The average prices appearing in the tables (e.g., across all States) are calculated by summing the dollar value at each plant (short tons of coal multiplied by price per short ton) and dividing by the corresponding total tons. For more information about prices of coal at *electric utilities*, see the EIA publication, *Electric Power Monthly* (DOE/EIA-0226).

Coke Plants. Respondents are asked to report the number of tons of coal received (or coke distributed) on Form EIA-5 and the total value of that coal (or coke) in dollars. Average prices are calculated by summing the reported values (e.g., across all States) and dividing by the corresponding total tons.

Other Industrial Plants. Respondents (manufacturing plants only) are asked to report the number of tons of coal received on Form EIA-3 and the total value of that coal in dollars. Average prices are calculated by summing the reported values across all States and dividing by the corresponding total tons.

Residential and Commercial. Data are not collected. See Technical Note 3.

5. Consumption

Annual Data

Annual coal consumption data are sums of quarterly or monthly data described below except for nonutility power producers whose coal consumption is not included in this report. These data are however, reported on Form EIA-867 and published in the *Electric Power Annual* (DOE/EIA-0348).

Electric Utilities. Consumption is reported on Form EIA-759.

Coke Plants. Consumption is reported on Form EIA-5.

Other Industrial Plants. In deriving a quarterly estimate for coal consumption for the *other industrial plants* sector, the first step is to equate consumption to beginning stocks plus receipts minus ending stocks. In terms of an equation, consumption can be expressed as $C = Sb + R - Se$, where Sb = beginning stocks, R = receipts, and Se = ending stocks.

Therefore, consumption is $C = (Sb - Se$ (change in stocks)$) + R$. Next, stock change at the State level is equated to the stock change for that State as reported on Form EIA-3, receipts at the State level are derived as described in Section 3, and a computed consumption is derived using the same equation for each State. Finally, the quarterly consumption (C) at the State level is equated to the maximum of the computed consumption at the State level, as previously described, and the quarterly consumption for that State as reported on Form EIA-3. This process ensures that State-level consumption for the *other industrial plants* sector is always greater than or equal to the *manufacturing* sector consumption for that State. Total quarterly consumption for the *other industrial plants* sector is computed by summing the quarterly State-level consumption figures.

Residential and Commercial. Shipments to the *residential and commercial* sector as reported on Form EIA-6 are defined as consumption as well as receipts for this end-use sector.

EIA publishes monthly estimates of coal consumption in the *Monthly Energy Review* (DOE/EIA-0035).

Monthly coal consumption at electric utility plants is derived directly from Form EIA-759. Prior to 1980, monthly coal consumption at coke plants was derived directly from Form EIA-5. For 1981 through 1987, it was derived from the quarterly coal consumption reported on Form EIA-5, using the ratios of monthly to quarterly consumption in 1979, the last year that coke plant data were collected monthly on Form EIA-5. These ratios by month (January - December) are

0.3377, 0.3200, 0.3423; 0.3529, 0.3462, 0.3009; 0.3364, 0.3347, 0.3289; and 0.3273, 0.3301, 0.3426.

Starting with 1988, monthly coal consumption at coke plants is derived from quarterly coal consumption reported on Form EIA-5, using ratios derived from monthly data on raw steel production published by the American Iron and Steel Institute (AISI) on Form AIS7. The ratio is the proportion of monthly raw steel production from open hearth and basic oxygen process furnaces to the quarterly raw steel production from those furnace types.

Prior to 1978, coal consumption for the *other industrial plants* sector (i.e., industrial users minus coke plants) was derived by using monthly data reported on Form EIA-3 to modify baseline coal consumption figures from the most recent Census of Manufactures or Annual Survey of Manufactures, Bureau of the Census, U.S. Department of Commerce. For 1978 through 1987, data from Forms EIA-3 and EIA-6 are used to compute monthly coal consumption for the *other industrial plants* sector.

Given the quarterly consumption for the *other industrial plants* sector (C), the monthly consumption for the sector (Cm) is estimated for each month in the quarter as Cm = (Cm3/C3) x C where Cm3/C3 is the ratio of monthly to quarterly coal consumption as reported on Form EIA-3. For the 1978 coal consumption figures, the ratios used are based on 1978 EIA-3 data. For 1979 through 1987, the ratios used are based on the 1979 EIA-3 data. These 1979 ratios by month (January - December) are 0.3593, 0.3264, 0.3143; 0.3485, 0.3332, 0.3183; 0.3317, 0.3407, 0.3276; and 0.3045, 0.3253, 0.3702.

Starting with 1988, monthly coal consumption for the other industrial plants sector is derived from quarterly coal consumption reported on Form EIA-3 using monthly ratios derived from the industrial production indices published by the Board of Governors of the Federal Reserve System. Six major industry groups' indices are used as the basis for calculating the monthly ratios. These groups are foods (Standard Industrial Classification (SIC) 20), paper and products (SIC 26), chemicals and products (SIC 28), petroleum products (SIC 29), clay, glass, stone products (SIC 32), and primary metals (SIC 33).

The monthly ratios are computed as the monthly sum of weighted indices as a proportion of the quarterly sum of weighted indices, using the 1985 proportion as the weight.

Prior to 1980, monthly coal consumption for the *residential and commercial* sector was derived by using monthly data reported on Form EIA-2, "Monthly Coal Report - Retail Dealers and Upper Lake Docks," to modify baseline coal consumption figures developed by the Bureau of Mines, U.S. Department of the Interior.

For 1980, the quarterly coal consumption figures in the *residential and commercial* sector are converted to monthly coal consumption figures using the ratios of monthly to quarterly coal deliveries to this sector in 1979 as reported on Form EIA-2. These 1979 ratios by month (January-December) are 0.4002, 0.3502, 0.2496; 0.4805, 0.2901, 0.2294; 0.3126, 0.2952, 0.3922; and 0.2931, 0.3101, 0.3968. The 1981 and 1982 monthly coal consumption figures were derived using the 1979 ratios but were also modified according to heating/cooling degree-days. For 1983 through 1987, coal consumption figures are converted to monthly coal consumption figures using only the ratios of monthly to quarterly coal deliveries to this sector in 1979.

Starting with 1988, monthly coal consumption figures are derived using the monthly national average population weighted heating/cooling degree-days obtained from the National Oceanic and Atmospheric Administration. The ratio is the proportion of the monthly national sum of heating and cooling degree-days to the quarterly sum.

6. Stocks

Annual stocks are calculated at the end of the year or the end of the 4th quarter. Coal stocks are derived for each end-use sector as follows:

Electric Utilities. Stocks are reported on Form EIA-759.

Coke Plants. Stocks are reported on Form EIA-5.

Other Industrial Plants. Stocks are reported on Form EIA-3, i.e., stocks at *manufacturing* plants only. Technical Note 1 discusses the difference between *other industrial plants* and *manufacturing plants.*

Residential and Commercial. Data are not available. See Technical Note 3.

Producer and Distributor. Stocks are reported on Form EIA-6.

7. Methods of Transportation

Rail: Shipments of coal moved to consumers by rail, either private or public/commercial. Included is coal hauled to or away from a railroad siding by truck.

Water Transportation: Shipments of coal moved by one of the three methods--river, Great Lakes, or tidewater piers and coastal ports. Included in these shipments is

coal hauled to or from water-loading facilities by other means of transportation.

River: Shipments of coal moved to consumers via river by barge, except shipments to Great Lakes coal-loading docks or tidewater piers or coastal ports.

