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# Coal Industry Annual 1997

**Energy Information Administration**
Office of Coal, Nuclear, Electric and Alternate Fuels
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# Contacts

This publication was prepared by Frederick L. Freme, Michelle Bowles, and Thomas Murphy, under the direction of Mary K. Paull, Project Leader, Coal Data Team, Coal and Electric Data and Renewables Division, Office of Coal, Nuclear, Electric, and Alternate Fuels. Specific information about the data in this report can be obtained from Frederick L. Freme (202/426-1152), or e-mail Frederick.Freme @EIA.DOE.GOV. Specific information about the Executive Summary can be obtained from Willie Hong (202/426-1126), or e-mail BHONG@EIA.DOE.GOV. All other questions on coal statistics should be directed to the National Energy Information Center (202/586-8800), or e-mail INFOCTR@EIA.DOE.GOV.

# Preface

*Coal Industry Annual 1997* provides comprehensive information about U.S. coal production, number of mines, prices, productivity, employment, productive capacity, and recoverable reserves. U.S. Coal production for 1997 and previous years is based on the annual survey EIA-7A, "Coal Production Report."

This report presents data on coal consumption, coal distribution, coal stocks, coal prices, and coal quality for Congress, Federal and State agencies, the coal industry, and the general public. Appendix A contains a compilation of coal statistics for the major coal-producing States. This report includes a national total coal consumption for nonutility power producers that are not in the manufacturing, agriculture, mining, construction, or commercial sectors.

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. Data for the Demonstrated Reserve Base (DRB) are now reported in *U.S. Coal Reserves: A Review and Update* (DOE/EIA-0529). However, this report presents data on the recoverable portion of the DRB in Table 105.

The base year for the implicit price deflator, which is used to convert nominal figures to real figures is 1992, the same as the previous year (Table D3).

This report constitutes the 22nd annual report on coal production published by EIA and continues the series formerly included 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.

# Contents

# Tables

# Illustrations

**Page**

# Executive Summary

## Overview

U.S. coal production totaled a record high of 1,090 million short tons in 1997, up by 2 percent from the 1996 production level (Table ES1). The electric power industry (utilities and independent power producers)—the dominant coal consumer—used a record 922 million short tons, 3 percent higher than in 1996. The increase in coal use for electricity generation was attributable primarily to (1) a substantial decline in nuclear-powered generation, and (2) moderate growth in electricity demand.

Coal consumption in the non-electricity sectors (residential/commercial and industrial users) fell by 1 percent to 107 million short tons. Coal imports rose 5 percent to nearly 7 and one half million short tons, while coal exports dropped in 1997, by about 7 million short tons to 84 million short tons, reversing the upward trend of the previous two years. The decline was mostly in steam coal exports, as a result of weak international coal prices and strong competition from other coal-exporting countries.

The trend toward holding reduced levels of consumer coal stocks (in terms of both absolute tonnage and days of supply) generally continued in 1997, with year-end coal stocks declining to 107 million short tons, a drawdown of 16 million short tons from 1996 levels. Consequently, coal production requirements were reduced that much in 1997. Year-end stocks at electric utilities declined by 16 million short tons; however, stocks held by producers and distributors grew by 5 million short tons.

Although domestic coal demand rose in 1997, the price of coal declined, continuing its downward trend that started more than a decade ago. The average utility coal price (per ton) dropped by 1 percent, while the price of industrial coal remained relatively unchanged. The average price of U.S. coal exports (measured in free alongside ship (f.a.s.) value) also remained relatively unchanged, while the price of U.S. coal imports edged up by 3 percent in 1997.

## Production

In 1997, the U.S. coal industry produced a record high of 1,090 million short tons, 26 million short tons more than the 1996 production level (Table ES1). Regionally, Appalachia output rose 4 percent, outpacing the 3-percent growth in Western coal production. Coal output in the Interior Region was virtually unchanged from the 1996 level (Figure ES1).

The rising demand for western low-sulfur coal for electricity generation, driven by its low cost and the sulfur emissions reduction requirements of the 1990 Clean Air Act Amendments (CAAA), continued to boost coal production in the Western Region (Figure ES2). This trend, however, slowed somewhat in 1997, as it did in 1996, because of strong demand for coal from Appalachia and the Illinois Basin in the East, particularly Indiana. A significant drop in nuclear-powered electricity generation in 1997, mostly in the East, contributed to the rise in demand for eastern coal, which had been declining in recent years.

The average mine price of U.S. coal in 1997 was $18.14 per short ton, 2 percent less than in 1996 and the 15$^{th}$ consecutive year of decline. Regionally, the average mine price dropped 5 percent in the Western Region, 3 percent in the Interior Region, and about 1 percent in the Appalachian Region.

### Appalachian Region

Coal production in the Appalachian Region rose by 4 percent to 468 million short tons in 1997 (Table ES2). The production growth came primarily from increased utility coal consumption in the South Atlantic, Middle Atlantic, and East North Central Census Divisions (Figure ES3), which more than offset a substantial decline (about 6 million short tons) in coal exports from the region, primarily from West Virginia and Eastern Kentucky. The rise in utility coal use was to meet the increase in electricity demand in the South Atlantic and Middle Atlantic Census Divisions and to offset a substantial decline in nuclear-powered generation in the East North Central Census Division.

**Table ES1. U.S. Coal Supply, Disposition, and Prices, 1994-1997**
(Million Short Tons and Nominal Dollars per Short Ton)

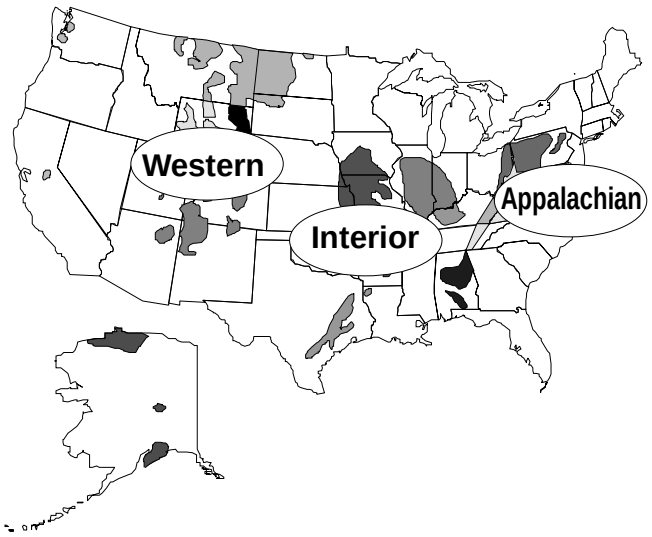
| Item | 1994 | 1995 | 1996 | 1997 |
|---|---|---|---|---|
| Production by Region | | | | |
| Appalachian | 445 | 435 | 452 | 468 |
| Interior | 180 | 169 | 173 | 171 |
| Western | 408 | 430 | 439 | 451 |
| **Total** | **1,034** | **1,033** | **1,064** | **1,090** |
| Consumption by Sector | | | | |
| Electricity | 839 | 850 | 897 | 922 |
| Utilities | 817 | 829 | 875 | 900 |
| Independent Power Producers | 21 | 21 | 22 | 22 |
| Coke Plants | 32 | 33 | 32 | 30 |
| Other Industrial Plants | 75 | 73 | 71 | 71 |
| Residential/Commercial Users | 6 | 6 | 6 | 6 |
| **Total** | **951** | **962** | **1,006** | **1,029** |
| Year-End Coal Stocks | | | | |
| Electric Utilities | 127 | 126 | 115 | 99 |
| Coke Plants | 3 | 3 | 3 | 2 |
| Other Industrial Plants | 7 | 6 | 6 | 6 |
| Producers/Distributors | 33 | 34 | 29 | 34 |
| **Total** | **169** | **169** | **152** | **141** |
| U.S. Coal Trade | | | | |
| Exports | 71 | 89 | 90 | 84 |
| Steam Coal | 24 | 36 | 38 | 31 |
| Metallurgical Coal | 47 | 52 | 53 | 52 |
| Imports | 8 | 7 | 7 | 7 |
| **Net Exports** | **64** | **81** | **83** | **76** |
| Average Delivered Price | | | | |
| Electric Utilities | 28.03 | 27.01 | 26.45 | 26.16 |
| Coke Plants | 46.56 | 47.34 | 47.33 | 47.61 |
| Other Industrial Plants | 32.55 | 32.42 | 32.32 | 32.41 |
| Average Free Alongside Ship (f.a.s.) Price | | | | |
| Exports | 39.93 | 40.27 | 40.76 | 40.55 |
| Steam Coal | 34.34 | 34.51 | 34.09 | 32.42 |
| Metallurgical Coal | 42.77 | 44.30 | 45.49 | 45.45 |
| Imports | 30.21 | 34.13 | 33.45 | 34.32 |

Notes: Totals may not equal sum of components due to independent rounding. Sum of net exports, stock changes, and consumption may not equal production, primarily because the supply and disposition data are obtained from different surveys. 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". **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." **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." **Imports:** U.S. Department of Commerce, Bureau of the Census, "Monthly Report IM 145." **Consumer Delivered Prices:** Federal Energy 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"; EIA, Form EIA-3, "Quarterly Coal Consumption Report - Manufacturing Plants."

Notable production gains were made in Pennsylvania (12 percent or 8 million short tons). Utility demand for high- and medium-sulfur coal from Pennsylvania remained strong in 1997, as it was in 1996, and increased coal shipments to Canada also helped boost Pennsylvania coal production in 1997.

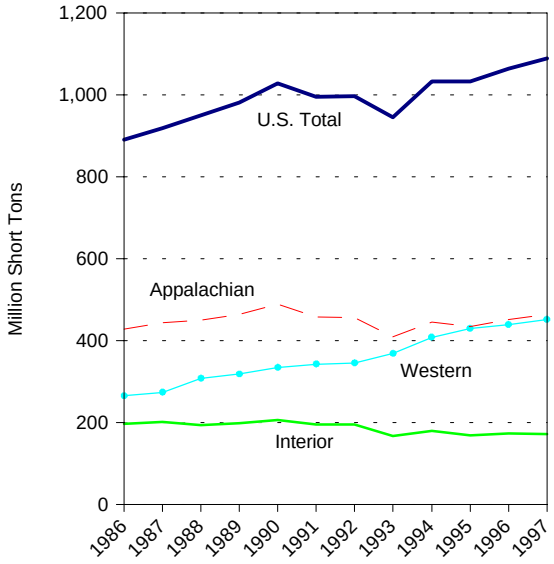
Coal output in West Virginia—the largest coal-producing State in the East and the country's second largest after Wyoming—increased slightly (by 2 percent) to 174 million short tons in 1997. A sizable increase in utility coal demand was largely offset by reduced demand for coal exports, resulting in a modest gain.

**Figure ES1. Coal-Producing Regions**




Source: Energy Information Administration, *Coal Industry Annual 1996*, DOE/EIA-0584(96) (Washington, DC, November 1997).

**Figure ES2. Coal Production by Region, 1986-1997**




Sources: Energy Information Administration (EIA), Form EIA-7A, "Coal Production Report" and U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Coal output in Eastern Kentucky rose for the first time in three years, up by 3 percent in 1997 to 121 million short tons. The combined output total from Eastern and Western Kentucky was 156 million short tons, the third largest after Wyoming and West Virginia.

## Interior Region

Overall coal production in the Interior Region declined by 2 million short tons to 171 million short tons in 1997. However, production in the Illinois Basin (Illinois, Indiana, and Western Kentucky) remained about the same, 113 million short tons. Indiana's coal production rose significantly (by 20 percent or 6 million short tons), offsetting the decline in Illinois (12 percent or 5 million short tons).

The increase in Indiana was largely a response to the decline in Illinois that resulted from the closure of several mines (e.g., Freeman United's Orient No. 6 mine, Consol's Burning Star No. 4 mine, and Ziegler's Spartan mine). Shortfalls in Illinois coal shipments to electric utilities in Indiana were covered by the production increase in Indiana. Coal supplies from the Illinois Basin were tight throughout the year because of mine closures in the past several years. Even though there was a substantial decline in nuclear-powered generation in the Midwestern States, especially in Illinois (as discussed in the consumption section below), coal production in the Illinois Basin did not increase.

With production of 53 million short tons, primarily lignite, Texas, the largest coal-producing State in the Interior Region, produced 3 percent less in 1997 than it did in 1996. The production decline reflected a draw-down of stocks at electric utilities in the State, to meet the increase in coal-fired electricity demand.

## Western Region

Coal production in the Western Region rose by 3 percent in 1997 to 451 million short tons. However, the region's coal output still trailed that of Appalachia, historically the region with the highest U.S. coal production. In 1997, the increase in production from the Western Region was largely attributable to strong (4 percent) growth in coal-fired electricity demand in the Mountain Census Division and a 2-percent increase in the East North Central Census Division.

In prior years, output growth for the Western Region has largely been determined by demand growth for Western coal in Texas and the Midwestern States.

Coal production in Wyoming, by far the largest coal-producing State in the country, rose by 1 percent to 282 million short tons in 1997, 26 percent of the U.S. total. The increase in 1997 was far less than the 7-

**Table ES2. U.S. Coal Production by Coal-Producing Region and State, 1994-1997**
(Million Short Tons)

| Coal-Producing Region and State | 1994 | 1995 | 1996 | 1997 |
|---|---|---|---|---|
| **Appalachian Total** | **445** | **435** | **452** | **468** |
| Alabama | 23 | 25 | 25 | 24 |
| Kentucky, Eastern | 124 | 119 | 117 | 121 |
| Maryland | 4 | 4 | 4 | 4 |
| Ohio | 30 | 26 | 29 | 29 |
| Pennsylvania Total | 62 | 62 | 68 | 76 |
| Anthracite | 5 | 5 | 5 | 5 |
| Bituminous | 58 | 57 | 63 | 72 |
| Tennessee | 3 | 3 | 4 | 3 |
| Virginia | 37 | 34 | 36 | 36 |
| West Virginia | 162 | 163 | 170 | 174 |
| Northern | 49 | 46 | 46 | 43 |
| Southern | 112 | 117 | 125 | 131 |
| **Interior Total** | **180** | **169** | **173** | **171** |
| Arkansas | * | * | * | * |
| Illinois | 53 | 48 | 47 | 41 |
| Indiana | 31 | 26 | 30 | 35 |
| Kansas | * | * | * | * |
| Kentucky, Western | 37 | 35 | 35 | 35 |
| Louisiana | 3 | 4 | 3 | 4 |
| Missouri | 1 | 1 | 1 | * |
| Oklahoma | 2 | 2 | 2 | 2 |
| Texas | 52 | 53 | 55 | 53 |
| **Western Total** | **408** | **430** | **439** | **451** |
| Alaska | 2 | 2 | 1 | 1 |
| Arizona | 13 | 12 | 10 | 12 |
| Colorado | 25 | 26 | 25 | 27 |
| Montana | 42 | 39 | 38 | 41 |
| New Mexico | 28 | 27 | 24 | 27 |
| North Dakota | 32 | 30 | 30 | 30 |
| Utah | 24 | 25 | 28 | 27 |
| Washington | 5 | 5 | 5 | 4 |
| Wyoming | 237 | 264 | 278 | 282 |
| **U.S. Total** | **1,034** | **1,033** | **1,064** | **1,090** |

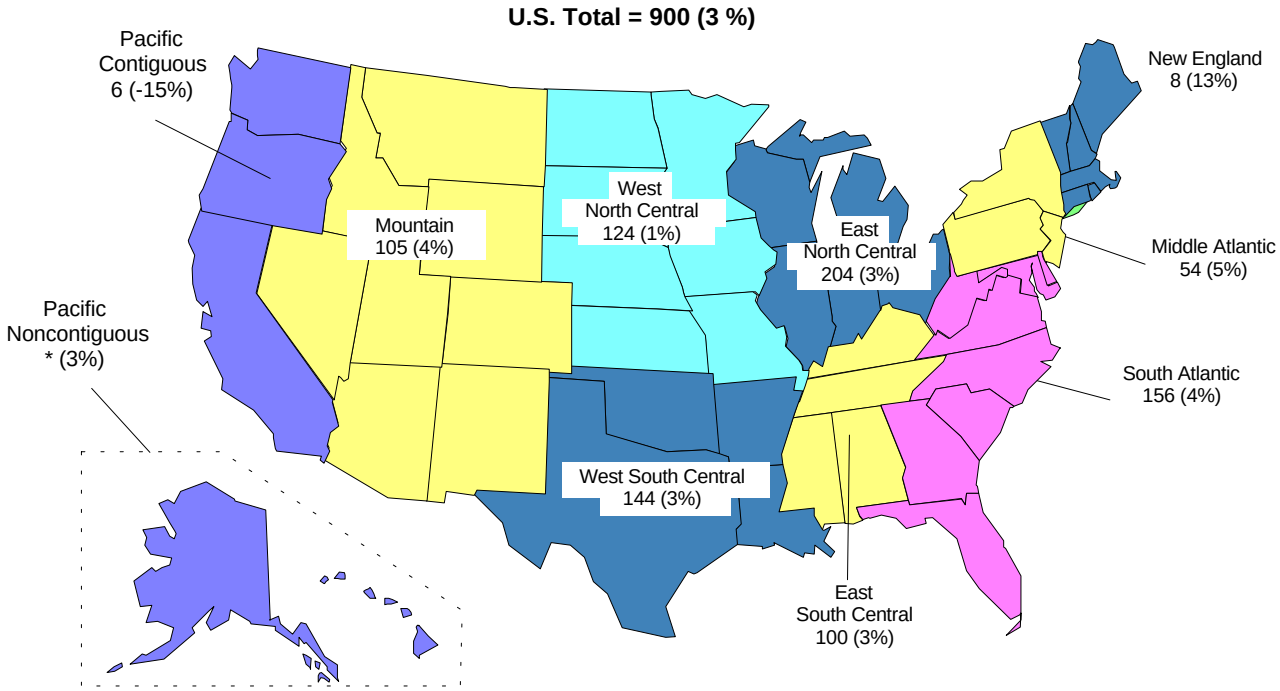
* = Less than 500 thousand short tons.
Notes: Totals may not equal sum of components due to independent rounding.
Source: Energy Information Administration (EIA), Form EIA-*7A,* "Coal Production Report" and U.S. Department of Labor, mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

percent-average-annual growth between 1990 and 1996, in part because of the transportation problems experienced by Union Pacific Railroad carrying Powder River Basin coal to markets in Texas and the Midwest.

With strong utility coal demand in the Mountain Region, coal production rose substantially in some other coal-producing States in the region—12 percent in Arizona and in New Mexico, and 10 percent in Colorado. Colorado's output of 27 million short tons was a record high. Montana bounced back from setbacks in 1995 and 1996, producing 41 million short tons, up by 8 percent.

In contrast, coal output in Utah, at 27 million short tons in 1997, was slightly lower than in 1996. The State's coal production was in part constrained by the rail shipment

**Figure ES3. Electric Utility Consumption of Coal by Census Division, 1997**
(Million Short Tons and Percent Change from 1996)




*Less than 500 thousand short tons.
Source: Energy Information Administration, *Electric Power Annual 1997, Volume I, July 1998,* DOE/EIA-0348(97)/1 (Washington, DC, July 1998).

problems for Utah coal being carried to West Coast ports for export and sales to other domestic customers. Lignite production in North Dakota was marginally lower, reflecting a 4-percent decline in coal-fired electricity generation and a slight decline in synthetic gas production in the State.

# Consumption

## Electricity Generation Sector

### *National Overview*

U.S. coal consumption by all users totaled 1,029 million short tons in 1997, a 2-percent increase over 1996 (Table ES1). Growth came entirely from the electric utility industry (Figure ES3), as coal consumption in the non-electricity sectors decreased by 1 percent. Electric utilities burned 900 million short tons and independent power producers 22 million short tons, for a total of 922 million short tons of coal for electricity generation (Figure ES4).

Much of the 3-percent increase in coal use for electricity generation can be attributed to replacement power for lost nuclear generation. Many nuclear power generating units were shut down in 1997, mostly in New England and the East North Central Census Divisions.

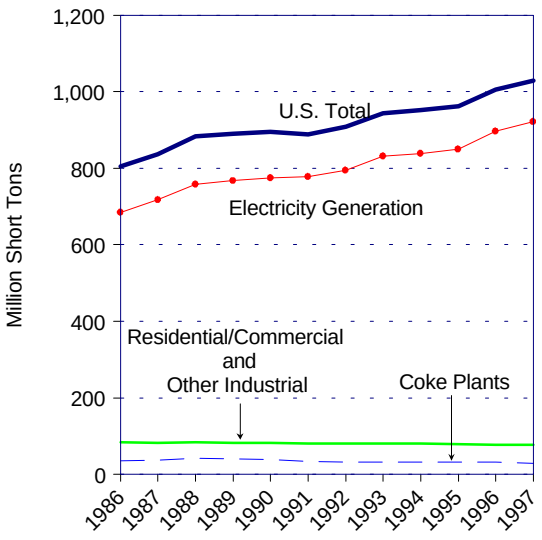
Nationwide, nuclear generation declined by 46 billion kilowatthours, equivalent to about 21 million short tons of coal (Table ES3).

Growth in retail sales of electricity by U.S. electric utilities in 1997 was about 1.4 percent, far less than the 3.6-percent growth in gross domestic product—and was at best a marginal factor in the increased coal use for electricity generation. Milder than normal temperatures during the winter and spring months and a cooler than normal summer led to a 1-percent decline in residential electricity demand. Commercial use was up by 3 percent and industrial use remained about the same.

Growth in coal consumption in the electric utility industry was limited by increases in generation from

natural gas, hydropower and petroleum. Petroleum-fired generation rose for the second consecutive year, increasing by 8 percent, while gas-fired generation rebounded from its poor year in 1996, also growing by 8 percent. Hydroelectric generation increased for the third consecutive year, rising by 3 percent to a record 337 billion kilowatthours.

**Figure ES4. Coal Consumption by Sector, 1986-1997**




Sources: Energy Information Administration (EIA), Form EIA-759, "Monthly Power Plant Report;" Form EIA-867, "Annual Nonutility Power Producers Report;" Form EIA-5, "Coke Plant Report - Quarterly;" Form EIA-3, "Quarterly Coal Consumption Report - Manufacturing Plants;" and Form EIA-6, "Coal Distribution Report."

Overall, coal continued to be the principal energy source for electric power generation in the United States. Coal's share of power generation rose almost 1 percent to 57 percent in 1997 (Figure ES5). In spite of strong demand growth, 1997 utility coal prices continued the steady downward trend that started more than a decade ago (Figure ES6). Ongoing productivity gains in coal mining and transportation maintained the downward price trend. Increased shipments of relatively low-cost western coal and the expiration of high-cost, long-term coal contracts also contributed to the trend. The average delivered price of coal to electric utilities declined by 1 percent, from $26.45 per short ton in 1996 to $26.16 per short ton in 1997.

## *Regional Summaries*

In the New England Census Division, five nuclear power units, a total of 4 gigawatts generating capacity, were out of operation in 1997. Although the region's oil-fired generation rose by 73 percent over 1996 levels, the drop in nuclear generation was so large (14 billion kilowatthours) that increased coal-fired and natural gas-fired generation was also needed.

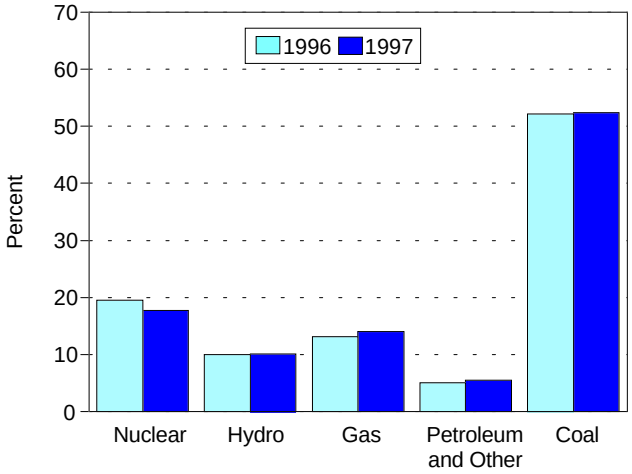
New England's coal-fired plants consumed 13 percent (almost 1 million short tons) more coal in 1997, reaching

**Table ES3. Change in Electric Utility Net Generation by Census Division and Fuel Type, 1997 versus 1996**
(Billion Kilowatthours)

| Census Division | Total | | Coal | | Gas | | Hydro | | Nuclear | | Other | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Net Change | Percent Change | Net Change | Percent Change | Net Change | Percent Change | Net Change | Percent Change | Net Change | Percent Change | Net Change | Percent Change |
| New England | -2 | -2 | 2 | 11 | 2 | 20 | -1 | -17 | -14 | -46 | 10 | 70 |
| Middle Atlantic | 10 | 3 | 7 | 5 | 8 | 47 | 1 | 5 | -4 | -3 | -2 | -18 |
| East North Central | -18 | -3 | 8 | 2 | 2 | 61 | * | -4 | -28 | -24 | * | -3 |
| West North Central | 3 | 1 | 2 | 1 | 1 | 22 | 1 | 8 | -1 | -2 | * | 9 |
| South Atlantic | 18 | 3 | 16 | 4 | 2 | 6 | -2 | -16 | * | * | 3 | 10 |
| East South Central | 9 | 3 | 5 | 2 | -1 | -10 | * | -1 | 3 | 5 | 1 | 78 |
| West South Central | 7 | 2 | 4 | 2 | 1 | * | 2 | 39 | * | * | * | -13 |
| Mountain | 15 | 6 | 8 | 4 | 1 | 14 | 5 | 12 | * | 2 | * | -19 |
| Pacific Contiguous | 4 | 1 | -1 | -13 | 5 | 15 | 3 | 2 | -3 | -7 | * | -3 |
| Pacific Noncontiguous | * | -1 | * | 3 | * | 7 | * | -13 | – | – | * | -2 |
| **U.S. Total** | **45** | **1** | **50** | **3** | **21** | **8** | **9** | **3** | **-46** | **-7** | **11** | **14** |

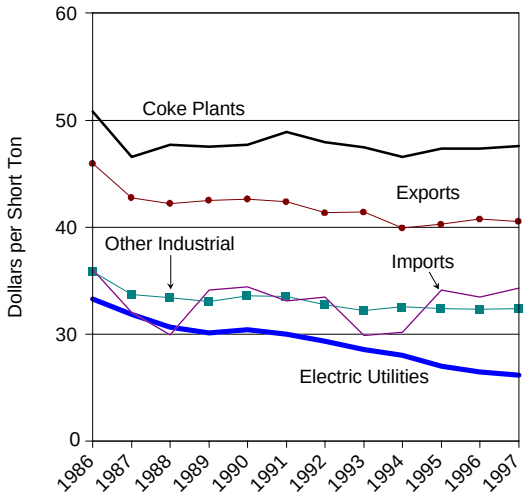
* Less than 0.5 billion kilowatthours or less than 0.5 percent.
Note: Other category includes petroleum products, geothermal, wood, wind, waste, and solar.
Source: Energy Information Administration, *Electric Power Annual, Volume I, July 1998,* DOE/EIA-0348(97)/1 (Washington, DC, July 1998).

**Figure ES5. Share of Electric Power Industry Net Generation by Energy Source, 1996 vs. 1997**




Source: Energy Information Administration, *Electric Power Annual 1997, Volume I, July 1998*, DOE/EIA-0348(97)/1 (Washington, DC, July 1998); and Form EIA-867, "Annual Nonutility Power Producers Report."

**Figure ES6. Coal Prices, 1986-1997**
(Nominal Dollars)




Sources: Energy Information Administration (EIA), Form EIA-5, "Coke Plant Report - Quarterly;" Form EIA-3, "Quarterly Coal Consumption Report - Manufacturing Plants;" Federal Energy Regulatory Commission (FERC), FERC Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants;" and, U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545" and "Monthly Report IM 145."

a capacity utilization rate of 81 percent. Almost all the extra coal burned in 1997 came from Appalachia, the primary source of coal supplies to New England.

In the East North Central Census Division, total generation dropped by 3 percent or 18 billion kilowatthours, while nuclear-powered generation declined by 24 percent or 28 billion kilowatthours—62 percent of the total national decline in nuclear generation. The decline was centered in Illinois, Wisconsin and Michigan, where five units were out of operation for all of 1997 and another five were shut down for part of the year. Much of the 10-billion-kilowatthour shortfall was replaced by coal-fired generation (8 billion kilowatthours) and, to a lesser extent, by natural gas-fired generation (2 billion kilowatthours). Coal-fired generation rose by 2 percent, using 3 percent (5 million short tons) more coal than in 1996, most of which was Western coal.

In the Middle Atlantic Census Division, electricity generation rose by 3 percent, despite a substantial decline in generation from nuclear and oil-fired plants. Most of the growth resulted from a resurgence in natural gas generation (up by 47 percent) after a severely depressed 1996 showing. Coal-fired generation also grew strongly, increasing by 5 percent. Coal consumption for electricity generation also rose by 5 percent. Some of the electricity generated was sent to other regions, including New England and the East North Central Census Divisions.

Coal-fired generation was the dominant component of the South Atlantic Census Division's 3-percent growth in generation. Utility coal consumption rose by 6 million short tons in 1997, the largest tonnage increase of any region. Four new coal-fired plants that came on line during 1996 with a combined capacity of 1.4 gigawatts became fully operational in 1997 and contributed significantly to the increase.

In contrast to the national trend, nuclear-powered generation rose in the East South Central Region. Nevertheless, coal-fired generation was the largest contributor to the region's 3-percent growth in electricity production. Coal consumption for electricity generation rose by 3 million short tons in the region. As in the Middle Atlantic Census Division, some of the increased generation was sent to outside regions.

Abundant hydropower generation in the Pacific Northwest, together with higher gas-fired generation, led coal-fired generation to decline in the Pacific Contiguous Region. The decline in coal consumption (1 million short tons) was slight, however, as coal is only a minor component of Pacific generation.

The increase in hydroelectric generation also constrained the growth in coal-fired generation in the neighboring

Mountain Census Division, which traditionally dispatches a large amount of "coal-by-wire" to the West Coast States. Nevertheless, coal-fired generation in the Mountain Census Division increased by 4 percent, an increase of 4 million short tons of coal over the 1996 level, in response to a 6-percent growth in electricity demand within the region.

In the West South Central Census Division, electricity generation rose 2 percent above the 1996 level. This increase was met by a 2-percent rise in coal-fired generation and 39-percent higher hydroelectric generation in the region. Coal consumption for electricity generation rose by 3 percent (4 million short tons) over 1996.

## Non-electricity Sectors

Coal consumption in the non-electricity sectors (coke plants, other industrial plants, and residential/commercial users) totaled 107 million short tons in 1997, down by 1 percent from the 1996 level of 109 million short tons. Metallurgical coal consumption (carbonization) at the 26 operating coke plants in the United Stated declined by 5 percent to 30 million short tons (Table ES1), and coke production declined by 4 percent to 22 million short tons. The average price of metallurgical coal delivered to coke plants remained steady at $47.61 per short ton in 1997, compared with $47.33 per short ton in 1996.

Coal consumption by other industrial plants and residential/commercial users remained virtually unchanged at 77 million short tons in 1997. The average delivered price of coal to industrial consumers was $32.41 per short ton, up slightly from $32.32 per short ton in 1996.

## Exports and Imports

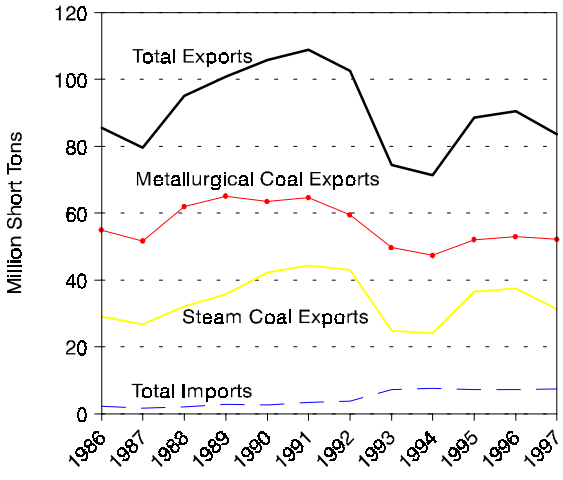
### *Exports*

The upward trend in U.S. coal exports over the past 2 years reversed in 1997, as exports declined by 8 percent to 84 million short tons. The decline was mostly in steam coal, which fell by 16 percent to a total of 31 million short tons. There were declines in exports of U.S. steam coal in every world region except North America (Canada and Mexico). Weak international coal prices, a strong dollar, and increased competition from other exporting countries were the major factors contributing to the decline. The average price for U.S. steam coal exports fell by 5 percent in 1997 to $32.42 per short ton. The average for metallurgical coal exports remained almost unchanged at $45.45 per short ton (Figure ES7).

Exports to Europe, the primary market for U.S. steam coal exports, fell by more than one-third to 13 million short tons in 1997, with reductions to every major European country except the United Kingdom (U.K.). In addition to strong competition from Colombia, Venezuela, and South Africa, interfuel competition from natural gas in the electricity generation market in Europe continued to affect U.S. steam coal exports. Among the major importing countries in Europe, the Netherlands showed the largest decline—a drop of 2 million short tons, a 76-percent drop from its purchases of U.S. steam coal in 1996. Italy's imports fell by 1 million short tons (from 4 million short tons in 1996). On the other hand, exports to the U.K. rose by 15 percent to 4 million short tons. U.K. imports have risen sharply since 1995, as subsidies to domestic coal producers were eliminated, allowing imports to compete.

Steam coal exports to Asia declined by 29 percent to 7 million short tons in 1997. Japan, Taiwan, and Korea—the major Asian importing countries—all took less U.S. steam coal. In addition to weak coal prices and strong competition from Australia and Indonesia, U.S. exports to Asia were also hurt by the delivery problems experienced by Union Pacific Railroad (UP) from mines in Utah and Colorado to the ports of Los Angeles and Long Beach during the latter half of the year. Also, some unit trains carrying export coal from Colorado to Mexico were temporarily suspended as part of UP's efforts

**Figure ES7. U.S. Coal Exports and Imports, 1986-1997**




Source: U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545" and "Monthly Report IM 145."

(Service Recovery Plan) to maintain essential services to its domestic customers, hurting export shipments. These transportation bottlenecks were reported to have reduced U.S. coal exports out of the Western Region by at least 1 million short tons.

In Africa, Morocco's imports of U.S. steam coal fell by over 1 million short tons in 1997 to only about one-tenth of its 1996 import level, practically drying up the African market.

On the positive side, U.S. steam coal exports to Canada rose by 4.1 million short tons in 1997. Shipments to Canada were bolstered by increased purchases by Ontario Hydro, which shut down several nuclear power plants for upgrades and substituted increased coal-fired generation for the lost nuclear generation (a situation that is expected to continue for the next 3 years). Mexico took almost a half million short tons more U.S. steam coal in 1997 than it did in 1996. The increased shipments to Mexico reflected a new multi-year contract for Cypress Amax Coal Company to supply coal to the Commission Federal de Electricidad's C.T. Carbon II generating station. Shipments to Mexico would have been even larger in 1997, had there not been rail delivery problems between Colorado and Mexico.

U.S. metallurgical coal exports also fell in 1997, but only slightly, by 2 percent to 52 million short tons. The high quality of U.S. metallurgical coal, coupled with strong growth in pig iron production worldwide in 1997, especially in Europe and Asia, maintained the export volume and price of U.S. metallurgical coal in 1997. Exports to Canada declined by 1 million short tons, but the decline was largely offset by an almost equal increase in exports to Brazil. Shipments to Asia fell by about 1 million short tons to 8 million short tons, but exports to Europe, by far the largest market for U.S. metallurgical coal, rose by over one half million short tons to 29 million short tons. Brazil remained the largest importer of U.S. metallurgical coal with over 7 million short tons in 1997, followed by Canada, Japan, Italy, and the Netherlands, each of which imported 4 to 5 million short tons.

### *Imports*

U.S. coal imports totaled 7 million short tons in 1997, a 5-percent increase over 1996. Imports represented less than 1 percent of total US consumption and were equivalent to less than 10 percent of total US exports. The average price of all imported coal to the United States edged up by 3 percent from $33.45 per short ton in 1996 to $34.32 per short ton in 1997 (Figure ES6).

After nearly doubling from 4 million short tons to 7 million short tons between 1992 and 1993, the level of U.S. coal imports has remained steady. The jump in 1993 came about as East Coast and Gulf Coast utilities turned to imports to offset losses of supply that resulted from floods in the Midwest and strikes by the United Mine Workers of America. In subsequent years, many of these utilities have maintained their level of imports as a means of assisting in meeting CAAA Phase I requirements for sulfur emission reductions, which became effective on January 1, 1995. U.S. imports of steam coal are invariably low-sulfur coal.

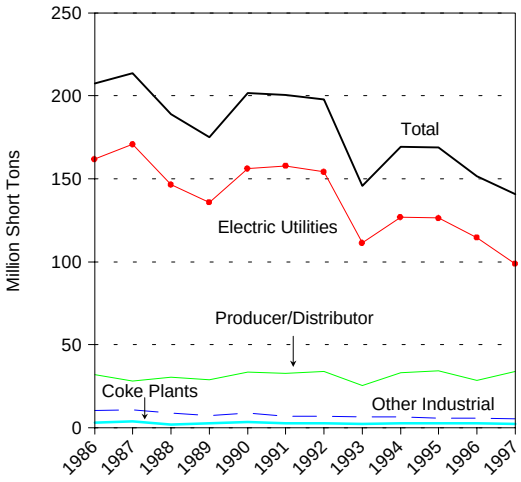
Colombia remained the largest supplier of U.S. imports, with 3 million short tons, followed by Venezuela, Indonesia, and Canada, each increasing by 1 million short tons. U.S. imports were primarily steam coal for electricity generation, but coal from Canada was largely metallurgical coal used by coke plants in Indiana, Michigan, and Illinois. The largest importers of steam coal were New England Power Company, Jacksonville Electric Authority, Tampa Electric Company, and Central Hudson Gas and Electric Corporation. Together, they received more than 85 percent of all U.S. steam coal imports.

## Coal Stocks

At the end of 1997, coal stocks in the United States totaled 141 million short tons, a decrease of 11 million short tons from their level a year earlier. Consumers, primarily electric utilities, held a total of 107 million short tons in coal stocks, down by 16 million short tons, and coal producers and distributors held 34 million short tons, up by 4 million short tons from the 1996 year-end level (Figure ES8).

Year-end utility coal stocks fell to 99 million short tons, a drawdown of 16 million short tons from the 1996 level. Utility coal stocks declined in every region except the East North Central Census Division and nearly every State west of the Mississippi River. The drawdown was largely attributable to the severe delivery problems experienced by Union Pacific Railroad during the second half of the year. The area hardest hit was the West South Central Census Division, where Texas drew down 4 million short tons of coal from stockpiles, or 38 percent, and Arkansas drew down 2 million short tons, or 65 percent. In the East, utility coal stocks also generally declined, except in the East South Central Census Division, where coal stocks rose by 10 percent. Year-end coal stocks at other industrial plants were down 2 percent from 1996 levels, at 6 million short tons.

**Figure ES8. Year-End Coal Stocks, 1986-1997**




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

Coke plant coal stocks showed a sharper decline, down 9 percent to 2 million short tons.

Producer and distributor stocks increased in every region, but there were large differences among States. In the West, coal stocks rose in Arizona, Colorado, and Utah, almost 1 million short tons each, primarily as a result of delayed shipments from mines to consumers. Stocks declined almost 1 million short tons in New Mexico. In the East, stocks rose by 1 million short tons in Kentucky and in Virginia, but anthracite stocks declined by 1 million short tons in Pennsylvania.

# Supply

## Production

U.S. coal production during 1997 increased 2.4 percent to 1,089.9 million short tons (Table 1). The largest ranking coal- producing State was Wyoming with 281.9 million short tons; the lowest, Arkansas with 18,000 short tons. The three highest ranking coal producing states were Wyoming, West Virginia and Kentucky, which together accounted for 56 percent of the coal produced in the United States. Each of these states inceased by 3.4 million short tons (Wyoming and Kentucky) and 3.3 million short tons (West Virginia), respectively. Only 14 of the 25 coal producing States showed an increase in 1997.

Coal production increased in the Appalachian and Western Regions increased by 3.5 and 2.8 percent, respectively. Increases in Appalachia's production occured in Maryland, Ohio, Pennsylvania, Virginia, and West Virginia, resulting in the largest increase of any region, 15.9 million short tons (3.5 percent). The Western Region increased 12.2 million short tons, an increase of 2.8 percent. Over the last decade, the Appalachian Region has only increased at an average annual rate of 0.4 percent, while the Western Region increased 4.3 percent. During the same time period, the Interior Region declined at an average annual rate of 1.3 percent.

U.S. coal producers operated 1,828 mines during 1997, including 874 underground mines and 954 surface mines (Table 3). Underground mines produced 421 million short tons and represented 39 percent of total coal production while surface mines produced 669.3 million short tons and accounted for 61 percent of production. Underground mines east of the Mississippiaccounted for 88.7 percent of all underground coal production in 1997. Surface mines west of the Mississippi represented 69 percent of total surface coal production in 1997. Of the top 20 coal mines in the United States, 19 are surface mines, all located west of the Mississippi; they accounted for 29.4 percent of total U.S. coal production. Nine of the top ten mines in the United States are in Wyoming and represent 20 percent of total U.S. coal production.

## Productive Capacity

The total estimated productive capacity of U.S. coal mines in 1997 was 1,325 million short tons, virtually no change since last year (Table 16). Total coal mine capacity utilization (defined as the ratio of actual production to productive capacity) was 82 percent, due to an increase in the Appalachian and Interior Regions by 5 and 6 percent, respectively (Table 17). The largest estimate of productive capacity accounted for mines that produce more than 1 million short tons.

## Recoverable Reserves

Estimated recoverable U.S. coal reserves at producing mines in 1997 totaled 19 billion short tons, a slight decrease since 1996 (Table 25). Recoverable reserves at producing mines in the Western Region accounted for 62.3 percent of total reserves, with reserves at producing mines in the Appalachian and Interior Regions representing 24.1 percent and 13.5 percent, respectively.

The average recovery percentage for all U.S. producing mines in 1997 was estimates at 80.8 percent (Table 26). The estimated recovery percent for all underground mines in 1997 was 57.1 percent, and 90.1 percent at surface mines.

### *Producers and Distributors Stocks*

Coal stocks held by U.S. coal producers and distributors at the end of 1997 totaled 34 million short tons, an increase of 18.6 percent compared with stocks at year-end 1996.

### *Coal Imports*

U.S. coal imports during 1997 totaled 7.5 million short tons, 5 percent more than the 7.1 million short tons imported during 1996 (Table 35). Since 1988, U.S. coal imports have increased at an average annual rate of 15 percent.

Colombia, Venezuela, Indonesia, and Canada were the major sources of imported coal during 1997. They contributed 7.3 million short tons and accounted for 97 percent of total coal imports.

## Table 1. Coal Production by State, 1988, 1993-1997

(Thousand Short Tons)

| Coal-Producing State and Region | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| Alabama | 24,468 | 24,637 | 24,640 | 23,266 | 24,768 | 26,518 | –0.7 | –0.3 | –0.9 |
| Alaska | 1,450 | 1,481 | 1,698 | 1,567 | 1,601 | 1,745 | –2.1 | –2.4 | –2.0 |
| Arizona | 11,723 | 10,442 | 11,947 | 13,056 | 12,173 | 12,398 | 12.3 | –.9 | –.6 |
| Arkansas | 18 | 21 | 29 | 51 | 44 | 276 | –12.3 | –19.8 | –26.0 |
| California | – | – | – | – | – | 54 | – | – | – |
| Colorado | 27,449 | 24,886 | 25,710 | 25,304 | 21,886 | 15,913 | 10.3 | 5.8 | 6.2 |
| Illinois | 41,159 | 46,656 | 48,180 | 52,797 | 41,098 | 58,594 | –11.8 | * | –3.8 |
| Indiana | 35,497 | 29,670 | 26,007 | 30,927 | 29,295 | 31,271 | 19.6 | 4.9 | 1.4 |
| Iowa | – | – | – | 46 | 175 | 341 | – | – | – |
| Kansas | 360 | 232 | 285 | 284 | 341 | 737 | 54.8 | 1.3 | –7.7 |
| Kentucky Total | 155,853 | 152,425 | 153,739 | 161,642 | 156,299 | 157,852 | 2.2 | –.1 | –.1 |
| Eastern | 120,918 | 116,951 | 118,541 | 124,447 | 120,191 | 117,524 | 3.4 | .1 | .3 |
| Western | 34,936 | 35,474 | 35,198 | 37,195 | 36,108 | 40,328 | –1.5 | –.8 | –1.6 |
| Louisiana | 3,545 | 3,221 | 3,719 | 3,463 | 3,134 | 2,889 | 10.1 | 3.1 | 2.3 |
| Maryland | 4,160 | 4,093 | 3,667 | 3,632 | 3,355 | 3,242 | 1.6 | 5.5 | 2.8 |
| Missouri | 401 | 710 | 548 | 838 | 653 | 4,169 | –43.5 | –11.5 | –22.9 |
| Montana | 41,005 | 37,891 | 39,451 | 41,640 | 35,917 | 38,881 | 8.2 | 3.4 | .6 |
| New Mexico | 27,025 | 24,067 | 26,813 | 28,041 | 28,268 | 21,803 | 12.3 | –1.1 | 2.4 |
| North Dakota | 29,580 | 29,861 | 30,112 | 32,286 | 31,973 | 29,731 | –.9 | –1.9 | * |
| Ohio | 29,154 | 28,572 | 26,118 | 29,897 | 28,816 | 34,043 | 2.0 | .3 | –1.7 |
| Oklahoma | 1,621 | 1,701 | 1,876 | 1,911 | 1,758 | 2,136 | –4.7 | –2.0 | –3.0 |
| Pennsylvania Total | 76,198 | 67,942 | 61,576 | 62,237 | 59,700 | 70,645 | 12.1 | 6.3 | .8 |
| Anthracite | 4,678 | 4,751 | 4,682 | 4,621 | 4,306 | 3,555 | –1.5 | 2.1 | 3.1 |
| Bituminous | 71,520 | 63,190 | 56,893 | 57,616 | 55,394 | 67,091 | 13.2 | 6.6 | .7 |
| Tennessee | 3,300 | 3,651 | 3,221 | 2,987 | 3,047 | 6,510 | –9.6 | 2.0 | –7.3 |
| Texas | 53,328 | 55,164 | 52,684 | 52,346 | 54,567 | 52,281 | –3.3 | –.6 | .2 |
| Utah | 26,683 | 27,507 | 25,167 | 24,399 | 21,847 | 18,163 | –3.0 | 5.1 | 4.4 |
| Virginia | 35,837 | 35,590 | 34,099 | 37,129 | 39,317 | 45,886 | .7 | –2.3 | –2.7 |
| Washington | 4,495 | 4,565 | 4,868 | 4,893 | 4,739 | 5,170 | –1.5 | –1.3 | –1.5 |
| West Virginia Total | 173,743 | 170,433 | 162,997 | 161,776 | 130,525 | 145,005 | 1.9 | 7.4 | 2.0 |
| Northern | 42,802 | 45,910 | 46,114 | 49,316 | 33,802 | 53,252 | –6.8 | 6.1 | –2.4 |
| Southern | 130,941 | 124,523 | 116,883 | 112,460 | 96,723 | 91,753 | 5.1 | 7.9 | 4.0 |
| Wyoming | 281,881 | 278,440 | 263,822 | 237,092 | 210,129 | 164,014 | 1.2 | 7.6 | 6.2 |
| **Appalachian Total**[1] | **467,778** | **451,868** | **434,861** | **445,370** | **409,718** | **449,373** | **3.5** | **3.4** | **.4** |
| **Interior Total**[1] | **170,863** | **172,848** | **168,526** | **179,858** | **167,174** | **193,022** | **–1.1** | **.5** | **–1.3** |
| **Western Total**[1] | **451,291** | **439,140** | **429,587** | **408,276** | **368,532** | **307,871** | **2.8** | **5.2** | **4.3** |
| **East of Miss. River** | **579,369** | **563,668** | **544,246** | **566,289** | **516,219** | **579,565** | **2.8** | **2.9** | ***** |
| **West of Miss. River** | **510,563** | **500,188** | **488,728** | **467,216** | **429,205** | **370,700** | **2.1** | **4.4** | **3.6** |
| **U.S. Total** | **1,089,932** | **1,063,856** | **1,032,974** | **1,033,504** | **945,424** | **950,265** | **2.4** | **3.6** | **1.5** |

[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, 1988, 1993-1997

| Coal-Producing State and Region | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| Alabama | 51 | 53 | 73 | 85 | 85 | 104 | –3.8 | –12.0 | –7.6 |
| Alaska | 1 | 1 | 1 | 1 | 1 | 1 | – | – | – |
| Arizona | 2 | 2 | 2 | 2 | 2 | 2 | – | – | – |
| Arkansas | 3 | 5 | 3 | 6 | 6 | 7 | –40.0 | –15.9 | –9.0 |
| California | – | – | – | – | – | 1 | – | – | – |
| Colorado | 14 | 15 | 17 | 18 | 20 | 23 | –6.7 | –8.5 | –5.4 |
| Illinois | 28 | 31 | 31 | 34 | 39 | 48 | –9.7 | –7.9 | –5.8 |
| Indiana | 39 | 37 | 42 | 55 | 56 | 73 | 5.4 | –8.6 | –6.7 |
| Iowa | – | – | – | 1 | 2 | 4 | – | – | – |
| Kansas | 3 | 1 | 1 | 1 | 2 | 6 | 200.0 | 10.7 | –7.4 |
| Kentucky Total | 529 | 544 | 598 | 673 | 696 | 1,230 | –2.8 | –6.6 | –8.9 |
| Eastern | 482 | 484 | 540 | 607 | 622 | 1,140 | –.4 | –6.2 | –9.1 |
| Western | 47 | 60 | 58 | 66 | 74 | 90 | –21.7 | –10.7 | –7.0 |
| Louisiana | 2 | 2 | 2 | 2 | 2 | 1 | – | – | 8.0 |
| Maryland | 18 | 18 | 20 | 20 | 21 | 29 | – | –3.8 | –5.2 |
| Missouri | 4 | 5 | 6 | 6 | 7 | 10 | –20.0 | –13.0 | –9.7 |
| Montana | 8 | 8 | 8 | 8 | 8 | 9 | – | – | –1.3 |
| New Mexico | 6 | 6 | 7 | 7 | 7 | 10 | – | –3.8 | –5.5 |
| North Dakota | 6 | 5 | 6 | 6 | 8 | 12 | 20.0 | –6.9 | –7.4 |
| Ohio | 81 | 99 | 113 | 134 | 135 | 215 | –18.2 | –12.0 | –10.3 |
| Oklahoma | 11 | 12 | 13 | 14 | 17 | 24 | –8.3 | –10.3 | –8.3 |
| Pennsylvania Total | 403 | 402 | 459 | 505 | 524 | 716 | .2 | –6.3 | –6.2 |
| Anthracite | 131 | 127 | 134 | 143 | 148 | 206 | 3.1 | –3.0 | –4.9 |
| Bituminous | 272 | 275 | 325 | 362 | 376 | 510 | –1.1 | –7.8 | –6.7 |
| Tennessee | 27 | 26 | 25 | 24 | 37 | 105 | 3.8 | –7.6 | –14.0 |
| Texas | 12 | 13 | 14 | 13 | 14 | 14 | –7.7 | –3.8 | –1.7 |
| Utah | 12 | 11 | 13 | 14 | 15 | 20 | 9.1 | –5.4 | –5.5 |
| Virginia | 191 | 191 | 194 | 231 | 237 | 413 | – | –5.3 | –8.2 |
| Washington | 3 | 3 | 3 | 3 | 3 | 4 | – | – | –3.1 |
| West Virginia Total | 349 | 386 | 424 | 462 | 502 | 747 | –9.6 | –8.7 | –8.1 |
| Northern | 80 | 93 | 98 | 116 | 137 | 236 | –14.0 | –12.6 | –11.3 |
| Southern | 269 | 293 | 326 | 346 | 365 | 511 | –8.2 | –7.3 | –6.9 |
| Wyoming | 25 | 27 | 29 | 29 | 29 | 32 | –7.4 | –3.6 | –2.7 |
| **Appalachian Total**[1] | **1,602** | **1,659** | **1,848** | **2,068** | **2,163** | **3,469** | **–3.4** | **–7.2** | **–8.2** |
| **Interior Total**[1] | **149** | **166** | **170** | **198** | **219** | **277** | **–10.2** | **–9.2** | **–6.6** |
| **Western Total**[1] | **77** | **78** | **86** | **88** | **93** | **114** | **–1.3** | **–4.6** | **–4.3** |
| **East of Miss. River** | **1,716** | **1,787** | **1,979** | **2,223** | **2,332** | **3,680** | **–4.0** | **–7.4** | **–8.1** |
| **West of Miss. River** | **112** | **116** | **125** | **131** | **143** | **180** | **–3.4** | **–5.9** | **–5.1** |
| **U.S. Total** | **1,828** | **1,903** | **2,104** | **2,354** | **2,475** | **3,860** | **–3.9** | **–7.3** | **–8.0** |

[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, 1997

(Thousand Short Tons)

| Coal-Producing State and Region | Underground | | Surface | | Total | |
|---|---|---|---|---|---|---|
| | Number of Mines | Production | Number of Mines | Production | Number of Mines | Production |
| Alabama | 11 | 18,505 | 40 | 5,963 | 51 | 24,468 |
| Alaska | – | – | 1 | 1,450 | 1 | 1,450 |
| Arizona | – | – | 2 | 11,723 | 2 | 11,723 |
| Arkansas | – | – | 3 | 18 | 3 | 18 |
| Colorado | 10 | 17,820 | 4 | 9,628 | 14 | 27,449 |
| Illinois | 19 | 34,824 | 9 | 6,334 | 28 | 41,159 |
| Indiana | 4 | 3,530 | 35 | 31,967 | 39 | 35,497 |
| Kansas | – | – | 3 | 360 | 3 | 360 |
| Kentucky Total | 308 | 96,302 | 221 | 59,551 | 529 | 155,853 |
| Eastern | 289 | 69,928 | 193 | 50,990 | 482 | 120,918 |
| Western | 19 | 26,374 | 28 | 8,561 | 47 | 34,936 |
| Louisiana | – | – | 2 | 3,545 | 2 | 3,545 |
| Maryland | 3 | 3,301 | 15 | 859 | 18 | 4,160 |
| Missouri | – | – | 4 | 401 | 4 | 401 |
| Montana | 1 | 8 | 7 | 40,997 | 8 | 41,005 |
| New Mexico | – | – | 6 | 27,025 | 6 | 27,025 |
| North Dakota | – | – | 6 | 29,580 | 6 | 29,580 |
| Ohio | 9 | 16,949 | 72 | 12,205 | 81 | 29,154 |
| Oklahoma | 1 | 212 | 10 | 1,409 | 11 | 1,621 |
| Pennsylvania Total | 94 | 54,829 | 309 | 21,369 | 403 | 76,198 |
| Anthracite | 40 | 419 | 91 | 4,259 | 131 | 4,678 |
| Bituminous | 54 | 54,410 | 218 | 17,110 | 272 | 71,520 |
| Tennessee | 14 | 1,396 | 13 | 1,904 | 27 | 3,300 |
| Texas | – | – | 12 | 53,328 | 12 | 53,328 |
| Utah | 12 | 26,683 | – | – | 12 | 26,683 |
| Virginia | 148 | 26,929 | 43 | 8,907 | 191 | 35,837 |
| Washington | – | – | 3 | 4,495 | 3 | 4,495 |
| West Virginia Total | 239 | 116,523 | 110 | 57,220 | 349 | 173,743 |
| Northern | 46 | 37,056 | 34 | 5,746 | 80 | 42,802 |
| Southern | 193 | 79,467 | 76 | 51,474 | 269 | 130,941 |
| Wyoming | 1 | 2,846 | 24 | 279,035 | 25 | 281,881 |
| **Appalachian Total**[1] | **807** | **308,360** | **795** | **159,418** | **1,602** | **467,778** |
| **Interior Total**[1] | **43** | **64,941** | **106** | **105,923** | **149** | **170,863** |
| **Western Total**[1] | **24** | **47,357** | **53** | **403,934** | **77** | **451,291** |
| **East of Miss. River** | **849** | **373,089** | **867** | **206,281** | **1,716** | **579,369** |
| **West of Miss. River** | **25** | **47,569** | **87** | **462,994** | **112** | **510,563** |
| **U.S. Total** | **874** | **420,657** | **954** | **669,274** | **1,828** | **1,089,932** |

[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, 1997
(Thousand Short Tons)

| Coal-Producing State and County | Underground | | Surface | | Total | |
|---|---|---|---|---|---|---|
| | Number of Mines | Production | Number of Mines | Production | Number of Mines | Production |
| **Alabama** | **11** | **18,505** | **40** | **5,963** | **51** | **24,468** |
| Bibb | – | – | 1 | 21 | 1 | 21 |
| Blount | – | – | 1 | 6 | 1 | 6 |
| Cullman | – | – | 2 | 74 | 2 | 74 |
| Fayette | 1 | 1,992 | – | – | 1 | 1,992 |
| Jackson | – | – | 1 | 45 | 1 | 45 |
| Jefferson | 5 | 9,069 | 3 | 1,301 | 8 | 10,370 |
| Marion | – | – | 2 | 130 | 2 | 130 |
| Shelby | 1 | 853 | – | – | 1 | 853 |
| Tuscaloosa | 3 | 6,075 | 3 | 582 | 6 | 6,656 |
| Walker | 1 | 515 | 25 | 3,562 | 26 | 4,078 |
| Winston | – | – | 2 | 243 | 2 | 243 |
| **Alaska** | – | – | **1** | **1,450** | **1** | **1,450** |
| Yukon River | – | – | 1 | 1,450 | 1 | 1,450 |
| **Arizona** | – | – | **2** | **11,723** | **2** | **11,723** |
| Navajo | – | – | 2 | 11,723 | 2 | 11,723 |
| **Arkansas** | – | – | **3** | **18** | **3** | **18** |
| Johnson | – | – | 2 | 14 | 2 | 14 |
| Sebastian | – | – | 1 | 5 | 1 | 5 |
| **Colorado** | **10** | **17,820** | **4** | **9,628** | **14** | **27,449** |
| Delta | 2 | 804 | – | – | 2 | 804 |
| Fremont | 1 | 227 | – | – | 1 | 227 |
| Garfield | 1 | 49 | – | – | 1 | 49 |
| Gunnison | 2 | 7,322 | – | – | 2 | 7,322 |
| La Plata | 1 | 222 | – | – | 1 | 222 |
| Mesa | 1 | 430 | – | – | 1 | 430 |
| Moffat | – | – | 2 | 7,557 | 2 | 7,557 |
| Montrose | – | – | 1 | 386 | 1 | 386 |
| Rio Blanco | 1 | 1,514 | – | – | 1 | 1,514 |
| Routt | 1 | 7,252 | 1 | 1,685 | 2 | 8,937 |
| **Illinois** | **19** | **34,824** | **9** | **6,334** | **28** | **41,159** |
| Gallatin | 1 | 1,563 | – | – | 1 | 1,563 |
| Jackson | – | – | 1 | 139 | 1 | 139 |
| Jefferson | 2 | 4,337 | – | – | 2 | 4,337 |
| Logan | 1 | 2,059 | – | – | 1 | 2,059 |
| Macoupin | 3 | 6,478 | – | – | 3 | 6,478 |
| McDonough | – | – | 1 | 596 | 1 | 596 |
| Perry | 1 | 2,017 | 2 | 4,087 | 3 | 6,104 |
| Randolph | 3 | 3,024 | – | – | 3 | 3,024 |
| Saline | 4 | 7,319 | 1 | 986 | 5 | 8,305 |
| Schuyler | – | – | 2 | 480 | 2 | 480 |
| Vermilion | 1 | 635 | – | – | 1 | 635 |
| Wabash | 1 | 1,406 | – | – | 1 | 1,406 |
| Washington | 1 | 3,977 | – | – | 1 | 3,977 |
| White | 1 | 2,009 | – | – | 1 | 2,009 |
| Williamson | – | – | 2 | 46 | 2 | 46 |
| **Indiana** | **4** | **3,530** | **35** | **31,967** | **39** | **35,497** |
| Clay | – | – | 4 | 1,604 | 4 | 1,604 |
| Daviess | – | – | 5 | 3,936 | 5 | 3,936 |
| Dubois | – | – | 1 | 373 | 1 | 373 |
| Gibson | 1 | 182 | 3 | 2,694 | 4 | 2,876 |
| Greene | – | – | 2 | 2,145 | 2 | 2,145 |
| Knox | 3 | 3,348 | 3 | 1,857 | 6 | 5,205 |
| Owen | – | – | 2 | 969 | 2 | 969 |
| Pike | – | – | 6 | 4,465 | 6 | 4,465 |
| Sullivan | – | – | 2 | 4,830 | 2 | 4,830 |
| Vigo | – | – | 2 | 3,652 | 2 | 3,652 |
| Warrick | – | – | 5 | 5,442 | 5 | 5,442 |
| **Kansas** | – | – | **3** | **360** | **3** | **360** |
| Crawford | – | – | 1 | 91 | 1 | 91 |
| Linn | – | – | 2 | 268 | 2 | 268 |
| **Kentucky** | **308** | **96,302** | **221** | **59,551** | **529** | **155,853** |
| Bell | 15 | 3,325 | 14 | 1,638 | 29 | 4,963 |
| Breathitt | – | – | 6 | 4,312 | 6 | 4,312 |
| Butler | – | – | 2 | 117 | 2 | 117 |
| Clay | – | – | 8 | 330 | 8 | 330 |
| Daviess | – | – | 2 | 731 | 2 | 731 |
| Floyd | 34 | 2,898 | 10 | 3,461 | 44 | 6,358 |
| Harlan | 29 | 9,026 | 11 | 1,578 | 40 | 10,604 |
| Henderson | 1 | 800 | 2 | 1,232 | 3 | 2,032 |
| Hopkins | 7 | 4,113 | 7 | 3,401 | 14 | 7,515 |

See footnotes at end of table.

## Table 4. Coal Production and Number of Mines by State, County, and Mine Type, 1997 (Continued)

(Thousand Short Tons)

| Coal-Producing State and County | Underground | | Surface | | Total | |
|---|---|---|---|---|---|---|
| | Number of Mines | Production | Number of Mines | Production | Number of Mines | Production |
| **Kentucky (Continued)** | | | | | | |
| Jackson | – | – | 1 | * | 1 | * |
| Johnson | 3 | 1,328 | 4 | 308 | 7 | 1,635 |
| Knott | 25 | 5,119 | 17 | 7,005 | 42 | 12,124 |
| Knox | 10 | 444 | 7 | 116 | 17 | 560 |
| Lawrence | 1 | 60 | 2 | 174 | 3 | 235 |
| Leslie | 8 | 7,354 | 10 | 2,580 | 18 | 9,935 |
| Letcher | 22 | 6,061 | 23 | 2,971 | 45 | 9,032 |
| Magoffin | – | – | 2 | 1,331 | 2 | 1,331 |
| Martin | 22 | 7,093 | 10 | 5,437 | 32 | 12,530 |
| McLean | 1 | 1,104 | 3 | 239 | 4 | 1,344 |
| Morgan | – | – | 1 | 1 | 1 | 1 |
| Muhlenberg | 2 | 2,925 | 3 | 323 | 5 | 3,248 |
| Ohio | – | – | 7 | 1,476 | 7 | 1,476 |
| Owsley | – | – | 4 | 113 | 4 | 113 |
| Perry | 17 | 4,841 | 16 | 6,639 | 33 | 11,480 |
| Pike | 100 | 22,129 | 42 | 12,823 | 142 | 34,953 |
| Union | 3 | 7,864 | – | – | 3 | 7,864 |
| Webster | 5 | 9,568 | 2 | 1,041 | 7 | 10,610 |
| Whitley | 3 | 248 | 5 | 174 | 8 | 422 |
| **Louisiana** | – | – | **2** | **3,545** | **2** | **3,545** |
| De Soto | – | – | 1 | 2,534 | 1 | 2,534 |
| Red River | – | – | 1 | 1,011 | 1 | 1,011 |
| **Maryland** | **3** | **3,301** | **15** | **859** | **18** | **4,160** |
| Allegany | – | – | 9 | 561 | 9 | 561 |
| Garrett | 3 | 3,301 | 6 | 298 | 9 | 3,598 |
| **Missouri** | – | – | **4** | **401** | **4** | **401** |
| Barton | – | – | 1 | 73 | 1 | 73 |
| Bates | – | – | 2 | 297 | 2 | 297 |
| Vernon | – | – | 1 | 30 | 1 | 30 |
| **Montana** | **1** | **8** | **7** | **40,997** | **8** | **41,005** |
| Big Horn | – | – | 4 | 27,275 | 4 | 27,275 |
| Musselshell | 1 | 8 | – | – | 1 | 8 |
| Richland | – | – | 1 | 242 | 1 | 242 |
| Rosebud | – | – | 2 | 13,480 | 2 | 13,480 |
| **New Mexico** | – | – | **6** | **27,025** | **6** | **27,025** |
| Colfax | – | – | 1 | 1,244 | 1 | 1,244 |
| McKinley | – | – | 2 | 11,464 | 2 | 11,464 |
| San Juan | – | – | 3 | 14,318 | 3 | 14,318 |
| **North Dakota** | – | – | **6** | **29,580** | **6** | **29,580** |
| Bowman | – | – | 1 | 1 | 1 | 1 |
| McLean | – | – | 1 | 7,164 | 1 | 7,164 |
| Mercer | – | – | 2 | 17,080 | 2 | 17,080 |
| Oliver | – | – | 2 | 5,334 | 2 | 5,334 |
| **Ohio** | **9** | **16,949** | **72** | **12,205** | **81** | **29,154** |
| Belmont | 1 | 5,102 | 6 | 1,635 | 7 | 6,737 |
| Carroll | – | – | 4 | 58 | 4 | 58 |
| Columbiana | 2 | 337 | 5 | 443 | 7 | 779 |
| Coshocton | – | – | 6 | 368 | 6 | 368 |
| Gallia | – | – | 1 | 333 | 1 | 333 |
| Guernsey | – | – | 5 | 481 | 5 | 481 |
| Harrison | 1 | 1,386 | 7 | 704 | 8 | 2,090 |
| Holmes | – | – | 1 | 122 | 1 | 122 |
| Jackson | – | – | 3 | 1,147 | 3 | 1,147 |
| Jefferson | 2 | 477 | 6 | 429 | 8 | 907 |
| Lawrence | – | – | 1 | 6 | 1 | 6 |
| Meigs | 2 | 6,405 | – | – | 2 | 6,405 |
| Monroe | 1 | 3,243 | – | – | 1 | 3,243 |
| Muskingum | – | – | 3 | 701 | 3 | 701 |
| Noble | – | – | 4 | 870 | 4 | 870 |
| Perry | – | – | 5 | 1,234 | 5 | 1,234 |
| Stark | – | – | 4 | 546 | 4 | 546 |
| Tuscarawas | – | – | 8 | 1,317 | 8 | 1,317 |
| Vinton | – | – | 3 | 1,809 | 3 | 1,809 |
| **Oklahoma** | **1** | **212** | **10** | **1,409** | **11** | **1,621** |
| Craig | – | – | 1 | 190 | 1 | 190 |
| Haskell | – | – | 1 | 201 | 1 | 201 |
| Latimer | – | – | 1 | 274 | 1 | 274 |
| Le Flore | 1 | 212 | 5 | 549 | 6 | 761 |
| Nowata | – | – | 1 | 189 | 1 | 189 |
| Okmulgee | – | – | 1 | 6 | 1 | 6 |

See footnotes at end of table.

**Table 4. Coal Production and Number of Mines by State, County, and Mine Type, 1997 (Continued)**
(Thousand Short Tons)

| Coal-Producing State and County | Underground | | Surface | | Total | |
|---|---|---|---|---|---|---|
| | Number of Mines | Production | Number of Mines | Production | Number of Mines | Production |
| **Pennsylvania** | **94** | **54,829** | **309** | **21,369** | **403** | **76,198** |
| Allegheny | 1 | * | 2 | 41 | 3 | 41 |
| Armstrong | 10 | 4,392 | 19 | 1,558 | 29 | 5,949 |
| Beaver | – | – | 1 | 89 | 1 | 89 |
| Blair | – | – | 1 | 36 | 1 | 36 |
| Butler | – | – | 7 | 112 | 7 | 112 |
| Cambria | 2 | 106 | 13 | 1,323 | 15 | 1,429 |
| Centre | – | – | 3 | 388 | 3 | 388 |
| Clarion | – | – | 9 | 683 | 9 | 683 |
| Clearfield | 2 | 163 | 44 | 4,438 | 46 | 4,602 |
| Columbia | 2 | 175 | 5 | 749 | 7 | 923 |
| Dauphin | 1 | * | 1 | 10 | 2 | 10 |
| Elk | – | – | 5 | 643 | 5 | 643 |
| Fayette | – | – | 17 | 388 | 17 | 388 |
| Greene | 11 | 35,324 | 3 | 38 | 14 | 35,362 |
| Indiana | 10 | 3,941 | 20 | 879 | 30 | 4,820 |
| Jefferson | 4 | 614 | 22 | 929 | 26 | 1,543 |
| Lackawanna | – | – | 5 | 83 | 5 | 83 |
| Lawrence | – | – | 1 | 17 | 1 | 17 |
| Luzerne | – | – | 18 | 897 | 18 | 897 |
| Lycoming | – | – | 1 | 407 | 1 | 407 |
| Mercer | – | – | 1 | 4 | 1 | 4 |
| Northumberland | 8 | 36 | 10 | 282 | 18 | 318 |
| Schuylkill | 29 | 209 | 50 | 2,222 | 79 | 2,430 |
| Snyder | – | – | 1 | * | 1 | * |
| Somerset | 11 | 2,097 | 30 | 3,508 | 41 | 5,605 |
| Sullivan | – | – | 1 | 17 | 1 | 17 |
| Venango | – | – | 1 | 68 | 1 | 68 |
| Washington | 3 | 7,773 | 6 | 691 | 9 | 8,464 |
| Westmoreland | – | – | 12 | 872 | 12 | 872 |
| **Tennessee** | **14** | **1,396** | **13** | **1,904** | **27** | **3,300** |
| Anderson | 3 | 173 | 1 | 260 | 4 | 434 |
| Campbell | 6 | 593 | 3 | 283 | 9 | 876 |
| Claiborne | 1 | 231 | 6 | 441 | 7 | 672 |
| Fentress | – | – | 1 | 288 | 1 | 288 |
| Marion | – | – | 1 | 53 | 1 | 53 |
| Morgan | 1 | 56 | – | – | 1 | 56 |
| Scott | 2 | 108 | – | – | 2 | 108 |
| Sequatchie | 1 | 235 | 1 | 579 | 2 | 814 |
| **Texas** | – | – | **12** | **53,328** | **12** | **53,328** |
| Atascosa | – | – | 1 | 3,487 | 1 | 3,487 |
| Freestone | – | – | 1 | 5,127 | 1 | 5,127 |
| Harrison | – | – | 2 | 4,422 | 2 | 4,422 |
| Hopkins | – | – | 1 | 2,219 | 1 | 2,219 |
| Leon | – | – | 1 | 8,799 | 1 | 8,799 |
| Milam | – | – | 1 | 6,370 | 1 | 6,370 |
| Panola | – | – | 1 | 7,248 | 1 | 7,248 |
| Robertson | – | – | 1 | 1,715 | 1 | 1,715 |
| Rusk | – | – | 1 | 5,808 | 1 | 5,808 |
| Titus | – | – | 1 | 7,779 | 1 | 7,779 |
| Webb | – | – | 1 | 353 | 1 | 353 |
| **Utah** | **12** | **26,683** | – | – | **12** | **26,683** |
| Carbon | 7 | 10,104 | – | – | 7 | 10,104 |
| Emery | 4 | 11,640 | – | – | 4 | 11,640 |
| Sevier | 1 | 4,939 | – | – | 1 | 4,939 |
| **Virginia** | **148** | **26,929** | **43** | **8,907** | **191** | **35,837** |
| Buchanan | 67 | 13,219 | 7 | 1,201 | 74 | 14,420 |
| Dickenson | 14 | 1,845 | 9 | 1,212 | 23 | 3,058 |
| Lee | 5 | 1,234 | 4 | 237 | 9 | 1,471 |
| Russell | 7 | 897 | 3 | 236 | 10 | 1,133 |
| Tazewell | 17 | 1,705 | – | – | 17 | 1,705 |
| Wise | 38 | 8,029 | 20 | 6,020 | 58 | 14,049 |
| **Washington** | – | – | **3** | **4,495** | **3** | **4,495** |
| King | – | – | 1 | 67 | 1 | 67 |
| Lewis | – | – | 1 | 3,211 | 1 | 3,211 |
| Thurston | – | – | 1 | 1,217 | 1 | 1,217 |
| **West Virginia** | **239** | **116,523** | **110** | **57,220** | **349** | **173,743** |
| Barbour | 5 | 1,292 | 2 | 79 | 7 | 1,371 |
| Boone | 27 | 18,712 | 15 | 11,890 | 42 | 30,602 |
| Braxton | 1 | 413 | – | – | 1 | 413 |
| Brooke | 1 | 1,539 | – | – | 1 | 1,539 |

See footnotes at end of table.

## Table 4. Coal Production and Number of Mines by State, County, and Mine Type, 1997 (Continued)

(Thousand Short Tons)

| Coal-Producing State and County | Underground | | Surface | | Total | |
|---|---|---|---|---|---|---|
| | Number of Mines | Production | Number of Mines | Production | Number of Mines | Production |
| **West Virginia (Continued)** | | | | | | |
| Clay | – | – | 4 | 6,902 | 4 | 6,902 |
| Fayette | 3 | 862 | 4 | 2,844 | 7 | 3,706 |
| Gilmer | 1 | 15 | – | – | 1 | 15 |
| Grant | 2 | 1,254 | 2 | 663 | 4 | 1,917 |
| Greenbrier | 2 | 501 | 2 | 27 | 4 | 528 |
| Harrison | 5 | 5,144 | 7 | 148 | 12 | 5,292 |
| Kanawha | 8 | 4,246 | 5 | 4,651 | 13 | 8,897 |
| Lincoln | 1 | 47 | – | – | 1 | 47 |
| Logan | 17 | 5,276 | 12 | 15,191 | 29 | 20,467 |
| Marion | 1 | 4,806 | 3 | 91 | 4 | 4,897 |
| Marshall | 2 | 10,131 | – | – | 2 | 10,131 |
| McDowell | 63 | 4,826 | 11 | 1,847 | 74 | 6,673 |
| Mineral | – | – | 2 | 122 | 2 | 122 |
| Mingo | 24 | 17,327 | 13 | 5,097 | 37 | 22,424 |
| Monongalia | 8 | 6,365 | 4 | 1,269 | 12 | 7,635 |
| Nicholas | 8 | 2,104 | 1 | 501 | 9 | 2,605 |
| Preston | 6 | 1,608 | 6 | 135 | 12 | 1,743 |
| Raleigh | 19 | 12,812 | 3 | 1,070 | 22 | 13,882 |
| Randolph | 4 | 626 | – | – | 4 | 626 |
| Tucker | – | – | 1 | 193 | 1 | 193 |
| Upshur | 5 | 1,315 | 5 | 270 | 10 | 1,585 |
| Wayne | 4 | 3,715 | 2 | 679 | 6 | 4,394 |
| Webster | 5 | 2,548 | 2 | 2,776 | 7 | 5,324 |
| Wyoming | 17 | 9,039 | 4 | 775 | 21 | 9,814 |
| **Wyoming** | **1** | **2,846** | **24** | **279,035** | **25** | **281,881** |
| Campbell | – | – | 15 | 246,281 | 15 | 246,281 |
| Carbon | 1 | 2,846 | 2 | 2,552 | 3 | 5,398 |
| Converse | – | – | 2 | 17,701 | 2 | 17,701 |
| Lincoln | – | – | 2 | 4,607 | 2 | 4,607 |
| Sheridan | – | – | 1 | 44 | 1 | 44 |
| Sweetwater | – | – | 2 | 7,849 | 2 | 7,849 |
| **U.S. Total** | **874** | **420,657** | **954** | **669,274** | **1,828** | **1,089,932** |

* 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, 1997

(Thousand Short Tons)

| Coal-Producing State and Region | Continuous[1] | Conventional[2] | Longwall[3] | Other[4] | Total |
|---|---|---|---|---|---|
| Alabama | 999 | – | 15,235 | 2,271 | 18,505 |
| Colorado | 3,333 | – | 14,487 | – | 17,820 |
| Illinois | 22,564 | 23 | 12,238 | – | 34,824 |
| Indiana | 3,530 | – | – | – | 3,530 |
| Kentucky Total | 73,159 | 9,588 | 13,000 | 555 | 96,302 |
| Eastern | 55,623 | 8,484 | 5,266 | 555 | 69,928 |
| Western | 17,536 | 1,104 | 7,734 | – | 26,374 |
| Maryland | 369 | – | 2,932 | – | 3,301 |
| Montana | – | 8 | – | – | 8 |
| Ohio | 2,200 | – | 14,750 | – | 16,949 |
| Oklahoma | 212 | – | – | – | 212 |
| Pennsylvania Total | 12,385 | 781 | 41,619 | 45 | 54,829 |
| Anthracite | 190 | 184 | – | 45 | 419 |
| Bituminous | 12,195 | 596 | 41,619 | – | 54,410 |
| Tennessee | 1,206 | 191 | – | – | 1,396 |
| Utah | 3,833 | 579 | 22,271 | – | 26,683 |
| Virginia | 13,063 | 5,982 | 7,885 | – | 26,929 |
| West Virginia Total | 63,551 | 4,936 | 47,513 | 523 | 116,523 |
| Northern | 7,125 | 1,276 | 28,132 | 523 | 37,056 |
| Southern | 56,426 | 3,660 | 19,381 | – | 79,467 |
| Wyoming | – | – | 2,846 | – | 2,846 |
| **Appalachian Total**[5] | **149,394** | **20,373** | **135,199** | **3,394** | **308,360** |
| **Interior Total**[5] | **43,842** | **1,127** | **19,972** | – | **64,941** |
| **Western Total**[5] | **7,166** | **587** | **39,605** | – | **47,357** |
| **East of Miss. River** | **193,024** | **21,500** | **155,171** | **3,394** | **373,089** |
| **West of Miss. River** | **7,378** | **587** | **39,605** | – | **47,569** |
| **U.S. Total** | **200,402** | **22,087** | **194,775** | **3,394** | **420,657** |

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.