Great Lakes: Shipments of coal moved to consumers via the Great Lakes. These shipments are moved via the Great Lakes coal-loading docks, which are identified by name and locations as follows: Superior Midwest Energy Terminal, Superior, Wisconsin; Bessemer & Lake Erie Coal Storage & Transfer Facility, Conneaut, Ohio; B&O Railroad Coal-Loading Dock, Lorain, Ohio; C&O Railroad Presque Isle Docks, Toledo, Ohio; Lakefront Dock & Railroad Terminal Company Coal-Loading Dock, Toledo, Ohio; N&W Sandusky Coal Pier No. 3, Sandusky, Ohio; ConRail Coal Transfer Facilities, Ashtabula, Ohio; Rail to Water Transfer Corporation Dock, Chicago, Illinois.

Tidewater Piers and Coastal Ports: Shipments of coal moved to tidewater piers and coastal ports for further shipments to consumers via coastal water or ocean. The tidewater piers are identified by name and location as follows: B&O Curtis Bay Coal Piers, Baltimore, Maryland; C&O Coal Piers Nos. 14 & 15, Newport News, Virginia; N&W Lamberts Point Coal Piers Nos. 5 & 6, Norfolk, Virginia; Alabama State Docks Bulk Handling Plant, Mobile, Alabama; Alabama State Docks/McDuffie Terminals, Mobile, Alabama; Canton Coal Piers, Baltimore Harbor on the Chesapeake Bay; Greenwich Coal Pier, Greenwich Point, Philadelphia, Pennsylvania, on Delaware River; Port Richmond Pier, Pier 18 Port Richmond, Philadelphia, Pennsylvania, on the Delaware River; Galveston Regional Coal Distribution Center, Pelican Island, Galveston, Texas; International Marine Terminals/Plaquemines Parish Terminal, Mile 57 AHP-Mississippi River, approximately 30 miles south of New Orleans; Energy Terminals of Houston, Inc., a Subsidiary of Soros Associates, Houston, Texas. Coastal Ports are those located at Charleston, South Carolina; New York, New York; San Diego, California; Los Angeles, California; and Seattle, Washington.

Truck: Shipments of coal moved to consumers by truck.

Tramway, Conveyor, or Slurry Pipeline: Shipments of coal moved to consumers by tramway, conveyor, or slurry pipeline.

8. Census Export and Import Data

Export and import data are obtained from the Bureau of the Census, U.S. Department of Commerce, where they are compiled monthly from documents filed with the U.S. Customs Service, as required by law.

Each coal shipment is reported in short tons with corresponding total dollar values. EIA converts all value data obtained from the Census Bureau to average price data by dividing the dollar value by the quantity.

Based on an analysis and sample validation of the Census Bureau import and export data conducted by the EIA, it was determined that some of the coal and coke data collected from the Census Bureau may be misleading or incorrect (particularly those data associated with very small quantities or very high prices). Because of this, a methodology was developed to edit the Census Bureau price data.

Prior to 1989, certain data cells had been suppressed for publication purposes only: (1) average import coal prices of $50.00 or more per short ton; (2) average export coal prices of $60.00 or more per short ton; (3) average coke prices of $200.00 or more per short ton; (4) all percent changes of 500 percent or more.

Beginning with 1989, coal export data were categorized as metallurgical coal and steam coal, rather than as bituminous steam coal, lignite, anthracite, and bituminous metallurgical coal.

In addition, coal export tables were revised to present those countries to which the United States exported more than 50,000 short tons in the prior calendar year. The remaining countries in each continent were aggregated in an "other" category. This reduces the number of empty cells and highlights the major importers of U.S. coal. All coke export and import, and coal import countries and quantities are displayed.

The following methodology was used to derive the typical average prices as presented in the price tables. For all coal, a price distribution was derived from the prior calendar year export price data. Since extreme price variations in the Census Bureau data are the exception rather than the rule, the price distribution was used to identify a typical price range. The price distribution, from low to high, along with the frequency of each price (quantity) was analyzed to determine the representative prices. The extreme prices at both ends of the distribution were eliminated to arrive at a price range that covered at least 90 percent of the exports. This price range was considered to include typical or representative prices. Considering the records that fell within the typical price range, the weighted average price was calculated by country of destination and type of coal.

The same procedure was used to determine the typical average prices of coal imports. In addition to the average prices based on the above methodology, a U.S. total row is presented in the price tables, which represents the average price using all the Census Bureau data.

For reporting purposes, the month of exportation reflects the month in which the shipment leaves the United States. The month of importation generally is

based on the month in which the U.S. Customs Service releases the merchandise to the importer. For both sets of data, however, there can exist a small carry-over from the actual month of exportation or importation to a subsequent month, usually the succeeding month. A number of factors in processing account for this, e.g., late receipt of a document for an end-of-month shipment, or rejection of a shipment by the computer due to failure to meet established edit criteria. These limitations should be considered when making comparisons.

Based on the U.S. - Canada Free Trade Agreement, as of January 1990, the U.S. Department of Commerce began reporting statistics on U.S. exports to Canada based on information on imports provided monthly by the Canadian government.

Comparing Census reported imported coal figures in Table 34 with EIA reported imported coal receipts at electric utilities, manufacturers, and coke plants for 1993 shows a difference of about 1.8 million short tons. The main reason for this is that the EIA receipts data do not cover imported coal received by nonutility power producers who are not in the manufacturing sector.

9. Metric Data

Selected quarterly tables are converted to metric tons by multiplying the underlying data by the factor .907185. The metric data in Appendix B are derived from the following tables:

Tables ES1, 1, 15, 24, 34, 48, 67, 68, 76, 80, 91, 93, 95, 98, and 97 and are presented, respectively, in Tables B1. through B15.

10. Revisions

The Office of Coal, Nuclear, Electric and Alternate Fuels has adopted the following policy with respect to the revision and correction of recurrent data in energy publications:

1. Annual survey data collected by this office are published either as preliminary or final when first appearing in a data report. Data initially released as preliminary will be so noted in the report. These data will be revised, if necessary, and declared final in the next publication of the data.

2. All monthly and quarterly survey data collected by this office are published as preliminary. These data are revised only after the completion of the 12-month cycle of the data. No revisions are made to the published data before this.

3. After data are published as final, corrections will be made only in the event of a greater than one percent difference at the national level. Corrections for differences that are less than the one percent threshold are left to the discretion of the Office Director.

11. Approximate Heat Content of Coal

Table C2 presents the approximate heat content of coal by rank and disposition for 1980 through 1993.

12. Price Data and Taxes

F.O.B. mine coal prices and prices of coal delivered to or received by end-use consumers (electric utility plants, manufacturing plants, and coke plants) as reported in this publication include relevant local, state and federal exise and sales taxes.

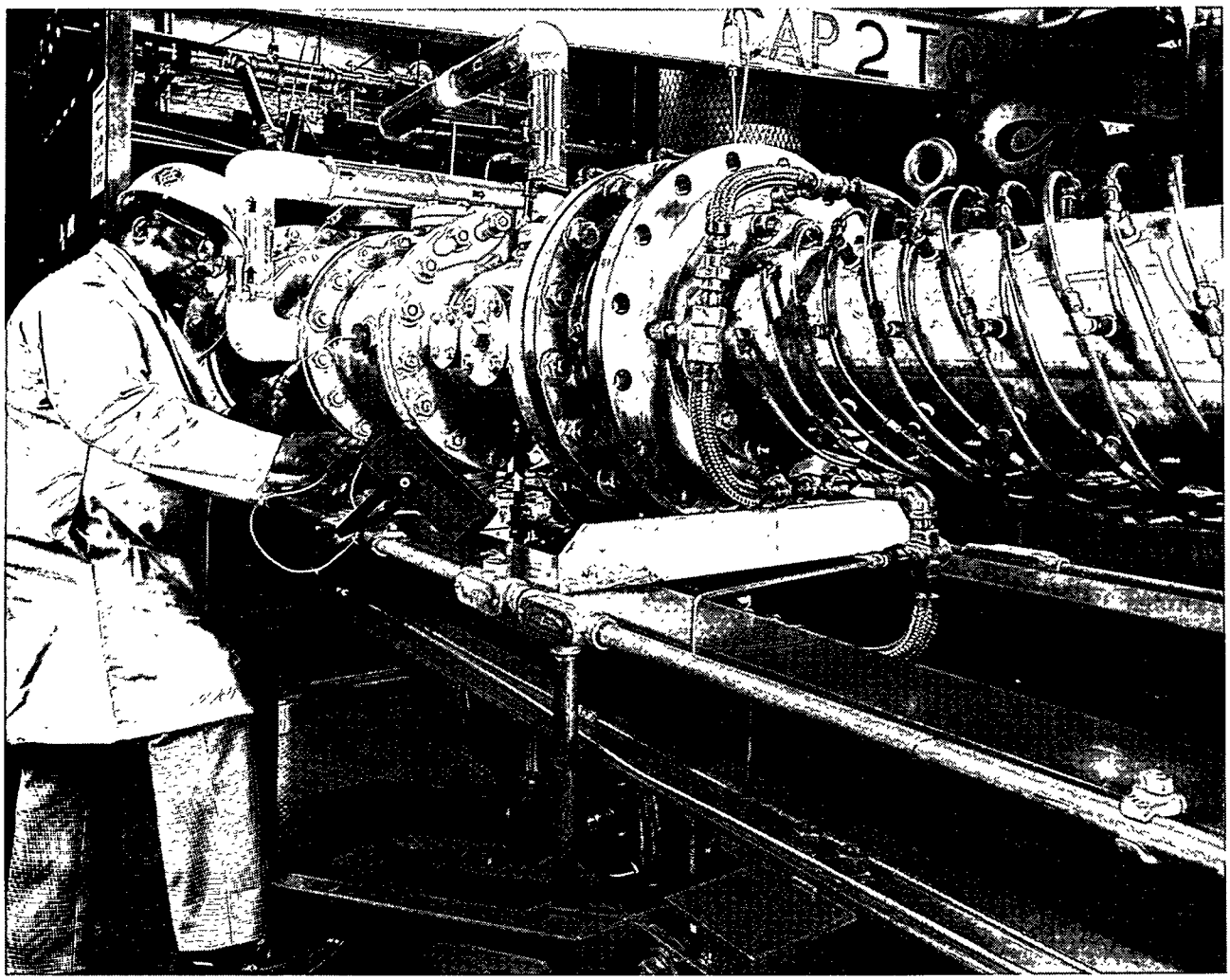
Table D3. Gross Domestic Product, Implicit Price Deflator, 1983-1993

Year	Implicit Price Deflator (1987 = 100)
1983	87.2
1984	91.0
1985	94.4
1986	96.9
1987	100.0
1988	103.9
1989	108.5
1990	113.3
1991	117.7
1992	121.1
1993	124.2

Source: Bureau of Economic Analysis, U.S. Department of Commerce, *Survey of Current Business.*

Appendix E

Selected Coal References



At the Pittsburgh Energy Technology Center in Pittsburgh, Pennsylvania, a technician monitors the temperature of combustion gas from a slugging combustor. The slugging combustor burns pulverized coal at low SO_2, NO_X, and particulate emissions.

Selected Coal References

Coal Reports

- *Weekly Coal Production* DOE/EIA-0218 (94-01)
- *State Coal Profiles*, DOE/EIA-0576, January 1994
- *Quarterly Coal Report*, DOE/EIA-0121 (94/2Q).
- *The Changing Structure of the U.S. Coal Industry: An Update*, DOE/EIA-0513(93), July 1993.
- *U.S. Coal Reserves: An Update by Heat and Sulfur Content*, DOE/EIA-0529(92), February 1993.
- *The U.S. Coal Industry, 1970-1990: Two Decades of Change*, DOA/EIA-0559, November 1992
- *Coal Data: A Reference*, DOE/EIA-0064(90), November 1991
- *Trends in Contract Coal Transportation*, 1979-1987, DOE/EIA-0549, September 1991
- *Electric Power Monthly*, DOE/EIA-0226(94/09), September 1994.
- *Electric Power Annual*, DOE/EIA-0348(92), January 1994.
- *Cost and Quality of Fuels for Electric Utility Plants 1993*, DOE/EIA-0191(93), July 1994.

Feature Articles

- *Carbon Dioxide Emission Factors for Coal*, August 1994. (Quarterly Coal Report, DOE/EIA-0121 (94/1Q), August 1994).
- *Federal and Indian Coal Lands: A Growing Souce of Energy and Revenue*, October 1993 (Coal Production 1992, DOE/EIA-0118(92), October 1993).
- *Coal Supply and Demand in 1993: A Review*, 1993 (Mining Engineering, May 1994, pp 433-436).
- *Wyoming Coal: An Overview*, October 1992 (Coal Production 1991, DOE/EIA-0118(91), October 1992).
- *Profile of New Coal Mines in the 1980's*, September 1991 (Coal Production 1990, DOE/EIA-0118), September 1991).

Glossary

Agglomerating Character: Agglomeration describes the caking properties of coal. Agglomerating character is determined by examination and testing of the residue when a small powdered sample is heated to 950 degrees centigrade under specified conditions. If the sample is "agglomerating," the residue will be coherent, show swelling or cell structure, and be capable of supporting a 500-gram weight without pulverizing.

Anthracite: A hard, black lustrous coal, often referred to as hard coal, containing a high percentage of fixed carbon and a low percentage of volatile matter. Comprises three groups classified according to the following ASTM Specification D388-91a, on a dry mineral-matter-free (mmf) basis:

	Fixed Carbon Limits		Volatile Matter	
	GE	LT	GT	LE
Meta-Anthracite	98	-	-	2
Anthracite	92	98	2	8
Semianthracite	86	92	8	14

GE = Greater than or equal to
LT = Less than
GT = Greater than
LE = Less than or equal to

Anthracite coal is non-agglomerating. If agglomerating, semianthracite is classified in the low-volatile group of the bituminous class.

Ash: Impurities consisting of silica, iron, alumina, and other incombustible matter that are contained in coal. Ash increases the weight of coal, adds to the cost of handling, and can affect the burning characteristics. Ash content is measured as a percent by weight of coal on an "as received" or a "dry" (moisture-free, usually part of a laboratory analysis) basis.

Auger Mine: A surface mine where coal is recovered through the use of a large-diameter drill driven into a coalbed in a hillside. It usually follows contour surface mining, particularly when the overburden is too costly to excavate.

Average Annual Percent Change:

$$\sqrt[n]{\frac{V_n}{V_0}} - 1 \qquad (1)$$

Where: V_0 = the value for the base period.

V_n = the value for the nth period.

n = the number of periods.

Average Daily Production: The ratio of the total production at a mining operation to the total number of production days worked at the operation.

Average Length of a Shift: The arithmetic mean number of hours worked during a production shift. Overtime is included if usually worked during the year.

Average Mine Price: The ratio of the total value of the coal produced at the mine to the total production tonnage. (See f.o.b. mine price.)

Average Number of Employees per Shift: The arithmetic mean number of employees working during a production shift. Includes all employees except office workers. (See direct labor hours.)

Average Number of Miners Working Daily: The arithmetic mean number of miners working each day at a mining operation. Includes maintenance as well as production work performed.

Average Number of Shifts per Day: The arithmetic mean number of shifts each day at a mining operation. Includes maintenance as well as production shifts.

Average Production per Miner per Day: The product of the average production per miner per hour at a mining operation and the average length of a production shift at the operation.

Average Production per Miner per Hour: The ratio of the total production at a mining operation to the total direct labor hours worked at the operation.

Average Production per Miner per Shift: Calculated by multiplying average production per miner per hour by the average length of a miner shift.

Average Quality of Coal: Refers to individual measurements such as heat value, fixed cabon, moisture, ash, sulfur, phosphorus, major, minor, and trace elements, coking properties, petrologic properties, and particular organic constituents. The individual quality elements may be aggregated in various ways to classify coal for such special purposes as metallurgical, gas, petrochemical, and blending usages.