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, 1997

(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** | **8** | **3** | **7** | **7** | **21** | **5** | **18,132** | **2,328** | **2,207** | **863** | **913** | **25** |
| Underground | 7 | 2 | – | 1 | 1 | – | 16,990 | 1,369 | – | 116 | 30 | – |
| Surface | 1 | 1 | 7 | 6 | 20 | 5 | 1,142 | 959 | 2,207 | 746 | 883 | 25 |
| **Alaska** | **1** | – | – | – | – | – | **1,450** | – | – | – | – | – |
| Surface | 1 | – | – | – | – | – | 1,450 | – | – | – | – | – |
| **Arizona** | **2** | – | – | – | – | – | **11,723** | – | – | – | – | – |
| Surface | 2 | – | – | – | – | – | 11,723 | – | – | – | – | – |
| **Arkansas** | – | – | – | – | **1** | **2** | – | – | – | – | **10** | **8** |
| Surface | – | – | – | – | 1 | 2 | – | – | – | – | 10 | 8 |
| **Colorado** | **7** | **1** | **4** | – | **2** | – | **25,330** | **756** | **1,265** | – | **97** | – |
| Underground | 4 | 1 | 3 | – | 2 | – | 16,088 | 756 | 879 | – | 97 | – |
| Surface | 3 | – | 1 | – | – | – | 9,242 | – | 386 | – | – | – |
| **Illinois** | **16** | **4** | **2** | **1** | **4** | **1** | **37,096** | **3,103** | **726** | **139** | **87** | **7** |
| Underground | 14 | 2 | 1 | – | 2 | – | 33,008 | 1,521 | 254 | – | 41 | – |
| Surface | 2 | 2 | 1 | 1 | 2 | 1 | 4,087 | 1,582 | 473 | 139 | 46 | 7 |
| **Indiana** | **14** | **11** | **9** | **3** | **2** | – | **24,876** | **7,002** | **3,046** | **511** | **63** | – |
| Underground | 2 | – | – | 2 | – | – | 3,207 | – | – | 323 | – | – |
| Surface | 12 | 11 | 9 | 1 | 2 | – | 21,669 | 7,002 | 3,046 | 188 | 63 | – |
| **Kansas** | – | – | – | **1** | **2** | – | – | – | – | **170** | **189** | – |
| Surface | – | – | – | 1 | 2 | – | – | – | – | 170 | 189 | – |
| **Kentucky Total** | **36** | **61** | **104** | **87** | **183** | **58** | **60,964** | **41,397** | **32,468** | **12,546** | **8,239** | **239** |
| Underground | 24 | 32 | 61 | 55 | 115 | 21 | 42,513 | 21,708 | 18,547 | 8,014 | 5,416 | 105 |
| Surface | 12 | 29 | 43 | 32 | 68 | 37 | 18,451 | 19,689 | 13,921 | 4,533 | 2,823 | 134 |
| **Eastern** | **24** | **51** | **95** | **82** | **178** | **52** | **36,771** | **34,389** | **29,773** | **11,814** | **7,952** | **218** |
| Underground | 13 | 28 | 59 | 54 | 114 | 21 | 19,786 | 18,852 | 17,980 | 7,863 | 5,343 | 105 |
| Surface | 11 | 23 | 36 | 28 | 64 | 31 | 16,985 | 15,538 | 11,793 | 3,952 | 2,609 | 113 |
| **Western** | **12** | **10** | **9** | **5** | **5** | **6** | **24,193** | **7,007** | **2,695** | **732** | **287** | **21** |
| Underground | 11 | 4 | 2 | 1 | 1 | – | 22,727 | 2,856 | 567 | 151 | 73 | – |
| Surface | 1 | 6 | 7 | 4 | 4 | 6 | 1,466 | 4,151 | 2,128 | 581 | 214 | 21 |
| **Louisiana** | **2** | – | – | – | – | – | **3,545** | – | – | – | – | – |
| Surface | 2 | – | – | – | – | – | 3,545 | – | – | – | – | – |
| **Maryland** | **1** | – | **2** | **1** | **11** | **3** | **2,932** | – | **551** | **109** | **550** | **18** |
| Underground | 1 | – | 1 | – | 1 | – | 2,932 | – | 306 | – | 63 | – |
| Surface | – | – | 1 | 1 | 10 | 3 | – | – | 245 | 109 | 487 | 18 |
| **Missouri** | – | – | **1** | – | **2** | **1** | – | – | **292** | – | **103** | **5** |
| Surface | – | – | 1 | – | 2 | 1 | – | – | 292 | – | 103 | 5 |
| **Montana** | **6** | – | **1** | – | – | **1** | **40,755** | – | **242** | – | – | **8** |
| Underground | – | – | – | – | – | 1 | – | – | – | – | – | 8 |
| Surface | 6 | – | 1 | – | – | – | 40,755 | – | 242 | – | – | – |
| **New Mexico** | **6** | – | – | – | – | – | **27,025** | – | – | – | – | – |
| Surface | 6 | – | – | – | – | – | 27,025 | – | – | – | – | – |
| **North Dakota** | **5** | – | – | – | – | **1** | **29,579** | – | – | – | – | **1** |
| Surface | 5 | – | – | – | – | 1 | 29,579 | – | – | – | – | 1 |
| **Ohio** | **6** | **5** | **18** | **12** | **31** | **9** | **17,464** | **2,903** | **5,569** | **1,843** | **1,342** | **34** |
| Underground | 5 | – | 3 | – | 1 | – | 16,135 | – | 723 | – | 91 | – |
| Surface | 1 | 5 | 15 | 12 | 30 | 9 | 1,329 | 2,903 | 4,846 | 1,843 | 1,250 | 34 |
| **Oklahoma** | – | – | **4** | **3** | **2** | **2** | – | – | **943** | **513** | **158** | **7** |
| Underground | – | – | 1 | – | – | – | – | – | 212 | – | – | – |
| Surface | – | – | 3 | 3 | 2 | 2 | – | – | 732 | 513 | 158 | 7 |
| **Pennsylvania Total** | **11** | **10** | **34** | **40** | **175** | **133** | **45,528** | **6,730** | **11,142** | **5,867** | **6,411** | **520** |
| Underground | 10 | 6 | 12 | 10 | 22 | 34 | 44,095 | 4,358 | 3,966 | 1,601 | 713 | 96 |
| Surface | 1 | 4 | 22 | 30 | 153 | 99 | 1,434 | 2,372 | 7,176 | 4,266 | 5,698 | 424 |
| **Anthracite** | – | **1** | **4** | **5** | **53** | **68** | – | **649** | **1,171** | **797** | **1,837** | **223** |
| Underground | – | – | – | 1 | 10 | 29 | – | – | – | 173 | 176 | 71 |
| Surface | – | 1 | 4 | 4 | 43 | 39 | – | 649 | 1,171 | 625 | 1,662 | 152 |
| **Bituminous** | **11** | **9** | **30** | **35** | **122** | **65** | **45,528** | **6,081** | **9,971** | **5,069** | **4,574** | **297** |
| Underground | 10 | 6 | 12 | 9 | 12 | 5 | 44,095 | 4,358 | 3,966 | 1,428 | 537 | 25 |
| Surface | 1 | 3 | 18 | 26 | 110 | 60 | 1,434 | 1,723 | 6,005 | 3,641 | 4,036 | 272 |
| **Tennessee** | – | **1** | **7** | – | **16** | **3** | – | **579** | **1,845** | – | **867** | **10** |
| Underground | – | – | 3 | – | 10 | 1 | – | – | 733 | – | 657 | 6 |
| Surface | – | 1 | 4 | – | 6 | 2 | – | 579 | 1,112 | – | 210 | 3 |
| **Texas** | **10** | – | **2** | – | – | – | **52,685** | – | **642** | – | – | – |
| Surface | 10 | – | 2 | – | – | – | 52,685 | – | 642 | – | – | – |

See footnotes at end of table.

## Table 6. Coal Production and Number of Mines by State, Mine Type, and Mine Production Range, 1997 (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 |
| **Utah** | **8** | **2** | **1** | – | – | **1** | **24,870** | **1,455** | **350** | – | – | **9** |
| Underground | 8 | 2 | 1 | – | – | 1 | 24,870 | 1,455 | 350 | – | – | 9 |
| **Virginia** | **3** | **9** | **43** | **34** | **82** | **20** | **7,885** | **6,236** | **12,871** | **4,774** | **3,983** | **88** |
| Underground | 3 | 4 | 30 | 28 | 69 | 14 | 7,885 | 2,793 | 8,963 | 3,835 | 3,386 | 67 |
| Surface | – | 5 | 13 | 6 | 13 | 6 | – | 3,442 | 3,908 | 939 | 597 | 21 |
| **Washington** | **2** | – | – | – | **1** | – | **4,428** | – | – | – | **67** | – |
| Surface | 2 | – | – | – | 1 | – | 4,428 | – | – | – | 67 | – |
| **West Virginia Total** | **44** | **45** | **67** | **50** | **102** | **41** | **106,766** | **31,448** | **23,410** | **7,313** | **4,630** | **176** |
| Underground | 27 | 32 | 50 | 39 | 69 | 22 | 68,125 | 21,947 | 17,366 | 5,689 | 3,309 | 86 |
| Surface | 17 | 13 | 17 | 11 | 33 | 19 | 38,641 | 9,501 | 6,044 | 1,623 | 1,321 | 90 |
| **Northern** | **11** | **5** | **9** | **13** | **28** | **14** | **32,539** | **3,728** | **3,392** | **1,859** | **1,223** | **60** |
| Underground | 9 | 4 | 7 | 10 | 10 | 6 | 29,487 | 2,877 | 2,728 | 1,426 | 520 | 17 |
| Surface | 2 | 1 | 2 | 3 | 18 | 8 | 3,052 | 851 | 663 | 433 | 704 | 43 |
| **Southern** | **33** | **40** | **58** | **37** | **74** | **27** | **74,227** | **27,720** | **20,019** | **5,454** | **3,406** | **116** |
| Underground | 18 | 28 | 43 | 29 | 59 | 16 | 38,638 | 19,070 | 14,637 | 4,263 | 2,789 | 69 |
| Surface | 15 | 12 | 15 | 8 | 15 | 11 | 35,588 | 8,650 | 5,381 | 1,190 | 617 | 47 |
| **Wyoming** | **20** | **3** | **1** | – | **1** | – | **279,373** | **2,257** | **206** | – | **44** | – |
| Underground | 1 | – | – | – | – | – | 2,846 | – | – | – | – | – |
| Surface | 19 | 3 | 1 | – | 1 | – | 276,527 | 2,257 | 206 | – | 44 | – |
| **Appalachian Total**[1] | **97** | **124** | **273** | **226** | **616** | **266** | **235,478** | **84,613** | **87,368** | **32,582** | **26,647** | **1,090** |
| Underground | 66 | 72 | 158 | 132 | 287 | 92 | 175,948 | 49,319 | 50,036 | 19,104 | 13,592 | 360 |
| Surface | 31 | 52 | 115 | 94 | 329 | 174 | 59,530 | 35,294 | 37,332 | 13,478 | 13,055 | 729 |
| **Interior Total**[1] | **54** | **25** | **27** | **13** | **18** | **12** | **142,395** | **17,112** | **8,345** | **2,066** | **898** | **48** |
| Underground | 27 | 6 | 4 | 3 | 3 | – | 58,943 | 4,377 | 1,032 | 474 | 114 | – |
| Surface | 27 | 19 | 23 | 10 | 15 | 12 | 83,452 | 12,735 | 7,312 | 1,592 | 784 | 48 |
| **Western Total**[1] | **57** | **6** | **7** | – | **4** | **3** | **444,533** | **4,468** | **2,063** | – | **209** | **18** |
| Underground | 13 | 3 | 4 | – | 2 | 2 | 43,804 | 2,211 | 1,229 | – | 97 | 17 |
| Surface | 44 | 3 | 3 | – | 2 | 1 | 400,729 | 2,257 | 834 | – | 112 | 1 |
| **East of Miss. River** | **139** | **149** | **293** | **235** | **627** | **273** | **321,643** | **101,725** | **93,835** | **33,965** | **27,084** | **1,117** |
| Underground | 93 | 78 | 161 | 135 | 290 | 92 | 234,891 | 53,696 | 50,857 | 19,578 | 13,706 | 360 |
| Surface | 46 | 71 | 132 | 100 | 337 | 181 | 86,752 | 48,029 | 42,978 | 14,386 | 13,378 | 757 |
| **West of Miss. River** | **69** | **6** | **14** | **4** | **11** | **8** | **500,763** | **4,468** | **3,941** | **684** | **669** | **37** |
| Underground | 13 | 3 | 5 | – | 2 | 2 | 43,804 | 2,211 | 1,440 | – | 97 | 17 |
| Surface | 56 | 3 | 9 | 4 | 9 | 6 | 456,959 | 2,257 | 2,501 | 684 | 572 | 21 |
| **U.S. Total** | **208** | **155** | **307** | **239** | **638** | **281** | **822,407** | **106,193** | **97,776** | **34,648** | **27,754** | **1,155** |
| Underground | 106 | 81 | 166 | 135 | 292 | 94 | 278,695 | 55,907 | 52,297 | 19,578 | 13,803 | 377 |
| Surface | 102 | 74 | 141 | 104 | 346 | 187 | 543,712 | 50,286 | 45,478 | 15,070 | 13,950 | 778 |

[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 7. U.S. Coal Production by Coalbed Thickness and Mine Type, 1997

(Thousand Short Tons)

| Coalbed Thickness (inches) | Underground | Surface | Total |
|---|---|---|---|
| < 7 | – | 75 | 75 |
| 7-12 | – | 1,771 | 1,771 |
| 13-18 | – | 8,197 | 8,197 |
| 19-24 | 532 | 22,506 | 23,038 |
| 25-30 | 5,881 | 23,808 | 29,689 |
| 31-36 | 35,898 | 31,544 | 67,442 |
| 37-42 | 27,936 | 19,497 | 47,434 |
| 43-48 | 36,803 | 28,407 | 65,211 |
| 49-54 | 31,690 | 21,596 | 53,286 |
| 55-60 | 54,506 | 15,801 | 70,307 |
| 61-66 | 33,386 | 13,271 | 46,657 |
| 67-72 | 47,797 | 18,982 | 66,780 |
| 73-78 | 30,293 | 6,666 | 36,959 |
| 79-84 | 30,065 | 7,936 | 38,001 |
| 85-90 | 10,055 | 5,446 | 15,501 |
| 91-96 | 28,481 | 7,948 | 36,429 |
| 97-102 | 855 | 9,519 | 10,374 |
| 103-108 | 3,020 | 9,499 | 12,519 |
| 109-114 | 10,570 | 5,868 | 16,438 |
| 115-120 | 5,945 | 6,354 | 12,299 |
| > 120 | 26,566 | 403,805 | 430,370 |
| **Unknown**[1] | **377** | **778** | **1,155** |
| **U.S. Total** | **420,657** | **669,274** | **1,089,932** |

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, 1997

| Coalbed ID Number [1] Coalbed Name [2] | Production (thousand short tons) | | | Thickness (inches) | | |
|---|---|---|---|---|---|---|
| | Underground | Surface | Total | Average[3] | Low | High |
| 1699 Wyodak | – | 247,321 | 247,321 | 824 | 228 | 1,200 |
| 0036 Pittsburgh | 78,624 | 2,619 | 81,243 | 74 | 18 | 108 |
| 0111 Hazard No. 5-A | 17,978 | 24,880 | 42,859 | 86 | 18 | 217 |
| 0489 No. 9 | 27,889 | 7,659 | 35,549 | 59 | 41 | 78 |
| 0484 No. 6 | 25,558 | 3,632 | 29,191 | 77 | 44 | 96 |
| 1569 Beulah-Zap | – | 27,678 | 27,678 | 156 | 144 | 180 |
| 0084 Lower Kittanning | 6,731 | 16,523 | 23,254 | 62 | 12 | 132 |
| 0135 Hazard No. 4 | 17,435 | 2,553 | 19,988 | 44 | 22 | 68 |
| 0103 Stockton-Lewiston | 3,873 | 15,847 | 19,720 | 73 | 12 | 120 |
| 0151 Elkhorn No. 1 | 13,233 | 5,343 | 18,576 | 52 | 13 | 140 |
| 1808 Rosebud | – | 17,429 | 17,429 | 260 | 216 | 276 |
| 0168 Lower Elkhorn | 15,792 | 1,586 | 17,378 | 57 | 21 | 92 |
| 0344 Pocahontas No. 3 | 15,494 | – | 15,494 | 62 | 37 | 83 |
| 0071 Upper Freeport | 10,455 | 4,235 | 14,690 | 57 | 6 | 96 |
| 0176 Eagle | 11,582 | 1,269 | 12,852 | 61 | 24 | 104 |
| 0483 Indiana No. 6 | – | 12,173 | 12,173 | 46 | 21 | 72 |
| 0157 Elkhorn No. 3 | 8,421 | 3,504 | 11,925 | 66 | 12 | 120 |
| 0121 Hazard No. 5 | 6,637 | 3,367 | 10,004 | 56 | 22 | 105 |
| **Major Coalbeds Total** | **259,703** | **397,620** | **657,323** | **360** | **6** | **1,200** |
| **Other Coalbeds** | **160,578** | **270,876** | **431,454** | **133** | **1** | **1,440** |
| **Unknown**[4] | **377** | **778** | **1,155** | **NA** | **NA** | **NA** |
| **U.S. Total** | **420,657** | **669,274** | **1,089,932** | **270** | **1** | **1,440** |

[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, 0176); West Virginia (0036, 0084, 0103, 0344); Pennsylvania (0071,0076); Western Kentucky (0489); 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); 0176, Middle Eagle (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 or more short tons 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 discontinuous 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 even in the Gulf Coast lignite belt. Coalbeds of these types are also included in ''Other Coalbeds,'' even though production may exceed 10 million short tons. 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, 1997

(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 | 51 | 24,468 | – | – | – | – | – | – | 51 | 24,468 |
| Alaska | – | – | 1 | 1,450 | – | – | – | – | 1 | 1,450 |
| Arizona | 2 | 11,723 | – | – | – | – | – | – | 2 | 11,723 |
| Arkansas | 1 | 5 | – | – | – | – | 2 | 14 | 3 | 18 |
| Colorado | 11 | 18,207 | 3 | 9,242 | – | – | – | – | 14 | 27,449 |
| Illinois | 28 | 41,159 | – | – | – | – | – | – | 28 | 41,159 |
| Indiana | 39 | 35,497 | – | – | – | – | – | – | 39 | 35,497 |
| Kansas | 3 | 360 | – | – | – | – | – | – | 3 | 360 |
| Kentucky Total | 529 | 155,853 | – | – | – | – | – | – | 529 | 155,853 |
| Eastern | 482 | 120,918 | – | – | – | – | – | – | 482 | 120,918 |
| Western | 47 | 34,936 | – | – | – | – | – | – | 47 | 34,936 |
| Louisiana | – | – | – | – | 2 | 3,545 | – | – | 2 | 3,545 |
| Maryland | 18 | 4,160 | – | – | – | – | – | – | 18 | 4,160 |
| Missouri | 4 | 401 | – | – | – | – | – | – | 4 | 401 |
| Montana | – | – | 7 | 40,763 | 1 | 242 | – | – | 8 | 41,005 |
| New Mexico | 4 | 14,319 | 2 | 12,706 | – | – | – | – | 6 | 27,025 |
| North Dakota | – | – | – | – | 6 | 29,580 | – | – | 6 | 29,580 |
| Ohio | 81 | 29,154 | – | – | – | – | – | – | 81 | 29,154 |
| Oklahoma | 11 | 1,621 | – | – | – | – | – | – | 11 | 1,621 |
| Pennsylvania Total | 272 | 71,520 | – | – | – | – | 131 | 4,678 | 403 | 76,198 |
| Anthracite | – | – | – | – | – | – | 131 | 4,678 | 131 | 4,678 |
| Bituminous | 272 | 71,520 | – | – | – | – | – | – | 272 | 71,520 |
| Tennessee | 27 | 3,300 | – | – | – | – | – | – | 27 | 3,300 |
| Texas | 1 | 353 | – | – | 11 | 52,975 | – | – | 12 | 53,328 |
| Utah | 12 | 26,683 | – | – | – | – | – | – | 12 | 26,683 |
| Virginia | 191 | 35,837 | – | – | – | – | – | – | 191 | 35,837 |
| Washington | 1 | 67 | 2 | 4,428 | – | – | – | – | 3 | 4,495 |
| West Virginia Total | 349 | 173,743 | – | – | – | – | – | – | 349 | 173,743 |
| Northern | 80 | 42,802 | – | – | – | – | – | – | 80 | 42,802 |
| Southern | 269 | 130,941 | – | – | – | – | – | – | 269 | 130,941 |
| Wyoming | 3 | 5,398 | 22 | 276,483 | – | – | – | – | 25 | 281,881 |
| **Appalachian Total**[1] | **1,471** | **463,100** | – | – | – | – | **131** | **4,678** | **1,602** | **467,778** |
| **Interior Total**[1] | **134** | **114,330** | – | – | **13** | **56,519** | **2** | **14** | **149** | **170,863** |
| **Western Total**[1] | **33** | **76,398** | **37** | **345,071** | **7** | **29,822** | – | – | **77** | **451,291** |
| **East of Miss. River** | **1,585** | **574,691** | – | – | – | – | **131** | **4,678** | **1,716** | **579,369** |
| **West of Miss. River** | **53** | **79,136** | **37** | **345,071** | **20** | **86,341** | **2** | **14** | **112** | **510,563** |
| **U.S. Total** | **1,638** | **653,828** | **37** | **345,071** | **20** | **86,341** | **133** | **4,692** | **1,828** | **1,089,932** |

[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, 1997

(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 | 8,120 | 4,205 | 11,919 | 24,468 | – | – | – | 24,468 |
| Alaska | – | – | – | – | 1,450 | – | – | 1,450 |
| Arizona | – | – | 11,723 | 11,723 | – | – | – | 11,723 |
| Arkansas | 5 | – | – | 5 | – | – | 14 | 18 |
| Colorado | – | – | 18,207 | 18,207 | 9,242 | – | – | 27,449 |
| Illinois | – | 1,457 | 39,702 | 41,159 | – | – | – | 41,159 |
| Indiana | – | – | 35,497 | 35,497 | – | – | – | 35,497 |
| Kansas | – | – | 360 | 360 | – | – | – | 360 |
| Kentucky Total | 4,697 | 2,475 | 147,681 | 155,853 | – | – | – | 155,853 |
| Eastern | 4,697 | 2,475 | 113,746 | 120,918 | – | – | – | 120,918 |
| Western | – | – | 33,935 | 34,936 | – | – | – | 34,936 |
| Louisiana | – | – | – | – | – | 3,545 | – | 3,545 |
| Maryland | 3,554 | – | 606 | 4,160 | – | – | – | 4,160 |
| Missouri | – | – | 401 | 401 | – | – | – | 401 |
| Montana | – | – | – | – | 40,763 | 242 | – | 41,005 |
| New Mexico | – | – | 14,319 | 14,319 | 12,706 | – | – | 27,025 |
| North Dakota | – | – | – | – | – | 29,580 | – | 29,580 |
| Ohio | 109 | 680 | 27,415 | 29,154 | – | – | – | 29,154 |
| Oklahoma | 407 | 555 | 659 | 1,621 | – | – | – | 1,621 |
| Pennsylvania Total | 4,100 | 11,737 | 55,415 | 71,520 | – | – | 4,678 | 76,198 |
| Anthracite | – | – | – | – | – | – | 4,678 | 4,678 |
| Bituminous | 4,100 | 11,737 | 55,415 | 71,520 | – | – | – | 71,520 |
| Tennessee | – | 750 | 2,550 | 3,300 | – | – | – | 3,300 |
| Texas | – | 353 | – | 353 | – | 52,975 | – | 53,328 |
| Utah | – | – | 26,683 | 26,683 | – | – | – | 26,683 |
| Virginia | 7,943 | 5,915 | 21,980 | 35,837 | – | – | – | 35,837 |
| Washington | – | – | 67 | 67 | 4,428 | – | – | 4,495 |
| West Virginia Total | 17,525 | 11,241 | 144,454 | 173,743 | – | – | – | 173,743 |
| Northern | 2,531 | 2,516 | 37,232 | 42,802 | – | – | – | 42,802 |
| Southern | 14,994 | 8,725 | 107,222 | 130,941 | – | – | – | 130,941 |
| Wyoming | – | – | 5,398 | 5,398 | 276,483 | – | – | 281,881 |
| **Appalachian Total[2]** | **46,048** | **37,001** | **378,084** | **463,100** | – | – | **4,678** | **467,778** |
| **Interior Total[2]** | **412** | **2,365** | **110,553** | **114,330** | – | **56,519** | **14** | **170,863** |
| **Western Total[2]** | – | – | **76,398** | **76,398** | **345,071** | **29,822** | – | **451,291** |
| **East of Miss. River** | **46,048** | **38,458** | **487,219** | **574,691** | – | – | **4,678** | **579,369** |
| **West of Miss. River** | **412** | **908** | **77,817** | **79,136** | **345,071** | **86,341** | **14** | **510,563** |
| **U.S. Total** | **46,460** | **39,366** | **565,035** | **653,828** | **345,071** | **86,341** | **4,692** | **1,089,932** |

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, 1997
(Thousand Short Tons)

| Coal-Producing State and Region | UMWA | Other Unions | Union Total | Nonunion | Total |
|---|---|---|---|---|---|
| **Alabama** | **17,021** | – | **17,021** | **7,422** | **24,443** |
| Underground | 14,919 | – | 14,919 | 3,586 | 18,505 |
| Surface | 2,102 | – | 2,102 | 3,837 | 5,938 |
| **Alaska** | – | **1,450** | **1,450** | – | **1,450** |
| Surface | – | 1,450 | 1,450 | – | 1,450 |
| **Arizona** | **11,723** | – | **11,723** | – | **11,723** |
| Surface | 11,723 | – | 11,723 | – | 11,723 |
| **Arkansas** | – | – | – | **10** | **10** |
| Surface | – | – | – | 10 | 10 |
| **Colorado** | **3,585** | **2,013** | **5,598** | **21,851** | **27,449** |
| Underground | 1,514 | – | 1,514 | 16,306 | 17,820 |
| Surface | 2,071 | 2,013 | 4,084 | 5,544 | 9,628 |
| **Illinois** | **26,809** | **3,982** | **30,791** | **10,361** | **41,152** |
| Underground | 22,125 | 2,996 | 25,121 | 9,703 | 34,824 |
| Surface | 4,684 | 986 | 5,669 | 658 | 6,328 |
| **Indiana** | **13,405** | – | **13,405** | **22,093** | **35,497** |
| Underground | 182 | – | 182 | 3,348 | 3,530 |
| Surface | 13,223 | – | 13,223 | 18,744 | 31,967 |
| **Kansas** | **91** | – | **91** | **268** | **360** |
| Surface | 91 | – | 91 | 268 | 360 |
| **Kentucky Total** | **20,723** | **506** | **21,229** | **134,385** | **155,614** |
| Underground | 16,088 | 506 | 16,594 | 79,603 | 96,197 |
| Surface | 4,635 | – | 4,635 | 54,782 | 59,417 |
| **Eastern** | **10,102** | **506** | **10,609** | **110,091** | **120,700** |
| Underground | 6,067 | 506 | 6,573 | 63,249 | 69,823 |
| Surface | 4,035 | – | 4,035 | 46,842 | 50,877 |
| **Western** | **10,621** | – | **10,621** | **24,294** | **34,914** |
| Underground | 10,021 | – | 10,021 | 16,354 | 26,374 |
| Surface | 600 | – | 600 | 7,940 | 8,540 |
| **Louisiana** | – | – | – | **3,545** | **3,545** |
| Surface | – | – | – | 3,545 | 3,545 |
| **Maryland** | – | – | – | **4,141** | **4,141** |
| Underground | – | – | – | 3,301 | 3,301 |
| Surface | – | – | – | 840 | 840 |
| **Missouri** | – | – | – | **396** | **396** |
| Surface | – | – | – | 396 | 396 |
| **Montana** | **16,450** | **16,197** | **32,647** | **8,350** | **40,997** |
| Surface | 16,450 | 16,197 | 32,647 | 8,350 | 40,997 |
| **New Mexico** | **7,850** | **14,318** | **22,168** | **4,857** | **27,025** |
| Surface | 7,850 | 14,318 | 22,168 | 4,857 | 27,025 |
| **North Dakota** | **2,126** | **4,314** | **6,440** | **23,139** | **29,579** |
| Surface | 2,126 | 4,314 | 6,440 | 23,139 | 29,579 |
| **Ohio** | **15,133** | – | **15,133** | **13,987** | **29,120** |
| Underground | 14,750 | – | 14,750 | 2,200 | 16,949 |
| Surface | 383 | – | 383 | 11,788 | 12,171 |
| **Oklahoma** | – | – | – | **1,614** | **1,614** |
| Underground | – | – | – | 212 | 212 |
| Surface | – | – | – | 1,403 | 1,403 |
| **Pennsylvania Total** | **33,360** | **32** | **33,392** | **42,286** | **75,678** |
| Underground | 31,135 | – | 31,135 | 23,598 | 54,733 |
| Surface | 2,225 | 32 | 2,257 | 18,689 | 20,946 |
| **Anthracite** | **892** | **32** | **924** | **3,531** | **4,455** |
| Underground | – | – | – | 348 | 348 |
| Surface | 892 | 32 | 924 | 3,183 | 4,107 |
| **Bituminous** | **32,468** | – | **32,468** | **38,755** | **71,223** |
| Underground | 31,135 | – | 31,135 | 23,250 | 54,385 |
| Surface | 1,333 | – | 1,333 | 15,506 | 16,839 |
| **Tennessee** | – | – | – | **3,290** | **3,290** |
| Underground | – | – | – | 1,390 | 1,390 |
| Surface | – | – | – | 1,900 | 1,900 |
| **Texas** | – | **34,841** | **34,841** | **18,487** | **53,328** |
| Surface | – | 34,841 | 34,841 | 18,487 | 53,328 |
| **Utah** | **8,407** | – | **8,407** | **18,267** | **26,674** |
| Underground | 8,407 | – | 8,407 | 18,267 | 26,674 |
| **Virginia** | **6,495** | **1,413** | **7,908** | **27,841** | **35,749** |
| Underground | 6,417 | 720 | 7,137 | 19,725 | 26,862 |
| Surface | 78 | 693 | 770 | 8,116 | 8,886 |
| **Washington** | – | **4,428** | **4,428** | **67** | **4,495** |
| Surface | – | 4,428 | 4,428 | 67 | 4,495 |
| **West Virginia Total** | **89,893** | – | **89,893** | **83,674** | **173,566** |
| Underground | 64,026 | – | 64,026 | 52,411 | 116,437 |
| Surface | 25,867 | – | 25,867 | 31,263 | 57,130 |

See footnotes at end of table.

## Table 11. Coal Production by State, Mine Type, and Union Type, 1997 (Continued)

(Thousand Short Tons)

| Coal-Producing State and Region | UMWA | Other Unions | Union Total | Nonunion | Total |
|---|---|---|---|---|---|
| **Northern** | **28,168** | – | **28,168** | **14,573** | **42,741** |
| Underground | 28,168 | – | 28,168 | 8,871 | 37,039 |
| Surface | – | – | – | 5,703 | 5,703 |
| **Southern** | **61,725** | – | **61,725** | **69,100** | **130,825** |
| Underground | 35,858 | – | 35,858 | 43,540 | 79,398 |
| Surface | 25,867 | – | 25,867 | 25,560 | 51,427 |
| **Wyoming** | **4,652** | **10,062** | **14,713** | **267,167** | **281,881** |
| Underground | – | – | – | 2,846 | 2,846 |
| Surface | 4,652 | 10,062 | 14,713 | 264,321 | 279,035 |
| **Appalachian Total**[1] | **172,004** | **1,951** | **173,954** | **292,734** | **466,688** |
| Underground | 137,314 | 1,226 | 138,540 | 169,459 | 307,999 |
| Surface | 34,689 | 725 | 35,414 | 123,275 | 158,689 |
| **Interior Total**[1] | **50,925** | **38,823** | **89,748** | **81,067** | **170,816** |
| Underground | 32,328 | 2,996 | 35,324 | 29,617 | 64,941 |
| Surface | 18,598 | 35,827 | 54,424 | 51,451 | 105,875 |
| **Western Total**[1] | **54,794** | **52,781** | **107,574** | **343,699** | **451,273** |
| Underground | 9,921 | – | 9,921 | 37,419 | 47,340 |
| Surface | 44,872 | 52,781 | 97,653 | 306,279 | 403,933 |
| **East of Miss. River** | **222,838** | **5,933** | **228,770** | **349,481** | **578,252** |
| Underground | 169,642 | 4,223 | 173,864 | 198,864 | 372,728 |
| Surface | 53,196 | 1,710 | 54,906 | 150,617 | 205,523 |
| **West of Miss. River** | **54,885** | **87,622** | **142,507** | **368,018** | **510,525** |
| Underground | 9,921 | – | 9,921 | 37,631 | 47,552 |
| Surface | 44,964 | 87,622 | 132,586 | 330,387 | 462,973 |
| **Unknown**[2] | **NA** | **NA** | **NA** | **NA** | **1,155** |
| Underground | NA | NA | NA | NA | 377 |
| Surface | NA | NA | NA | NA | 778 |
| **U.S. Total** | **277,723** | **93,555** | **371,277** | **717,500** | **1,089,932** |
| Underground | 179,563 | 4,223 | 183,786 | 236,495 | 420,657 |
| Surface | 98,160 | 89,332 | 187,492 | 481,005 | 669,274 |

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 Production by State and Disposition, 1997

(Thousand Short Tons)

| Coal-Producing State and Region | Open Market[1] | Captive[2] | Total |
|---|---|---|---|
| Alabama | 23,606 | 837 | 24,443 |
| Alaska | 1,449 | 1 | 1,450 |
| Arizona | 11,723 | 0 | 11,723 |
| Arkansas | 10 | 0 | 10 |
| Colorado | 25,935 | 1,514 | 27,449 |
| Illinois | 40,755 | 397 | 41,152 |
| Indiana | 35,438 | 60 | 35,497 |
| Kansas | 360 | 0 | 360 |
| Kentucky Total | 154,786 | 828 | 155,614 |
| Eastern | 119,878 | 821 | 120,700 |
| Western | 34,908 | 6 | 34,914 |
| Louisiana | 3,545 | 0 | 3,545 |
| Maryland | 4,113 | 29 | 4,141 |
| Missouri | 396 | 0 | 396 |
| Montana | 37,812 | 3,185 | 40,997 |
| New Mexico | 27,025 | 0 | 27,025 |
| North Dakota | 28,801 | 778 | 29,579 |
| Ohio | 22,255 | 6,866 | 29,120 |
| Oklahoma | 1,425 | 189 | 1,614 |
| Pennsylvania Total | 74,259 | 1,420 | 75,678 |
| Anthracite | 3,390 | 1,065 | 4,455 |
| Bituminous | 70,869 | 354 | 71,223 |
| Tennessee | 3,055 | 235 | 3,290 |
| Texas | 15,000 | 38,328 | 53,328 |
| Utah | 17,983 | 8,691 | 26,674 |
| Virginia | 34,943 | 805 | 35,749 |
| Washington | 67 | 4,428 | 4,495 |
| West Virginia Total | 166,470 | 7,097 | 173,566 |
| Northern | 40,845 | 1,897 | 42,741 |
| Southern | 125,625 | 5,200 | 130,825 |
| Wyoming | 267,486 | 14,395 | 281,881 |
| **Appalachian Total[3]** | **448,578** | **18,110** | **466,688** |
| **Interior Total[3]** | **131,836** | **38,980** | **170,816** |
| **Western Total[3]** | **418,281** | **32,992** | **451,273** |
| **East of Miss. River** | **559,678** | **18,574** | **578,252** |
| **West of Miss. River** | **439,016** | **71,509** | **510,525** |
| **Total[4]** | **998,695** | **90,083** | **1,088,777** |
| **Unknown[5]** | **NA** | **NA** | **1,155** |
| **U.S. Total** | **NA** | **NA** | **1,089,932** |

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.
4 Excludes mines producing less than 10,000 short tons, which are not required to provide these data.
5 Includes mines producing 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.

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 13. Coal Mining Acreage, Production and Royalties from Federal and Indian Leases by State, 1997

| 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 | 1,610 | 184 | 632 | – | – | – |
| Arizona | – | – | – | 64,858 | 12,152 | 32,293 |
| Colorado | 58,248 | 22,264 | 33,460 | – | – | – |
| Kentucky | 2,413 | 506 | 770 | – | – | – |
| Montana | 26,996 | 24,502 | 32,214 | 14,746 | 6,094 | 2,790 |
| New Mexico | 11,773 | 6,029 | 22,154 | 36,026 | 14,037 | 31,543 |
| North Dakota | 5,735 | 3,313 | 1,183 | – | – | – |
| Oklahoma | 8,193 | 577 | 461 | – | – | – |
| Utah | 60,585 | 23,887 | 34,635 | – | – | – |
| Washington | 241 | 947 | 1,723 | – | – | – |
| Wyoming | 129,636 | 248,062 | 158,320 | – | – | – |
| **Appalachian Total**[1] | **1,610** | **184** | **632** | – | – | – |
| **Interior Total**[1] | **10,606** | **1,083** | **1,231** | – | – | – |
| **Western Total**[1] | **293,214** | **329,003** | **283,689** | **115,630** | **32,283** | **66,627** |
| **East of Miss. River** | **4,023** | **680** | **1,402** | – | – | – |
| **West of Miss. River** | **301,407** | **329,580** | **284,150** | **115,630** | **32,283** | **66,627** |
| **U.S. Total** | **305,430** | **330,270** | **285,552** | **115,630** | **32,283** | **66,627** |

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

Notes: U.S. Total for this table represents Federal and Indian Leases only. 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, 1997, Report on Receipts from Federal and Indian Leases.*

## Table 14. Major U.S. Coal Mines, 1997

| Rank | Mine Name/Company | Mine Type | State | Production (short tons) |
|---|---|---|---|---|
| 1 | Black Thunder/Thunder Basin Coal | Surface | Wyoming | 37,719,322 |
| 2 | North Antelope/Powder River Coal | Surface | Wyoming | 34,965,089 |
| 3 | Jacobs Ranch/Kerr-McGee Coal | Surface | Wyoming | 27,113,014 |
| 4 | Rochelle/Powder River Coal | Surface | Wyoming | 24,940,362 |
| 5 | Belle Ayr/AMAX Coal West | Surface | Wyoming | 22,800,736 |
| 6 | Caballo/Caballo Coal | Surface | Wyoming | 19,946,859 |
| 7 | Eagle Butte/AMAX Coal West | Surface | Wyoming | 17,921,232 |
| 8 | Freedom-Coteau/Coteau Properties | Surface | North Dakota | 15,974,590 |
| 9 | Caballo Rojo/Caballo Rojo | Surface | Wyoming | 14,681,876 |
| 10 | Buckskin/Triton Coal | Surface | Wyoming | 14,442,958 |
| 11 | Antelope/Antelope Coal | Surface | Wyoming | 13,559,203 |
| 12 | Cordero/Cordero Mining | Surface | Wyoming | 13,324,489 |
| 13 | Rawhide/Caballo Coal | Surface | Wyoming | 10,705,680 |
| 14 | West Decker/Decker Coal | Surface | Montana | 9,961,746 |
| 15 | Rosebud No 6/Western Energy | Surface | Montana | 9,145,572 |
| 16 | Jewett/Northwestern Resources | Surface | Texas | 8,799,439 |
| 17 | Enlow Fork/Enlow Fork Mining | Underground | Pennsylvania | 8,376,474 |
| 18 | Spring Creek/Spring Creek Coal | Surface | Montana | 8,350,406 |
| 19 | Navajo/BHP Minerals | Surface | New Mexico | 7,849,000 |
| 20 | Monticello-Winfield/Texas Utilities Mining | Surface | Texas | 7,778,875 |
| 21 | Bailey No 1/CONSOL | Underground | Pennsylvania | 7,517,072 |
| 22 | Foidel Creek/Twenty Mile Coal | Underground | Colorado | 7,251,862 |
| 23 | Martin Lake(Panola Cnty)/Texas Utilities Mining | Surface | Texas | 7,248,121 |
| 24 | Falkirk/Falkirk Mining | Surface | North Dakota | 7,164,272 |
| 25 | Kayenta/Peabody Western | Surface | Arizona | 7,089,531 |
| 26 | Absaloka/Morris-Knudsen Corp. | Surface | Montana | 7,051,281 |
| 27 | McKinley/Pittsburg & Midway | Surface | New Mexico | 6,606,740 |
| 28 | Sandow-Rockdale/ALCOA | Surface | Texas | 6,370,027 |
| 29 | Cumberland/Cyprus Cumberland | Underground | Pennsylvania | 6,360,492 |
| 30 | Jim Bridger/Bridger Coal | Surface | Wyoming | 5,920,376 |
| 31 | Martin Lake-Oak Hill/Texas Utilities Mining | Surface | Texas | 5,808,296 |
| 32 | West Elk/Mountain Coal | Underground | Colorado | 5,721,549 |
| 33 | Mountaineer/Mingo Logan Coal | Underground | West Virginia | 5,657,541 |
| 34 | Colowyo/Colowyo Coal | Surface | Colorado | 5,544,255 |
| 35 | McElory/McElory Coal | Underground | West Virginia | 5,350,245 |
| 36 | No 50/US Steel Mining | Underground | West Virginia | 5,335,460 |
| 37 | Big Brown/Texas Utilities Mining | Surface | Texas | 5,126,881 |
| 38 | Powhatan No 6/Ohio Valley Coal | Underground | Ohio | 5,101,746 |
| 39 | Galatia No 56/Kerr-McGee Coal | Underground | Illinois | 4,976,660 |
| 40 | SUFCO/Canyon Fuel | Underground | Utah | 4,939,498 |
| 41 | Lee Ranch/Lee Ranch Coal | Surface | New Mexico | 4,857,003 |
| 42 | Emerald No 1/Cyprus Emerald Resources | Underground | Pennsylvania | 4,826,792 |
| 43 | Loveridge No 22/CONSOL | Underground | West Virginia | 4,805,652 |
| 44 | No 84/Eighty Four Mining | Underground | Pennsylvania | 4,783,950 |
| 45 | Robinson Run No 95/CONSOL | Underground | West Virginia | 4,782,788 |
| 46 | Shoemaker/CONSOL | Underground | West Virginia | 4,781,199 |
| 47 | Old Hickory/Hobet Mining | Surface | West Virginia | 4,753,412 |
| 48 | Black Mesa/Peabody Western | Surface | Arizona | 4,633,735 |
| 49 | Deer Creek/Pacificorp | Underground | Utah | 4,479,706 |
| 50 | Samples(Boone)/Catenary Coal | Surface | West Virginia | 4,450,151 |
| 51 | Dilworth/CONSOL | Underground | Pennsylvania | 4,436,579 |
| 52 | Kemmer/Pittsburg & Midway Coal | Surface | Wyoming | 4,401,607 |
| 53 | Federal No 2/Eastern Associated Coal | Underground | West Virginia | 4,393,317 |
| 54 | Skyline No 1/Canyon Fuel | Underground | Utah | 4,389,511 |
| 55 | Buchanan No 1/CONSOL | Underground | Virginia | 4,343,711 |
| 56 | Big Sky/Big Sky Coal | Surface | Montana | 4,334,750 |
| 57 | Center/BNI Coal | Surface | North Dakota | 4,313,861 |
| 58 | Upper Big Branch/Performance Coal | Underground | West Virginia | 4,298,491 |
| 59 | No 13 Baker/Lodestar Energy | Underground | Kentucky | 4,220,746 |
| 60 | Dave Johnston/Pacificorp | Surface | Wyoming | 4,141,405 |
| 61 | South Hallsville No 1/Sabine Mining | Surface | Texas | 4,132,651 |
| 62 | Rend Lake/CONSOL | Underground | Illinois | 4,083,838 |
| 63 | Shoal Creek/Drummond Coal | Underground | Alabama | 4,015,264 |
| 64 | Marissa (Washington Cnty)/Peabody Coal | Underground | Illinois | 3,977,115 |
| 65 | Trail Mountain/Pacificorp | Underground | Utah | 3,927,569 |
| 66 | No 2/Fola Coal | Surface | West Virginia | 3,664,668 |
| 67 | Meigs No 31/Southern Ohio Coal | Underground | Ohio | 3,549,291 |
| 68 | Camp No 11/Peabody Coal | Underground | Kentucky | 3,513,450 |
| * | **Subtotal** | | | **571,791,039** |
| * | **All Other Mines** | | | **518,140,749** |
| * | **U.S. Total** | | | **1,089,931,788** |

Notes: Major mines are mines that produced more than 3.5 million short tons in 1997. The company is the firm operating the mine.
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 15. Major U.S. Coal Producers, 1997

| Rank | Company Name | Production (thousand short tons) | Percent of Total Production |
|---|---|---|---|
| 1 | Peabody Holding Co., Inc. | 142,473 | 13.1 |
| 2 | Cyprus AMAX Minerals Co. | 81,217 | 7.5 |
| 3 | Kennecott Energy Co. | 78,950 | 7.2 |
| 4 | Consol Energy Inc. | 72,822 | 6.7 |
| 5 | ARCO Coal Co | 46,386 | 4.3 |
| 6 | A.T. Massey Coal Co. | 34,548 | 3.2 |
| 7 | Kerr-McGee Coal Corp. | 32,090 | 2.9 |
| 8 | Zeigler Coal Holding Co. | 30,144 | 2.8 |
| 9 | North American Coal Corp. | 28,283 | 2.6 |
| 10 | Texas Utilities Co. | 28,181 | 2.6 |
| 11 | Arch Mineral Corp. | 26,071 | 2.4 |
| 12 | Ashland Coal Inc. | 22,420 | 2.1 |
| 13 | Montana Power Co. | 19,262 | 1.8 |
| 14 | Clinchfield Coal Co. | 16,165 | 1.5 |
| 15 | Pittsburg & Midway Coal Mining Co. | 15,451 | 1.4 |
| 16 | BHP Utah Minerals | 14,318 | 1.3 |
| 17 | Kiewit Coal Properties Inc. | 13,847 | 1.3 |
| 18 | Mapco Coal Inc. | 13,109 | 1.2 |
| 19 | TECO Energy | 11,539 | 1.1 |
| 20 | Black Beauty Coal Co. | 11,268 | 1.0 |
| 21 | Lodestar Energy | 10,790 | 1.0 |
| 22 | Canyon Fuel Co. | 10,479 | 1.0 |
| 23 | James River Coal Co. | 9,849 | .9 |
| 24 | Rochester & Pittsburg Coal Co. | 8,910 | .8 |
| 25 | Jim Walters Resources Inc. | 8,366 | .8 |
| 26 | AEP Service Corp. | 8,052 | .7 |
| 27 | US Steel Mining Co. | 7,952 | .7 |
| 28 | Andalex Resources Inc. | 7,645 | .7 |
| 29 | Morrison-Knudsen Corp. | 7,051 | .6 |
| 30 | Drummond Company | 6,778 | .6 |
| 31 | Aluminum Company of America | 6,370 | .6 |
| 32 | Ohio Valley Resources Inc. | 5,101 | .5 |
| 33 | Lee Ranch Coal Company | 4,857 | .4 |
| 34 | General Dynamics Corp. | 4,611 | .4 |
| 35 | Minnesota Power & Light | 4,314 | .4 |
| 36 | Leslie Resources Inc. | 3,758 | .3 |
| 37 | Fola Coal Company | 3,665 | .3 |
| 38 | San Miguel Electric CoOp | 3,487 | .3 |
| 39 | Addington Enterprises Inc. | 3,472 | .3 |
| 40 | Kindill Mining Inc. | 3,350 | .3 |
| 41 | Black Hills Corp. | 3,251 | .3 |
| 42 | Golden Oak Mining Co. LP | 3,165 | .3 |
| 43 | A N R Coal Company | 3,117 | .3 |
| 44 | Pen Coal Corp. | 2,943 | .3 |
| 45 | Exxon Coal USA Inc. | 2,923 | .3 |
| 46 | Sun Company Inc. | 2,668 | .2 |
| 47 | James Coal Company | 2,607 | .2 |
| 48 | Dolet Hills Mining Venture | 2,534 | .2 |
| 49 | Glamorgan Coal Corp. | 2,486 | .2 |
| 50 | Solar Sources Inc. | 2,395 | .2 |
| 51 | MDU Resources Group Inc. | 2,369 | .2 |
| 52 | Independence Coal Company | 2,171 | .2 |
| 53 | Princess Beverly Coal Co. | 2,124 | .2 |
| 54 | Williams Fork Company | 2,013 | .2 |
| 55 | Anker Group Inc. | 1,995 | .2 |
| 56 | Pine Branch Coal Sales Co. | 1,989 | .2 |
| 57 | Waterloo Coal Co., Inc. | 1,975 | .2 |
| * | **Subtotal** | **910,125** | **83.5** |
| * | **All other coal producers** | **179,807** | **16.5** |
| * | **U.S. Total** | **1,089,932** | **100.0** |

Notes: Major coal producers are companies that produced more than 1.9 million short tons in 1997. 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 16. Productive Capacity of Coal Mines by State, 1988, 1993-1997

(Thousand Short Tons)

| Coal-Producing State and Region | 1997 | 1996 | 1995 | 1994 | 1993 | 1988[1] | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| Alabama | 29,081 | 32,159 | 32,546 | 33,049 | 27,916 | 30,373 | –9.6 | 1.0 | –0.5 |
| 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 |
| California | – | – | – | – | – | w | – | – | – |
| Colorado | 35,466 | 29,330 | 32,435 | 31,075 | 30,040 | 20,989 | 20.9 | 4.2 | 6.0 |
| Illinois | 51,523 | 61,727 | 56,627 | 69,414 | 69,320 | 71,529 | –16.5 | –7.1 | –3.6 |
| Indiana | 36,999 | 35,564 | 35,256 | 38,931 | 43,955 | 41,800 | 4.0 | –4.2 | –1.3 |
| Iowa | – | – | – | w | w | w | – | – | – |
| Kansas | w | w | w | w | w | w | w | w | w |
| Kentucky Total | 195,453 | 189,225 | 203,173 | 213,427 | 204,805 | 170,725 | 3.3 | –1.2 | 1.5 |
| Eastern | 152,681 | 145,691 | 152,111 | 161,731 | 157,318 | 124,285 | 4.8 | –.7 | 2.3 |
| Western | 42,771 | 43,534 | 51,062 | 51,696 | 47,486 | 46,440 | –1.8 | –2.6 | –.9 |
| Louisiana | w | w | w | w | w | w | w | w | w |
| Maryland | 4,884 | 4,935 | 4,408 | 4,332 | 3,927 | 4,574 | –1.0 | 5.6 | .7 |
| Missouri | 690 | 1,046 | 1,081 | 1,209 | w | w | –34.0 | w | w |
| Montana | 56,140 | 56,175 | 51,597 | 51,104 | 50,849 | 50,259 | –.1 | 2.5 | 1.2 |
| New Mexico | 31,604 | 32,695 | 32,760 | 32,807 | 33,360 | 32,782 | –3.3 | –1.3 | –.4 |
| North Dakota | 32,568 | 32,184 | 34,464 | 35,920 | 36,371 | 39,978 | 1.2 | –2.7 | –2.3 |
| Ohio | 33,443 | 37,584 | 34,011 | 43,925 | 42,236 | 49,999 | –11.0 | –5.7 | –4.4 |
| Oklahoma | 2,451 | 1,981 | 2,557 | 2,251 | 2,422 | 4,558 | 23.7 | .3 | –6.7 |
| Pennsylvania Total | 87,527 | 81,684 | 77,187 | 80,975 | 82,148 | 86,521 | 7.1 | 1.6 | .1 |
| Anthracite | 5,504 | 5,504 | 6,547 | 5,776 | 5,806 | 3,450 | * | –1.3 | 5.3 |
| Bituminous | 82,024 | 76,180 | 70,640 | 75,200 | 76,342 | 83,071 | 7.7 | 1.8 | –.1 |
| Tennessee | 4,100 | 4,009 | 3,750 | 3,409 | 3,763 | 8,022 | 2.3 | 2.2 | –7.2 |
| Texas | 54,614 | 59,604 | 54,758 | 55,856 | 57,115 | 69,181 | –8.4 | –1.1 | –2.6 |
| Utah | 30,281 | 30,230 | 30,888 | 27,640 | 25,933 | 29,610 | .2 | 3.9 | .2 |
| Virginia | 43,023 | 41,593 | 43,037 | 46,462 | 50,879 | 49,082 | 3.4 | –4.1 | –1.4 |
| Washington | w | w | w | w | w | w | w | w | w |
| West Virginia Total | 203,006 | 217,409 | 204,837 | 201,684 | 191,706 | 162,195 | –6.6 | 1.4 | 2.5 |
| Northern | 50,744 | 54,602 | 56,355 | 59,295 | 60,015 | 60,124 | –7.1 | –4.1 | –1.9 |
| Southern | 152,262 | 162,807 | 148,482 | 142,388 | 131,691 | 102,071 | –6.5 | 3.7 | 4.5 |
| Wyoming | 366,680 | 350,908 | 337,184 | 321,046 | 277,875 | 257,683 | 4.5 | 7.2 | 4.0 |
| **Appalachian Total**[2] | **557,745** | **565,064** | **551,888** | **575,568** | **559,893** | **515,051** | **–1.3** | **–.1** | **.9** |
| **Interior Total**[2] | **193,720** | **207,658** | **205,393** | **223,897** | **225,938** | **244,491** | **–6.7** | **–3.8** | **–2.5** |
| **Western Total**[2] | **574,139** | **551,990** | **541,773** | **521,191** | **476,042** | **451,974** | **4.0** | **4.8** | **2.7** |
| **East of Miss. River** | **689,038** | **705,890** | **694,832** | **735,609** | **720,654** | **674,819** | **–2.4** | **–1.1** | **.2** |
| **West of Miss. River** | **636,566** | **618,823** | **604,222** | **585,047** | **541,219** | **536,697** | **2.9** | **4.1** | **1.9** |
| **U.S. Total** | **1,325,604** | **1,324,712** | **1,299,054** | **1,320,656** | **1,261,873** | **1,211,516** | **.1** | **1.2** | **1.0** |

[1] For 1988, the Form EIA-7A solicited data on ''Daily Productive Capacity.'' To obtain annual productive capacity for a mine in 1988, 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.

* Data round to zero.

**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. 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 17. Capacity Utilization of Coal Mines by State, 1988, 1993-1997

(Percent)

| Coal-Producing State and Region | 1997 | 1996 | 1995 | 1994 | 1993 | 1988[1] |
|---|---|---|---|---|---|---|
| Alabama | 84.05 | 76.57 | 75.52 | 70.19 | 88.46 | 87.03 |
| Alaska | w | w | w | w | w | w |
| Arizona | w | w | w | w | w | w |
| Arkansas | w | – | w | w | w | w |
| California | – | – | – | – | – | w |
| Colorado | 77.39 | 84.85 | 79.27 | 81.41 | 72.84 | 75.74 |
| Illinois | 79.87 | 75.58 | 85.08 | 76.06 | 59.28 | 81.91 |
| Indiana | 95.94 | 83.42 | 73.70 | 79.37 | 66.60 | 74.71 |
| Iowa | – | – | – | w | w | w |
| Kansas | w | w | w | w | w | w |
| Kentucky Total | 79.62 | 80.38 | 75.49 | 75.54 | 76.11 | 91.76 |
| Eastern | 79.05 | 80.07 | 77.71 | 76.70 | 76.15 | 93.62 |
| Western | 81.63 | 81.40 | 68.89 | 71.89 | 76.00 | 86.77 |
| Louisiana | w | w | w | w | w | w |
| Maryland | 84.80 | 82.42 | 82.65 | 83.07 | 85.01 | 70.58 |
| Missouri | 57.36 | 67.85 | 49.88 | 69.35 | w | w |
| Montana | 73.03 | 67.45 | 76.44 | 81.47 | 70.64 | 77.36 |
| New Mexico | 85.51 | 73.61 | 81.85 | 85.47 | 84.74 | 66.51 |
| North Dakota | 90.82 | 92.78 | 87.37 | 89.88 | 87.89 | 74.34 |
| Ohio | 87.07 | 75.88 | 76.55 | 67.87 | 67.94 | 67.68 |
| Oklahoma | 65.87 | 85.16 | 73.14 | 83.98 | 71.95 | 46.75 |
| Pennsylvania Total | 86.46 | 82.53 | 78.81 | 75.89 | 71.79 | 80.44 |
| Anthracite | 80.95 | 82.56 | 67.12 | 74.02 | 68.80 | 89.99 |
| Bituminous | 86.83 | 82.53 | 79.89 | 76.03 | 72.02 | 80.05 |
| Tennessee | 80.26 | 90.32 | 85.51 | 87.27 | 79.73 | 79.89 |
| Texas | 97.64 | 92.55 | 96.21 | 93.72 | 95.54 | 75.57 |
| Utah | 88.09 | 90.97 | 81.48 | 88.27 | 84.22 | 61.34 |
| Virginia | 83.09 | 85.34 | 79.07 | 79.61 | 77.07 | 92.79 |
| Washington | w | w | w | w | w | w |
| West Virginia Total | 85.50 | 78.32 | 79.50 | 80.07 | 67.91 | 89.02 |
| Northern | 84.23 | 83.95 | 81.70 | 83.04 | 56.15 | 88.16 |
| Southern | 85.92 | 76.43 | 78.67 | 78.83 | 73.28 | 89.52 |
| Wyoming | 76.87 | 79.35 | 78.24 | 73.85 | 75.62 | 63.65 |
| **Appalachian Total**[2] | **83.67** | **79.75** | **78.53** | **77.07** | **72.85** | **86.55** |
| **Interior Total**[2] | **88.18** | **83.20** | **82.01** | **80.29** | **73.95** | **78.90** |
| **Western Total**[2] | **78.60** | **79.55** | **79.29** | **78.33** | **77.41** | **68.11** |
| **East of Miss. River** | **83.92** | **79.68** | **78.11** | **76.73** | **71.37** | **85.34** |
| **West of Miss. River** | **80.20** | **80.82** | **80.88** | **79.85** | **79.29** | **69.06** |
| **U.S. Total** | **82.13** | **80.21** | **79.40** | **78.11** | **74.77** | **78.13** |

[1] For 1988, the Form EIA-7A solicited data on ''Daily Productive Capacity.'' To obtain annual productive capacity for a mine in 1988, 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.

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.

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

## Table 18. Production, Productive Capacity, and Capacity Utilization of Coal Mines by State and Mine Type, 1997

(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 | 18,505 | 22,267 | 83.10 | 5,938 | 6,815 | 87.14 | 24,443 | 29,081 | 84.05 |
| Alaska | – | – | – | 1,450 | w | w | 1,450 | w | w |
| Arizona | – | – | – | 11,723 | w | w | 11,723 | w | w |
| Arkansas | – | – | – | 10 | w | w | 10 | w | w |
| Colorado | 17,820 | w | w | 9,628 | w | w | 27,449 | 35,466 | 77.39 |
| Illinois | 34,824 | 44,380 | 78.47 | 6,328 | 7,143 | 88.58 | 41,152 | 51,523 | 79.87 |
| Indiana | 3,530 | w | w | 31,967 | w | w | 35,497 | 36,999 | 95.94 |
| Kansas | – | – | – | 360 | w | w | 360 | w | w |
| Kentucky Total | 96,197 | 120,943 | 79.54 | 59,417 | 74,510 | 79.74 | 155,614 | 195,453 | 79.62 |
| Eastern | 69,823 | 90,931 | 76.79 | 50,877 | 61,750 | 82.39 | 120,700 | 152,681 | 79.05 |
| Western | 26,374 | 30,012 | 87.88 | 8,540 | 12,760 | 66.93 | 34,914 | 42,771 | 81.63 |
| Louisiana | – | – | – | 3,545 | w | w | 3,545 | w | w |
| Maryland | 3,301 | w | w | 840 | w | w | 4,141 | 4,884 | 84.80 |
| Missouri | – | – | – | 396 | 690 | 57.36 | 396 | 690 | 57.36 |
| Montana | – | – | – | 40,997 | 56,140 | 73.03 | 40,997 | 56,140 | 73.03 |
| New Mexico | – | – | – | 27,025 | 31,604 | 85.51 | 27,025 | 31,604 | 85.51 |
| North Dakota | – | – | – | 29,579 | 32,568 | 90.82 | 29,579 | 32,568 | 90.82 |
| Ohio | 16,949 | 18,078 | 93.76 | 12,171 | 15,365 | 79.21 | 29,120 | 33,443 | 87.07 |
| Oklahoma | 212 | w | w | 1,403 | w | w | 1,614 | 2,451 | 65.87 |
| Pennsylvania Total | 54,733 | 61,498 | 89.00 | 20,946 | 26,030 | 80.47 | 75,678 | 87,527 | 86.46 |
| Anthracite | 348 | 528 | 65.94 | 4,107 | 4,975 | 82.54 | 4,455 | 5,504 | 80.95 |
| Bituminous | 54,385 | 60,970 | 89.20 | 16,839 | 21,054 | 79.98 | 71,223 | 82,024 | 86.83 |
| Tennessee | 1,390 | w | w | 1,900 | w | w | 3,290 | 4,100 | 80.26 |
| Texas | – | – | – | 53,328 | 54,614 | 97.64 | 53,328 | 54,614 | 97.64 |
| Utah | 26,674 | 30,281 | 88.09 | – | – | – | 26,674 | 30,281 | 88.09 |
| Virginia | 26,862 | 32,716 | 82.11 | 8,886 | 10,306 | 86.22 | 35,749 | 43,023 | 83.09 |
| Washington | – | – | – | 4,495 | w | w | 4,495 | w | w |
| West Virginia Total | 116,437 | 138,689 | 83.96 | 57,130 | 64,317 | 88.82 | 173,566 | 203,006 | 85.50 |
| Northern | 37,039 | 42,981 | 86.17 | 5,703 | 7,763 | 73.46 | 42,741 | 50,744 | 84.23 |
| Southern | 79,398 | 95,708 | 82.96 | 51,427 | 56,555 | 90.93 | 130,825 | 152,262 | 85.92 |
| Wyoming | 2,846 | w | w | 279,035 | w | w | 281,881 | 366,680 | 76.87 |
| **Appalachian Total**[1] | **307,999** | **370,005** | **83.24** | **158,689** | **187,740** | **84.53** | **466,688** | **557,745** | **83.67** |
| **Interior Total**[1] | **64,941** | **78,384** | **82.85** | **105,875** | **115,336** | **91.80** | **170,816** | **193,720** | **88.18** |
| **Western Total**[1] | **47,340** | **58,927** | **80.34** | **403,933** | **515,212** | **78.40** | **451,273** | **574,139** | **78.60** |
| **East of Miss. River** | **372,728** | **448,146** | **83.17** | **205,523** | **240,893** | **85.32** | **578,252** | **689,038** | **83.92** |
| **West of Miss. River** | **47,552** | **59,170** | **80.37** | **462,973** | **577,395** | **80.18** | **510,525** | **636,566** | **80.20** |
| **Unknown**[2] | **377** | **NA** | **NA** | **778** | **NA** | **NA** | **1,155** | **NA** | **NA** |
| **U.S. Total** | **420,657** | **507,316** | **82.84** | **669,274** | **818,288** | **81.69** | **1,089,932** | **1,325,604** | **82.13** |

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 19. Productive Capacity and Capacity Utilization of Underground Coal Mines by State and Mining Method, 1997

(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 | 5,344 | 87.85 | – | – | 15,104 | 80.16 | w | w |
| Colorado | w | w | – | – | 14,962 | 78.81 | w | w |
| Illinois | 33,407 | 74.89 | w | w | 10,951 | 89.35 | – | – |
| Indiana | w | w | – | – | – | – | – | – |
| Kentucky Total | 96,050 | 79.28 | 11,402 | 83.17 | 13,007 | 77.59 | 483 | 98.27 |
| Eastern | w | w | 10,298 | 81.37 | 6,248 | 62.06 | 483 | 98.27 |
| Western | w | w | w | w | 6,759 | 91.95 | – | – |
| Maryland | w | w | – | – | w | w | – | – |
| Ohio | 5,094 | 83.77 | – | – | 12,984 | 97.68 | – | – |
| Oklahoma | w | w | – | – | – | – | – | – |
| Pennsylvania Total | 22,224 | 82.34 | 917 | 74.67 | 38,145 | 93.60 | w | w |
| Anthracite | w | w | 127 | 89.26 | – | – | w | w |
| Bituminous | w | w | 790 | 72.32 | 38,145 | 93.60 | – | – |
| Tennessee | w | w | w | w | – | – | – | – |
| Utah | w | w | w | w | 20,874 | 87.81 | – | – |
| Virginia | w | w | 7,741 | 76.54 | 8,490 | 79.90 | – | – |
| West Virginia Total | 87,984 | 83.24 | 6,955 | 74.25 | 43,750 | 86.94 | – | – |
| Northern | 13,588 | 82.32 | 1,768 | 88.37 | 27,625 | 87.93 | – | – |
| Southern | 74,395 | 83.40 | 5,187 | 69.44 | 16,125 | 85.25 | – | – |
| Wyoming | 258 | 77.33 | w | w | w | w | – | – |
| **Appalachian Total**[3] | **213,890** | **81.24** | **26,329** | **77.24** | **127,271** | **87.75** | **2,514** | **88.44** |
| **Interior Total**[3] | **59,547** | **80.30** | **w** | **w** | **17,710** | **90.34** | – | – |
| **Western Total**[3] | **18,942** | **73.16** | **w** | **w** | **39,258** | **83.46** | **146** | **99.34** |
| **East of Miss. River** | **273,194** | **81.03** | **w** | **w** | **144,981** | **88.07** | **2,514** | **88.44** |
| **West of Miss. River** | **19,185** | **73.34** | **w** | **w** | **39,258** | **83.46** | **146** | **99.34** |
| **U.S. Total** | **292,380** | **80.52** | **28,037** | **78.59** | **184,240** | **87.09** | **2,660** | **89.04** |

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 20. Productive Capacity and Capacity Utilization of Coal Mines by State and Coal Rank, 1997

(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 | 29,081 | 84.05 | – | – | – | – | – | – |
| Alaska | – | – | w | w | – | – | – | – |
| Arizona | w | w | – | – | – | – | – | – |
| Arkansas | – | – | – | – | – | – | w | w |
| Colorado | 25,366 | 71.78 | 10,100 | 91.50 | – | – | – | – |
| Illinois | 51,523 | 79.87 | – | – | – | – | – | – |
| Indiana | 36,999 | 95.94 | – | – | – | – | – | – |
| Kansas | w | w | – | – | – | – | – | – |
| Kentucky Total | 195,453 | 79.62 | – | – | – | – | – | – |
| Eastern | 152,681 | 79.05 | – | – | – | – | – | – |
| Western | 42,771 | 81.63 | – | – | – | – | – | – |
| Louisiana | – | – | – | – | w | w | – | – |
| Maryland | 4,884 | 84.80 | – | – | – | – | – | – |
| Missouri | 690 | 57.36 | – | – | – | – | – | – |
| Montana | – | – | w | w | w | w | – | – |
| New Mexico | w | w | w | w | – | – | – | – |
| North Dakota | – | – | – | – | 32,568 | 90.82 | – | – |
| Ohio | 33,443 | 87.07 | – | – | – | – | – | – |
| Oklahoma | 2,451 | 65.87 | – | – | – | – | – | – |
| Pennsylvania Total | 82,024 | 86.83 | – | – | – | – | 5,504 | 80.95 |
| Anthracite | – | – | – | – | – | – | 5,504 | 80.95 |
| Bituminous | 82,024 | 86.83 | – | – | – | – | – | – |
| Tennessee | 4,100 | 80.26 | – | – | – | – | – | – |
| Texas | w | w | – | – | w | w | – | – |
| Utah | 30,281 | 88.09 | – | – | – | – | – | – |
| Virginia | 43,023 | 83.09 | – | – | – | – | – | – |
| Washington | 200 | 33.73 | 5,000 | 88.55 | – | – | – | – |
| West Virginia Total | 203,006 | 85.50 | – | – | – | – | – | – |
| Northern | 50,744 | 84.23 | – | – | – | – | – | – |
| Southern | 152,262 | 85.92 | – | – | – | – | – | – |
| Wyoming | w | w | w | w | – | – | – | – |
| **Appalachian Total**[1] | **552,241** | **83.70** | – | – | – | – | **5,504** | **80.95** |
| **Interior Total**[1] | **w** | **w** | – | – | **w** | **w** | **w** | **w** |
| **Western Total**[1] | **w** | **w** | **445,794** | **77.40** | **w** | **w** | – | – |
| **East of Miss. River** | **683,535** | **83.95** | – | – | – | – | **5,504** | **80.95** |
| **West of Miss. River** | **99,633** | **79.40** | **445,794** | **77.40** | **91,128** | **94.75** | **w** | **w** |
| **U.S. Total** | **783,168** | **83.37** | **445,794** | **77.40** | **91,128** | **94.75** | [2] **5,504** | [2] **80.95** |

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 21. Productive Capacity and Capacity Utilization of Coal Mines by State and Mine Production Range, 1997

(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 | 20,922 | w | 2,262 | 1,042 | 1,432 | 86.66 | w | 97.55 | 82.82 | 63.77 |
| Alaska | w | – | – | – | – | w | – | – | – | – |
| Arizona | w | – | – | – | – | w | – | – | – | – |
| Arkansas | – | – | – | – | w | – | – | – | – | w |
| Colorado | 31,001 | w | 1,465 | – | 1,900 | 81.71 | w | 86.34 | – | 5.12 |
| Illinois | 41,871 | 3,990 | w | w | 4,696 | 88.60 | 77.77 | w | w | 1.86 |
| Indiana | 24,981 | 7,521 | 3,608 | 730 | 159 | 99.58 | 93.09 | 84.42 | 70.01 | 39.85 |
| Kansas | – | – | – | w | w | – | – | – | w | w |
| Kentucky Total | 69,562 | 48,151 | 41,108 | 19,321 | 17,311 | 87.64 | 85.97 | 78.98 | 64.94 | 47.59 |
| Eastern | 42,648 | 39,205 | 37,687 | 17,901 | 15,240 | 86.22 | 87.72 | 79.00 | 66.00 | 52.18 |
| Western | 26,914 | 8,947 | 3,420 | 1,420 | 2,070 | 89.89 | 78.32 | 78.79 | 51.55 | 13.86 |
| Louisiana | w | – | – | – | – | w | – | – | – | – |
| Maryland | w | – | w | w | 875 | w | – | w | w | 62.82 |
| Missouri | – | – | w | – | w | – | – | w | – | w |
| Montana | 55,694 | – | w | – | – | 73.18 | – | w | – | – |
| New Mexico | 31,604 | – | – | – | – | 85.51 | – | – | – | – |
| North Dakota | 32,568 | – | – | – | – | 90.82 | – | – | – | – |
| Ohio | 18,605 | 3,396 | 7,544 | 2,216 | 1,683 | 93.87 | 85.48 | 73.81 | 83.19 | 79.74 |
| Oklahoma | – | – | 1,460 | w | w | – | – | 64.60 | w | w |
| Pennsylvania Total | 49,512 | 6,740 | 13,751 | 7,829 | 9,695 | 91.95 | 99.85 | 81.03 | 74.94 | 66.12 |
| Anthracite | – | w | 1,390 | 910 | 2,983 | – | w | 84.24 | 87.63 | 61.60 |
| Bituminous | 49,512 | 6,520 | 12,361 | 6,919 | 6,712 | 91.95 | 93.27 | 80.67 | 73.27 | 68.14 |
| Tennessee | – | w | 2,025 | – | 1,496 | – | w | 91.13 | – | 57.93 |
| Texas | 53,514 | – | w | – | – | 98.45 | – | w | – | – |
| Utah | 28,200 | w | w | – | – | 88.19 | w | w | – | – |
| Virginia | 9,760 | 6,645 | 14,363 | 5,694 | 6,560 | 80.79 | 93.84 | 89.62 | 83.84 | 60.71 |
| Washington | w | – | – | – | w | w | – | – | – | w |
| West Virginia Total | 117,133 | 36,997 | 28,094 | 12,580 | 8,202 | 91.15 | 85.00 | 83.33 | 58.13 | 56.44 |
| Northern | 35,247 | 7,013 | 4,083 | 2,338 | 2,063 | 92.32 | 53.16 | 83.07 | 79.51 | 59.29 |
| Southern | 81,887 | 29,984 | 24,011 | 10,241 | 6,139 | 90.65 | 92.45 | 83.37 | 53.25 | 55.48 |
| Wyoming | 358,080 | w | w | – | w | 78.02 | w | w | – | w |
| **Appalachian Total**[1] | **261,580** | **96,985** | **106,627** | **47,369** | **45,184** | **90.02** | **87.24** | **81.94** | **68.78** | **58.97** |
| **Interior Total**[1] | **151,380** | **20,458** | **10,675** | **3,151** | **8,057** | **94.06** | **83.64** | **78.17** | **65.57** | **11.15** |
| **Western Total**[1] | **558,346** | **10,181** | **3,412** | – | **2,200** | **79.62** | **43.89** | **60.46** | – | **9.50** |
| **East of Miss. River** | **355,346** | **117,442** | **114,381** | **49,760** | **52,109** | **90.52** | **86.62** | **82.04** | **68.26** | **51.98** |
| **West of Miss. River** | **615,960** | **10,181** | **6,332** | **760** | **3,332** | **81.30** | **43.89** | **62.24** | **89.89** | **20.09** |
| **U.S. Total** | **971,306** | **127,623** | **120,713** | **50,520** | **55,441** | **84.67** | **83.21** | **81.00** | **68.58** | **50.06** |

[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 22. Productive Capacity and Productivity of Coal Mines by State and Capacity Utilization Range, 1997

(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 | 13,947 | 7,987 | w | w | 2,730 | 29,081 | 2.44 | 2.41 | 3.67 | 1.38 | 2.00 | 2.39 |
| Alaska | – | – | – | – | w | w | – | – | – | – | 6.41 | 6.41 |
| Arizona | – | w | – | – | – | w | – | 7.04 | – | – | – | 6.79 |
| Arkansas | w | – | – | – | – | w | 1.94 | – | – | – | – | 1.94 |
| Colorado | 17,766 | w | – | w | 7,300 | 35,466 | 7.88 | 9.87 | – | 4.04 | 4.29 | 7.68 |
| Illinois | 16,533 | 16,100 | 13,000 | – | 5,890 | 51,523 | 4.82 | 4.29 | 4.10 | – | 1.10 | 4.20 |
| Indiana | 34,275 | – | w | – | w | 36,999 | 5.37 | – | 7.24 | – | 3.71 | 5.33 |
| Kansas | – | w | – | – | w | w | – | 6.85 | – | – | 1.66 | 3.82 |
| Kentucky Total | 100,049 | 28,660 | 16,362 | 8,507 | 41,875 | 195,453 | 4.52 | 4.56 | 4.45 | 3.48 | 1.88 | 3.94 |
| Eastern | 79,932 | 19,325 | w | w | 35,525 | 152,681 | 4.39 | 4.56 | 4.32 | 3.56 | 1.90 | 3.83 |
| Western | 20,117 | 9,334 | w | w | 6,350 | 42,771 | 5.09 | 4.56 | 4.77 | 3.24 | 1.74 | 4.38 |
| Louisiana | w | w | – | – | – | w | 12.66 | 10.38 | – | – | – | 10.94 |
| Maryland | 3,434 | w | w | – | w | 4,884 | 5.15 | 1.49 | 3.61 | – | 2.29 | 3.93 |
| Missouri | w | w | – | – | w | 690 | 5.31 | 4.10 | – | – | 1.56 | 3.19 |
| Montana | 18,300 | w | – | w | 20,580 | 56,140 | 25.51 | 16.47 | – | 33.74 | 20.09 | 23.56 |
| New Mexico | w | w | – | – | – | w | 5.85 | 9.65 | – | – | – | 9.37 |
| North Dakota | 23,600 | w | – | – | w | 32,568 | 19.05 | 16.66 | – | – | 11.43 | 17.82 |
| Ohio | 20,578 | 3,584 | 2,187 | 4,789 | 2,305 | 33,443 | 4.15 | 4.26 | 5.29 | 4.02 | 1.88 | 4.02 |
| Oklahoma | w | w | w | – | w | 2,451 | 2.86 | 2.84 | 2.21 | – | 1.96 | 2.51 |
| Pennsylvania Total | 61,568 | 3,953 | 8,992 | 4,355 | 8,658 | 87,527 | 4.23 | 3.14 | 3.69 | 4.60 | .96 | 3.63 |
| Anthracite | 2,662 | 208 | w | w | 1,379 | 5,504 | 3.32 | 1.46 | 1.20 | 5.37 | .29 | 1.76 |
| Bituminous | 58,906 | 3,745 | w | w | 7,279 | 82,024 | 4.30 | 3.35 | 4.18 | 4.46 | 1.29 | 3.89 |
| Tennessee | 1,917 | w | 558 | w | 950 | 4,100 | 3.81 | 2.95 | 2.27 | 2.43 | .80 | 2.37 |
| Texas | 51,314 | – | w | – | w | 54,614 | 10.38 | – | 15.00 | – | 3.56 | 10.24 |
| Utah | 21,781 | w | – | w | – | 30,281 | 7.37 | 3.92 | – | 4.56 | – | 6.34 |
| Virginia | 27,641 | 2,585 | 1,691 | 2,054 | 9,052 | 43,023 | 3.35 | 2.97 | 2.96 | 2.24 | 1.18 | 2.77 |
| Washington | w | w | – | – | w | w | 3.66 | 3.78 | – | – | .97 | 3.59 |
| West Virginia Total | 129,168 | 27,915 | 15,921 | 6,137 | 23,865 | 203,006 | 5.29 | 4.72 | 4.23 | 5.22 | 1.29 | 4.46 |
| Northern | 29,168 | 9,653 | 5,079 | – | 6,844 | 50,744 | 4.98 | 4.23 | 4.94 | – | 2.24 | 4.48 |
| Southern | 100,000 | 18,262 | 10,842 | 6,137 | 17,021 | 152,262 | 5.39 | 5.04 | 3.97 | 5.22 | 1.08 | 4.46 |
| Wyoming | 123,800 | 122,800 | 26,680 | 30,000 | 63,400 | 366,680 | 43.35 | 30.36 | 33.49 | 44.18 | 21.76 | 34.55 |
| **Appalachian Total**[1] | **338,186** | **66,339** | **43,341** | **25,820** | **84,059** | **557,745** | **4.38** | **3.93** | **4.02** | **3.48** | **1.45** | **3.76** |
| **Interior Total**[1] | **123,826** | **29,788** | **21,180** | **2,000** | **16,926** | **193,720** | **6.54** | **4.60** | **4.59** | **3.24** | **1.90** | **5.54** |
| **Western Total**[1] | **207,840** | **190,570** | **26,680** | **50,600** | **98,448** | **574,139** | **19.49** | **15.82** | **33.49** | **17.55** | **14.87** | **17.75** |
| **East of Miss. River** | **409,111** | **91,773** | **61,961** | **27,820** | **98,373** | **689,038** | **4.50** | **4.05** | **4.11** | **3.46** | **1.48** | **3.89** |
| **West of Miss. River** | **260,741** | **194,924** | **29,240** | **50,600** | **101,060** | **636,566** | **16.35** | **15.32** | **26.52** | **17.55** | **13.15** | **16.04** |
| **U.S. Total** | **669,852** | **286,697** | **91,201** | **78,420** | **199,434** | **1,325,604** | **6.24** | **8.02** | **5.67** | **7.28** | **2.85** | **6.04** |

[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 23. Productive Capacity and Capacity Utilization of Coal Mines by State and Recoverable Reserves Range, 1997