Average Recovery Percentage: Average recovery percentage represents the percentage of coal that can be recovered from coal reserves at reporting mines, averaged for all mines in the reported geographic area.

Bituminous Coal: The most common coal. It is dense and black (often with well-defined bands of bright and dull material). Its moisture content is usually less than 20 percent. It is used for generating electricity, making coke, and for space heating. Comprises five groups classified according to ASTM Specification D-388-91a, on a dry mineral-matter-free mmf basis for fixed-carbon and volatile matter and a moist mmf basis for calorific value. Coals having 69 percent or more fixed carbon on the dry, mineral-matter-free basis shall be classified according to fixed carbon, regardless of calorific (heating) value. High-volatile C bituminous coal is agglomerating, but other bituminous coals are commonly agglomerating. However, it is recognized that there may be nonagglomerating varieties in these groups of the bituminous class, and there are notable exceptions in the high-volatile C bituminous group. Coals with less than 69 percent fixed carbon, but with 14,000 or more Btu per pound, are classified as high-volatile A bituminous.

	Fixed Carbon Limits		Volatile Matter Limits		Calorific Value Limits Btu/lb.	
	GE	LT	GT	LT	GE	LE
lv	78	86	14	22	-	-
mv	69	78	22	31	-	-
hvA	-	69	31	-	14000	-
hvB	-	-	-	-	13000	14000
hvC	-	-	-	-	10500	13000

lv = Low-volatile bituminous coal
mv = Medium-volatile bituminous coal
hvA = High-volatile A bituminous coal
hvB = High-volatile B bituminous coal
hvC = High-volatile C bituminous coal

GE = Greater than or equal to
LT = Less than
GT = Greater than
LE = Less than or equal to

Btu (British thermal unit): The amount of heat needed to raise the temperature of 1 pound of water by 1 degree fahrenheit. The Btu is a convenient measure by which to compare the energy content of various fuels.

Cannel Coal: A variety of bituminous coal that is noncaking, contains a high percentage of volatile matter, ignites easily, and burns with a luminous smokey flame.

Capacity Utilization: Capacity utilization is computed by dividing production by productive capacity and multiplying by 100.

Captive Coal: Coal produced and consumed by the mine operator, a subsidiary, or parent company (for example, steel companies and electric utilities).

Carbon Dioxide: CO_2. A colorless, odorless, incombustible gas formed during combustion in fossil-fuel electric generation plants.

Census Divisions: The nine geographic divisions of the United States established by the Bureau of the Census, U.S. Department of Commerce for statistical analysis. The boundaries of Census divisions coincide with State boundaries. In some cases, the Pacific Division is subdivided into the Pacific Contiguous and Pacific Noncontiguous areas.

CIF: See Cost, Insurance, Freight.

Coal Carbonized: The amount of coal decomposed into solid coke and gaseous products by heating in a coke oven in a limited air supply or in the absence of air.

Coal (Coke): See Coke (coal).

Coal Mining Productivity: Coal mining productivity is calculated by dividing total coal production by the total direct labor hours worked by all mine employees.

Coal Preparation: The process of sizing and cleaning coal to meet market specifications by removing impurities such as rock, sulfur, etc. May include crushing, screening, or mechanical cleaning.

Coal-Producing Regions: A geographic classification of coal-producing States. The States in the Appalachian Region are Alabama, Georgia, eastern Kentucky, Maryland, Ohio, Pennsylvania, Tennessee, Virginia, and West Virginia. The States in the Interior Region are Arkansas, Illinois, Indiana, Iowa, Kansas, western Kentucky, Louisiana, Missouri, Oklahoma, and Texas. The States in the Western Region are Alaska, Arizona, California, Colorado, Montana, New Mexico, North Dakota, Utah, Washington, and Wyoming.

Coal-Producing States: The States where mined and/or purchased coal originates are defined as follows: Alabama, Alaska, Arizona, Arkansas, California, Colorado, Illinois, Indiana, Iowa, Kansas, Kentucky Eastern, Kentucky Western, Louisiana, Maryland, Missouri, Montana, New Mexico, North Dakota, Ohio, Oklahoma, Pennsylvania anthracite, Pennsylvania bituminous, Tennessee, Texas, Utah, Virginia, Wash-

ington, West Virginia Northern, West Virginia Southern, and Wyoming.

The following Coal-Producing States are split in origin of coal, as defined below:

Kentucky, Eastern: All mines located in counties other than the Western Kentucky counties.

Kentucky, Western: All mines in the following counties in Western Kentucky: Butler, Caldwell, Christian, Crittenden, Daviess, Edmonson, Grayson, Hancock, Henderson, Hopkins, Logan, McLean, Muhlenberg, Ohio, Simpson, Todd, Union, Warren, and Webster.

Pennsylvania Anthracite: All mines in the following counties: Carbon, Columbia, Dauphin, Lackawanna, Lebanon, Luzerne, Northumberland, Schuylkill, Sullivan, and Susquehanna. All anthracite mines in Bradford County.

Pennslyvania Bituminous: All mines located in counties other than the Pennsylvania anthracite counties and all bituminous mines in Bradford County.

West Virginia, Northern: All mines in the following counties (formerly defined as Coal-Producing Districts 1, 3, & 6): Barbour, Brooke, Braxton, Calhoun, Doddridge, Gilmer, Grant, Hancock, Harrison, Jackson, Lewis, Marion, Marshall, Mineral, Monongalia, Ohio, Pleasants, Preston, Randolph, Ritchie, Roane, Taylor, Tucker, Upshur, Webster, Wetzel, Wirt, and Wood.

West Virginia, Southern: All mines in the following counties (formerly defined as Coal-Producing Districts 7 & 8): Boone, Cabell, Clay, Fayette, Greenbrier, Kanawha, Lincoln, Logan, Mason, McDowell, Mercer, Mingo, Monroe, Nicholas, Pocahontas, Putnam, Raleigh, Summers, Wayne, and Wyoming.

Coal Rank/Group: A classification of coal based on fixed carbon, volatile matter, calorific (heating) value, and agglomerating character. Coal is ranked progressively from lignite (least carbonaceous) to anthracite (most carbonaceous). The rank of coal can also determined by measuring the reflectance of vitrinite, one of several organic components of coal. The lower rank coal can be classified based on heat content. The heat content of the higher rank coals is generally above 14,000 Btu per pound for each coal rank group (except for meta-anthracite, which trends slightly lower), and heat content ranges vary within a relatively narrow range. Since heat content is not a dependable criterion for these higher rank coals, their rank categories are instead described by degree of metamorphism, or "coalification", a property that is measured by fixed carbon content. Finally, the agglomerating character of bituminous coals is a critical attribute for certain coal consumers, and thus agglomerating character has come to define the distinctions between certain adjacent coal groups. Some high-volatile C bituminous and subbituminous A coals can be distinguished only on the basis of agglomerating character. Percentages are based on dry mineral-matter-free coal. Volatile matter (not shown) is the complement of fixed carbon; that is, the percentages of fixed carbon and volatile matter sum to 100 percent. As fixed carbon percentage decreases, therefore, volatile matter percentage increases by the same amount.

Coal Stocks: The supply of coal at a mine, plant, or utility at the end of the reporting period.

Coalbed: A bed or stratum of coal. Also called a coal seam.

Cogenerator: A generating facility that produces electricity and another form of useful thermal energy (such as heat or steam) used for industrial, commercial, heating, and cooling purposes. To receive status as a qualifying facility (QF) under the Public Utility Regulatory Policies Act (PURPA), the facility must produce electric energy and "another form of useful thermal energy through the sequencial use of energy," and meet certain ownership, operating, and efficiency criteria established by the Federal Energy Regulatory Commission (FERC). (See the Code of Federal Regulation, Title 18, Part 292.)

Coke (coal): In general, coke is made from bituminous coal (or blends of bituminous coal) from which the volatile constituents are driven off by baking in an oven at temperatures as high as 2,000 degrees Fahrenheit, so that the fixed carbon and ash are fused together. Coke is hard and porous, has a gray, submetallic luster, and is strong enough to support a load of iron ore in a blast furnace. It is used both as a fuel and a reducing agent in smelting iron ore in a blast furnace. Coke has a heating value of 24.8 million Btu per short ton.

Coke Plants: Plants where coal is carbonized in slot or beehive ovens for the manufacture of coke.

Continuous Mining: A form of room-and-pillar mining in which a continuous mining machine extracts and removes coal from the working face in one operation; no blasting is required.

Conventional Mining: The oldest form of room-and-pillar mining which consists of a series of operations that involve cutting the coalbed so it breaks easily when blasted with explosives or high-pressure air, and then loading the broken coal.

Cost, Insurance, Freight (CIF): A type of sale in which the buyer of the product agrees to pay a unit price that includes the f.o.b. value of the product at the point of origin plus all costs of insurance and transportation. This type of transaction differs from a "delivered" purchase in that the buyer accepts the quantity as determined at the loading port (as certified by the Bill of Loading and Quality Report) rather than pay on the basis of the quantity and quality ascertained at the un-

loading port. It is similar to the terms of an f.o.b. sale, except that the seller, as a service for which he is compensated, arranges for transportation and insurance.

Crude Oil: A mixture of hydrocarbons that exists in liquid phase in underground reservoirs and remains liquid at amospheric pressure after passing through surface-separating facilities. Included are lease condensate and liquid hydrocarbons produced from tar sands, gilsonite and oil shale. Drip gases are also included, but topped crude (residual oil) and other unfinished oils are excluded. Liquids produced at natural gas processing plants and mixed with crude oil are likewise excluded where identifiable. Crude oil is considered as either domestic or foreign, according to the following:

Domestic. Crude oil produced in the United States or from its "outer continental shelf" as defined in 43 U.S.C. 1331.

Foreign. Crude oil produced outside the United States. Imported Athabasca hydrocarbons are included.

Culm: Waste from Pennsylvania anthracite preparation plants, consisting of coarse rock fragments containing as much as 30 percent small-sized coal; sometimes defined as including very fine coal particles called silt. Its heat value ranges from 8 to 17 million Btu per short ton.

Customs District: Customs districts, as defined by the Bureau of the Census, U.S. Department of Commerce, "Monthly Report EM 545," are as follows:

Eastern: Bridgeport, CT, Washington, DC, Boston, MA, Baltimore, MD, Portland, ME, Buffalo, NY, New York City, NY, Ogdensburg, NY, Philadelphia, PA, Providence, RI, Norfolk, VA, St. Albans, VT.

Southern: Mobile, AL, Savannah, GA, Miami, FL, Tampa, FL, New Orleans, LA, Wilmington, NC, San Juan, PR, Charleston, SC, Dallas-Fort Worth, TX, El Paso, TX, Houston-Galveston, TX, Laredo, TX, Virgin Islands.

Western: Anchorage, AK, Nogales, AZ, Los Angeles, CA, San Diego, CA, San Fracisco, CA, Honolulu, HI, Great Falls, MT, Portland, OR, Seattle, WA.

Northern: Chicago, IL, Detroit, MI, Duluth, MN, Minneapolis, MN, St. Louis, MO, Pembina, ND, Cleveland, OH, Milwaukee, WI.

Demonstrated Reserve Base: A collective term for the sum of coal in both measured and indicated resource categories of reliability which represents 100 percent of the coal in these categories in place as of a certain date. Includes beds of bituminous coal and anthracite 28 inches or more thick and beds of subbituminous coal 60 inches or more thick that occur at depths to 1,000 feet. Includes beds of lignite 60 inches or more thick that can be surface mined. Includes also thinner and/or deeper beds that presently are being mined or for which there is evidence that they could be mined commercially at this time. Represents that portion of the identified coal resource from which reserves are calculated.

Depletion: The subtraction of both the tonnage produced and the tonnage lost to mining from identified resources to determine the remaining tonnage as of a certain time.

Depletion Factor: The multiplier applied to the tonnage produced to compute depletion. This multiplier takes into account both the tonnage recovered and the tonnage lost due to mining. The depletion factor is the reciprocal of the recovery factor in relation to a given quantity of production.

Direct Labor Hours: Direct labor hours worked by all mining employees at a mining operation during the year. Includes hours worked by those employees engaged in production, preparation, development, maintenance, repair, shop or yard work, management, and technical or engineering work. Excludes office workers. Excludes vacation and leave hours.

Distillate Fuel Oil: A general classification for one of the petroleum fractions produced in conventional distillation operations. Included are products known as No.1, No.2, and No.4 fuel oils and No.1, No.2, and No.4 diesel fuels. It is used primarily for space heating, on-and-off-highway diesel engine fuel (including railroad engine fuel and fuel for agricultural machinery), and electric power generation.

Dredge Mining: A method of recovering coal from rivers or streams.

Drift Mine: An underground mine that has a horizontal entry dug to a coalbed in a hillside.

Dry (Coal) Basis: Coal quality data calculated to a theoretical basis in which no moisture is associated with the sample. This basis is determined by measuring the weight loss of a sample when its inherent moisture is driven off under controlled conditions of low temperature air-drying followed by heating to just above the boiling point of water (104 to 110 degrees centigrade).

Electricity: A form of energy generated by friction, induction, or chemical change that is caused by the presence and motion of elementary charged particles of which matter consists.

Electricity Generation: The process of producing electric energy or transforming other forms of energy into electric energy. Also the amount of electric energy produced or expressed in watthours (Wh).

Electricity Generation, Gross: The total amount of electric energy produced by the generating station or stations, measured at the generator terminals.

Electricity Generation, Net: Gross generation less electricity consumed at the generating plant for station use. Electricity required for pumping at pumped-storage plants is regarded as plant use and is deducted from gross generation.

Electric Power Plant: A station containing prime movers, electric generators, and auxiliary equipment for converting mechanical, chemical, and/or fission energy into electric energy.

Electric Utility: A corporation, person, agency, authority, or other legal entity or instrumentality that owns and/or operates facilities within the United States, its territories or Puerto Rico for the generation, transmission, distribution, or sale of electric energy primarily for use by the public and files forms listed in the Code of Federal Regulations, Title 18, Part 141. Facilities that qualify as cogenerators or small power producers under the Public Utility Regulatory Policies Act (PURPA) and exempt wholesale generators under Energy Policy Act of 1992 are not considered electric utilities. See definition of nonutility power producer.

Electric Utility Sector: The electric utility sector consists of privately and publicly owned establishments that generate, transmit, distribute, or sell electricity primarily for use by the public and that meet the definition of an electric utility. Nonutility power producers are not included in the electric utility sector.

Emissions: The pollutants dischaged into the atmosphere in exhaust gases. For coal-burning plants, these emissions are primarily Carbon Dioxide (CO_2), Nitrogen Oxide (NO_x), and Sulfur Dioxide (SO_2).

Energy: The capacity for doing work as measured by the capability of doing work (potential energy) or the conversion of this capability to motion (kinetic energy). Energy has several forms, some of which are easily convertible and can be changed to another form useful for work. Most of the world's convertible energy comes from fossil fuels that are burned to produce heat that is then used as a transfer medium to mechanical or other means in order to accomplish tasks. Electrical energy is usually measured in kilowatthours, while heat energy is usually measured in British thermal units.

Energy Consumption: The use of energy as a source of heat or power or as an input in the manufacturing process.

Exports: Shipments of goods from the 50 States and the District of Columbia to foreign countries, Puerto Rico, the Virgin Islands, and other U.S. possessions and territories.