(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 | w | w | w | w | 11,103 | 83.02 | 29,081 | 84.05 |
| Alaska | w | w | – | – | – | – | w | w |
| Arizona | w | w | – | – | – | – | w | w |
| Arkansas | – | – | – | – | w | w | w | w |
| Colorado | w | w | 14,131 | 57.29 | w | w | 35,466 | 77.39 |
| Illinois | 14,133 | 84.68 | 25,540 | 87.96 | 11,850 | 56.69 | 51,523 | 79.87 |
| Indiana | – | – | 22,582 | 97.92 | 14,417 | 92.85 | 36,999 | 95.94 |
| Kansas | – | – | – | – | w | w | w | w |
| Kentucky Total | 7,773 | 93.54 | 45,263 | 85.17 | 142,417 | 77.09 | 195,453 | 79.62 |
| Eastern | w | w | w | w | 118,048 | 77.54 | 152,681 | 79.05 |
| Western | w | w | w | w | 24,368 | 74.92 | 42,771 | 81.63 |
| Louisiana | w | w | w | w | – | – | w | w |
| Maryland | – | – | w | w | w | w | 4,884 | 84.80 |
| Missouri | – | – | – | – | 690 | 57.36 | 690 | 57.36 |
| Montana | 39,634 | 66.76 | 16,506 | 88.08 | – | – | 56,140 | 73.03 |
| New Mexico | w | w | w | w | – | – | 31,604 | 85.51 |
| North Dakota | 32,568 | 90.82 | – | – | – | – | 32,568 | 90.82 |
| Ohio | w | w | w | w | 15,589 | 79.85 | 33,443 | 87.07 |
| Oklahoma | – | – | w | w | w | w | 2,451 | 65.87 |
| Pennsylvania Total | 33,584 | 94.88 | 17,767 | 83.17 | 36,176 | 80.26 | 87,527 | 86.46 |
| Anthracite | – | – | w | w | w | w | 5,504 | 80.95 |
| Bituminous | 33,584 | 94.88 | w | w | w | w | 82,024 | 86.83 |
| Tennessee | – | – | w | w | w | w | 4,100 | 80.26 |
| Texas | 51,295 | 98.38 | w | w | w | w | 54,614 | 97.64 |
| Utah | w | w | 15,500 | 96.62 | w | w | 30,281 | 88.09 |
| Virginia | – | – | 8,194 | 72.41 | 34,829 | 85.61 | 43,023 | 83.09 |
| Washington | – | – | w | w | w | w | w | w |
| West Virginia Total | 41,509 | 93.40 | 52,247 | 86.94 | 109,250 | 81.81 | 203,006 | 85.50 |
| Northern | 22,450 | 89.79 | 13,639 | 75.98 | 14,655 | 83.38 | 50,744 | 84.23 |
| Southern | 19,059 | 97.66 | 38,608 | 90.81 | 94,595 | 81.56 | 152,262 | 85.92 |
| Wyoming | 351,650 | 77.38 | – | – | 15,030 | 65.13 | 366,680 | 76.87 |
| **Appalachian Total**[1] | **97,420** | **94.28** | **130,526** | **83.83** | **329,798** | **80.48** | **557,745** | **83.67** |
| **Interior Total**[1] | **75,001** | **94.81** | **63,515** | **92.16** | **55,204** | **74.58** | **193,720** | **88.18** |
| **Western Total**[1] | **499,152** | **78.51** | **55,291** | **82.25** | **19,696** | **70.72** | **574,139** | **78.60** |
| **East of Miss. River** | **118,126** | **93.08** | **190,479** | **86.37** | **380,433** | **79.85** | **689,038** | **83.92** |
| **West of Miss. River** | **553,447** | **80.38** | **58,854** | **83.12** | **24,265** | **68.98** | **636,566** | **80.20** |
| **U.S. Total** | **671,573** | **82.62** | **249,332** | **85.60** | **404,698** | **79.20** | **1,325,604** | **82.13** |

[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 24. Productive Capacity and Capacity Utilization of Coal Mines by State, Mine Type, and Union Type, 1997

(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** | **20,337** | **83.70** | – | – | **8,745** | **84.88** | **29,081** | **84.05** |
| Underground | 18,112 | 82.37 | – | – | 4,155 | 86.30 | 22,267 | 83.10 |
| Surface | 2,225 | 94.47 | – | – | 4,590 | 83.59 | 6,815 | 87.14 |
| **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** | **w** | **w** | **w** | **w** | **25,966** | **84.15** | **35,466** | **77.39** |
| Underground | w | w | – | – | w | w | 24,966 | 71.38 |
| Surface | w | w | w | w | w | w | 10,500 | 91.70 |
| **Illinois** | **33,914** | **79.05** | **w** | **w** | **w** | **w** | **51,523** | **79.87** |
| Underground | 28,827 | 76.75 | w | w | w | w | 44,380 | 78.47 |
| Surface | 5,087 | 92.07 | w | w | w | w | 7,143 | 88.58 |
| **Indiana** | **13,464** | **99.56** | – | – | **23,534** | **93.87** | **36,999** | **95.94** |
| Underground | w | w | – | – | w | w | 3,749 | 94.16 |
| Surface | w | w | – | – | w | w | 33,249 | 96.14 |
| **Kansas** | **w** | **w** | – | – | **w** | **w** | **w** | **w** |
| Surface | w | w | – | – | w | w | w | w |
| **Kentucky Total** | **w** | **w** | **w** | **w** | **169,038** | **79.50** | **195,453** | **79.62** |
| Underground | w | w | w | w | 100,827 | 78.95 | 120,943 | 79.54 |
| Surface | 6,299 | 73.59 | – | – | 68,211 | 80.31 | 74,510 | 79.74 |
| **Eastern** | **w** | **w** | **w** | **w** | **139,891** | **78.70** | **152,681** | **79.05** |
| Underground | w | w | w | w | 83,089 | 76.12 | 90,931 | 76.79 |
| Surface | 4,949 | 81.54 | – | – | 56,801 | 82.47 | 61,750 | 82.39 |
| **Western** | **13,624** | **77.95** | – | – | **29,147** | **83.35** | **42,771** | **81.63** |
| Underground | 12,274 | 81.64 | – | – | 17,737 | 92.20 | 30,012 | 87.88 |
| Surface | 1,350 | 44.45 | – | – | 11,410 | 69.59 | 12,760 | 66.93 |
| **Louisiana** | – | – | – | – | **w** | **w** | **w** | **w** |
| Surface | – | – | – | – | w | w | w | w |
| **Maryland** | – | – | – | – | **4,884** | **84.80** | **4,884** | **84.80** |
| Underground | – | – | – | – | w | w | w | w |
| Surface | – | – | – | – | w | w | w | w |
| **Missouri** | – | – | – | – | **690** | **57.36** | **690** | **57.36** |
| Surface | – | – | – | – | 690 | 57.36 | 690 | 57.36 |
| **Montana** | **w** | **w** | **w** | **w** | **w** | **w** | **56,140** | **73.03** |
| Surface | w | w | w | w | w | w | 56,140 | 73.03 |
| **New Mexico** | **w** | **w** | **w** | **w** | **w** | **w** | **31,604** | **85.51** |
| Surface | w | w | w | w | w | w | 31,604 | 85.51 |
| **North Dakota** | **w** | **w** | **w** | **w** | **w** | **w** | **32,568** | **90.82** |
| Surface | w | w | w | w | w | w | 32,568 | 90.82 |
| **Ohio** | **16,105** | **93.97** | – | – | **17,339** | **80.67** | **33,443** | **87.07** |
| Underground | 15,105 | 97.65 | – | – | 2,973 | 73.98 | 18,078 | 93.76 |
| Surface | 1,000 | 38.31 | – | – | 14,365 | 82.06 | 15,365 | 79.21 |
| **Oklahoma** | – | – | – | – | **2,451** | **65.87** | **2,451** | **65.87** |
| Underground | – | – | – | – | w | w | w | w |
| Surface | – | – | – | – | w | w | w | w |
| **Pennsylvania Total** | **36,806** | **90.64** | **w** | **w** | **50,617** | **83.54** | **87,527** | **86.46** |
| Underground | 33,486 | 92.98 | – | – | 28,012 | 84.24 | 61,498 | 89.00 |
| Surface | 3,320 | 67.04 | w | w | 22,606 | 82.67 | 26,030 | 80.47 |
| **Anthracite** | **w** | **w** | **w** | **w** | **4,008** | **88.11** | **5,504** | **80.95** |
| Underground | – | – | – | – | w | w | 528 | 65.94 |
| Surface | w | w | w | w | w | w | 4,975 | 82.54 |
| **Bituminous** | **w** | **w** | – | – | **w** | **w** | **82,024** | **86.83** |
| Underground | w | w | – | – | w | w | 60,970 | 89.20 |
| Surface | w | w | – | – | w | w | 21,054 | 79.98 |
| **Tennessee** | – | – | – | – | **4,100** | **80.26** | **4,100** | **80.26** |
| Underground | – | – | – | – | 1,926 | 72.18 | 1,926 | 72.18 |
| Surface | – | – | – | – | 2,174 | 87.43 | 2,174 | 87.43 |
| **Texas** | – | – | **35,181** | **99.03** | **19,433** | **95.13** | **54,614** | **97.64** |
| Surface | – | – | 35,181 | 99.03 | 19,433 | 95.13 | 54,614 | 97.64 |
| **Utah** | **w** | **w** | – | – | **w** | **w** | **30,281** | **88.09** |
| Underground | w | w | – | – | w | w | 30,281 | 88.09 |
| **Virginia** | **9,460** | **68.65** | **1,650** | **85.64** | **31,912** | **87.24** | **43,023** | **83.09** |
| Underground | w | w | w | w | 22,606 | 87.26 | 32,716 | 82.11 |
| Surface | w | w | w | w | 9,306 | 87.21 | 10,306 | 86.22 |

See footnotes at end of table.

## Table 24. Productive Capacity and Capacity Utilization of Coal Mines by State, Mine Type, and Union Type, 1997 (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) |
| **Washington** | – | – | **w** | **w** | **w** | **w** | **w** | **w** |
| Surface | – | – | w | w | w | w | w | w |
| **West Virginia Total** | **103,418** | **86.92** | – | – | **99,588** | **84.02** | **203,006** | **85.50** |
| Underground | 75,425 | 84.89 | – | – | 63,264 | 82.84 | 138,689 | 83.96 |
| Surface | 27,993 | 92.40 | – | – | 36,324 | 86.07 | 64,317 | 88.82 |
| **Northern** | **31,764** | **88.68** | – | – | **18,980** | **76.78** | **50,744** | **84.23** |
| Underground | 31,764 | 88.68 | – | – | 11,217 | 79.08 | 42,981 | 86.17 |
| Surface | – | – | – | – | 7,763 | 73.46 | 7,763 | 73.46 |
| **Southern** | **71,654** | **86.14** | – | – | **80,609** | **85.72** | **152,262** | **85.92** |
| Underground | 43,661 | 82.13 | – | – | 52,047 | 83.65 | 95,708 | 82.96 |
| Surface | 27,993 | 92.40 | – | – | 28,562 | 89.49 | 56,555 | 90.93 |
| **Wyoming** | **w** | **w** | **w** | **w** | **349,580** | **76.43** | **366,680** | **76.87** |
| Underground | – | – | – | – | w | w | w | w |
| Surface | w | w | w | w | w | w | w | w |
| **Appalachian Total**[1] | **198,405** | **86.69** | **2,265** | **86.14** | **357,076** | **81.98** | **557,745** | **83.67** |
| Underground | 158,668 | 86.54 | 1,411 | 86.93 | 209,925 | 80.72 | 370,005 | 83.24 |
| Surface | 39,736 | 87.30 | 854 | 84.84 | 147,150 | 83.77 | 187,740 | 84.53 |
| **Interior Total**[1] | **61,255** | **83.14** | **39,951** | **97.18** | **92,514** | **87.63** | **193,720** | **88.18** |
| Underground | 41,284 | 78.31 | 3,600 | 83.23 | 33,501 | 88.41 | 78,384 | 82.85 |
| Surface | 19,972 | 93.12 | 36,351 | 98.56 | 59,013 | 87.19 | 115,336 | 91.80 |
| **Western Total**[1] | **68,398** | **80.11** | **66,794** | **79.02** | **438,947** | **78.30** | **574,139** | **78.60** |
| Underground | 13,680 | 72.53 | – | – | 45,247 | 82.70 | 58,927 | 80.34 |
| Surface | 54,718 | 82.01 | 66,794 | 79.02 | 393,700 | 77.80 | 515,212 | 78.40 |
| **East of Miss. River** | **259,408** | **85.90** | **7,035** | **84.34** | **422,596** | **82.70** | **689,038** | **83.92** |
| Underground | 199,952 | 84.84 | 5,011 | 84.27 | 243,183 | 81.78 | 448,146 | 83.17 |
| Surface | 59,456 | 89.47 | 2,024 | 84.50 | 179,413 | 83.95 | 240,893 | 85.32 |
| **West of Miss. River** | **68,650** | **79.95** | **101,975** | **85.92** | **465,941** | **78.98** | **636,566** | **80.20** |
| Underground | 13,680 | 72.53 | – | – | 45,491 | 82.72 | 59,170 | 80.37 |
| Surface | 54,970 | 81.80 | 101,975 | 85.92 | 420,450 | 78.58 | 577,395 | 80.18 |
| **U.S. Total** | **328,057** | **84.66** | **109,010** | **85.82** | **888,537** | **80.75** | **1,325,604** | **82.13** |
| Underground | 213,632 | 84.05 | 5,011 | 84.27 | 288,673 | 81.92 | 507,316 | 82.84 |
| Surface | 114,426 | 85.78 | 103,999 | 85.90 | 599,863 | 80.19 | 818,288 | 81.69 |

[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.''

**Figure 1. Recoverable Coal Reserves at Producing U.S. Mines by Mine Type and by Region, 1988 - 1997**

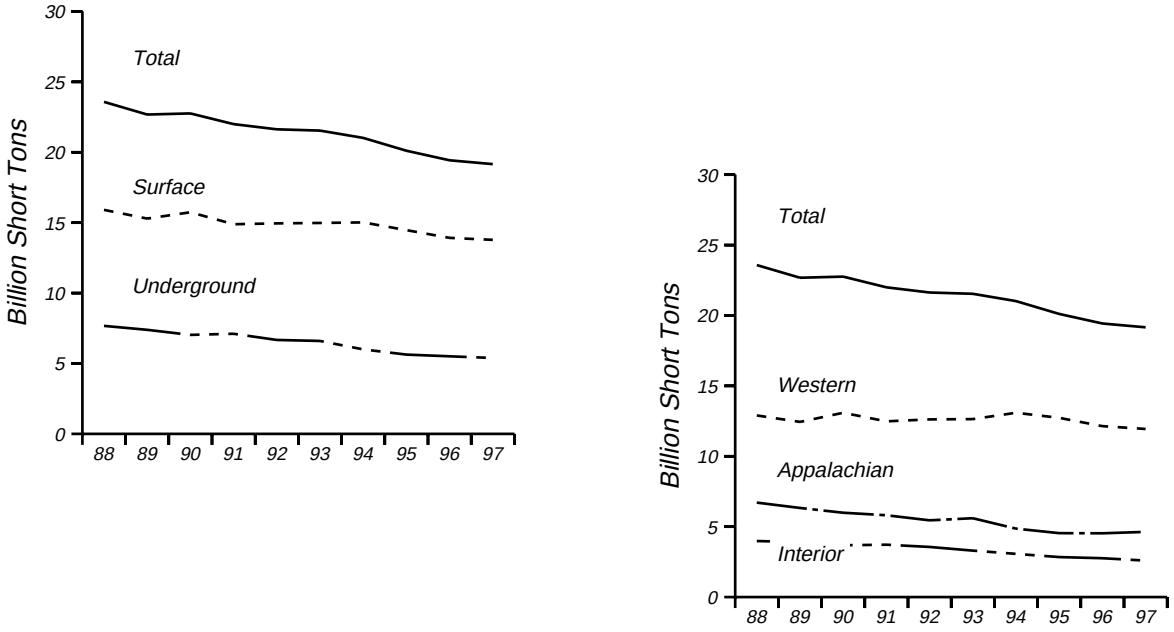
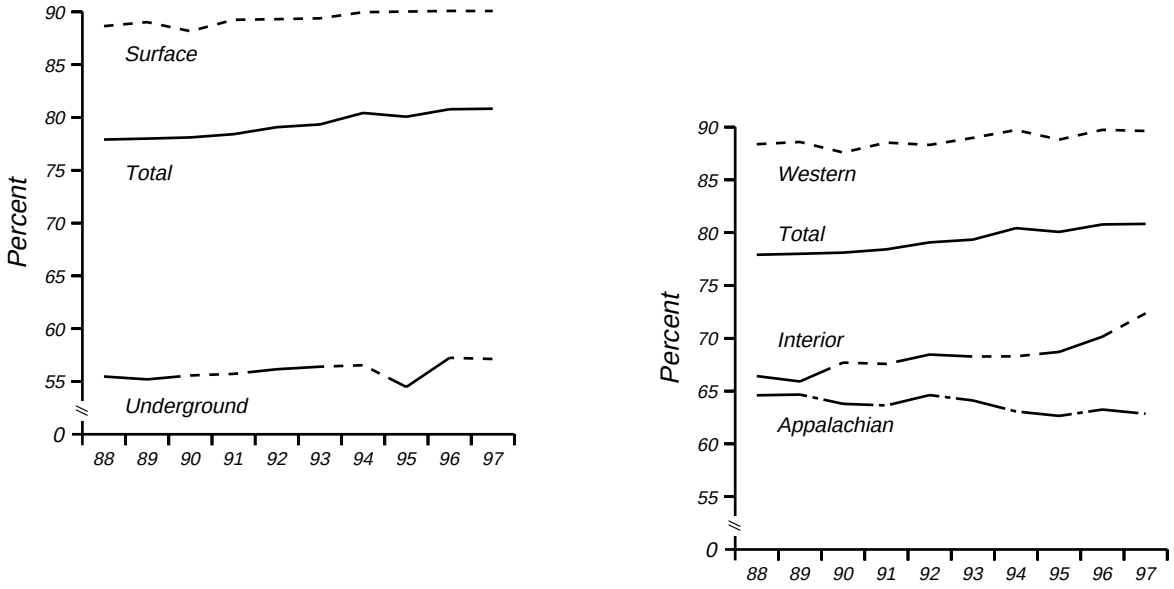



**Figure 2. Average Recovery Percentage at Producing U.S. Coal Mines by Mine Type and by Region, 1988 - 1997**




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. Recoverable Coal Reserves at Producing Mines by State, 1988, 1993-1997
(Million Short Tons)

| Coal-Producing State and Region | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| Alabama | 374 | 452 | 510 | 457 | 427 | 511 | –17.1 | –3.2 | –3.4 |
| 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 | – | – | – |
| California | – | – | – | – | – | w | – | – | – |
| Colorado | 568 | 642 | 692 | 676 | 609 | 652 | –11.5 | –1.7 | –1.5 |
| Illinois | 745 | 891 | 882 | 963 | 1,064 | 1,350 | –16.4 | –8.5 | –6.4 |
| Indiana | 393 | 386 | 324 | 304 | 379 | 455 | 1.9 | .9 | –1.6 |
| Iowa | – | – | – | w | w | w | – | – | – |
| Kansas | w | w | w | w | w | w | w | w | w |
| Kentucky Total | 1,331 | 1,255 | 1,279 | 1,365 | 1,828 | 1,729 | 6.0 | –7.6 | –2.9 |
| Eastern | 965 | 818 | 763 | 809 | 1,347 | 1,122 | 17.9 | –8.0 | –1.7 |
| Western | 366 | 437 | 516 | 556 | 481 | 607 | –16.3 | –6.6 | –5.5 |
| Louisiana | w | w | w | w | w | w | w | w | w |
| Maryland | 68 | 71 | 58 | 89 | 66 | 89 | –4.6 | .6 | –3.0 |
| Missouri | 1 | 3 | 2 | 12 | w | w | –60.9 | w | w |
| Montana | 1,168 | 1,309 | 1,251 | 1,283 | 1,285 | 1,573 | –10.8 | –2.3 | –3.3 |
| New Mexico | 1,415 | 1,436 | 1,480 | 1,458 | 1,473 | 1,590 | –1.5 | –1.0 | –1.3 |
| North Dakota | 1,211 | 1,301 | 1,668 | 1,695 | 1,411 | 1,393 | –6.9 | –3.8 | –1.5 |
| Ohio | 318 | 415 | 468 | 479 | 520 | 813 | –23.2 | –11.5 | –9.9 |
| Oklahoma | 24 | 19 | 19 | 43 | 46 | 35 | 26.4 | –15.4 | –4.4 |
| Pennsylvania Total | 905 | 796 | 737 | 913 | 940 | 1,281 | 13.7 | –.9 | –3.8 |
| Anthracite | 120 | 90 | 49 | 38 | 65 | 58 | 34.3 | 16.5 | 8.5 |
| Bituminous | 785 | 706 | 687 | 875 | 874 | 1,223 | 11.1 | –2.7 | –4.8 |
| Tennessee | 57 | 59 | 68 | 42 | 29 | 112 | –4.1 | 17.8 | –7.3 |
| Texas | 922 | 878 | 940 | 1,026 | 1,105 | 1,167 | 4.9 | –4.4 | –2.6 |
| Utah | 433 | 284 | 375 | 423 | 447 | 537 | 52.1 | –.8 | –2.4 |
| Virginia | 208 | 188 | 203 | 237 | 336 | 411 | 10.3 | –11.3 | –7.3 |
| Washington | w | w | w | w | w | w | w | w | w |
| West Virginia Total | 1,737 | 1,731 | 1,731 | 1,830 | 1,931 | 2,368 | .3 | –2.6 | –3.4 |
| Northern | 714 | 741 | 782 | 861 | 824 | 1,227 | –3.6 | –3.5 | –5.8 |
| Southern | 1,023 | 990 | 949 | 969 | 1,107 | 1,141 | 3.3 | –2.0 | –1.2 |
| Wyoming | 6,465 | 6,591 | 6,724 | 6,999 | 6,831 | 6,446 | –1.9 | –1.4 | * |
| **Appalachian Total**[1] | **4,632** | **4,530** | **4,538** | **4,855** | **5,596** | **6,707** | **2.2** | **–4.6** | **–4.0** |
| **Interior Total**[1] | **2,591** | **2,757** | **2,835** | **3,069** | **3,300** | **3,979** | **–6.0** | **–5.9** | **–4.6** |
| **Western Total**[1] | **11,941** | **12,141** | **12,732** | **13,093** | **12,639** | **12,895** | **–1.6** | **–1.4** | **–.8** |
| **East of Miss. River** | **6,136** | **6,244** | **6,260** | **6,679** | **7,520** | **9,119** | **–1.7** | **–4.9** | **–4.3** |
| **West of Miss. River** | **13,029** | **13,184** | **13,845** | **14,337** | **14,016** | **14,461** | **–1.2** | **–1.8** | **–1.1** |
| **U.S. Total** | **19,164** | **19,428** | **20,105** | **21,017** | **21,535** | **23,581** | **–1.3** | **–2.9** | **–2.3** |

[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. 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 26. Average Recovery Percentage at Producing Coal Mines by State, 1988, 1993-1997

| Coal-Producing State and Region | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 |
|---|---|---|---|---|---|---|
| Alabama | 54.81 | 55.56 | 58.74 | 60.20 | 63.16 | 63.86 |
| Alaska | w | w | w | w | w | w |
| Arizona | w | w | w | w | w | w |
| Arkansas | – | – | w | w | w | w |
| California | – | – | – | – | – | w |
| Colorado | 80.43 | 79.12 | 66.06 | 77.12 | 71.99 | 64.37 |
| Illinois | 53.49 | 54.20 | 52.05 | 52.92 | 51.19 | 48.45 |
| Indiana | 76.35 | 78.85 | 76.23 | 72.75 | 73.12 | 72.53 |
| Iowa | – | – | – | w | w | w |
| Kansas | w | w | w | w | w | w |
| Kentucky Total | 60.91 | 58.99 | 57.71 | 59.45 | 62.26 | 66.21 |
| Eastern | 63.14 | 62.59 | 60.87 | 62.60 | 64.00 | 69.23 |
| Western | 55.02 | 52.27 | 53.03 | 54.86 | 57.38 | 60.63 |
| Louisiana | w | w | w | w | w | w |
| Maryland | 57.36 | 61.45 | 58.34 | 55.50 | 67.82 | 64.21 |
| Missouri | 60.73 | 59.87 | 61.04 | 81.48 | w | w |
| Montana | 90.27 | 89.05 | 90.38 | 90.51 | 90.43 | 90.10 |
| New Mexico | 93.42 | 93.35 | 92.62 | 92.42 | 92.28 | 91.52 |
| North Dakota | 89.84 | 89.72 | 89.58 | 89.84 | 90.96 | 88.51 |
| Ohio | 63.89 | 71.61 | 68.73 | 67.81 | 68.86 | 69.53 |
| Oklahoma | 69.34 | 65.94 | 62.39 | 63.89 | 66.11 | 89.48 |
| Pennsylvania Total | 65.17 | 65.59 | 65.26 | 68.23 | 67.95 | 66.30 |
| Anthracite | 47.72 | 59.90 | 64.39 | 65.06 | 61.04 | 51.55 |
| Bituminous | 67.85 | 66.32 | 65.32 | 68.37 | 68.47 | 67.00 |
| Tennessee | 68.23 | 63.33 | 64.14 | 65.18 | 68.92 | 70.13 |
| Texas | 90.47 | 88.32 | 87.09 | 86.10 | 84.23 | 81.22 |
| Utah | 49.47 | 45.61 | 46.10 | 46.10 | 47.51 | 59.29 |
| Virginia | 58.58 | 54.81 | 58.14 | 58.37 | 62.72 | 65.13 |
| Washington | w | w | w | w | w | w |
| West Virginia Total | 63.58 | 63.49 | 62.44 | 61.10 | 61.30 | 59.60 |
| Northern | 58.54 | 58.91 | 55.10 | 53.06 | 52.17 | 51.33 |
| Southern | 67.10 | 66.92 | 68.49 | 68.24 | 68.09 | 68.48 |
| Wyoming | 92.26 | 92.16 | 92.27 | 92.98 | 91.94 | 92.30 |
| **Appalachian Total**[1] | **62.85** | **63.25** | **62.65** | **63.07** | **64.11** | **64.59** |
| **Interior Total**[1] | **72.36** | **70.15** | **68.71** | **68.29** | **68.27** | **66.42** |
| **Western Total**[1] | **89.63** | **89.74** | **88.81** | **89.72** | **88.98** | **88.38** |
| **East of Miss. River** | **62.11** | **62.16** | **61.06** | **61.36** | **62.31** | **62.34** |
| **West of Miss. River** | **89.64** | **89.60** | **88.66** | **89.32** | **88.48** | **87.73** |
| **U.S. Total** | **80.83** | **80.78** | **80.07** | **80.43** | **79.34** | **77.91** |

[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 27. Recoverable Coal Reserves and Average Recovery Percentage at Producing Mines by State and Mine Type, 1997

(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 | 350 | 52.70 | 25 | 84.91 | 374 | 54.81 |
| Alaska | – | – | w | w | w | w |
| Arizona | – | – | w | w | w | w |
| Colorado | w | w | w | w | 568 | 80.43 |
| Illinois | 728 | 52.91 | 16 | 79.27 | 745 | 53.49 |
| Indiana | w | w | w | w | 393 | 76.35 |
| Kansas | – | – | w | w | w | w |
| Kentucky Total | 1,026 | 53.90 | 305 | 84.52 | 1,331 | 60.91 |
| Eastern | 691 | 54.63 | 274 | 84.59 | 965 | 63.14 |
| Western | 335 | 52.40 | 30 | 83.92 | 366 | 55.02 |
| Louisiana | – | – | w | w | w | w |
| Maryland | w | w | w | w | 68 | 57.36 |
| Missouri | – | – | 1 | 60.73 | 1 | 60.73 |
| Montana | – | – | 1,168 | 90.27 | 1,168 | 90.27 |
| New Mexico | – | – | 1,415 | 93.42 | 1,415 | 93.42 |
| North Dakota | – | – | 1,211 | 89.84 | 1,211 | 89.84 |
| Ohio | 231 | 56.52 | 88 | 83.28 | 318 | 63.89 |
| Oklahoma | w | w | w | w | 24 | 69.34 |
| Pennsylvania Total | 676 | 64.71 | 229 | 66.52 | 905 | 65.17 |
| Anthracite | 23 | 73.75 | 97 | 41.50 | 120 | 47.72 |
| Bituminous | 653 | 64.39 | 132 | 84.95 | 785 | 67.85 |
| Tennessee | w | w | w | w | 57 | 68.23 |
| Texas | – | – | 922 | 90.47 | 922 | 90.47 |
| Utah | 433 | 49.47 | – | – | 433 | 49.47 |
| Virginia | 186 | 54.95 | 22 | 89.27 | 208 | 58.58 |
| Washington | – | – | w | w | w | w |
| West Virginia Total | 1,239 | 57.08 | 498 | 79.75 | 1,737 | 63.58 |
| Northern | 622 | 57.61 | 92 | 64.81 | 714 | 58.54 |
| Southern | 617 | 56.55 | 406 | 83.14 | 1,023 | 67.10 |
| Wyoming | w | w | w | w | 6,465 | 92.26 |
| **Appalachian Total**[1] | **3,486** | **57.61** | **1,146** | **78.80** | **4,632** | **62.85** |
| **Interior Total**[1] | **1,113** | **52.68** | **1,478** | **87.18** | **2,591** | **72.36** |
| **Western Total**[1] | **784** | **61.34** | **11,157** | **91.62** | **11,941** | **89.63** |
| **East of Miss. River** | **4,585** | **56.41** | **1,551** | **78.99** | **6,136** | **62.11** |
| **West of Miss. River** | **798** | **61.30** | **12,231** | **91.49** | **13,029** | **89.64** |
| **U.S. Total** | **5,383** | **57.13** | **13,782** | **90.08** | **19,164** | **80.83** |

[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 28. Recoverable Coal Reserves at Producing Underground Mines by State and Mining Method, 1997

(Million Short Tons)

| Coal-Producing State and Region | Continuous[1] | Conventional[2] | Longwall[3] | Other[4] | Total |
|---|---|---|---|---|---|
| Alabama | w | – | 251 | w | 350 |
| Colorado | w | – | 281 | – | w |
| Illinois | w | w | 362 | – | 728 |
| Indiana | w | – | – | – | w |
| Kentucky Total | 913 | 34 | 78 | 1 | 1,026 |
| Eastern | w | w | 5 | 1 | 691 |
| Western | w | w | 72 | – | 335 |
| Maryland | w | – | w | – | w |
| Ohio | 28 | – | 203 | – | 231 |
| Oklahoma | w | – | – | – | w |
| Pennsylvania Total | 177 | w | 463 | w | 676 |
| Anthracite | w | w | – | w | 23 |
| Bituminous | w | w | 463 | – | 653 |
| Tennessee | 27 | w | – | – | w |
| Utah | w | w | 276 | – | 433 |
| Virginia | w | w | 57 | – | 186 |
| West Virginia Total | 523 | 13 | 702 | 2 | 1,239 |
| Northern | 85 | 4 | 531 | 2 | 622 |
| Southern | 438 | 8 | 171 | – | 617 |
| Wyoming | w | – | w | – | w |
| **Appalachian Total[5]** | **1,566** | **109** | **1,717** | **94** | **3,486** |
| **Interior Total[5]** | **678** | – | **435** | – | **1,113** |
| **Western Total[5]** | **222** | – | **562** | – | **784** |
| **East of Miss. River** | **2,230** | **109** | **2,152** | **94** | **4,585** |
| **West of Miss. River** | **236** | – | **562** | – | **798** |
| **U.S. Total** | **2,466** | **109** | **2,713** | **94** | **5,383** |

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.
**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 29. Average Recovery Percentage at Producing Underground Coal Mines by State and Mining Method, 1997

| Coal-Producing State and Region | Continuous[1] | Conventional[2] | Longwall[3] | Other[4] | Total |
|---|---|---|---|---|---|
| Alabama | w | – | 53.51 | w | 52.70 |
| Colorado | w | – | 83.77 | – | w |
| Illinois | w | w | 55.74 | – | 52.91 |
| Indiana | w | – | – | – | w |
| Kentucky Total | 53.03 | 67.99 | 57.71 | 66.04 | 53.90 |
| Eastern | w | w | 41.56 | 66.04 | 54.63 |
| Western | w | w | 58.93 | – | 52.40 |
| Maryland | w | – | w | – | w |
| Ohio | 50.91 | – | 57.28 | – | 56.52 |
| Oklahoma | w | – | – | – | w |
| Pennsylvania Total | 64.08 | w | 64.31 | w | 64.71 |
| Anthracite | w | w | – | w | 73.75 |
| Bituminous | w | w | 64.31 | – | 64.39 |
| Tennessee | 71.86 | w | – | – | w |
| Utah | w | w | 44.99 | – | 49.47 |
| Virginia | w | w | 39.81 | – | 54.95 |
| West Virginia Total | 54.85 | 58.60 | 58.72 | 55.00 | 57.08 |
| Northern | 66.06 | 62.42 | 56.23 | 55.00 | 57.61 |
| Southern | 52.68 | 56.57 | 66.50 | – | 56.55 |
| Wyoming | w | – | w | – | w |
| **Appalachian Total[5]** | **56.09** | **62.51** | **58.60** | **58.97** | **57.61** |
| **Interior Total[5]** | **50.38** | – | **56.27** | – | **52.68** |
| **Western Total[5]** | **53.38** | – | **64.49** | – | **61.34** |
| **East of Miss. River** | **54.34** | **62.51** | **58.13** | **58.97** | **56.41** |
| **West of Miss. River** | **53.71** | – | **64.49** | – | **61.30** |
| **U.S. Total** | **54.28** | **62.51** | **59.45** | **58.97** | **57.13** |

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.
**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 30. Recoverable Coal Reserves and Average Recovery Percentage at Producing U.S. Mines by Mine Production Range and Mine Type, 1997

(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 | 3,851 | 57.75 | 12,541 | 91.03 | 16,392 | 83.21 |
| 500 to 1,000 | 507 | 50.52 | 724 | 83.95 | 1,231 | 70.19 |
| 200 to 500 | 511 | 56.04 | 310 | 83.97 | 821 | 66.58 |
| 100 to 200 | 191 | 55.90 | 97 | 62.34 | 288 | 58.07 |
| 50 to 100 | 131 | 61.40 | 69 | 52.82 | 200 | 58.45 |
| 10 to 50 | 192 | 63.40 | 41 | 83.27 | 233 | 66.86 |
| **U.S. Total** | **5,383** | **57.13** | **13,782** | **90.08** | **19,164** | **80.83** |

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 31. Recoverable Coal Reserves and Average Recovery Percentage at Producing U.S. Mines by Coalbed Thickness and Mine Type, 1997

(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 | – | – | * | 70.38 | * | 70.38 |
| 7-12 | – | – | 13 | 84.44 | 13 | 84.44 |
| 13-18 | – | – | 59 | 88.95 | 59 | 88.95 |
| 19-24 | 4 | 60.73 | 236 | 84.30 | 240 | 83.88 |
| 25-30 | 54 | 57.43 | 229 | 85.41 | 283 | 80.05 |
| 31-36 | 284 | 60.88 | 244 | 80.81 | 528 | 70.09 |
| 37-42 | 260 | 56.69 | 226 | 79.18 | 486 | 67.15 |
| 43-48 | 626 | 60.41 | 251 | 86.61 | 877 | 67.91 |
| 49-54 | 419 | 54.86 | 319 | 88.53 | 738 | 69.42 |
| 55-60 | 531 | 55.29 | 261 | 90.69 | 792 | 66.96 |
| 61-66 | 309 | 56.48 | 178 | 88.03 | 487 | 68.03 |
| 67-72 | 777 | 55.21 | 304 | 88.86 | 1,080 | 64.67 |
| 73-78 | 566 | 58.39 | 168 | 86.04 | 734 | 64.74 |
| 79-84 | 460 | 51.91 | 297 | 93.41 | 756 | 68.19 |
| 85-90 | 123 | 64.61 | 167 | 89.34 | 290 | 78.85 |
| 91-96 | 279 | 56.09 | 154 | 89.30 | 433 | 67.90 |
| 97-102 | * | 70.00 | 190 | 92.10 | 190 | 92.07 |
| 103-108 | 67 | 47.03 | 191 | 84.55 | 259 | 74.78 |
| 109-114 | 150 | 49.31 | 98 | 85.05 | 248 | 63.44 |
| 115-120 | 69 | 43.94 | 33 | 86.74 | 101 | 57.72 |
| > 120 | 405 | 67.99 | 10,164 | 91.11 | 10,569 | 90.22 |
| **U.S. Total** | **5,383** | **57.13** | **13,782** | **90.08** | **19,164** | **80.83** |

* Data round to zero.

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 32. Recoverable Coal Reserves and Average Recovery Percentage at Producing Mines by State, Mine Type, and Union Type, 1997

(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** | **286** | **54.49** | – | – | **89** | **55.85** | **374** | **54.81** |
| Underground | 276 | 53.08 | – | – | 74 | 51.31 | 350 | 52.70 |
| Surface | 10 | 95.00 | – | – | 15 | 78.37 | 25 | 84.91 |
| **Alaska** | – | – | **w** | **w** | – | – | **w** | **w** |
| Surface | – | – | w | w | – | – | w | w |
| **Arizona** | **w** | **w** | – | – | – | – | **w** | **w** |
| Surface | w | w | – | – | – | – | w | w |
| **Colorado** | **w** | **w** | **w** | **w** | **493** | **79.31** | **568** | **80.43** |
| Underground | w | w | – | – | w | w | 347 | 76.18 |
| Surface | w | w | w | w | w | w | 221 | 87.10 |
| **Illinois** | **304** | **47.26** | **w** | **w** | **w** | **w** | **745** | **53.49** |
| Underground | 302 | 47.07 | w | w | w | w | 728 | 52.91 |
| Surface | 2 | 77.55 | w | w | w | w | 16 | 79.27 |
| **Indiana** | **136** | **76.83** | – | – | **257** | **76.09** | **393** | **76.35** |
| Underground | w | w | – | – | w | w | 36 | 48.23 |
| Surface | w | w | – | – | w | w | 358 | 79.14 |
| **Kansas** | **w** | **w** | – | – | **w** | **w** | **w** | **w** |
| Surface | w | w | – | – | w | w | w | w |
| **Kentucky Total** | **w** | **w** | **w** | **w** | **1,194** | **59.68** | **1,331** | **60.91** |
| Underground | w | w | w | w | 934 | 52.99 | 1,026 | 53.90 |
| Surface | 45 | 88.82 | – | – | 259 | 83.78 | 305 | 84.52 |
| **Eastern** | **w** | **w** | **w** | **w** | **869** | **62.08** | **965** | **63.14** |
| Underground | w | w | w | w | 640 | 54.32 | 691 | 54.63 |
| Surface | 45 | 89.01 | – | – | 229 | 83.73 | 274 | 84.59 |
| **Western** | **41** | **68.86** | – | – | **325** | **53.27** | **366** | **55.02** |
| Underground | 41 | 68.93 | – | – | 295 | 50.11 | 335 | 52.40 |
| Surface | * | 60.00 | – | – | 30 | 84.16 | 30 | 83.92 |
| **Louisiana** | – | – | – | – | **w** | **w** | **w** | **w** |
| Surface | – | – | – | – | w | w | w | w |
| **Maryland** | – | – | – | – | **68** | **57.36** | **68** | **57.36** |
| Underground | – | – | – | – | w | w | w | w |
| Surface | – | – | – | – | w | w | w | w |
| **Missouri** | – | – | – | – | **1** | **60.73** | **1** | **60.73** |
| Surface | – | – | – | – | 1 | 60.73 | 1 | 60.73 |
| **Montana** | **w** | **w** | **w** | **w** | **w** | **w** | **1,168** | **90.27** |
| Surface | w | w | w | w | w | w | 1,168 | 90.27 |
| **New Mexico** | **w** | **w** | **w** | **w** | **w** | **w** | **1,415** | **93.42** |
| Surface | w | w | w | w | w | w | 1,415 | 93.42 |
| **North Dakota** | **w** | **w** | **w** | **w** | **w** | **w** | **1,211** | **89.84** |
| Surface | w | w | w | w | w | w | 1,211 | 89.84 |
| **Ohio** | **205** | **57.41** | – | – | **114** | **75.54** | **318** | **63.89** |
| Underground | 203 | 57.28 | – | – | 28 | 50.91 | 231 | 56.52 |
| Surface | 1 | 76.00 | – | – | 86 | 83.41 | 88 | 83.28 |
| **Oklahoma** | – | – | – | – | **24** | **69.34** | **24** | **69.34** |
| Underground | – | – | – | – | w | w | w | w |
| Surface | – | – | – | – | w | w | w | w |
| **Pennsylvania Total** | **480** | **59.22** | **w** | **w** | **425** | **71.86** | **905** | **65.17** |
| Underground | 371 | 62.72 | – | – | 306 | 67.13 | 676 | 64.71 |
| Surface | 109 | 47.37 | w | w | 119 | 84.00 | 229 | 66.52 |
| **Anthracite** | **w** | **w** | **w** | **w** | **31** | **68.78** | **120** | **47.72** |
| Underground | – | – | – | – | w | w | 23 | 73.75 |
| Surface | w | w | w | w | w | w | 97 | 41.50 |
| **Bituminous** | **w** | **w** | – | – | **w** | **w** | **785** | **67.85** |
| Underground | w | w | – | – | w | w | 653 | 64.39 |
| Surface | w | w | – | – | w | w | 132 | 84.95 |
| **Tennessee** | – | – | – | – | **57** | **68.23** | **57** | **68.23** |
| Underground | – | – | – | – | 51 | 66.12 | 51 | 66.12 |
| Surface | – | – | – | – | 6 | 87.11 | 6 | 87.11 |
| **Texas** | – | – | **434** | **91.58** | **488** | **89.49** | **922** | **90.47** |
| Surface | – | – | 434 | 91.58 | 488 | 89.49 | 922 | 90.47 |
| **Utah** | **w** | **w** | – | – | **w** | **w** | **433** | **49.47** |
| Underground | w | w | – | – | w | w | 433 | 49.47 |
| **Virginia** | **51** | **47.05** | **8** | **67.67** | **148** | **62.06** | **208** | **58.58** |
| Underground | w | w | w | w | 127 | 57.53 | 186 | 54.95 |
| Surface | w | w | w | w | 21 | 89.15 | 22 | 89.27 |
| **Washington** | – | – | **w** | **w** | **w** | **w** | **w** | **w** |
| Surface | – | – | w | w | w | w | w | w |

See footnotes at end of table.

## Table 32. Recoverable Coal Reserves and Average Recovery Percentage at Producing Mines by State, Mine Type, and Union Type, 1997 (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 |
| **West Virginia Total** | **1,075** | **64.26** | – | – | **662** | **62.45** | **1,737** | **63.58** |
| Underground | 820 | 58.09 | – | – | 420 | 55.10 | 1,239 | 57.08 |
| Surface | 256 | 84.03 | – | – | 242 | 75.21 | 498 | 79.75 |
| **Northern** | **531** | **56.23** | – | – | **183** | **65.23** | **714** | **58.54** |
| Underground | 531 | 56.23 | – | – | 91 | 65.65 | 622 | 57.61 |
| Surface | – | – | – | – | 92 | 64.81 | 92 | 64.81 |
| **Southern** | **544** | **72.11** | – | – | **478** | **61.39** | **1,023** | **67.10** |
| Underground | 288 | 61.54 | – | – | 329 | 52.17 | 617 | 56.55 |
| Surface | 256 | 84.03 | – | – | 150 | 81.61 | 406 | 83.14 |
| **Wyoming** | **w** | **w** | **w** | **w** | **6,147** | **92.34** | **6,465** | **92.26** |
| Underground | – | – | – | – | w | w | w | w |
| Surface | w | w | w | w | w | w | w | w |
| **Appalachian Total**[1] | **2,190** | **61.24** | **12** | **63.36** | **2,430** | **64.30** | **4,632** | **62.85** |
| Underground | 1,769 | 57.90 | 11 | 59.69 | 1,706 | 57.29 | 3,486 | 57.61 |
| Surface | 421 | 75.25 | 1 | 94.15 | 724 | 80.84 | 1,146 | 78.80 |
| **Interior Total**[1] | **483** | **57.50** | **478** | **89.41** | **1,630** | **71.76** | **2,591** | **72.36** |
| Underground | 343 | 49.60 | 31 | 62.97 | 739 | 53.68 | 1,113 | 52.68 |
| Surface | 140 | 76.85 | 447 | 91.24 | 891 | 86.76 | 1,478 | 87.18 |
| **Western Total**[1] | **1,218** | **85.83** | **2,445** | **91.63** | **8,278** | **89.60** | **11,941** | **89.63** |
| Underground | 112 | 50.47 | – | – | 672 | 63.15 | 784 | 61.34 |
| Surface | 1,106 | 89.40 | 2,445 | 91.63 | 7,606 | 91.94 | 11,157 | 91.62 |
| **East of Miss. River** | **2,671** | **60.56** | **56** | **67.02** | **3,409** | **63.25** | **6,136** | **62.11** |
| Underground | 2,112 | 56.55 | 42 | 62.14 | 2,431 | 56.18 | 4,585 | 56.41 |
| Surface | 559 | 75.70 | 14 | 81.25 | 978 | 80.83 | 1,551 | 78.99 |
| **West of Miss. River** | **1,220** | **85.78** | **2,879** | **91.63** | **8,929** | **89.52** | **13,029** | **89.64** |
| Underground | 112 | 50.47 | – | – | 686 | 63.07 | 798 | 61.30 |
| Surface | 1,109 | 89.35 | 2,879 | 91.63 | 8,243 | 91.72 | 12,231 | 91.49 |
| **U.S. Total** | **3,891** | **68.47** | **2,935** | **91.16** | **12,338** | **82.26** | **19,164** | **80.83** |
| Underground | 2,224 | 56.25 | 42 | 62.14 | 3,117 | 57.70 | 5,383 | 57.13 |
| Surface | 1,667 | 84.77 | 2,894 | 91.57 | 9,221 | 90.57 | 13,782 | 90.08 |

[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 33. U.S. Demonstrated Reserve Base of Coal by Potential Mining Method and Ranked by State Total, January 1, 1995

(Million Short Tons)

| Rank | State | Underground | Surface | Total |
|---|---|---|---|---|
| 1 | Montana | 70,959 | 48,815 | 119,773 |
| 2 | Illinois | 73,781 | 16,175 | 89,956 |
| 3 | Wyoming | 42,525 | 25,971 | 68,496 |
| 4 | West Virginia | 31,420 | 4,564 | 35,983 |
| 5 | Kentucky | 18,885 | 13,680 | 32,565 |
| 6 | Pennsylvania | 24,408 | 4,460 | 28,868 |
| | Anthracite | 3,850 | 3,375 | 7,225 |
| | Bituminous | 20,558 | 1,085 | 21,643 |
| 7 | Ohio | 17,847 | 5,907 | 23,754 |
| 8 | Colorado | 12,049 | 4,795 | 16,844 |
| 9 | Texas | – | 13,065 | 13,065 |
| 10 | New Mexico | 6,205 | 6,341 | 12,547 |
| 11 | Indiana | 8,873 | 1,118 | 9,991 |
| 12 | North Dakota | – | 9,470 | 9,470 |
| 13 | Alaska | 5,423 | 707 | 6,130 |
| 14 | Utah | 5,688 | 268 | 5,956 |
| 15 | Missouri | 1,479 | 4,517 | 5,996 |
| 16 | Alabama | 1,362 | 3,273 | 4,635 |
| 17 | Virginia | 1,630 | 697 | 2,327 |
| 18 | Iowa | 1,733 | 457 | 2,190 |
| 19 | Oklahoma | 1,237 | 342 | 1,580 |
| 20 | Washington | 1,332 | 69 | 1,401 |
| 21 | Kansas | – | 976 | 976 |
| 22 | Tennessee | 539 | 288 | 827 |
| 23 | Maryland | 649 | 82 | 731 |
| 24 | Louisiana | – | 471 | 471 |
| 25 | Arkansas | 273 | 145 | 417 |
| 26 | South Dakota | – | 366 | 366 |
| 27 | Arizona | 102 | 87 | 189 |
| 28 | Michigan | 123 | 5 | 128 |
| 29 | Oregon | 15 | 3 | 18 |
| 30 | North Carolina | 11 | – | 11 |
| 31 | Idaho | 4 | – | 4 |
| 32 | Georgia | 2 | 2 | 4 |
| | **U.S. Total** | **328,552** | **167,113** | **495,666** |

– Data not available.

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

Sources: Energy Information Administration, ''U.S. Coal Reserves: A Review and Update (DOE/EIA-0529(95)), August, 1996.

## Table 34. Year-End Producer and Distributor Coal Stocks by State, 1993-1997

(Thousand Short Tons)

| Coal-Producing State and Region | 1997 | 1996 | 1995 | 1994 | 1993 | Percent Change 1996-1997 | Average Annual Percent Change 1993-1997 |
|---|---|---|---|---|---|---|---|
| Alabama | 1,289 | 1,031 | 1,358 | 1,204 | 1,698 | 25.0 | –6.7 |
| Alaska | 25 | 6 | 26 | 58 | 19 | 341.7 | 6.8 |
| Arizona | 2,911 | 2,232 | 2,760 | 2,634 | 1,590 | 30.4 | 16.3 |
| Arkansas | 2 | 1 | 4 | 2 | 5 | 39.7 | –18.5 |
| Colorado | 1,364 | 494 | 1,063 | 1,575 | 1,155 | 176.0 | 4.2 |
| Illinois | 1,358 | 1,190 | 2,069 | 1,651 | 713 | 14.1 | 17.5 |
| Indiana | 698 | 574 | 611 | 803 | 527 | 21.6 | 7.3 |
| Kansas | – | 19 | 27 | 31 | 25 | –100.0 | – |
| Kentucky Total | 5,376 | 4,460 | 4,777 | 5,025 | 3,216 | 20.5 | 13.7 |
| Eastern | 4,622 | 3,720 | 4,088 | 4,235 | 2,558 | 24.2 | 15.9 |
| Western | 754 | 740 | 689 | 790 | 658 | 1.9 | 3.5 |
| Louisiana | 152 | 38 | 309 | 202 | 12 | 304.0 | 89.9 |
| Maryland | 271 | 143 | 269 | 179 | 123 | 90.1 | 21.8 |
| Missouri | 1 | – | – | – | 2 | – | –22.9 |
| Montana | 682 | 580 | 718 | 635 | 876 | 17.6 | –6.0 |
| New Mexico | 1,023 | 1,890 | 2,015 | 1,467 | 2,343 | –45.8 | –18.7 |
| North Dakota | 1,965 | 1,574 | 1,797 | 1,812 | 1,607 | 24.8 | 5.2 |
| Ohio | 774 | 532 | 1,374 | 833 | 550 | 45.5 | 8.9 |
| Oklahoma | * | 7 | 2 | 4 | 5 | –94.4 | –47.0 |
| Pennsylvania Total | 2,507 | 3,113 | 2,487 | 2,787 | 1,826 | –19.5 | 8.3 |
| Anthracite | 486 | 1,323 | 389 | 249 | 234 | –63.3 | 20.1 |
| Bituminous | 2,021 | 1,790 | 2,098 | 2,538 | 1,592 | 12.9 | 6.1 |
| Tennessee | 32 | 23 | 88 | 57 | 35 | 37.4 | –2.5 |
| Texas | 1,506 | 1,254 | 864 | 1,430 | 1,237 | 20.1 | 5.0 |
| Utah | 2,112 | 1,337 | 1,946 | 1,301 | 1,203 | 57.9 | 15.1 |
| Virginia | 2,328 | 1,644 | 1,649 | 1,180 | 1,389 | 41.5 | 13.8 |
| Washington | 56 | 55 | 59 | 65 | 72 | 1.3 | –6.2 |
| West Virginia Total | 5,504 | 4,947 | 6,176 | 6,692 | 4,059 | 11.3 | 7.9 |
| Northern | 858 | 584 | 1,959 | 1,940 | 685 | 46.9 | 5.8 |
| Southern | 4,645 | 4,362 | 4,217 | 4,752 | 3,374 | 6.5 | 8.3 |
| Wyoming | 2,036 | 1,504 | 1,997 | 1,592 | 998 | 35.4 | 19.5 |
| **Appalachian Total**[1] | **17,327** | **15,153** | **17,489** | **17,166** | **12,239** | **14.3** | **9.1** |
| **Interior Total**[1] | **4,471** | **3,823** | **4,575** | **4,913** | **3,182** | **17.0** | **8.9** |
| **Western Total**[1] | **12,174** | **9,672** | **12,381** | **11,140** | **9,863** | **25.9** | **5.4** |
| **East of Miss. River** | **20,138** | **17,657** | **20,858** | **20,410** | **14,137** | **14.0** | **9.3** |
| **West of Miss. River** | **13,835** | **10,991** | **13,587** | **12,809** | **11,147** | **25.9** | **5.5** |
| **U.S. Total** | **33,973** | **28,648** | **34,444** | **33,219** | **25,284** | **18.6** | **7.7** |

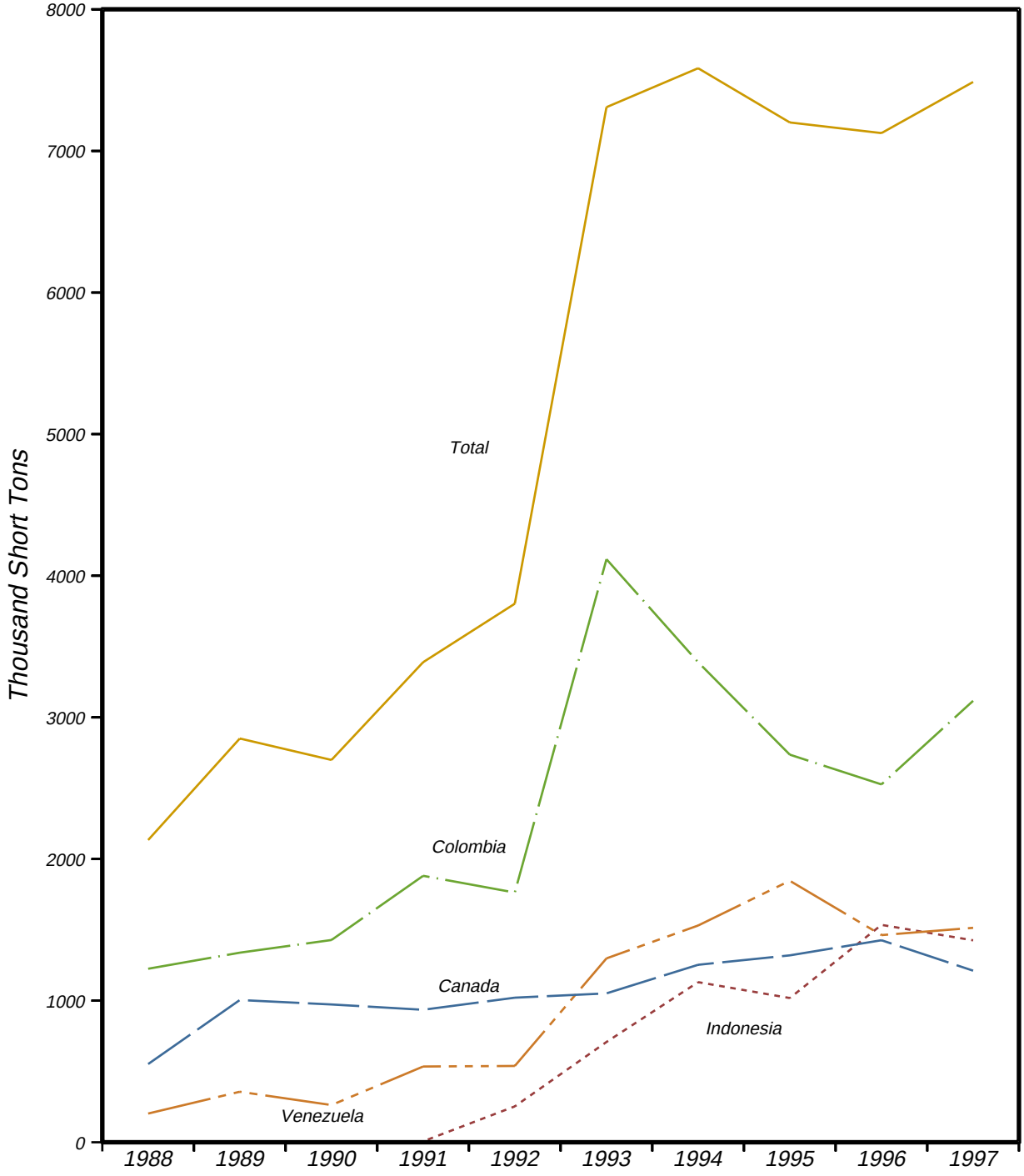
[1] For a definition of coal-producing regions, see Appendix C.

* 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.''

**Figure 3. U.S. Coal Imports, 1988-1997**




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

## Table 35. U.S. Coal Imports by Continent and Country of Origin, 1988, 1993-1997

(Short Tons)

| Continent and Country of Origin | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **North America Total** | **1,211,910** | **1,433,813** | **1,344,614** | **1,253,417** | **1,053,576** | **596,535** | **–15.5** | **3.6** | **8.2** |
| Canada | 1,211,557 | 1,426,504 | 1,319,742 | 1,253,196 | 1,051,273 | 552,238 | –15.1 | 3.6 | 9.1 |
| Guatemala | – | – | – | – | 4 | – | – | –100.0 | – |
| Mexico | 353 | 7,309 | 216 | 221 | 2,299 | 44,297 | –95.2 | –37.4 | –41.5 |
| Netherlands Antilles | – | – | 24,656 | – | – | – | – | – | – |
| **South America Total** | **4,631,213** | **3,989,640** | **4,583,283** | **4,920,202** | **5,415,318** | **1,427,979** | **16.1** | **–3.8** | **14.0** |
| Argentina | 13 | – | – | – | – | – | – | – | – |
| Colombia | 3,117,122 | 2,526,804 | 2,736,933 | 3,389,654 | 4,117,036 | 1,225,167 | 23.4 | –6.7 | 10.9 |
| Venezuela | 1,514,078 | 1,462,836 | 1,846,350 | 1,530,548 | 1,298,282 | 202,812 | 3.5 | 3.9 | 25.0 |
| **Europe Total** | **26,635** | **2,613** | **522** | **40** | **62** | **1,135** | **NM** | **355.3** | **42.0** |
| Belgium & Luxembourg | 6,016 | 2,473 | – | – | – | – | 143.3 | – | – |
| Denmark | – | – | 236 | – | 60 | 177 | – | –100.0 | –100.0 |
| Germany, FR | 20 | – | – | – | – | 200 | – | – | –22.6 |
| Netherlands | – | – | – | – | – | 320 | – | – | –100.0 |
| Norway | 20,383 | – | – | – | – | – | – | – | – |
| Poland | – | – | – | 40 | 2 | – | – | –100.0 | – |
| Spain | – | 99 | – | – | – | 124 | –100.0 | – | –100.0 |
| Switzerland | 201 | – | – | – | – | – | – | – | – |
| Turkey | – | 41 | – | – | – | – | –100.0 | – | – |
| United Kingdom | 15 | – | 286 | – | – | 314 | – | – | –28.7 |
| **Asia Total** | **1,460,503** | **1,534,989** | **1,018,512** | **1,153,561** | **708,080** | **42,191** | **–4.8** | **19.8** | **48.3** |
| China (Mainland) | 2,006 | – | 53 | 111 | – | – | – | – | – |
| Hong Kong | – | 1 | – | – | – | 2 | –100.0 | – | –100.0 |
| Indonesia | 1,425,916 | 1,534,986 | 1,018,433 | 1,130,468 | 708,080 | – | –7.1 | 19.1 | – |
| Japan | – | 2 | 26 | 1 | – | 42,189 | –100.0 | – | –100.0 |
| Vietnam | 32,581 | – | – | 22,981 | – | – | – | – | – |
| **Oceania & Australia Total** | **156,515** | **164,793** | **254,141** | **100,313** | **105,452** | **66,190** | **–5.0** | **10.4** | **10.0** |
| Australia | 115,510 | 164,793 | 211,702 | 92,204 | 100,076 | 66,190 | –29.9 | 3.6 | 6.4 |
| New Zealand | 41,005 | – | 42,439 | 8,109 | 5,376 | – | – | 66.2 | – |
| **Africa Total** | – | – | – | **156,452** | **26,419** | – | – | **–100.0** | – |
| South Africa, Rep of | – | – | – | 149,748 | 20,319 | – | – | –100.0 | – |
| Swaziland | – | – | – | 6,704 | 6,100 | – | – | –100.0 | – |
| **Total** | **7,486,776** | **7,125,848** | **7,201,072** | **7,583,985** | **7,308,907** | **2,134,030** | **5.1** | **.6** | **15.0** |

**NM** Not meaningful as value is greater than 500 percent.

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 36. Coal Imports by Customs District, 1988, 1993-1997

(Short Tons)

| Customs District | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **Eastern Total** | **2,508,318** | **2,144,142** | **1,935,401** | **1,554,466** | **1,275,919** | **196,612** | **17.0** | **18.4** | **32.7** |
| Boston, MA | 1,533,510 | 1,803,234 | 1,484,886 | 977,473 | 674,086 | 177 | –14.9 | 22.8 | 173.8 |
| Baltimore, MD | – | 99 | 28,328 | 88,668 | 224,579 | 200 | –100.0 | –100.0 | –100.0 |
| Portland, ME | 366,768 | 246,852 | 364,232 | 385,097 | 236,473 | 51,566 | 48.6 | 11.6 | 24.3 |
| Buffalo, NY | 6,060 | 2,658 | 2,034 | – | – | 21 | 128.0 | – | 87.6 |
| New York City, NY | 518,043 | 65 | 522 | – | 2 | 445 | NM | NM | 119.1 |
| Ogdensburg, NY | – | 50 | – | – | – | – | –100.0 | – | – |
| Philadelphia, PA | 83,918 | 91,184 | 55,399 | 78,387 | 140,779 | 144,203 | –8.0 | –12.1 | –5.8 |
| Norfolk, VA | 19 | – | – | 24,841 | – | – | – | – | – |
| **Southern Total** | **2,985,167** | **2,745,266** | **3,101,069** | **4,106,306** | **4,321,336** | **1,372,054** | **8.7** | **–8.8** | **9.0** |
| Mobile, AL | 214,241 | 288,484 | 1,108,555 | 1,033,368 | 935,232 | – | –25.7 | –30.8 | – |
| Savannah, GA | 178,085 | 118,509 | – | 29,582 | – | – | 50.3 | – | – |
| Miami, FL | 38,604 | – | 26,035 | 7,496 | – | – | – | – | – |
| Tampa, FL | 1,320,515 | 1,419,408 | 1,284,109 | 2,080,757 | 2,263,893 | 752,650 | –7.0 | –12.6 | 6.4 |
| New Orleans, LA | 840,919 | 808,592 | 387,861 | 524,256 | 675,827 | 178,226 | 4.0 | 5.6 | 18.8 |
| Wilmington, NC | – | – | – | 26,648 | – | – | – | – | – |
| San Juan, PR | 201,413 | 96,901 | 272,296 | 80,016 | 107,506 | 395,079 | 107.8 | 17.0 | –7.2 |
| Houston-Galveston, TX | 154,865 | 6,063 | – | 154,938 | 121,505 | 1,802 | NM | 6.3 | 64.0 |
| Laredo, TX | 353 | 7,309 | 167 | 221 | 2,299 | 44,297 | –95.2 | –37.4 | –41.5 |
| Virgin Islands | 36,172 | – | 22,046 | 169,024 | 215,074 | – | – | –36.0 | – |
| **Western Total** | **862,053** | **830,157** | **863,707** | **710,576** | **730,662** | **136,582** | **3.8** | **4.2** | **22.7** |
| Los Angeles, CA | 149 | 2 | – | 12 | – | – | NM | – | – |
| San Diego, CA | – | – | 49 | – | – | – | – | – | – |
| San Francisco, CA | – | – | – | – | – | 17,000 | – | – | –100.0 |
| Honolulu, HI | 759,385 | 810,176 | 844,785 | 670,005 | 660,379 | 64,388 | –6.3 | 3.5 | 31.5 |
| Great Falls, MT | 282 | 25 | 645 | 34,426 | 41,580 | 52,518 | NM | –71.3 | –44.0 |
| Portland, OR | 20,383 | – | – | – | – | – | – | – | – |
| Seattle, WA | 81,854 | 19,954 | 18,228 | 6,133 | 28,703 | 2,676 | 310.2 | 29.9 | 46.2 |
| **Northern Total** | **1,131,238** | **1,406,283** | **1,300,895** | **1,212,637** | **980,990** | **428,782** | **–19.5** | **3.6** | **11.4** |
| Chicago, IL | 329,778 | 238,592 | 64,394 | 283,106 | 134,485 | 320,361 | 38.2 | 25.1 | .3 |
| Detroit, MI | 388,678 | 374,566 | 421,633 | 312,214 | 203,067 | – | 3.8 | 17.6 | – |
| Duluth, MN | 416 | 291,346 | 244,278 | 77,355 | 12,811 | – | –99.8 | –57.5 | – |
| Pembina, ND | 410,509 | 501,778 | 570,590 | 539,962 | 630,627 | 108,108 | –18.2 | –10.2 | 16.0 |
| Cleveland, OH | – | – | – | – | – | 313 | – | – | –100.0 |
| Milwaukee, WI | 1,857 | – | – | – | – | – | – | – | – |
| **Total** | **7,486,776** | **7,125,848** | **7,201,072** | **7,583,985** | **7,308,907** | **2,134,030** | **5.1** | **.6** | **15.0** |

**NM** Not meaningful as value is greater than 500 percent.

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

## Table 37. U.S. Receipts of Imported Coal by Country of Origin and Destination State, 1988, 1993-1997

(Short Tons)

| Country of Origin and Destination State | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 |
|---|---|---|---|---|---|---|---|
| **Australia Total** | **155,632** | **147,204** | **211,099** | **109,737** | **98,947** | **38,365** | **5.7** |
| Florida | – | – | – | – | – | 38,365 | – |
| Hawaii | 155,632 | 147,204 | 211,099 | 109,737 | 98,947 | – | 5.7 |
| **Canada Total** | **865,355** | **1,332,243** | **1,401,960** | **1,317,929** | **664,835** | **51,900** | **–35.0** |
| Illinois | 147,967 | 215,959 | 222,876 | 346,192 | 50,936 | – | –31.5 |
| Indiana | 474,369 | 735,342 | 760,508 | 592,655 | 582,689 | – | –35.5 |
| Michigan | 200,919 | 361,458 | 393,367 | 371,097 | – | – | –44.4 |
| New Hampshire | – | – | – | – | – | 51,900 | – |
| Ohio | 652 | 1,454 | 1,410 | 1,635 | 2,000 | – | –55.1 |
| Washington | 41,448 | 18,030 | 23,799 | 6,350 | 29,210 | – | 129.9 |
| **Colombia Total** | **2,958,645** | **2,285,840** | **2,202,005** | **3,150,128** | **3,642,728** | **686,890** | **29.4** |
| Alabama | 214,251 | 160,675 | 161,950 | 178,330 | 57,602 | – | 33.3 |
| Delaware | – | – | 7,143 | 22,031 | – | – | – |
| Florida | 1,385,340 | 1,417,220 | 1,340,640 | 2,348,550 | 2,999,303 | 686,890 | –2.2 |
| Georgia | – | – | – | 11,902 | – | – | – |
| Maine | – | 45,220 | – | – | – | – | –100.0 |
| Maryland | – | – | – | 88,000 | 224,000 | – | – |
| Massachusetts | 1,077,600 | 630,400 | 557,900 | 135,500 | 187,200 | – | 70.9 |
| New Hampshire | 35,360 | 32,325 | 134,372 | 163,311 | 52,143 | – | 9.4 |
| New Jersey | – | – | – | 22,500 | – | – | – |
| New York | 147,050 | – | – | – | – | – | – |
| North Carolina | – | – | – | 26,600 | – | – | – |
| Texas | 99,044 | – | – | 153,404 | 122,480 | – | – |
| **Indonesia Total** | **782,035** | **833,706** | **428,554** | **437,292** | **118,981** | – | **–6.2** |
| Florida | 741,264 | 807,803 | 348,854 | 147,215 | – | – | –8.2 |
| Indiana | – | – | – | – | 11,100 | – | – |
| Louisiana | – | – | – | 169,181 | – | – | – |
| Maine | – | – | – | – | 3,135 | – | – |
| Massachusetts | – | – | – | 7,938 | – | – | – |
| Mississippi | – | – | – | – | 67,547 | – | – |
| New Hampshire | 40,771 | 25,903 | 79,700 | 112,958 | 37,199 | – | 57.4 |
| **Mexico Total** | – | **15,561** | – | – | **33,520** | – | **–100.0** |
| Texas | – | 15,561 | – | – | 33,520 | – | –100.0 |
| **South Africa Total** | – | – | – | **127,300** | – | – | – |
| Florida | – | – | – | 127,300 | – | – | – |
| **Venezuela Total** | **1,409,628** | **1,861,504** | **2,073,645** | **1,456,645** | **936,945** | **192,782** | **–24.3** |
| Alabama | – | – | – | – | 30,278 | – | – |
| Connecticut | 35,000 | 28,000 | – | – | – | – | 25.0 |
| Florida | 58,643 | 298,200 | 891,400 | 421,674 | 312,193 | 192,782 | –80.3 |
| Georgia | 279,139 | 209,907 | – | 26,835 | – | – | 33.0 |
| Maine | 2,708 | 13,966 | 81,392 | 91,436 | 9,123 | – | –80.6 |
| Massachusetts | 382,900 | 1,135,500 | 903,700 | 916,700 | 476,100 | – | –66.3 |
| New Hampshire | 228,969 | 96,033 | 82,425 | – | 109,251 | – | 138.4 |
| New York | 350,400 | – | 28,189 | – | – | – | – |
| Pennsylvania | 71,869 | 79,898 | 86,539 | – | – | – | –10.0 |
| **Total** | **6,171,295** | **6,476,058** | **6,317,263** | **6,599,031** | **5,495,956** | **969,937** | **–4.7** |
| Alabama | 214,251 | 160,675 | 161,950 | 178,330 | 87,880 | – | 33.3 |
| Connecticut | 35,000 | 28,000 | – | – | – | – | 25.0 |
| Delaware | – | – | 7,143 | 22,031 | – | – | – |
| Florida | 2,185,247 | 2,523,223 | 2,580,894 | 3,044,739 | 3,311,496 | 918,037 | –13.4 |
| Georgia | 279,139 | 209,907 | – | 38,737 | – | – | 33.0 |
| Hawaii | 155,632 | 147,204 | 211,099 | 109,737 | 98,947 | – | 5.7 |
| Illinois | 147,967 | 215,959 | 222,876 | 346,192 | 50,936 | – | –31.5 |
| Indiana | 474,369 | 735,342 | 760,508 | 592,655 | 593,789 | – | –35.5 |
| Louisiana | – | – | – | 169,181 | – | – | – |
| Maine | 2,708 | 59,186 | 81,392 | 91,436 | 12,258 | – | –95.4 |
| Maryland | – | – | – | 88,000 | 224,000 | – | – |
| Massachusetts | 1,460,500 | 1,765,900 | 1,461,600 | 1,060,138 | 663,300 | – | –17.3 |
| Michigan | 200,919 | 361,458 | 393,367 | 371,097 | – | – | –44.4 |
| Mississippi | – | – | – | – | 67,547 | – | – |
| New Hampshire | 305,100 | 154,261 | 296,497 | 276,269 | 198,593 | 51,900 | 97.8 |
| New Jersey | – | – | – | 22,500 | – | – | – |
| New York | 497,450 | – | 28,189 | – | – | – | – |

See footnotes at end of table.

## Table 37. U.S. Receipts of Imported Coal by Country of Origin and Destination State, 1988, 1993-1997 (Continued)

(Short Tons)

| Country of Origin and Destination State | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 |
|---|---|---|---|---|---|---|---|
| **Total (Continued)** | | | | | | | |
| North Carolina | – | – | – | 26,600 | – | – | – |
| Ohio | 652 | 1,454 | 1,410 | 1,635 | 2,000 | – | –55.1 |
| Pennsylvania | 71,869 | 79,898 | 86,539 | – | – | – | –10.0 |
| Texas | 99,044 | 15,561 | – | 153,404 | 156,000 | – | NM |
| Washington | 41,448 | 18,030 | 23,799 | 6,350 | 29,210 | – | 129.9 |

**NM** Not meaningful as value is greater than 500 percent.

Notes: Data for 1988 are only for receipts at electric utilities. Data for 1993 through 1997 are for receipts at electric utilities, manufacturing plants and coke plants. See Table 38 and Table 39 for related data. See Technical Note 1 for the difference between receipts of imported coal and U.S. coal imports.

Sources: 1988: Federal Energy Regulatory Commission (FERC), FERC Form 423, ''Monthly Report of Cost and Quality of Fuels for Electric Plants.'' 1993-1997: 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 38. Imported Coal Received at Electric Utilities by Country of Origin and Destination State, 1988, 1993-1997

(Short Tons)

| Country of Origin and Destination State | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **Australia Total** | – | – | – | – | – | 38,365 | – | – | –100.0 |
| Florida | – | – | – | – | – | 38,365 | – | – | –100.0 |
| **Canada Total** | **9,590** | **18,030** | **23,799** | **63,350** | **29,210** | **51,900** | **–46.8** | **–24.3** | **–17.1** |
| Michigan | – | – | – | 57,000 | – | – | – | – | – |
| New Hampshire | – | – | – | – | – | 51,900 | – | – | –100.0 |
| Washington | 9,590 | 18,030 | 23,799 | 6,350 | 29,210 | – | –46.8 | –24.3 | – |
| **Colombia Total** | **2,744,394** | **2,079,945** | **2,040,055** | **2,971,798** | **3,585,126** | **686,890** | **31.9** | **–6.5** | **16.6** |
| Delaware | – | – | 7,143 | 22,031 | – | – | – | – | – |
| Florida | 1,385,340 | 1,417,220 | 1,340,640 | 2,348,550 | 2,999,303 | 686,890 | –2.2 | –17.6 | 8.1 |
| Georgia | – | – | – | 11,902 | – | – | – | – | – |
| Maryland | – | – | – | 88,000 | 224,000 | – | – | –100.0 | – |
| Massachusetts | 1,077,600 | 630,400 | 557,900 | 135,500 | 187,200 | – | 70.9 | 54.9 | – |
| New Hampshire | 35,360 | 32,325 | 134,372 | 163,311 | 52,143 | – | 9.4 | –9.3 | – |
| New Jersey | – | – | – | 22,500 | – | – | – | – | – |
| New York | 147,050 | – | – | – | – | – | – | – | – |
| North Carolina | – | – | – | 26,600 | – | – | – | – | – |
| Texas | 99,044 | – | – | 153,404 | 122,480 | – | – | –5.2 | – |
| **Indonesia Total** | **782,035** | **833,706** | **428,554** | **437,292** | **115,846** | **–** | **–6.2** | **61.2** | **–** |
| Florida | 741,264 | 807,803 | 348,854 | 147,215 | – | – | –8.2 | – | – |
| Indiana | – | – | – | – | 11,100 | – | – | –100.0 | – |
| Louisiana | – | – | – | 169,181 | – | – | – | – | – |
| Massachusetts | – | – | – | 7,938 | – | – | – | – | – |
| Mississippi | – | – | – | – | 67,547 | – | – | –100.0 | – |
| New Hampshire | 40,771 | 25,903 | 79,700 | 112,958 | 37,199 | – | 57.4 | 2.3 | – |
| **South Africa Total** | – | – | – | **127,300** | – | – | – | – | – |
| Florida | – | – | – | 127,300 | – | – | – | – | – |
| **Venezuela Total** | **1,335,051** | **1,767,640** | **1,905,714** | **1,365,209** | **897,544** | **192,782** | **–24.5** | **10.4** | **24.0** |
| Connecticut | 35,000 | 28,000 | – | – | – | – | 25.0 | – | – |
| Florida | 58,643 | 298,200 | 891,400 | 421,674 | 312,193 | 192,782 | –80.3 | –34.2 | –12.4 |
| Georgia | 279,139 | 209,907 | – | 26,835 | – | – | 33.0 | – | – |
| Massachusetts | 382,900 | 1,135,500 | 903,700 | 916,700 | 476,100 | – | –66.3 | –5.3 | – |
| New Hampshire | 228,969 | 96,033 | 82,425 | – | 109,251 | – | 138.4 | 20.3 | – |
| New York | 350,400 | – | 28,189 | – | – | – | – | – | – |
| **Total** | **4,871,070** | **4,699,321** | **4,398,122** | **4,964,949** | **4,627,726** | **969,937** | **3.6** | **1.3** | **19.6** |
| Connecticut | 35,000 | 28,000 | – | – | – | – | 25.0 | – | – |
| Delaware | – | – | 7,143 | 22,031 | – | – | – | – | – |
| Florida | 2,185,247 | 2,523,223 | 2,580,894 | 3,044,739 | 3,311,496 | 918,037 | –13.4 | –9.9 | 10.1 |
| Georgia | 279,139 | 209,907 | – | 38,737 | – | – | 33.0 | – | – |
| Indiana | – | – | – | – | 11,100 | – | – | –100.0 | – |
| Louisiana | – | – | – | 169,181 | – | – | – | – | – |
| Maryland | – | – | – | 88,000 | 224,000 | – | – | –100.0 | – |
| Massachusetts | 1,460,500 | 1,765,900 | 1,461,600 | 1,060,138 | 663,300 | – | –17.3 | 21.8 | – |
| Michigan | – | – | – | 57,000 | – | – | – | – | – |
| Mississippi | – | – | – | – | 67,547 | – | – | –100.0 | – |
| New Hampshire | 305,100 | 154,261 | 296,497 | 276,269 | 198,593 | 51,900 | 97.8 | 11.3 | 21.8 |
| New Jersey | – | – | – | 22,500 | – | – | – | – | – |
| New York | 497,450 | – | 28,189 | – | – | – | – | – | – |
| North Carolina | – | – | – | 26,600 | – | – | – | – | – |
| Texas | 99,044 | – | – | 153,404 | 122,480 | – | – | –5.2 | – |
| Washington | 9,590 | 18,030 | 23,799 | 6,350 | 29,210 | – | –46.8 | –24.3 | – |

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

## Table 39. Imported Coal Received at Manufacturing and Coke Plants by Country of Origin and Destination State, 1995-1997

(Short Tons)

| Country of Origin and Destination State | Manufacturing | | | Coke Plants | | | Total | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1997 | 1996 | 1995 | 1997 | 1996 | 1995 | 1997 | 1996 | 1995 | Percent Change 1996-1997 |
| **Australia Total** | **155,632** | **147,204** | **211,099** | – | – | – | **155,632** | **147,204** | **211,099** | **5.7** |
| Hawaii | 155,632 | 147,204 | 211,099 | – | – | – | 155,632 | 147,204 | 211,099 | 5.7 |
| **Canada Total** | **32,510** | **1,454** | **1,410** | **823,255** | **1,312,759** | **1,376,751** | **855,765** | **1,314,213** | **1,378,161** | **–34.9** |
| Illinois | – | – | – | 147,967 | 215,959 | 222,876 | 147,967 | 215,959 | 222,876 | –31.5 |
| Indiana | – | – | – | 474,369 | 735,342 | 760,508 | 474,369 | 735,342 | 760,508 | –35.5 |
| Michigan | – | – | – | 200,919 | 361,458 | 393,367 | 200,919 | 361,458 | 393,367 | –44.4 |
| Ohio | 652 | 1,454 | 1,410 | – | – | – | 652 | 1,454 | 1,410 | –55.2 |
| Washington | 31,858 | – | – | – | – | – | 31,858 | – | – | – |
| **Colombia Total** | **214,251** | **205,895** | **161,950** | – | – | – | **214,251** | **205,895** | **161,950** | **4.1** |
| Alabama | 214,251 | 160,675 | 161,950 | – | – | – | 214,251 | 160,675 | 161,950 | 33.3 |
| Maine | – | 45,220 | – | – | – | – | – | 45,220 | – | –100.0 |
| **Indonesia Total** | – | – | – | – | – | – | – | – | – | – |
| Maine | – | – | – | – | – | – | – | – | – | – |
| **Mexico Total** | – | **15,561** | – | – | – | – | – | **15,561** | – | **–100.0** |
| Texas | – | 15,561 | – | – | – | – | – | 15,561 | – | –100.0 |
| **Venezuela Total** | **74,577** | **93,864** | **167,931** | – | – | – | **74,577** | **93,864** | **167,931** | **–20.5** |
| Alabama | – | – | – | – | – | – | – | – | – | – |
| Maine | 2,708 | 13,966 | 81,392 | – | – | – | 2,708 | 13,966 | 81,392 | –80.6 |
| Pennsylvania | 71,869 | 79,898 | 86,539 | – | – | – | 71,869 | 79,898 | 86,539 | –10.0 |
| **Total** | **476,970** | **463,978** | **542,390** | **823,255** | **1,312,759** | **1,376,751** | **1,300,225** | **1,776,737** | **1,919,141** | **–26.8** |
| Alabama | 214,251 | 160,675 | 161,950 | – | – | – | 214,251 | 160,675 | 161,950 | 33.3 |
| Hawaii | 155,632 | 147,204 | 211,099 | – | – | – | 155,632 | 147,204 | 211,099 | 5.7 |
| Illinois | – | – | – | 147,967 | 215,959 | 222,876 | 147,967 | 215,959 | 222,876 | –31.5 |
| Indiana | – | – | – | 474,369 | 735,342 | 760,508 | 474,369 | 735,342 | 760,508 | –35.5 |
| Maine | 2,708 | 59,186 | 81,392 | – | – | – | 2,708 | 59,186 | 81,392 | –95.4 |
| Michigan | – | – | – | 200,919 | 361,458 | 393,367 | 200,919 | 361,458 | 393,367 | –44.4 |
| Ohio | 652 | 1,454 | 1,410 | – | – | – | 652 | 1,454 | 1,410 | –55.2 |
| Pennsylvania | 71,869 | 79,898 | 86,539 | – | – | – | 71,869 | 79,898 | 86,539 | –10.0 |
| Texas | – | 15,561 | – | – | – | – | – | 15,561 | – | –100.0 |
| Washington | 31,858 | – | – | – | – | – | 31,858 | – | – | – |

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 1997, the average number of miners working daily at mines and/or preparation plants producing or processing 10,000 or more short tons of coal totaled 81,516 miners a decrease of 2.3 percent from the 1996 level (Table 40). Wyoming the largest ranking coal-producing state had an average of 2,777 miners working daily in 1997, while Kentucky and West Virginia had an average of 18,937 and 18,245 miners working daily. Together these three States accounted for 49 percent of total employment in 1997. Employment in the Western Region increased by 1.3 percent, while the Appalachian and Interior Regions decreased by 2.2 and 5.7 percent, respectively.