Fahrenheit: A temperature scale on which the boiling point of water is at 212 degrees above zero on the scale and the freezing point is at 32 degrees above zero at standard atmospheric pressure.

F.A.S. Value: Free alongside ship value. The value of a commodity at the port of exportation, generally including the purchase price plus all charges incurred in placing the commodity alongside the carrier at the port of exportation in the country of exportation.

Federal Energy Regulatory Commission (FERC): A quasi-independent regulatory agency within the Department of Energy having jurisdiction over interstate electricity sales, wholesale electric rates, hydroelectric licensing, natural gas pricing, oil pipeline rates, and gas pipeline certification.

Federal Coal Lease: A lease granted to a mining company to produce coal from land owned and administered by the Federal Government in exchange for royalties and other revenues.

Federal Power Act: Enacted in 1920, and amended in 1935, the Act consists of three parts. The first part incorporated the Federal Water Power Act administered by the former Federal Power Commission, whose activities were confined almost entirely to licensing non-Federal hydroelectric projects. Parts II and III were added with the passage of the Public Utility Act. These parts extended the Act's jurisdiction to include regulating the interstate transmission of electrical energy and rates for its sale as wholesale in interstate commerce. The Federal Energy Regulatory Commission is now charged with the administration of this law.

Federal Power Commission: The predecessor agency of the Federal Energy Regulatory Commission. The Federal Power Commission (FPC) was created by an Act of Congress under the Federal Water Power Act on June 10, 1920. It was charged originally with regulating the electric power and natural gas industries. The FPC was abolished on September 20, 1977, when the Department of Energy was created. The functions of the FPC were divided between the Department of Energy and the Federal Energy Regulatory Commission.

FERC: The Federal Energy Regulatory Commission.

Fixed Carbon: The nonvolatile matter in coal minus the ash. Fixed carbon is the solid residue other than ash obtained by prescribed methods of destructive distillation of a coal. Fixed carbon is the part of the total carbon that remains when coal is heated in a closed vessel until all volatile matter is driven off.

Flue Gas Desulfurization Unit (Scrubber): Equipment used to remove sulfur oxides from the combustion gases of a boiler plant before discharge to the atmosphere. Chemicals, such as lime, are used as the scrubbing media.

Flue Gas Particulate Collectors: Equipment used to remove fly ash from the combustion gases of a boiler plant before discharge to the atmosphere. Particulate collectors include electrostatic precipitators, mechan-

ical collectors (cyclones), fabric filters (baghouses), and wet scrubbers.

F.O.B. Mine Price: The free on board mine price. This is the price paid for coal at the mining operation site. It excludes freight or shipping and insurance costs.

Foreign-Controlled Firms: Foreign-controlled firms are U.S. coal producers with more than 50 percent of their stock or assets owned by a foreign firm.

Fossil-Fuel Electric Generation: Electric generation in which the prime mover is a turbine rotated by high-pressure steam produced in a boiler by heat from burning fossil fuels.

Geothermal Energy: Energy from the internal heat of the Earth, which may be residual heat, friction heat, or a result of radioactive decay. The heat is found in rocks and fluids at various depths and can be extracted by drilling and/or pumping.

Greenhouse Effect: The increasing mean global surface temperature of the earth caused by gases in the atmosphere (including carbon dioxide, methane, nitrous oxide, ozone, and chlorofluorocarbon). The greenhouse effect allows solar radiation to penetrate but absorbs the infrared radiation returning to space.

Gross Domestic Product (GDP): The total value of goods and services produced by labor and property in the United States. As long as the labor and property are located in the United States, the supplier (that is, the workers and, for property, the owners) may be either U.S. residents or residents of foreign countries.

Gross Domestic Product (GDP) Implicit Price Deflator: The implicit price deflator, published by the U.S. Department of Commerce, Bureau of Economic Analysis, is used to convert nominal figures to real figures.

Hand Loading: An underground loading method by which coal is removed from the working face by manual labor through the use of a shovel for conveyance to the surface. Though rapidly disappearing, it is still used in very small-tonnage mines.

High-Volatile A Bituminous Coal: See Bituminous coal.

High-Volatile B Bituminous Coal: See Bituminous coal.

High-Volatile C Bituminous Coal: See Bituminous coal.

High-Volatile (specific sub-group unknown): See Bituminous coal.

Hydroelectric Power: The harnessing of flowing water to produce mechanical or electrical energy.

Imports: Receipts of goods into the 50 States and the District of Columbia from foreign countries and from Puerto Rico, the Virgin Islands, and other U.S. possessions and territories.

Indian Coal Lease: A lease granted to a mining company to produce coal from Indian lands in exchange for royalties and other revenues; obtained by direct negotiatian with the Indians, but subject to approval and administration by the U.S. Department of the Interior.

Industrial Sector: The industrial sector comprises manufacturing industries which make up the largest part of the sector, along with mining, construction, agriculture, fisheries, and forestry. Establishments in the sector range from steel mills, to small farms, to companies assembling electronic components. The SIC codes used to classify establishments as industrial are 1 through 39.

Interquartile Range: The interquartile range is the range within which the middle 50 percent of observations are concentrated. See Appendix D, Section "Interquartile Range".

Jet Fuel: The term includes kerosene-type jet fuel and naphtha-type jet fuel. Kerosene-type jet fuel is a kerosene-quality product used primarily for commercial turbojet and turboprop aircraft engines. Naphtha-type jet fuel is a fuel in the heavy naphthas range used primarily for military turbojet and turboprop aircraft engines.

Lease Condensate: A natural gas liquid recovered from gas well gas (associated and non-associated) in lease separators or natural gas field facilities. Lease condensate consists primarily of pentanes and heavier hydrocarbons.

Lignite: A brownish-black coal of low rank with high inherent moisture and volatile matter (used almost exclusively for electric power generation). Similar coal in Europe and Australia are also referred to as brown coal. Comprises two groups classified according to the following ASTM Specifiaction D-388-91a for calorific values on a moist mineral-matter-free basis:

	Limits Btu/lb.	
	GE	LT
Lignite A	6300	8300
Lignite B	-	6300

GE = Greater than or equal to
LT = Less than

Lignite is non-agglomerating.

Lignite A: See Lignite.

Lignite B: See Lignite.

Longwall Mining: A form of underground coal mining which is gaining in importance in the United States and can be used at greater depths than room-and-pillar mining. In longwall mining, a cutting machine is pulled back and forth across a panel of coal 300 to 600 feet wide and as much as a mile long, with the broken coal moved by conveyor. Longwall mining is done under movable roof supports that are advanced as the bed is cut. The roof in the mined-out area is allowed to fall as the mining advances.

Low-Volatile Bituminous Coal: See Bituminous coal.

Major Coal Producing States: Any State that produces more than 12 million short tons of coal during the year.

Manufacturing (except coke plants): Those industrial users/plants, not including coke plants, that are engaged in the mechanical or chemical transformation of materials or substances into new (i.e., finished or semi-finished) products. Includes coal used for gasification/liquifaction.

Medium-Volatile Bituminous Coal: See Bituminous Coal.

Merchant Coke Plant: A coke plant where coke is produced primarily for sale on the commercial (open) market.

Meta-Anthracite: See Anthracite.

Metallurgical Coal: Coal that meets the requirements for making coke. It must be low in ash and sulfur and form a coke that is capable of supporting the charge of iron ore and limestone in a blast furnace. A blend of two or more bituminous coals is usually required to make coke.

Metric Ton: A unit of weight equal to 2,204.6 pounds.

Mine Type: See Surface Mine and Underground Mine.

Mineral-Matter-Free Basis: Mineral matter in coal is the parent material in coal from which ash is derived, and which comes from minerals present in the original plant materials that formed the coal, or from extraneous sources such as sediments and precipitates from mineralized water is called the mineral matter. Mineral matter in coal cannot be analytically determined and is commonly calculated using data on ash and ash-forming constituents. Coal analyses are calculated to the mineral-matter-free basis by adjusting formulas used in calculations in order to deduct the weight of mineral matter from the total coal.

Moist (Coal) Basis: "Moist" coal contains its natural inherent or bed moisture, but does not include water adhering to the surface. Coal analyses expressed on a moist basis are performed or adjusted so as to describe the data when the coal contains only that moisture which exists in the bed in its natural state of deposition, and when the coal has not lost any moisture due to drying.

Naphtha: A genetic term applied to a petroleum fraction with an approximate boiling range between 122 and 400 degrees fahrenheit.

Natural Gas: A mixture of hydrocarbons and small quantities of various nonhydrocarbons existing in the gaseous phase or in solution with crude oil in underground reservoirs.

Natural Gas (Dry): The marketable portion of natural gas production, which is obtained by subtracting extraction losses, including natural gas liquids removed at natural gas processing plants, from total production.

Natural Gas Plant Liquids (NGPL): Natural gas liquids recovered from natural gas in processing plants and, in some situations, from natural gas field facilities, as well as those extracted by fractionators. Natural gas plant liquids are defined according to the published specifications of the Gas Processors Association and the American Society for Testing and Materials as follows: ethane, propane, normal butane, isobutane, pentanes plus, and other products from natural gas processing plants (i.e., products meeting the standards for finished petroleum products produced at natural gas processing plants, such as finished motor gasoline, finished avaiation gasoline, special naphthas, kerosene, distillate fuel oil, and miscellaneous products).

Nitrogen Oxide: NO_x. A gas formed in high-temperature environments when nitrogen and oxygen are present together. This typically occurs in a combustion chamber such as those in fossil-fuel burning electric utilities. Nitrogen oxide emissions are a contributor to acid rain.

Nominal Price: The price paid for a product or service at the time of the transaction. The nominal price, which is expressed in current dollars, is not adjusted to remove the effect of changes in the purchasing power of the dollar.

Nonutility Power Producers: A corporation, person, agency, authority, or other legal entity or instrumentality that owns electric generating capacity and is not an electric utility. Nonutility power producers include qualifying cogenerators, qualifying small-power producers, and other nonutility generators (including independent power producers) without a designated franchised service area and which do not file forms listed in the Code of Federal Regulations, Title 18, Part 141. (See Electric Utility.)

Nuclear Electric Power: Electricity generated by an electric power plant whose turbines are driven by

steam generated in a reactor by heat from the fissioning of nuclear fuel.

Number of Mines: The number of mines, or mines collocated with preparation plants or tipples, located in a particular geographic area (State or region). If a mine is mining coal across two counties within a State, or across two States, then it is counted as two operations. This is done so that EIA can separate production by State and county.

Number of Mining Operations: The number of mining operations includes preparation plants with greater than 5,000 total direct labor hours. Mining operations that consist of a mine and preparation plant or a preparation plant only will be counted as two operations, if the preparation plant processes both underground and surface coal. Exluded are silt, culm, refuse bank, slurry dam, and dredge operations except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons of coal during the year, and preparation plants with less than 5,000 employee hours.

Open Market Coal: Coal sold in the open market, i.e., coal sold to companies other than the reporting company's parent company or an operating subsidiary of the parent company.

Operating Subsidiary: A company which is controlled through the ownership of voting stock, or a corporate joint venture in which a corporation is owned by a small group of businesses as a separate and specific business or project for the mutual benefit of the members of the group.

Other Industrial Plant: Industrial users, not including coke plants, engaged in the mechanical or chemical transformation of materials or substances into new products (manufacturing); and companies engaged in the agriculture, mining, or construction industries.

Other Unions: See Union Type.

Overburden: Any material, consolidated or unconsolidated, that overlies a coal deposit.

Parent Company: A company which solely or jointly owns the reporting company and which is not itself a subsidiary of, or owned by, another company.

Percent Utilization: The ratio of total production to productive capacity, times 100.

Petroleum: Petroleum includes residential and distillate fuel oils, crude oil, and all other petroleum fuels, excluding petroleum coke.

Petroleum Coke: A residue that is the final product of the condensation process in cracking. The product is either marketable petroleum coke or catalyst petroleum coke.

Petroleum Products: Products obtained from the processing of crude oil (including lease condensate), natural gas, and other hydrocarbon compounds. Petroleum products include unfinished oils, liquefied petroleum gases, pentanes plus, aviation gasoline, motor gasoline, naphtha-type jet fuel, kerosene-type jet fuel, kerosene, distillate fuel oil, residual fuel oil, petrochemical feedstocks, special naphthas, lubricants, waxes, petroleum coke, asphalt, road oil, still gas, and miscellaneous products.

Photovoltiac and Solar Thermal Energy (as used at electric utilities): Energy radiated by the sun as electromagnetic waves (electromagnetic radiation) that is converted at electric utilities into electricity by means of solar (photovoltiac) cells or concentrating (focusing) collectors.

Preparation Plant: A mining facility at which coal is crushed, screened, and mechanically cleaned.

Producer and Distributor Coal Stocks: Producer and distributor coal stocks consist of coal held in stock by producers/distributors at the end of a reporting period.

Productive Capacity: The maximum amount of coal that a mining operation can produce or process during a period with the existing mining equipment and/or preparation plant in place, assuming that the labor and materials sufficient to utilize the plant and equipment are available, and that the market exists for the maximum production.

Quadrillion Btu: 10^{15} Btu.

Real Price: A price that has been adjusted to remove the effect of changes in the purchasing power of the dollar. Real prices, which are expressed in constant dollars, usually reflect buying power relative to a base year.

Recoverable Coal Reserves at Mines: The quantity of coal that can be recovered (i.e. mined) from existing coal reserves, as reported on Form EIA-7A.

Recoverable Reserves of Coal: An estimate of the amount of coal that can be recovered (mined) from the accessible reserves of the demonstrated reserve base.

Recovery Percentage: The percentage of coal that can be recovered from the coal deposits at existing mines.

Refuse Bank: A repository for waste material generated by the coal cleaning process.

Refuse Mine: A surface mine where coal is recovered from previously mined coal. It may also be known as a silt bank, culm bank, refuse bank, slurry dam, or dredge operation.

Report Year: The calendar year beginning at 12:00 a.m. January 1 and ending at 11:59 p.m. December 31.

Residential and Commercial Sector: Housing units; wholesale and retail businesses (except coal deposits at active, producing mines as of the end of the year, as reported on Form EIA-7A. wholesale dealers); health institutions (hospitals); social and educational institutions (schools and universities); and Federal, State, and local governments (military installations, prisons, office buildings).

Residual Fuel Oil: The heavier oils that remain after the distillate fuel oils and and lighter hydrocarbons are distilled away in refinery operations and that conform to ASTM Specifications D396 and 975. Included are No. 5, a residual fuel oil of medium viscosity; Navy Special, for use in steam-powered vessels in government service and in shore power plants; and No. 6, which includes Bunker C fuel oil and is used for commercial and industrial heating, electricity generation, and to power ships. Imports of residual fuel oil include imported crude oil burned as fuel.

Room-and-Pillar Mining: The most common method of underground mining in which the mine roof is supported mainly by coal pillars left at regular intervals. Rooms are places where the coal is mined; pillars are areas of coal left between the rooms. Room-and-pillar mining is done either by conventional or continuous mining.

Royalties: Payments, in money or kind, of a stated share of production from mineral deposits, by the lessee to the lessor. Royalties may be an established minimum, a sliding-scale, or a step-scale. A step-scale royalty rate increases by steps as the average production on the lease increases. A sliding-scale royalty rate is based on average production and applies to all production from the lease.

Sales Volume: The reported output from Federal and/or Indian lands, the basis of royalties. It is approximately equivalent to production, which includes coal sold, and coal added to stockpiles.