The average number of miners at underground and surface mines in 1997 totaled 52,487 miners and 29,029 miners, respectively (Tables 41 and 42). Miners at underground mines accounted for 64 percent of all U.S. miners while miners at surface mines accounted for 36 percent. The 3.6 percent increase of miners at underground mines West of the Mississippi River was offset somewhat by the 2.8 percent decrease East of the Mississippi River.

A total of 39,448 miners, or 48 percent of the mining workforce worked in mines producing 1 million short tons or more coal which accounted for 75 percent of total production. Of this total, 66 percent worked in underground mines and 34 percent at surface mines.

The United Mine Workers of America (UMWA) continues to be the largest union, representing 88 percent of the unionized workforce and 38 percent of the total coal minimg workforce (Table 46).

## *Productivity*

In 1997, coal miners working daily averaged 6.04 short tons per miner per hour, an increase of 6.1 percent from the 1996 level (Table 48). Increases occurred in all regions, with the Appalachian Region showing the largest increase, 8 percent. Over the last decade, productivity has risen at an annual average rate of 6.1 percent, increasing both at underground and surface mines. Underground mines increased 5.4 percent over the last decade, while surface mines rose 6.6 percent during the same period.

**Figure 4. Average Number of U.S. Miners by Mine Type and by Region, 1988-1997**

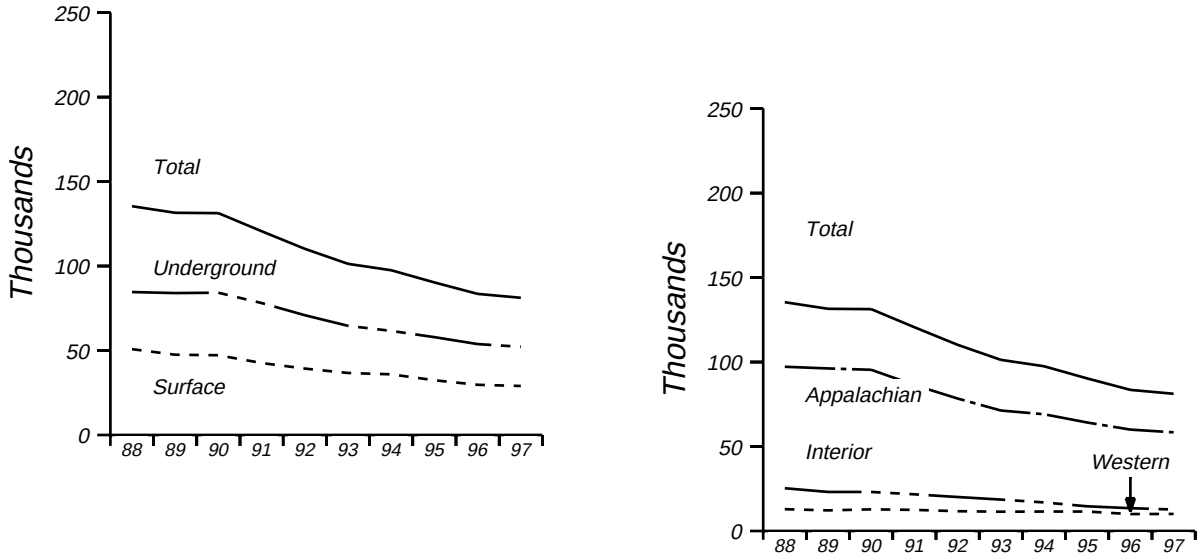
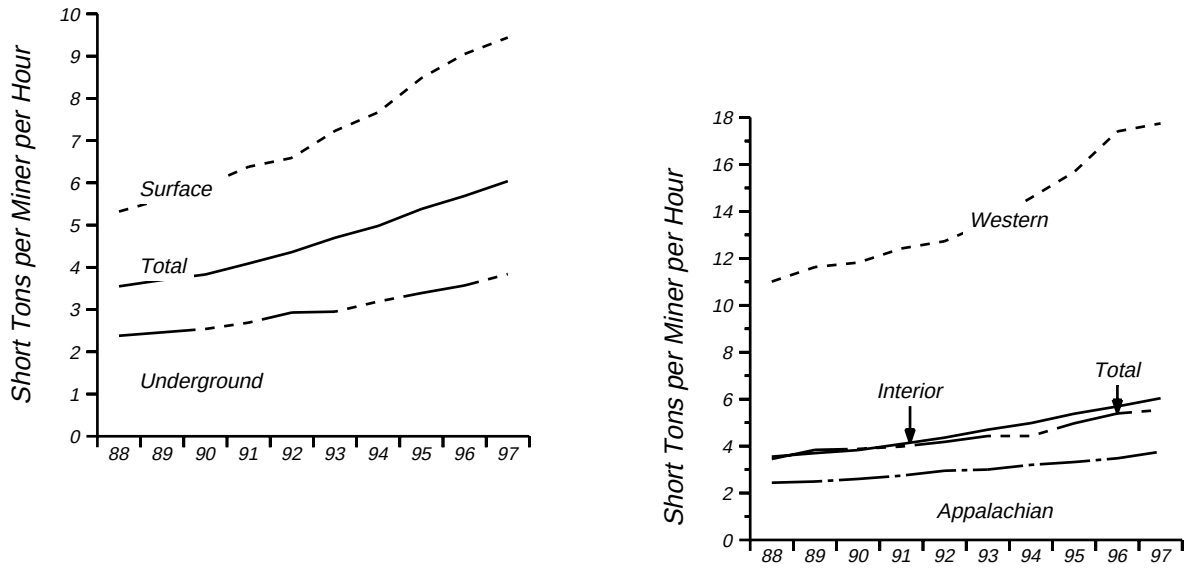



**Figure 5. U.S. Coal Mining Productivity by Mine Type and by Region, 1988-1997**




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 40. Average Number of Miners by State, 1988, 1993-1997

| Coal-Producing State and Region | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| Alabama | 4,928 | 5,031 | 5,567 | 5,418 | 5,399 | 6,858 | –2.0 | –2.3 | –3.6 |
| Alaska | 99 | 102 | 102 | 105 | 96 | 93 | –2.9 | .8 | .7 |
| Arizona | 676 | 651 | 831 | 864 | 876 | 984 | 3.8 | –6.3 | –4.1 |
| Arkansas | 2 | – | 4 | 15 | 5 | 22 | – | –20.5 | –23.4 |
| California | – | – | – | – | – | 8 | – | – | – |
| Colorado | 1,362 | 1,332 | 1,777 | 1,905 | 1,775 | 2,103 | 2.3 | –6.4 | –4.7 |
| Illinois | 4,612 | 5,174 | 5,652 | 6,591 | 7,303 | 10,022 | –10.9 | –10.8 | –8.3 |
| Indiana | 2,712 | 2,579 | 2,571 | 3,206 | 3,331 | 4,108 | 5.1 | –5.0 | –4.5 |
| Iowa | – | – | – | 20 | 90 | 121 | – | – | – |
| Kansas | 67 | 54 | 54 | 63 | 81 | 268 | 24.1 | –4.6 | –14.3 |
| Kentucky Total | 18,937 | 18,826 | 21,125 | 23,368 | 24,063 | 30,559 | .6 | –5.8 | –5.2 |
| Eastern | 15,422 | 15,130 | 16,840 | 18,577 | 18,711 | 24,346 | 1.9 | –4.7 | –4.9 |
| Western | 3,515 | 3,696 | 4,285 | 4,791 | 5,352 | 6,213 | –4.9 | –10.0 | –6.1 |
| Louisiana | 114 | 111 | 114 | 111 | 99 | 78 | 2.7 | 3.6 | 4.3 |
| Maryland | 458 | 469 | 458 | 451 | 441 | 530 | –2.3 | .9 | –1.6 |
| Missouri | 51 | 80 | 92 | 116 | 180 | 671 | –36.3 | –27.0 | –24.9 |
| Montana | 708 | 705 | 722 | 705 | 660 | 872 | .4 | 1.8 | –2.3 |
| New Mexico | 1,339 | 1,347 | 1,747 | 1,786 | 1,762 | 1,584 | –.6 | –6.6 | –1.8 |
| North Dakota | 657 | 640 | 716 | 645 | 782 | 977 | 2.6 | –4.3 | –4.3 |
| Ohio | 3,124 | 3,232 | 3,386 | 3,983 | 3,866 | 7,106 | –3.3 | –5.2 | –8.7 |
| Oklahoma | 269 | 233 | 241 | 253 | 273 | 727 | 15.4 | –.4 | –10.4 |
| Pennsylvania Total | 9,575 | 9,021 | 8,968 | 9,975 | 10,940 | 16,573 | 6.1 | –3.3 | –5.9 |
| Anthracite | 1,287 | 1,171 | 1,069 | 1,183 | 1,124 | 1,453 | 9.9 | 3.4 | –1.3 |
| Bituminous | 8,288 | 7,850 | 7,899 | 8,792 | 9,816 | 15,120 | 5.6 | –4.1 | –6.5 |
| Tennessee | 707 | 756 | 681 | 669 | 646 | 2,119 | –6.5 | 2.3 | –11.5 |
| Texas | 1,363 | 1,550 | 1,590 | 1,733 | 1,841 | 3,057 | –12.1 | –7.2 | –8.6 |
| Utah | 1,922 | 1,804 | 1,893 | 1,675 | 1,769 | 2,375 | 6.5 | 2.1 | –2.3 |
| Virginia | 6,235 | 6,241 | 6,919 | 8,121 | 8,339 | 10,696 | –.1 | –7.0 | –5.8 |
| Washington | 577 | 589 | 566 | 570 | 567 | 716 | –2.0 | .4 | –2.4 |
| West Virginia Total | 18,245 | 20,121 | 21,334 | 21,861 | 22,979 | 28,972 | –9.3 | –5.6 | –5.0 |
| Northern | 4,980 | 5,279 | 6,114 | 6,659 | 7,274 | 9,945 | –5.7 | –9.0 | –7.4 |
| Southern | 13,265 | 14,842 | 15,220 | 15,202 | 15,705 | 19,027 | –10.6 | –4.1 | –3.9 |
| Wyoming | 2,777 | 2,814 | 3,142 | 3,291 | 3,159 | 3,167 | –1.3 | –3.2 | –1.4 |
| **Appalachian Total**[1] | **58,694** | **60,001** | **64,153** | **69,055** | **71,321** | **97,200** | **–2.2** | **–4.8** | **–5.4** |
| **Interior Total**[1] | **12,705** | **13,477** | **14,603** | **16,899** | **18,555** | **25,287** | **–5.7** | **–9.0** | **–7.4** |
| **Western Total**[1] | **10,117** | **9,984** | **11,496** | **11,546** | **11,446** | **12,879** | **1.3** | **–3.0** | **–2.6** |
| **East of Miss. River** | **69,533** | **71,450** | **76,661** | **83,643** | **87,307** | **117,543** | **–2.7** | **–5.5** | **–5.7** |
| **West of Miss. River** | **11,983** | **12,012** | **13,591** | **13,857** | **14,015** | **17,823** | **–.2** | **–3.8** | **–4.3** |
| **U.S. Total** | **81,516** | **83,462** | **90,252** | **97,500** | **101,322** | **135,366** | **–2.3** | **–5.3** | **–5.5** |

[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 Underground Mines by State, 1988, 1993-1997

| Coal-Producing State and Region | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| Alabama | 4,014 | 4,145 | 4,314 | 3,775 | 3,707 | 4,507 | –3.2 | 2.0 | –1.3 |
| Arkansas | – | – | – | 10 | – | – | – | – | – |
| Colorado | 923 | 918 | 1,301 | 1,248 | 1,119 | 1,424 | .5 | –4.7 | –4.7 |
| Illinois | 4,044 | 4,256 | 4,780 | 5,595 | 6,196 | 7,440 | –5.0 | –10.1 | –6.5 |
| Indiana | 411 | 457 | 485 | 485 | 545 | 402 | –10.1 | –6.8 | .2 |
| Iowa | – | – | – | – | – | 45 | – | – | – |
| Kentucky Total | 12,947 | 12,876 | 14,542 | 15,837 | 16,493 | 20,473 | .5 | –5.9 | –5.0 |
| Eastern | 10,369 | 10,275 | 11,366 | 12,849 | 13,028 | 16,085 | .9 | –5.5 | –4.8 |
| Western | 2,578 | 2,601 | 3,176 | 2,988 | 3,465 | 4,388 | –.9 | –7.1 | –5.7 |
| Maryland | 304 | 308 | 293 | 284 | 260 | 288 | –1.3 | 4.0 | .6 |
| Montana | – | 18 | – | – | 7 | – | –100.0 | – | – |
| New Mexico | – | – | 132 | 168 | 246 | 159 | – | – | – |
| Ohio | 1,759 | 1,706 | 1,670 | 1,694 | 1,601 | 2,860 | 3.1 | 2.4 | –5.3 |
| Oklahoma | 36 | 26 | 12 | 32 | 40 | – | 38.5 | –2.6 | – |
| Pennsylvania Total | 6,202 | 5,599 | 5,659 | 6,192 | 6,853 | 10,242 | 10.8 | –2.5 | –5.4 |
| Anthracite | 174 | 147 | 152 | 149 | 194 | 237 | 18.4 | –2.7 | –3.4 |
| Bituminous | 6,028 | 5,452 | 5,507 | 6,043 | 6,659 | 10,005 | 10.6 | –2.4 | –5.5 |
| Tennessee | 390 | 467 | 473 | 511 | 375 | 1,676 | –16.5 | 1.0 | –14.9 |
| Utah | 1,922 | 1,803 | 1,893 | 1,675 | 1,769 | 2,375 | 6.6 | 2.1 | –2.3 |
| Virginia | 5,101 | 5,098 | 5,776 | 6,844 | 7,092 | 9,046 | * | –7.9 | –6.2 |
| West Virginia Total | 14,329 | 16,003 | 16,347 | 16,956 | 18,040 | 23,495 | –10.5 | –5.6 | –5.3 |
| Northern | 4,551 | 4,764 | 5,561 | 5,997 | 6,414 | 8,500 | –4.5 | –8.2 | –6.7 |
| Southern | 9,778 | 11,239 | 10,786 | 10,959 | 11,626 | 14,995 | –13.0 | –4.2 | –4.6 |
| Wyoming | 105 | 116 | 202 | 256 | 261 | 132 | –9.5 | –20.3 | –2.5 |
| **Appalachian Total**[1] | **42,468** | **43,601** | **45,898** | **49,105** | **50,956** | **68,199** | **–2.6** | **–4.4** | **–5.1** |
| **Interior Total**[1] | **7,069** | **7,340** | **8,453** | **9,110** | **10,246** | **12,275** | **–3.7** | **–8.9** | **–5.9** |
| **Western Total**[1] | **2,950** | **2,855** | **3,528** | **3,347** | **3,402** | **4,090** | **3.3** | **–3.5** | **–3.6** |
| **East of Miss. River** | **49,501** | **50,915** | **54,339** | **58,173** | **61,162** | **80,429** | **–2.8** | **–5.1** | **–5.3** |
| **West of Miss. River** | **2,986** | **2,881** | **3,540** | **3,389** | **3,442** | **4,135** | **3.6** | **–3.5** | **–3.5** |
| **U.S. Total** | **52,487** | **53,796** | **57,879** | **61,562** | **64,604** | **84,564** | **–2.4** | **–5.1** | **–5.2** |

[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 at Surface Mines by State, 1988, 1993-1997

| Coal-Producing State and Region | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| Alabama | 914 | 886 | 1,253 | 1,643 | 1,692 | 2,351 | 3.2 | –14.3 | –10.0 |
| Alaska | 99 | 102 | 102 | 105 | 96 | 93 | –2.9 | .8 | .7 |
| Arizona | 676 | 651 | 831 | 864 | 876 | 984 | 3.8 | –6.3 | –4.1 |
| Arkansas | 2 | – | 4 | 5 | 5 | 22 | – | –20.5 | –23.4 |
| California | – | – | – | – | – | 8 | – | – | – |
| Colorado | 439 | 414 | 476 | 657 | 656 | 679 | 6.0 | –9.5 | –4.7 |
| Illinois | 568 | 918 | 872 | 996 | 1,107 | 2,582 | –38.1 | –15.4 | –15.5 |
| Indiana | 2,301 | 2,122 | 2,086 | 2,721 | 2,786 | 3,706 | 8.4 | –4.7 | –5.1 |
| Iowa | – | – | – | 20 | 90 | 76 | – | – | – |
| Kansas | 67 | 54 | 54 | 63 | 81 | 268 | 24.1 | –4.6 | –14.3 |
| Kentucky Total | 5,990 | 5,950 | 6,583 | 7,531 | 7,570 | 10,086 | .7 | –5.7 | –5.6 |
| Eastern | 5,053 | 4,855 | 5,474 | 5,728 | 5,683 | 8,261 | 4.1 | –2.9 | –5.3 |
| Western | 937 | 1,095 | 1,109 | 1,803 | 1,887 | 1,825 | –14.4 | –16.0 | –7.1 |
| Louisiana | 114 | 111 | 114 | 111 | 99 | 78 | 2.7 | 3.6 | 4.3 |
| Maryland | 154 | 161 | 165 | 167 | 181 | 242 | –4.3 | –3.9 | –4.9 |
| Missouri | 51 | 80 | 92 | 116 | 180 | 671 | –36.3 | –27.0 | –24.9 |
| Montana | 708 | 687 | 722 | 705 | 653 | 872 | 3.0 | 2.0 | –2.3 |
| New Mexico | 1,339 | 1,347 | 1,615 | 1,618 | 1,516 | 1,425 | –.6 | –3.0 | –.7 |
| North Dakota | 657 | 640 | 716 | 645 | 782 | 977 | 2.6 | –4.3 | –4.3 |
| Ohio | 1,365 | 1,526 | 1,716 | 2,289 | 2,265 | 4,246 | –10.5 | –11.9 | –11.8 |
| Oklahoma | 233 | 207 | 229 | 221 | 233 | 727 | 12.6 | – | –11.9 |
| Pennsylvania Total | 3,373 | 3,422 | 3,309 | 3,783 | 4,087 | 6,331 | –1.4 | –4.7 | –6.8 |
| Anthracite | 1,113 | 1,024 | 917 | 1,034 | 930 | 1,216 | 8.7 | 4.6 | –1.0 |
| Bituminous | 2,260 | 2,398 | 2,392 | 2,749 | 3,157 | 5,115 | –5.8 | –8.0 | –8.7 |
| Tennessee | 317 | 289 | 208 | 158 | 271 | 443 | 9.7 | 4.0 | –3.6 |
| Texas | 1,363 | 1,550 | 1,590 | 1,733 | 1,841 | 3,057 | –12.1 | –7.2 | –8.6 |
| Utah | – | 1 | – | – | – | – | –100.0 | – | – |
| Virginia | 1,134 | 1,143 | 1,143 | 1,277 | 1,247 | 1,650 | –.8 | –2.3 | –4.1 |
| Washington | 577 | 589 | 566 | 570 | 567 | 716 | –2.0 | .4 | –2.4 |
| West Virginia Total | 3,916 | 4,118 | 4,987 | 4,905 | 4,939 | 5,477 | –4.9 | –5.6 | –3.6 |
| Northern | 429 | 515 | 553 | 662 | 860 | 1,445 | –16.7 | –15.9 | –12.6 |
| Southern | 3,487 | 3,603 | 4,434 | 4,243 | 4,079 | 4,032 | –3.2 | –3.8 | –1.6 |
| Wyoming | 2,672 | 2,698 | 2,940 | 3,035 | 2,898 | 3,035 | –1.0 | –2.0 | –1.4 |
| **Appalachian Total**[1] | **16,226** | **16,400** | **18,255** | **19,950** | **20,365** | **29,001** | **–1.1** | **–5.5** | **–6.2** |
| **Interior Total**[1] | **5,636** | **6,137** | **6,150** | **7,789** | **8,309** | **13,012** | **–8.2** | **–9.2** | **–8.9** |
| **Western Total**[1] | **7,167** | **7,129** | **7,968** | **8,199** | **8,044** | **8,789** | **.5** | **–2.8** | **–2.2** |
| **East of Miss. River** | **20,032** | **20,535** | **22,322** | **25,470** | **26,145** | **37,114** | **–2.4** | **–6.4** | **–6.6** |
| **West of Miss. River** | **8,997** | **9,131** | **10,051** | **10,468** | **10,573** | **13,688** | **–1.5** | **–3.9** | **–4.5** |
| **U.S. Total** | **29,029** | **29,666** | **32,373** | **35,938** | **36,718** | **50,802** | **–2.1** | **–5.7** | **–6.0** |

[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 43. Average Number of Miners by State and Mine Production Range, 1997

| 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 | 3,606 | 405 | 306 | 161 | 92 | 275 | 83 | 4,928 |
| Alaska | 99 | – | – | – | – | – | – | 99 |
| Arizona | 648 | – | – | – | – | – | 28 | 676 |
| Arkansas | – | – | – | – | – | 2 | – | 2 |
| Colorado | 1,063 | 84 | 141 | – | – | 51 | 23 | 1,362 |
| Illinois | 3,678 | 303 | 113 | 15 | – | 314 | 189 | 4,612 |
| Indiana | 1,900 | 395 | 256 | 71 | – | 51 | 39 | 2,712 |
| Kansas | – | – | – | 7 | 60 | – | – | 67 |
| Kentucky Total | 4,620 | 3,437 | 3,930 | 2,338 | 1,303 | 1,544 | 1,765 | 18,937 |
| Eastern | 2,593 | 2,886 | 3,505 | 2,174 | 1,248 | 1,529 | 1,487 | 15,422 |
| Western | 2,027 | 551 | 425 | 164 | 55 | 15 | 278 | 3,515 |
| Louisiana | 114 | – | – | – | – | – | – | 114 |
| Maryland | 219 | – | 94 | 13 | 79 | 20 | 33 | 458 |
| Missouri | – | – | 23 | – | 21 | 7 | – | 51 |
| Montana | 700 | – | 8 | – | – | – | – | 708 |
| New Mexico | 1,339 | – | – | – | – | – | – | 1,339 |
| North Dakota | 657 | – | – | – | – | – | – | 657 |
| Ohio | 1,677 | 224 | 659 | 175 | 143 | 118 | 128 | 3,124 |
| Oklahoma | – | – | 164 | 53 | 52 | – | – | 269 |
| Pennsylvania Total | 3,939 | 1,337 | 1,302 | 808 | 474 | 770 | 945 | 9,575 |
| Anthracite | – | 11 | 201 | 142 | 172 | 318 | 443 | 1,287 |
| Bituminous | 3,939 | 1,326 | 1,101 | 666 | 302 | 452 | 502 | 8,288 |
| Tennessee | – | 72 | 231 | – | 208 | 86 | 110 | 707 |
| Texas | 1,293 | – | 70 | – | – | – | – | 1,363 |
| Utah | 1,492 | 223 | 171 | – | – | – | 36 | 1,922 |
| Virginia | 874 | 497 | 1,837 | 879 | 766 | 637 | 745 | 6,235 |
| Washington | 543 | – | – | – | 34 | – | – | 577 |
| West Virginia Total | 8,347 | 2,690 | 2,467 | 1,319 | 666 | 710 | 2,046 | 18,245 |
| Northern | 3,157 | 449 | 434 | 260 | 141 | 166 | 373 | 4,980 |
| Southern | 5,190 | 2,241 | 2,033 | 1,059 | 525 | 544 | 1,673 | 13,265 |
| Wyoming | 2,640 | 60 | 64 | – | – | 13 | – | 2,777 |
| **Appalachian Total**[2] | **21,255** | **8,111** | **10,401** | **5,529** | **3,676** | **4,145** | **5,577** | **58,694** |
| **Interior Total**[2] | **9,012** | **1,249** | **1,051** | **310** | **188** | **389** | **506** | **12,705** |
| **Western Total**[2] | **9,181** | **367** | **384** | **–** | **34** | **64** | **87** | **10,117** |
| **East of Miss. River** | **28,860** | **9,360** | **11,195** | **5,779** | **3,731** | **4,525** | **6,083** | **69,533** |
| **West of Miss. River** | **10,588** | **367** | **641** | **60** | **167** | **73** | **87** | **11,983** |
| **U.S. Total** | **39,448** | **9,727** | **11,836** | **5,839** | **3,898** | **4,598** | **6,170** | **81,516** |

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 Underground Mines by State and Mine Production Range, 1997

| 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 | 3,438 | 303 | – | 36 | – | 189 | 48 | 4,014 |
| Colorado | 648 | 84 | 117 | – | – | 51 | 23 | 923 |
| Illinois | 3,316 | 195 | 81 | – | – | 305 | 147 | 4,044 |
| Indiana | 336 | – | – | 61 | – | – | 14 | 411 |
| Kentucky Total | 3,528 | 2,058 | 2,416 | 1,585 | 1,027 | 1,037 | 1,296 | 12,947 |
| Eastern | 1,567 | 1,809 | 2,356 | 1,549 | 991 | 1,037 | 1,060 | 10,369 |
| Western | 1,961 | 249 | 60 | 36 | 36 | – | 236 | 2,578 |
| Maryland | 219 | – | 42 | – | 10 | – | 33 | 304 |
| Ohio | 1,587 | – | 116 | – | 36 | – | 20 | 1,759 |
| Oklahoma | – | – | 36 | – | – | – | – | 36 |
| Pennsylvania Total | 3,810 | 1,002 | 518 | 278 | 69 | 178 | 347 | 6,202 |
| Anthracite | – | – | – | 36 | – | 89 | 49 | 174 |
| Bituminous | 3,810 | 1,002 | 518 | 242 | 69 | 89 | 298 | 6,028 |
| Tennessee | – | – | 107 | – | 176 | 37 | 70 | 390 |
| Utah | 1,492 | 223 | 171 | – | – | – | 36 | 1,922 |
| Virginia | 874 | 258 | 1,433 | 761 | 645 | 508 | 622 | 5,101 |
| West Virginia Total | 6,500 | 2,008 | 1,928 | 1,110 | 559 | 529 | 1,695 | 14,329 |
| Northern | 3,089 | 399 | 343 | 219 | 98 | 71 | 332 | 4,551 |
| Southern | 3,411 | 1,609 | 1,585 | 891 | 461 | 458 | 1,363 | 9,778 |
| Wyoming | 105 | – | – | – | – | – | – | 105 |
| **Appalachian Total**[2] | **17,995** | **5,380** | **6,500** | **3,734** | **2,486** | **2,478** | **3,895** | **42,468** |
| **Interior Total**[2] | **5,613** | **444** | **177** | **97** | **36** | **305** | **397** | **7,069** |
| **Western Total**[2] | **2,245** | **307** | **288** | – | – | **51** | **59** | **2,950** |
| **East of Miss. River** | **23,608** | **5,824** | **6,641** | **3,831** | **2,522** | **2,783** | **4,292** | **49,501** |
| **West of Miss. River** | **2,245** | **307** | **324** | – | – | **51** | **59** | **2,986** |
| **U.S. Total** | **25,853** | **6,131** | **6,965** | **3,831** | **2,522** | **2,834** | **4,351** | **52,487** |

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 at Surface Mines by State and Mine Production Range, 1997

| 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 | 168 | 102 | 306 | 125 | 92 | 86 | 35 | 914 |
| Alaska | 99 | – | – | – | – | – | – | 99 |
| Arizona | 648 | – | – | – | – | – | 28 | 676 |
| Arkansas | – | – | – | – | – | 2 | – | 2 |
| Colorado | 415 | – | 24 | – | – | – | – | 439 |
| Illinois | 362 | 108 | 32 | 15 | – | 9 | 42 | 568 |
| Indiana | 1,564 | 395 | 256 | 10 | – | 51 | 25 | 2,301 |
| Kansas | – | – | – | 7 | 60 | – | – | 67 |
| Kentucky Total | 1,092 | 1,379 | 1,514 | 753 | 276 | 507 | 469 | 5,990 |
| Eastern | 1,026 | 1,077 | 1,149 | 625 | 257 | 492 | 427 | 5,053 |
| Western | 66 | 302 | 365 | 128 | 19 | 15 | 42 | 937 |
| Louisiana | 114 | – | – | – | – | – | – | 114 |
| Maryland | – | – | 52 | 13 | 69 | 20 | – | 154 |
| Missouri | – | – | 23 | – | 21 | 7 | – | 51 |
| Montana | 700 | – | 8 | – | – | – | – | 708 |
| New Mexico | 1,339 | – | – | – | – | – | – | 1,339 |
| North Dakota | 657 | – | – | – | – | – | – | 657 |
| Ohio | 90 | 224 | 543 | 175 | 107 | 118 | 108 | 1,365 |
| Oklahoma | – | – | 128 | 53 | 52 | – | – | 233 |
| Pennsylvania Total | 129 | 335 | 784 | 530 | 405 | 592 | 598 | 3,373 |
| Anthracite | – | 11 | 201 | 106 | 172 | 229 | 394 | 1,113 |
| Bituminous | 129 | 324 | 583 | 424 | 233 | 363 | 204 | 2,260 |
| Tennessee | – | 72 | 124 | – | 32 | 49 | 40 | 317 |
| Texas | 1,293 | – | 70 | – | – | – | – | 1,363 |
| Virginia | – | 239 | 404 | 118 | 121 | 129 | 123 | 1,134 |
| Washington | 543 | – | – | – | 34 | – | – | 577 |
| West Virginia Total | 1,847 | 682 | 539 | 209 | 107 | 181 | 351 | 3,916 |
| Northern | 68 | 50 | 91 | 41 | 43 | 95 | 41 | 429 |
| Southern | 1,779 | 632 | 448 | 168 | 64 | 86 | 310 | 3,487 |
| Wyoming | 2,535 | 60 | 64 | – | – | 13 | – | 2,672 |
| **Appalachian Total**[2] | **3,260** | **2,731** | **3,901** | **1,795** | **1,190** | **1,667** | **1,682** | **16,226** |
| **Interior Total**[2] | **3,399** | **805** | **874** | **213** | **152** | **84** | **109** | **5,636** |
| **Western Total**[2] | **6,936** | **60** | **96** | – | **34** | **13** | **28** | **7,167** |
| **East of Miss. River** | **5,252** | **3,536** | **4,554** | **1,948** | **1,209** | **1,742** | **1,791** | **20,032** |
| **West of Miss. River** | **8,343** | **60** | **317** | **60** | **167** | **22** | **28** | **8,997** |
| **U.S. Total** | **13,595** | **3,596** | **4,871** | **2,008** | **1,376** | **1,764** | **1,819** | **29,029** |

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 46. Average Number of Miners by State, Mine Type, and Union Type, 1997

| Coal-Producing State and Region | UMWA | Other Unions | Union Total | Nonunion | Total |
|---|---|---|---|---|---|
| **Alabama** | **3,630** | – | **3,630** | **1,298** | **4,928** |
| Underground | 3,348 | – | 3,348 | 666 | 4,014 |
| Surface | 282 | – | 282 | 632 | 914 |
| **Alaska** | – | **99** | **99** | – | **99** |
| Surface | – | 99 | 99 | – | 99 |
| **Arizona** | **676** | – | **676** | – | **676** |
| Surface | 676 | – | 676 | – | 676 |
| **Arkansas** | – | – | – | **2** | **2** |
| Surface | – | – | – | 2 | 2 |
| **Colorado** | **249** | **132** | **381** | **981** | **1,362** |
| Underground | 138 | – | 138 | 785 | 923 |
| Surface | 111 | 132 | 243 | 196 | 439 |
| **Illinois** | **3,100** | **419** | **3,519** | **1,093** | **4,612** |
| Underground | 2,636 | 371 | 3,007 | 1,037 | 4,044 |
| Surface | 464 | 48 | 512 | 56 | 568 |
| **Indiana** | **1,146** | – | **1,146** | **1,566** | **2,712** |
| Underground | 36 | – | 36 | 375 | 411 |
| Surface | 1,110 | – | 1,110 | 1,191 | 2,301 |
| **Kansas** | **53** | – | **53** | **14** | **67** |
| Surface | 53 | – | 53 | 14 | 67 |
| **Kentucky Total** | **2,194** | **75** | **2,269** | **16,668** | **18,937** |
| Underground | 1,869 | 75 | 1,944 | 11,003 | 12,947 |
| Surface | 325 | – | 325 | 5,665 | 5,990 |
| **Eastern** | **941** | **75** | **1,016** | **14,406** | **15,422** |
| Underground | 728 | 75 | 803 | 9,566 | 10,369 |
| Surface | 213 | – | 213 | 4,840 | 5,053 |
| **Western** | **1,253** | – | **1,253** | **2,262** | **3,515** |
| Underground | 1,141 | – | 1,141 | 1,437 | 2,578 |
| Surface | 112 | – | 112 | 825 | 937 |
| **Louisiana** | – | – | – | **114** | **114** |
| Surface | – | – | – | 114 | 114 |
| **Maryland** | – | – | – | **458** | **458** |
| Underground | – | – | – | 304 | 304 |
| Surface | – | – | – | 154 | 154 |
| **Missouri** | – | – | – | **51** | **51** |
| Surface | – | – | – | 51 | 51 |
| **Montana** | **407** | **237** | **644** | **64** | **708** |
| Surface | 407 | 237 | 644 | 64 | 708 |
| **New Mexico** | **420** | **711** | **1,131** | **208** | **1,339** |
| Surface | 420 | 711 | 1,131 | 208 | 1,339 |
| **North Dakota** | **104** | **141** | **245** | **412** | **657** |
| Surface | 104 | 141 | 245 | 412 | 657 |
| **Ohio** | **1,657** | – | **1,657** | **1,467** | **3,124** |
| Underground | 1,512 | – | 1,512 | 247 | 1,759 |
| Surface | 145 | – | 145 | 1,220 | 1,365 |
| **Oklahoma** | – | – | – | **269** | **269** |
| Underground | – | – | – | 36 | 36 |
| Surface | – | – | – | 233 | 233 |
| **Pennsylvania Total** | **4,596** | **19** | **4,615** | **4,960** | **9,575** |
| Underground | 3,837 | 7 | 3,844 | 2,358 | 6,202 |
| Surface | 759 | 12 | 771 | 2,602 | 3,373 |
| **Anthracite** | **561** | **13** | **574** | **713** | **1,287** |
| Underground | 2 | 4 | 6 | 168 | 174 |
| Surface | 559 | 9 | 568 | 545 | 1,113 |
| **Bituminous** | **4,035** | **6** | **4,041** | **4,247** | **8,288** |
| Underground | 3,835 | 3 | 3,838 | 2,190 | 6,028 |
| Surface | 200 | 3 | 203 | 2,057 | 2,260 |
| **Tennessee** | – | – | – | **707** | **707** |
| Underground | – | – | – | 390 | 390 |
| Surface | – | – | – | 317 | 317 |
| **Texas** | – | **908** | **908** | **455** | **1,363** |
| Surface | – | 908 | 908 | 455 | 1,363 |
| **Utah** | **557** | – | **557** | **1,365** | **1,922** |
| Underground | 557 | – | 557 | 1,365 | 1,922 |
| **Virginia** | **1,164** | **136** | **1,300** | **4,935** | **6,235** |
| Underground | 1,145 | 81 | 1,226 | 3,875 | 5,101 |
| Surface | 19 | 55 | 74 | 1,060 | 1,134 |
| **Washington** | – | **543** | **543** | **34** | **577** |
| Surface | – | 543 | 543 | 34 | 577 |
| **West Virginia Total** | **10,258** | **41** | **10,299** | **7,946** | **18,245** |
| Underground | 8,589 | 1 | 8,590 | 5,739 | 14,329 |
| Surface | 1,669 | 40 | 1,709 | 2,207 | 3,916 |

See footnotes at end of table.

## Table 46. Average Number of Miners by State, Mine Type, and Union Type, 1997 (Continued)

| Coal-Producing State and Region | UMWA | Other Unions | Union Total | Nonunion | Total |
|---|---|---|---|---|---|
| **Northern** | **3,291** | – | **3,291** | **1,689** | **4,980** |
| Underground | 3,291 | – | 3,291 | 1,260 | 4,551 |
| Surface | – | – | – | 429 | 429 |
| **Southern** | **6,967** | **41** | **7,008** | **6,257** | **13,265** |
| Underground | 5,298 | 1 | 5,299 | 4,479 | 9,778 |
| Surface | 1,669 | 40 | 1,709 | 1,778 | 3,487 |
| **Wyoming** | **395** | **555** | **950** | **1,827** | **2,777** |
| Underground | – | – | – | 105 | 105 |
| Surface | 395 | 555 | 950 | 1,722 | 2,672 |
| **Appalachian Total**[1] | **22,246** | **271** | **22,517** | **36,177** | **58,694** |
| Underground | 19,159 | 164 | 19,323 | 23,145 | 42,468 |
| Surface | 3,087 | 107 | 3,194 | 13,032 | 16,226 |
| **Interior Total**[1] | **5,552** | **1,327** | **6,879** | **5,826** | **12,705** |
| Underground | 3,813 | 371 | 4,184 | 2,885 | 7,069 |
| Surface | 1,739 | 956 | 2,695 | 2,941 | 5,636 |
| **Western Total**[1] | **2,808** | **2,418** | **5,226** | **4,891** | **10,117** |
| Underground | 695 | – | 695 | 2,255 | 2,950 |
| Surface | 2,113 | 2,418 | 4,531 | 2,636 | 7,167 |
| **East of Miss. River** | **27,745** | **690** | **28,435** | **41,098** | **69,533** |
| Underground | 22,972 | 535 | 23,507 | 25,994 | 49,501 |
| Surface | 4,773 | 155 | 4,928 | 15,104 | 20,032 |
| **West of Miss. River** | **2,861** | **3,326** | **6,187** | **5,796** | **11,983** |
| Underground | 695 | – | 695 | 2,291 | 2,986 |
| Surface | 2,166 | 3,326 | 5,492 | 3,505 | 8,997 |
| **U.S. Total** | **30,606** | **4,016** | **34,622** | **46,894** | **81,516** |
| Underground | 23,667 | 535 | 24,202 | 28,285 | 52,487 |
| Surface | 6,939 | 3,481 | 10,420 | 18,609 | 29,029 |

[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. 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 47. U.S. Coal Mine Injuries, 1988, 1993-1997

| Injury Type | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **Injuries Total**[1] | **5,549** | **R 6,148** | **R 7,377** | **R 8,745** | **R 8,422** | **12,488** | **–9.7** | **–9.9** | **–8.6** |
| Fatal | 30 | R 39 | 47 | 45 | 47 | 53 | –23.1 | –10.6 | –6.1 |
| Nonfatal[2] | 5,519 | R 6,109 | R 7,330 | R 8,701 | R 8,375 | 12,435 | –9.7 | –9.9 | –8.6 |
| **Injuries per 200,000 Employee-Hours Total** | **5.17** | **R 5.66** | **R 6.62** | **R 7.28** | **R 7.25** | **8.68** | **–8.6** | **–8.1** | **–5.6** |
| Fatal | .03 | .04 | .04 | R .04 | .04 | .04 | –25.0 | –6.9 | –3.1 |
| Nonfatal[2] | 5.14 | R 5.62 | R 6.58 | R 7.24 | R 7.21 | 8.64 | –8.5 | –8.1 | –5.6 |

[1] Includes contractors.