Scoop Loading: An underground loading method by which coal is removed from the working face by a tractor unit equipped with a hydraulically operated bucket attached to the front; also called a front-end loader.

Semianthracite: See Anthracite.

Shaft Mine: An underground mine that reaches the coalbed by means of a vertical shaft. In addition to the passages providing entry to the coalbed, a network of other passages are also dug, some to provide access to various parts of the mine and some for ventilation.

Short Ton: A unit of weight equal to 2 thousand pounds.

Shortwall Mining: A form of underground mining that involves the use of a continuous mining machine and movable roof supports to shear coal panels 150 to 200 feet wide and more than half a mile long. Although similar to longwall mining, shortwall mining is generally more flexible because of the smaller working area. Productivity is lower than with longwall mining because the coal is hauled to the mine face by shuttle cars as opposed to conveyors.

SIC: See Standard Industrial Classification.

Silt: Waste from Pennsylvania anthracite preparation plants, consisting of coarse rock fragments containing as much as 30 percent small-sized coal; sometimes defined as including very fine coal particles called silt. Its heat value ranges from 8 to 17 million Btu per short ton. Synonymous with culm.

Silt, Culm Refuse Bank, or Slurry Dam Mining: A mining operation producing coal from these sources of coal. (see refuse mine.)

Slope Mine: An underground mine in which the entry is driven at an angle to reach the coal deposit.

Slurry Dam: A repository for the silt or culm from a preparation plant.

Solar Energy: The radiant energy of the sun, which can be converted into other forms of energy, such as heat or electricity.

Solar Thermal Collector: A devise designed to receive solar radiation and convert it into thermal energy. Normally, a solar thermal collector includes a frame, glazing, and an absorber, together with appropriate insulation. The heat collected by the solar thermal collector may be used immediately or stored for later use.

Standard Industrial Classification (SIC): A set of codes developed by the Office of Management and Budget which categorizes industries to groups with similar economic activities.

Steam Coal: All noncoking coal.

Stocks: The supply of coal or coke at a mine, plant, or utility at the end of the reporting period.

Strategic Petroleum Reserve (SPR): Petroleum stocks maintained by the Federal Government for use during periods of major supply interruption.

Strip (Surface) Mining: A method used on flat terrain to recover coal by mining long strips successively. The material excavated from the strip being mined is deposited in the strip previously mined.

Subbituminous Coal: A dull black coal of rank intermediate between lignite and bituminous, consisting of

subbituminous A coal, subbituminous B coal, and subbituminous C coal, classified according to the following ASTM Specification D-388-91a on a moist mineral-matter-free basis:

	Calorific Value Limits Btu/lb. GE	LT
Subbituminous A Coal	10500	11500
Subbituminous B Coal	9500	10500
Subbituminous C Coal	8300	9500

GE = Greater than or equal to
LT = Less than

Subbituminous coal is non-agglomerating.

Subbituminous A Coal: See Subbituminous Coal.

Subbituminous B Coal: See Subbituminous Coal.

Subbituminous C Coal: See Subbituminous Coal.

Sulfur: One of the elements present in varying quantities in coal that contributes to environmental degradation when coal is burned. In terms of sulfur content by weight, coal is generally classified as low (less than or equal to one percent), medium (greater than one percent and less than or equal to three percent), and high (greater than three percent). Sulfur content is measured as a percent by weight of coal on an "as received" or a "dry" (moisture-free, usually part of a laboratory analysis) basis.

Sulfur Dioxide: SO_2. A caustic, corrosive gas that is a by-product of combustion and emissions from fossil-fuel burning electric utility plants. The primary agent in the production of acid rain.

Supplemental Gaseous Fuels: Any gaseous substance that, introduced into or commingled with natural gas, increases the volume available for disposition. Such substances include, but are not limited to, propane-air, refinery gas, coke oven gas, still gas, manufactured gas, biomass gas, or air or inert gases added for Btu stabilization.

Surface Mine: A coal-producing mine that is usually within a few hundred feet of the surface. Earth and rock above or around the coal (overburden) is removed to expose the coalbed, which is then mined with surface excavation equipment such as draglines, power shovels, bulldozers, loaders, and augers. It may also be known as an area, contour, open-pit, strip, or auger mine.

Tipple: A central facility used in loading coal for transportation by rail or truck.

Transportation Sector: The transportation sector consists of private and public vehicles that move people and commodities. Included are automobiles, trucks. buses, motorcycles, railroads and railways (including streetcars), aircraft, ships, barges, and natural gas pipelines.

Underground Mine: A mine where coal is produced by tunneling into the earth to the coalbed, which is then mined with underground mining equipment such as cutting machines and continuous, longwall, and shortwall mining machines. Underground mines are classified according to the type of opening used to reach the coal, i.e., drift (level tunnel), slope (inclined tunnel), or shaft (vertical tunnel).

Unfinished Oils: All oils requiring further refinery processing, except those requiring only mechanical blending. Includes naphthas and lighter oils, kerosene and light gas oils, heavy gas oils, and residuum.

Union Type: Union type consists of United Mine Workers of America (UMWA), and the following "Other Union" types: Southern Labor Union (SLU), Appalachian Miners of America (AMA), Scotia Employees Association (SEA), International Union of Operation Engineers (IUOE), Utility Workers of America (UWA), Progressive Mine Workers Association (PMWA), International Brotherhood of Electrical Workers (IBEW), International Chemical Workers Union (ICWU), Redstone Workers Association (RWA), Chariton Valley Independent Union (CVIU), American Federation of Labor - Congress of Industrial Organization (AFL-CIO), Labors International (LABO), Crow Hollow Miners (CROW), Coal Strippers (COAL), United Steel Workers (USW), Independent Miners Association (IMA), Independent Union (INUN), Independence Miners, Brokers, and Truckers Association (IMBT), Council of Southern Mountains (CSM), International Brotherhood of Teamsters, Chauffeurs, Warehousemen and Helpers Union (TEAM), Thompson Creek Workers Association (TCWA), United Brotherhood of Clay Workers (UBCW), Wilmot Employees Independent Union (WEIU), Independent Strip Miners Union (ISMU), Independent Miners (IM), Independent Workers (IW), Coal Strippers Union (CSU), Independent Miners Union (IMU), Independent Coal Workers (ICW), Independent Strip Mining Workers (ISMW), Independent Strip Union (ISU), Association of Bituminous Contractors (ABC), Arch Minerals Employees Association (AMEA), United Paperworkers International Union (UPIU), Welch Miners Union (WMU), Falcon Coal Employees Association (FCEA), Justus Employees Association (JEA), International Construction Union (ICU), Brotherhood of Miners (BOM), Western Energy Workers (WEW), Carlin Independent Union (CIU), International Association of United Workers Union (IAWU), and Stove, Furnace and Allied Appliance Workers International Union of N. A. (SFAW).

U.S. Coal Exports: Amount of U.S. coal shipped to foreign destinations, as reported in the U.S. Department of Commerce, Bureau of Census, "Monthly Report EM 545".

U.S. Coal Imports: Amount of foreign coal shipped to the United States, as reported in the U.S. Department of Commerce, Bureau of the Census, "Monthly Report IM 145".

Wind Energy (as used at electric utilities): The kinetic energy of wind converted at electric utilities into mechanical energy by wind turbines (i.e., blades rotating from the hub) that drive generators to produce electricity for distribution.

Wood and Waste (as used at electric utilities): Wood energy, garbage, bagasse, sewerage gas, and other industrial, agricultural, and urban refuse used to generate electricity for distribution.

Volatile Matter: Those products, exclusive of moisture, given off by a material as gas or vapor. Volatile matter is determined by heating the coal to 950 degrees centigrade under carefully controlled conditions and measuring the weight loss, excluding weight of moisture driven off at 105 degrees centigrade.

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