[2] Includes only non-fatal injuries that resulted in absence from work.

**R** Revised.

Note: Calculations of growth rate are based using unrounded values.

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

**Figure 6. U.S. Coal Mine Injuries, 1988-1997**

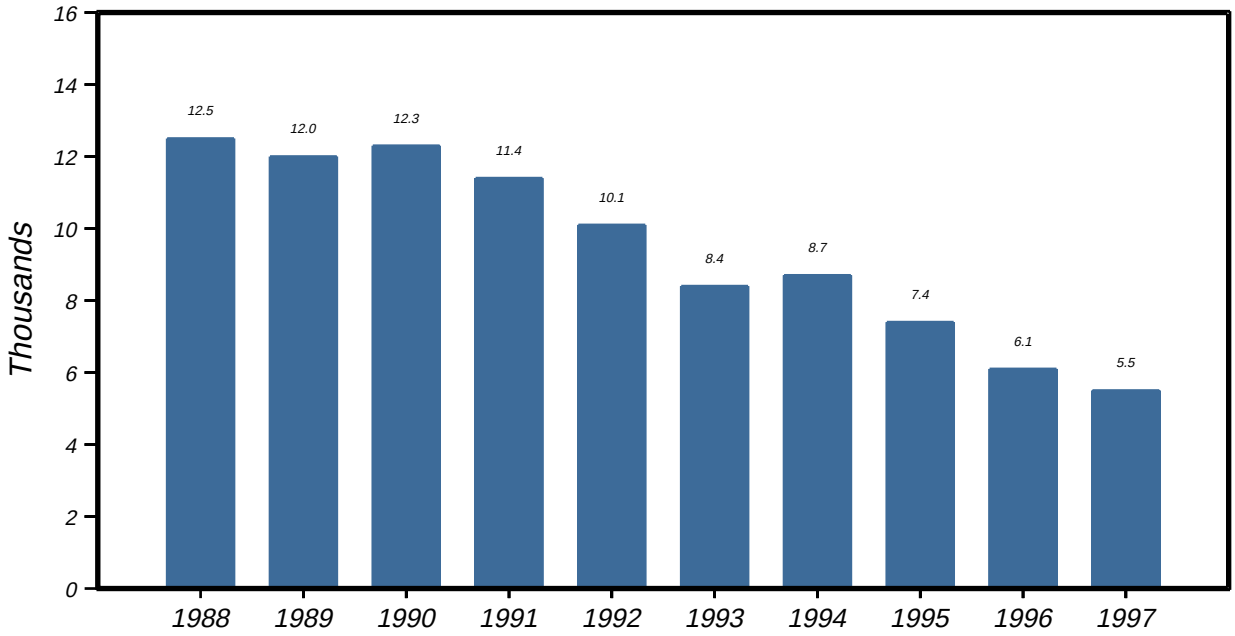
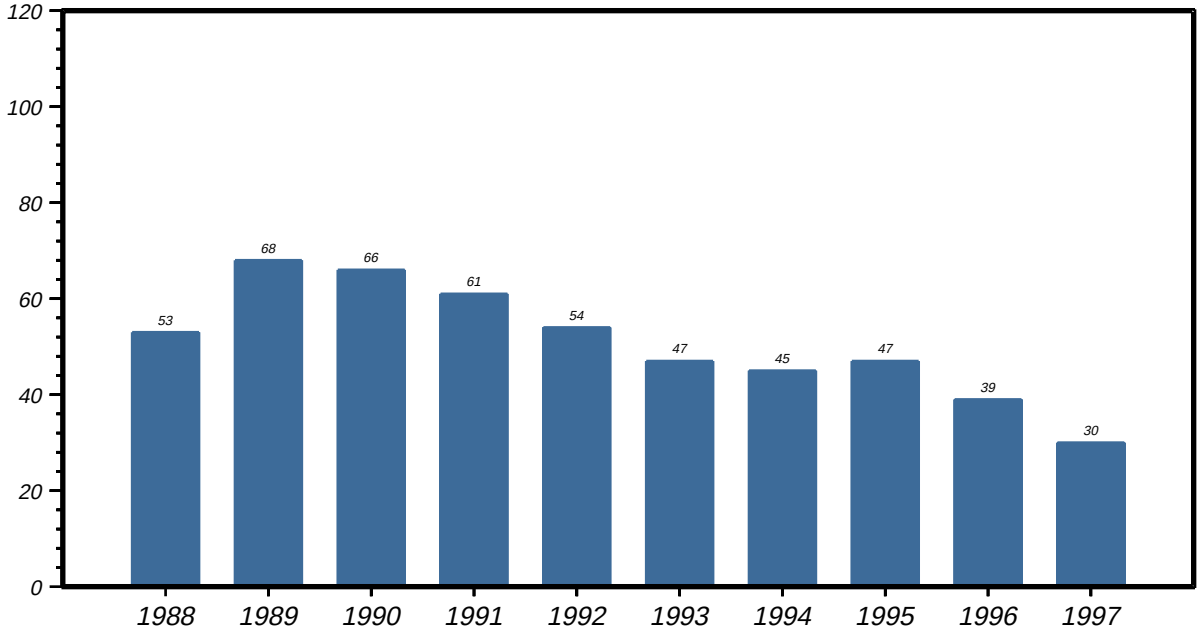



**Figure 7. U.S. Coal Mine Fatalities, 1988-1997**




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

## Table 48. Coal Mining Productivity by State, 1988, 1993-1997

(Short Tons of Coal Produced per Miner per Hour)

| Coal-Producing State and Region | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| Alabama | 2.39 | 2.20 | 2.24 | 2.25 | 2.35 | 2.03 | 8.4 | 0.3 | 1.8 |
| Alaska | 6.41 | 6.81 | 7.46 | 6.94 | 7.40 | 8.11 | –5.8 | –3.5 | –2.6 |
| Arizona | 6.79 | 6.30 | 6.34 | 6.71 | 6.21 | 6.45 | 7.7 | 2.3 | .6 |
| Arkansas | 1.94 | – | 1.47 | 1.52 | 1.39 | 7.67 | – | 8.8 | –14.1 |
| California | – | – | – | – | – | 14.93 | – | – | – |
| Colorado | 7.68 | 7.32 | 6.14 | 6.20 | 5.85 | 3.94 | 4.9 | 7.1 | 7.7 |
| Illinois | 4.20 | 4.18 | 3.87 | 3.59 | 3.23 | 2.67 | .3 | 6.8 | 5.1 |
| Indiana | 5.33 | 4.98 | 4.68 | 4.28 | 4.46 | 3.52 | 7.0 | 4.6 | 4.7 |
| Iowa | – | – | – | 1.52 | .72 | 1.55 | – | – | – |
| Kansas | 3.82 | 2.17 | 2.22 | 1.93 | 2.30 | 1.46 | 76.3 | 13.5 | 11.3 |
| Kentucky Total | 3.94 | 3.80 | 3.57 | 3.25 | 3.25 | 2.74 | 3.6 | 5.0 | 4.1 |
| Eastern | 3.83 | 3.68 | 3.47 | 3.24 | 3.18 | 2.68 | 4.2 | 4.8 | 4.1 |
| Western | 4.38 | 4.29 | 3.97 | 3.28 | 3.49 | 2.95 | 2.0 | 5.8 | 4.5 |
| Louisiana | 10.94 | 10.86 | 13.25 | 13.00 | 12.14 | 16.01 | .7 | –2.6 | –4.1 |
| Maryland | 3.93 | 4.13 | 3.82 | 3.68 | 3.41 | 3.04 | –4.8 | 3.6 | 2.9 |
| Missouri | 3.19 | 3.49 | 2.55 | 3.59 | 1.84 | 2.68 | –8.5 | 14.7 | 1.9 |
| Montana | 23.56 | 21.88 | 21.06 | 21.92 | 19.49 | 19.56 | 7.6 | 4.8 | 2.1 |
| New Mexico | 9.37 | 8.45 | 6.92 | 6.77 | 6.68 | 6.47 | 11.0 | 8.8 | 4.2 |
| North Dakota | 17.82 | 17.20 | 16.80 | 18.84 | 17.66 | 15.63 | 3.6 | .2 | 1.5 |
| Ohio | 4.02 | 3.95 | 3.62 | 3.42 | 3.46 | 2.39 | 1.6 | 3.8 | 5.9 |
| Oklahoma | 2.51 | 2.61 | 2.97 | 2.68 | 2.80 | 2.10 | –3.7 | –2.7 | 2.0 |
| Pennsylvania Total | 3.63 | 3.36 | 3.23 | 2.98 | 2.80 | 2.11 | 7.9 | 6.7 | 6.2 |
| Anthracite | 1.76 | 1.92 | 2.08 | 1.93 | 1.85 | 1.21 | –8.1 | –1.2 | 4.2 |
| Bituminous | 3.89 | 3.56 | 3.37 | 3.11 | 2.91 | 2.18 | 9.3 | 7.5 | 6.6 |
| Tennessee | 2.37 | 2.20 | 2.36 | 2.23 | 2.47 | 1.57 | 7.8 | –1.0 | 4.6 |
| Texas | 10.24 | 10.13 | 9.10 | 8.82 | 8.42 | 6.52 | 1.1 | 5.0 | 5.1 |
| Utah | 6.34 | 7.23 | 7.02 | 6.59 | 5.96 | 4.16 | –12.3 | 1.5 | 4.8 |
| Virginia | 2.77 | 2.72 | 2.50 | 2.51 | 2.41 | 2.31 | 2.0 | 3.6 | 2.0 |
| Washington | 3.59 | 3.97 | 4.04 | 4.11 | 4.00 | 3.57 | –9.6 | –2.6 | * |
| West Virginia Total | 4.46 | 3.91 | 3.74 | 3.69 | 3.27 | 2.68 | 14.1 | 8.0 | 5.8 |
| Northern | 4.48 | 4.05 | 3.72 | 3.63 | 2.98 | 2.65 | 10.5 | 10.7 | 6.0 |
| Southern | 4.46 | 3.86 | 3.75 | 3.72 | 3.39 | 2.69 | 15.5 | 7.1 | 5.7 |
| Wyoming | 34.55 | 32.06 | 30.06 | 26.05 | 24.46 | 18.80 | 7.8 | 9.0 | 7.0 |
| **Appalachian Total**[1] | **3.76** | **3.48** | **3.32** | **3.20** | **3.00** | **2.44** | **8.0** | **5.8** | **4.9** |
| **Interior Total**[1] | **5.54** | **5.39** | **4.97** | **4.43** | **4.43** | **3.45** | **2.8** | **5.8** | **5.4** |
| **Western Total**[1] | **17.75** | **17.41** | **15.68** | **14.58** | **13.53** | **11.01** | **1.9** | **7.0** | **5.4** |
| **East of Miss. River** | **3.89** | **3.63** | **3.45** | **3.28** | **3.11** | **2.54** | **7.1** | **5.8** | **4.9** |
| **West of Miss. River** | **16.04** | **15.66** | **14.18** | **13.22** | **12.14** | **9.38** | **2.4** | **7.2** | **6.1** |
| **U.S. Total** | **6.04** | **5.69** | **5.38** | **4.98** | **4.70** | **3.55** | **6.1** | **6.5** | **6.1** |

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

* Data round to zero.

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, shop or yard work at mining operations, but excludes office workers. 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, 1988, 1993-1997

(Short Tons of Coal Produced per Miner per Hour)

| Coal-Producing State and Region | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| Alabama | 2.21 | 1.95 | 2.02 | 1.94 | 2.09 | 1.76 | 13.3 | 1.4 | 2.5 |
| Arkansas | – | – | – | 1.62 | – | – | – | – | – |
| Colorado | 7.44 | 6.67 | 5.86 | 5.81 | 5.21 | 2.59 | 11.6 | 9.3 | 12.4 |
| Illinois | 4.07 | 4.10 | 3.86 | 3.49 | 3.11 | 2.43 | –.8 | 6.9 | 5.9 |
| Indiana | 3.74 | 3.09 | 3.22 | 2.82 | 2.49 | 2.28 | 21.2 | 10.7 | 5.7 |
| Kentucky Total | 3.64 | 3.53 | 3.25 | 2.89 | 2.93 | 2.53 | 3.0 | 5.5 | 4.1 |
| Eastern | 3.47 | 3.37 | 3.12 | 2.87 | 2.89 | 2.42 | 2.9 | 4.7 | 4.1 |
| Western | 4.15 | 4.05 | 3.70 | 2.96 | 3.10 | 2.86 | 2.5 | 7.5 | 4.2 |
| Maryland | 5.17 | 4.82 | 4.77 | 4.52 | 4.34 | 3.43 | 7.2 | 4.5 | 4.6 |
| Montana | – | 3.50 | – | – | 1.06 | – | –100.0 | – | – |
| New Mexico | – | – | 2.68 | 2.57 | 1.63 | 2.14 | – | – | – |
| Ohio | 4.18 | 4.19 | 3.81 | 3.51 | 3.27 | 1.95 | –.1 | 6.3 | 8.8 |
| Oklahoma | 2.32 | 1.75 | .74 | 1.70 | 1.03 | – | 32.7 | 22.5 | – |
| Pennsylvania Total | 4.05 | 3.74 | 3.49 | 3.18 | 2.91 | 1.97 | 8.2 | 8.6 | 8.3 |
| Anthracite | 1.03 | .94 | .86 | .64 | .74 | .86 | 9.6 | 8.7 | 2.0 |
| Bituminous | 4.13 | 3.81 | 3.56 | 3.25 | 2.98 | 1.99 | 8.3 | 8.5 | 8.4 |
| Tennessee | 1.83 | 1.76 | 2.02 | 1.90 | 2.34 | 1.45 | 4.0 | –6.0 | 2.6 |
| Utah | 6.34 | 7.24 | 7.02 | 6.59 | 5.96 | 4.16 | –12.4 | 1.5 | 4.8 |
| Virginia | 2.56 | 2.44 | 2.25 | 2.27 | 2.19 | 2.28 | 4.8 | 3.9 | 1.3 |
| West Virginia Total | 4.03 | 3.50 | 3.40 | 3.38 | 2.92 | 2.49 | 15.1 | 8.3 | 5.5 |
| Northern | 4.35 | 3.98 | 3.66 | 3.61 | 2.84 | 2.55 | 9.4 | 11.2 | 6.1 |
| Southern | 3.90 | 3.29 | 3.27 | 3.25 | 2.96 | 2.44 | 18.4 | 7.1 | 5.3 |
| Wyoming | 10.13 | 9.18 | 5.97 | 5.07 | 3.56 | 3.72 | 10.4 | 29.8 | 11.8 |
| **Appalachian Total**[1] | **3.55** | **3.24** | **3.08** | **2.96** | **2.75** | **2.27** | **9.3** | **6.5** | **5.1** |
| **Interior Total**[1] | **4.07** | **4.01** | **3.76** | **3.26** | **3.06** | **2.57** | **1.5** | **7.4** | **5.2** |
| **Western Total**[1] | **6.88** | **7.09** | **6.35** | **5.98** | **5.23** | **3.55** | **–3.0** | **7.1** | **7.6** |
| **East of Miss. River** | **3.63** | **3.36** | **3.19** | **3.02** | **2.81** | **2.32** | **7.8** | **6.6** | **5.1** |
| **West of Miss. River** | **6.82** | **7.03** | **6.32** | **5.93** | **5.18** | **3.55** | **–3.0** | **7.1** | **7.5** |
| **U.S. Total** | **3.83** | **3.57** | **3.39** | **3.19** | **2.95** | **2.38** | **7.2** | **6.7** | **5.4** |

[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 engaged in production, preparation, processing, development, maintenance, repair, shop or yard work at mining operations, but excludes office workers. 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, 1988, 1993-1997

(Short Tons of Coal Produced per Miner per Hour)

| Coal-Producing State and Region | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| Alabama | 3.21 | 3.50 | 3.07 | 3.07 | 3.01 | 2.52 | –8.5 | 1.6 | 2.7 |
| Alaska | 6.41 | 6.81 | 7.46 | 6.94 | 7.40 | 8.11 | –5.8 | –3.5 | –2.6 |
| Arizona | 6.79 | 6.30 | 6.34 | 6.71 | 6.21 | 6.45 | 7.7 | 2.3 | .6 |
| Arkansas | 1.94 | – | 1.47 | 1.46 | 1.39 | 7.67 | – | 8.8 | –14.1 |
| California | – | – | – | – | – | 14.93 | – | – | – |
| Colorado | 8.17 | 8.76 | 6.79 | 7.06 | 7.07 | 6.51 | –6.7 | 3.7 | 2.6 |
| Illinois | 5.11 | 4.67 | 3.89 | 4.12 | 3.86 | 3.32 | 9.3 | 7.2 | 4.9 |
| Indiana | 5.59 | 5.34 | 5.04 | 4.56 | 4.82 | 3.68 | 4.6 | 3.8 | 4.7 |
| Iowa | – | – | – | 1.52 | .72 | 1.56 | – | – | – |
| Kansas | 3.82 | 2.17 | 2.22 | 1.93 | 2.30 | 1.46 | 76.3 | 13.5 | 11.3 |
| Kentucky Total | 4.57 | 4.35 | 4.23 | 3.96 | 3.84 | 3.14 | 4.8 | 4.4 | 4.3 |
| Eastern | 4.47 | 4.23 | 4.13 | 3.97 | 3.74 | 3.14 | 5.5 | 4.5 | 4.0 |
| Western | 5.26 | 5.02 | 4.77 | 3.93 | 4.14 | 3.13 | 4.8 | 6.1 | 5.9 |
| Louisiana | 10.94 | 10.86 | 13.25 | 13.00 | 12.14 | 16.01 | .7 | –2.6 | –4.1 |
| Maryland | 2.02 | 2.56 | 2.16 | 2.18 | 2.07 | 2.56 | –21.0 | –.6 | –2.6 |
| Missouri | 3.19 | 3.49 | 2.55 | 3.59 | 1.84 | 2.68 | –8.5 | 14.7 | 1.9 |
| Montana | 23.56 | 22.34 | 21.06 | 21.92 | 19.59 | 19.56 | 5.4 | 4.7 | 2.1 |
| New Mexico | 9.37 | 8.45 | 7.19 | 7.18 | 7.26 | 6.61 | 11.0 | 6.6 | 3.9 |
| North Dakota | 17.82 | 17.20 | 16.80 | 18.84 | 17.66 | 15.63 | 3.6 | .2 | 1.5 |
| Ohio | 3.81 | 3.69 | 3.46 | 3.34 | 3.58 | 2.70 | 3.2 | 1.5 | 3.9 |
| Oklahoma | 2.55 | 2.73 | 3.10 | 2.80 | 3.12 | 2.10 | –6.7 | –5.0 | 2.2 |
| Pennsylvania Total | 2.86 | 2.72 | 2.79 | 2.67 | 2.63 | 2.32 | 5.0 | 2.0 | 2.3 |
| Anthracite | 1.87 | 2.06 | 2.30 | 2.13 | 2.09 | 1.28 | –9.1 | –2.6 | 4.3 |
| Bituminous | 3.28 | 2.97 | 2.95 | 2.84 | 2.78 | 2.53 | 10.2 | 4.2 | 2.9 |
| Tennessee | 3.02 | 2.91 | 3.20 | 3.19 | 2.71 | 2.00 | 3.9 | 2.7 | 4.7 |
| Texas | 10.24 | 10.13 | 9.10 | 8.82 | 8.42 | 6.52 | 1.1 | 5.0 | 5.1 |
| Virginia | 3.69 | 3.79 | 3.73 | 3.73 | 3.55 | 2.49 | –2.6 | 1.0 | 4.5 |
| Washington | 3.59 | 3.97 | 4.04 | 4.11 | 4.00 | 3.57 | –9.6 | –2.6 | * |
| West Virginia Total | 5.71 | 5.18 | 4.74 | 4.62 | 4.35 | 3.53 | 10.2 | 7.1 | 5.5 |
| Northern | 5.54 | 4.72 | 4.31 | 3.78 | 3.70 | 3.33 | 17.4 | 10.6 | 5.8 |
| Southern | 5.73 | 5.24 | 4.79 | 4.75 | 4.49 | 3.59 | 9.3 | 6.3 | 5.3 |
| Wyoming | 35.42 | 32.84 | 31.02 | 27.37 | 26.03 | 19.34 | 7.8 | 8.0 | 6.9 |
| **Appalachian Total**[1] | **4.26** | **4.05** | **3.88** | **3.72** | **3.55** | **2.84** | **5.2** | **4.6** | **4.6** |
| **Interior Total**[1] | **7.11** | **6.89** | **6.39** | **5.71** | **5.71** | **4.20** | **3.2** | **5.6** | **6.0** |
| **Western Total**[1] | **21.78** | **20.96** | **18.93** | **17.68** | **16.49** | **13.70** | **3.9** | **7.2** | **5.3** |
| **East of Miss. River** | **4.49** | **4.25** | **4.03** | **3.85** | **3.74** | **2.99** | **5.5** | **4.7** | **4.6** |
| **West of Miss. River** | **18.63** | **17.89** | **16.23** | **15.19** | **13.94** | **10.73** | **4.1** | **7.5** | **6.3** |
| **U.S. Total** | **9.46** | **9.05** | **8.48** | **7.67** | **7.23** | **5.32** | **4.5** | **6.9** | **6.6** |

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

* Data round to zero.

Notes: Productivity is calculated by dividing total coal production by the total direct labor hours worked by all mine employees engaged in production, preparation, processing, development, maintenance, repair, shop or yard work at mining operations, but excludes office workers. 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, 1997

| 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** | **57** | **4,928** | **2.39** | **20.34** |
| Underground | 16 | 4,014 | 2.21 | 18.56 |
| Surface | 41 | 914 | 3.21 | 27.45 |
| **Alaska** | **1** | **99** | **6.41** | **57.73** |
| Surface | 1 | 99 | 6.41 | 57.73 |
| **Arizona** | **3** | **676** | **6.79** | **58.43** |
| Surface | 3 | 676 | 6.79 | 58.43 |
| **Arkansas** | **1** | **2** | **1.94** | **18.11** |
| Surface | 1 | 2 | 1.94 | 18.11 |
| **Colorado** | **17** | **1,362** | **7.68** | **68.73** |
| Underground | 13 | 923 | 7.44 | 66.66 |
| Surface | 4 | 439 | 8.17 | 72.81 |
| **Illinois** | **32** | **4,612** | **4.20** | **35.98** |
| Underground | 23 | 4,044 | 4.07 | 34.45 |
| Surface | 9 | 568 | 5.11 | 45.04 |
| **Indiana** | **42** | **2,712** | **5.33** | **49.39** |
| Underground | 5 | 411 | 3.74 | 32.37 |
| Surface | 37 | 2,301 | 5.59 | 52.28 |
| **Kansas** | **3** | **67** | **3.82** | **40.62** |
| Surface | 3 | 67 | 3.82 | 40.62 |
| **Kentucky Total** | **619** | **18,937** | **3.94** | **36.33** |
| Underground | 367 | 12,947 | 3.64 | 32.33 |
| Surface | 252 | 5,990 | 4.57 | 44.24 |
| **Eastern** | **563** | **15,422** | **3.83** | **35.39** |
| Underground | 338 | 10,369 | 3.47 | 30.84 |
| Surface | 225 | 5,053 | 4.47 | 43.64 |
| **Western** | **56** | **3,515** | **4.38** | **39.50** |
| Underground | 29 | 2,578 | 4.15 | 37.49 |
| Surface | 27 | 937 | 5.26 | 47.43 |
| **Louisiana** | **2** | **114** | **10.94** | **98.48** |
| Surface | 2 | 114 | 10.94 | 98.48 |
| **Maryland** | **16** | **458** | **3.93** | **34.96** |
| Underground | 4 | 304 | 5.17 | 40.16 |
| Surface | 12 | 154 | 2.02 | 18.77 |
| **Missouri** | **3** | **51** | **3.19** | **29.83** |
| Surface | 3 | 51 | 3.19 | 29.83 |
| **Montana** | **7** | **708** | **23.56** | **200.97** |
| Surface | 7 | 708 | 23.56 | 200.97 |
| **New Mexico** | **6** | **1,339** | **9.37** | **72.92** |
| Surface | 6 | 1,339 | 9.37 | 72.92 |
| **North Dakota** | **5** | **657** | **17.82** | **148.76** |
| Surface | 5 | 657 | 17.82 | 148.76 |
| **Ohio** | **85** | **3,124** | **4.02** | **37.97** |
| Underground | 14 | 1,759 | 4.18 | 37.59 |
| Surface | 71 | 1,365 | 3.81 | 36.35 |
| **Oklahoma** | **9** | **269** | **2.51** | **23.29** |
| Underground | 1 | 36 | 2.32 | 20.92 |
| Surface | 8 | 233 | 2.55 | 23.67 |
| **Pennsylvania Total** | **364** | **9,575** | **3.63** | **31.27** |
| Underground | 98 | 6,202 | 4.05 | 33.46 |
| Surface | 266 | 3,373 | 2.86 | 24.98 |
| **Anthracite** | **103** | **1,287** | **1.76** | **13.95** |
| Underground | 24 | 174 | 1.03 | 7.79 |
| Surface | 79 | 1,113 | 1.87 | 15.04 |
| **Bituminous** | **261** | **8,288** | **3.89** | **34.55** |
| Underground | 74 | 6,028 | 4.13 | 35.00 |
| Surface | 187 | 2,260 | 3.28 | 29.65 |
| **Tennessee** | **37** | **707** | **2.37** | **22.09** |
| Underground | 20 | 390 | 1.83 | 16.48 |
| Surface | 17 | 317 | 3.02 | 29.29 |
| **Texas** | **12** | **1,363** | **10.24** | **108.41** |
| Surface | 12 | 1,363 | 10.24 | 108.41 |
| **Utah** | **14** | **1,922** | **6.34** | **54.67** |
| Underground | 14 | 1,922 | 6.34 | 54.67 |
| **Virginia** | **225** | **6,235** | **2.77** | **24.78** |
| Underground | 166 | 5,101 | 2.56 | 22.36 |
| Surface | 59 | 1,134 | 3.69 | 35.14 |
| **Washington** | **3** | **577** | **3.59** | **29.32** |
| Surface | 3 | 577 | 3.59 | 29.32 |
| **West Virginia Total** | **428** | **18,245** | **4.46** | **39.17** |
| Underground | 291 | 14,329 | 4.03 | 34.23 |
| Surface | 137 | 3,916 | 5.71 | 53.57 |

See footnotes at end of table.

## Table 51. Coal Mining Productivity by State and Mine Type, 1997 (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] |
|---|---|---|---|---|
| **Northern** | **93** | **4,980** | **4.48** | **39.32** |
| Underground | 56 | 4,551 | 4.35 | 37.12 |
| Surface | 37 | 429 | 5.54 | 50.67 |
| **Southern** | **335** | **13,265** | **4.46** | **39.12** |
| Underground | 235 | 9,778 | 3.90 | 33.06 |
| Surface | 100 | 3,487 | 5.73 | 54.25 |
| **Wyoming** | **25** | **2,777** | **34.55** | **358.14** |
| Underground | 1 | 105 | 10.13 | 111.48 |
| Surface | 24 | 2,672 | 35.42 | 366.22 |
| **Appalachian Total**[5] | **1,775** | **58,694** | **3.76** | **33.65** |
| Underground | 947 | 42,468 | 3.55 | 30.73 |
| Surface | 828 | 16,226 | 4.26 | 39.52 |
| **Interior Total**[5] | **160** | **12,705** | **5.54** | **50.77** |
| Underground | 58 | 7,069 | 4.07 | 35.73 |
| Surface | 102 | 5,636 | 7.11 | 66.78 |
| **Western Total**[5] | **81** | **10,117** | **17.75** | **162.01** |
| Underground | 28 | 2,950 | 6.88 | 60.96 |
| Surface | 53 | 7,167 | 21.78 | 201.89 |
| **East of Miss. River** | **1,905** | **69,533** | **3.89** | **34.85** |
| Underground | 1,004 | 49,501 | 3.63 | 31.46 |
| Surface | 901 | 20,032 | 4.49 | 41.56 |
| **West of Miss. River** | **111** | **11,983** | **16.04** | **149.89** |
| Underground | 29 | 2,986 | 6.82 | 60.46 |
| Surface | 82 | 8,997 | 18.63 | 177.21 |
| **U.S. Total** | **2,016** | **81,516** | **6.04** | **54.16** |
| Underground | 1,033 | 52,487 | 3.83 | 33.24 |
| Surface | 983 | 29,029 | 9.46 | 87.83 |

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 employees engaged in production, preparation, processing, development, maintenance, repair, shop or yard work at mining operations, but excludes office workers.

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, 1988, 1993-1997

| Coal-Producing State and Region | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **Alabama** | **269** | **267** | **260** | **240** | **250** | **254** | **0.5** | **1.8** | **0.6** |
| Underground | 270 | 268 | 259 | 246 | 249 | 237 | .7 | 2.1 | 1.4 |
| Surface | 264 | 265 | 262 | 231 | 253 | 274 | –.4 | 1.1 | –.4 |
| **Alaska** | **254** | **239** | **251** | **246** | **250** | **260** | **6.3** | **.4** | **–.3** |
| Surface | 254 | 239 | 251 | 246 | 250 | 260 | 6.3 | .4 | –.3 |
| **Arizona** | **299** | **281** | **211** | **217** | **211** | **216** | **6.4** | **9.1** | **3.6** |
| Surface | 299 | 281 | 211 | 217 | 211 | 216 | 6.4 | 9.1 | 3.6 |
| **Arkansas** | **278** | – | **240** | **176** | **240** | **123** | – | **3.7** | **9.5** |
| Underground | – | – | – | 85 | – | – | – | – | – |
| Surface | 278 | – | 240 | 240 | 240 | 123 | – | 3.7 | 9.5 |
| **California** | – | – | – | – | – | **56** | – | – | – |
| Surface | – | – | – | – | – | 56 | – | – | – |
| **Colorado** | **320** | **316** | **287** | **258** | **243** | **265** | **1.2** | **7.1** | **2.1** |
| Underground | 330 | 325 | 287 | 288 | 282 | 246 | 1.5 | 4.0 | 3.3 |
| Surface | 301 | 301 | 286 | 204 | 188 | 280 | .1 | 12.4 | .8 |
| **Illinois** | **276** | **276** | **260** | **253** | **220** | **242** | **.2** | **5.8** | **1.5** |
| Underground | 272 | 277 | 264 | 257 | 222 | 249 | –1.8 | 5.2 | 1.0 |
| Surface | 299 | 270 | 233 | 231 | 212 | 228 | 10.9 | 9.0 | 3.1 |
| **Indiana** | **284** | **276** | **266** | **274** | **254** | **237** | **2.9** | **2.8** | **2.0** |
| Underground | 283 | 279 | 277 | 285 | 246 | 252 | 1.6 | 3.6 | 1.3 |
| Surface | 284 | 276 | 264 | 272 | 255 | 236 | 3.1 | 2.8 | 2.1 |
| **Iowa** | – | – | – | **150** | **260** | **222** | – | – | – |
| Surface | – | – | – | 150 | 260 | 222 | – | – | – |
| **Kansas** | **231** | **246** | **265** | **269** | **259** | **174** | **–6.1** | **–2.8** | **3.2** |
| Surface | 231 | 246 | 265 | 269 | 259 | 174 | –6.1 | –2.8 | 3.2 |
| **Kentucky Total** | **255** | **261** | **254** | **261** | **255** | **241** | **–2.1** | * | **.6** |
| Underground | 251 | 257 | 252 | 257 | 247 | 241 | –2.5 | .4 | .4 |
| Surface | 262 | 266 | 258 | 268 | 267 | 239 | –1.6 | –.4 | 1.0 |
| **Eastern** | **249** | **258** | **250** | **257** | **253** | **232** | **–3.4** | **–.4** | **.8** |
| Underground | 240 | 249 | 246 | 249 | 244 | 229 | –3.6 | –.4 | .5 |
| Surface | 262 | 271 | 254 | 268 | 266 | 237 | –3.3 | –.4 | 1.1 |
| **Western** | **276** | **270** | **269** | **276** | **263** | **264** | **2.2** | **1.3** | **.5** |
| Underground | 279 | 279 | 267 | 283 | 256 | 273 | * | 2.2 | .3 |
| Surface | 265 | 247 | 276 | 266 | 270 | 247 | 7.3 | –.5 | .8 |
| **Louisiana** | **314** | **305** | **299** | **290** | **293** | **275** | **2.8** | **1.7** | **1.5** |
| Surface | 314 | 305 | 299 | 290 | 293 | 275 | 2.8 | 1.7 | 1.5 |
| **Maryland** | **254** | **261** | **237** | **237** | **249** | **234** | **–2.8** | **.5** | **.9** |
| Underground | 248 | 271 | 241 | 236 | 249 | 240 | –8.6 | –.1 | .3 |
| Surface | 279 | 219 | 223 | 243 | 250 | 224 | 27.1 | 2.7 | 2.5 |
| **Missouri** | **275** | **290** | **278** | **263** | **181** | **232** | **–4.9** | **11.1** | **1.9** |
| Surface | 275 | 290 | 278 | 263 | 181 | 232 | –4.9 | 11.1 | 1.9 |
| **Montana** | **330** | **322** | **341** | **341** | **341** | **301** | **2.5** | **–.8** | **1.0** |
| Underground | – | 223 | – | – | 158 | – | –100.0 | – | – |
| Surface | 330 | 323 | 341 | 341 | 341 | 301 | 2.4 | –.8 | 1.0 |
| **New Mexico** | **279** | **275** | **282** | **283** | **297** | **252** | **1.7** | **–1.6** | **1.1** |
| Underground | – | – | 241 | 241 | 241 | 62 | – | – | – |
| Surface | 279 | 275 | 283 | 284 | 299 | 254 | 1.7 | –1.7 | 1.0 |
| **North Dakota** | **294** | **314** | **289** | **303** | **307** | **249** | **–6.3** | **–1.0** | **1.8** |
| Surface | 294 | 314 | 289 | 303 | 307 | 249 | –6.3 | –1.0 | 1.8 |
| **Ohio** | **277** | **264** | **242** | **257** | **266** | **244** | **4.8** | **1.0** | **1.4** |
| Underground | 292 | 271 | 239 | 265 | 266 | 250 | 7.7 | 2.3 | 1.7 |
| Surface | 255 | 254 | 245 | 251 | 266 | 241 | .2 | –1.0 | .6 |
| **Oklahoma** | **268** | **296** | **296** | **305** | **294** | **226** | **–9.4** | **–2.3** | **1.9** |
| Underground | 310 | 308 | 309 | 310 | 300 | – | .6 | .8 | – |
| Surface | 262 | 295 | 296 | 305 | 293 | 226 | –11.3 | –2.8 | 1.6 |
| **Pennsylvania Total** | **269** | **268** | **262** | **257** | **246** | **244** | **.4** | **2.3** | **1.1** |
| Underground | 276 | 272 | 266 | 256 | 238 | 239 | 1.3 | 3.7 | 1.6 |
| Surface | 253 | 259 | 253 | 259 | 258 | 251 | –2.5 | –.5 | .1 |
| **Anthracite** | **233** | **269** | **253** | **264** | **247** | **222** | **–13.1** | **–1.4** | **.6** |
| Underground | 258 | 266 | 256 | 264 | 263 | 204 | –3.2 | –.5 | 2.6 |
| Surface | 231 | 269 | 252 | 264 | 246 | 224 | –13.9 | –1.5 | .4 |
| **Bituminous** | **272** | **268** | **263** | **256** | **246** | **245** | **1.2** | **2.5** | **1.1** |
| Underground | 276 | 272 | 266 | 256 | 238 | 239 | 1.3 | 3.8 | 1.6 |
| Surface | 258 | 257 | 253 | 258 | 261 | 253 | .5 | –.3 | .2 |
| **Tennessee** | **227** | **243** | **236** | **230** | **223** | **231** | **–6.5** | **.4** | **–.2** |
| Underground | 229 | 254 | 245 | 233 | 254 | 231 | –10.0 | –2.6 | –.1 |
| Surface | 225 | 231 | 221 | 223 | 173 | 232 | –2.5 | 6.8 | –.3 |
| **Texas** | **353** | **349** | **345** | **346** | **350** | **274** | **1.3** | **.2** | **2.8** |
| Surface | 353 | 349 | 345 | 346 | 350 | 274 | 1.3 | .2 | 2.8 |

See footnotes at end of table.

## Table 52. Weighted Average Number of Days Worked by State and Mine Type, 1988, 1993-1997 (Continued)

| Coal-Producing State and Region | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **Utah** | **265** | **251** | **241** | **257** | **249** | **242** | **5.7** | **1.5** | **1.0** |
| Underground | 265 | 251 | 241 | 257 | 249 | 242 | 5.7 | 1.5 | 1.0 |
| **Virginia** | **267** | **260** | **254** | **245** | **246** | **240** | **2.7** | **2.1** | **1.2** |
| Underground | 269 | 258 | 254 | 243 | 245 | 239 | 4.5 | 2.4 | 1.3 |
| Surface | 260 | 266 | 255 | 251 | 247 | 244 | –2.2 | 1.2 | .7 |
| **Washington** | **261** | **231** | **262** | **263** | **252** | **255** | **12.7** | **.9** | **.3** |
| Surface | 261 | 231 | 262 | 263 | 252 | 255 | 12.7 | .9 | .3 |
| **West Virginia Total** | **272** | **272** | **255** | **252** | **227** | **236** | **–.3** | **4.6** | **1.5** |
| Underground | 261 | 257 | 244 | 244 | 217 | 237 | 1.7 | 4.8 | 1.1 |
| Surface | 294 | 306 | 278 | 270 | 248 | 235 | –3.9 | 4.4 | 2.5 |
| **Northern** | **255** | **263** | **242** | **246** | **194** | **241** | **–3.1** | **7.2** | **.6** |
| Underground | 249 | 261 | 237 | 242 | 175 | 243 | –4.4 | 9.3 | .3 |
| Surface | 297 | 284 | 283 | 278 | 271 | 229 | 4.4 | 2.3 | 2.9 |
| **Southern** | **277** | **276** | **260** | **255** | **238** | **234** | **.5** | **3.8** | **1.9** |
| Underground | 267 | 255 | 248 | 246 | 235 | 233 | 4.7 | 3.1 | 1.5 |
| Surface | 293 | 308 | 277 | 268 | 243 | 237 | –4.8 | 4.8 | 2.4 |
| **Wyoming** | **352** | **351** | **352** | **341** | **345** | **329** | **.3** | **.5** | **.8** |
| Underground | 290 | 248 | 245 | 243 | 258 | 205 | 16.9 | 3.0 | 3.9 |
| Surface | 353 | 352 | 353 | 342 | 346 | 330 | .2 | .5 | .7 |
| **Appalachian Total**[1] | **265** | **266** | **254** | **253** | **243** | **238** | **–.4** | **2.1** | **1.2** |
| Underground | 261 | 259 | 249 | 248 | 235 | 236 | .9 | 2.7 | 1.1 |
| Surface | 271 | 279 | 261 | 262 | 257 | 243 | –2.8 | 1.3 | 1.2 |
| **Interior Total**[1] | **302** | **299** | **291** | **290** | **280** | **254** | **1.3** | **2.0** | **1.9** |
| Underground | 276 | 278 | 266 | 267 | 236 | 258 | –.8 | 4.0 | .7 |
| Surface | 319 | 312 | 308 | 304 | 302 | 252 | 2.2 | 1.4 | 2.6 |
| **Western Total**[1] | **332** | **330** | **326** | **319** | **320** | **298** | **.6** | **1.0** | **1.2** |
| Underground | 291 | 276 | 259 | 267 | 261 | 240 | 5.5 | 2.8 | 2.1 |
| Surface | 337 | 337 | 334 | 325 | 327 | 303 | .1 | .8 | 1.2 |
| **East of Miss. River** | **267** | **267** | **256** | **256** | **243** | **240** | ***** | **2.4** | **1.2** |
| Underground | 264 | 262 | 253 | 252 | 235 | 240 | .5 | 2.9 | 1.0 |
| Surface | 274 | 277 | 261 | 262 | 256 | 241 | –1.0 | 1.7 | 1.4 |
| **West of Miss. River** | **334** | **332** | **328** | **321** | **323** | **293** | **.6** | **.8** | **1.5** |
| Underground | 291 | 276 | 259 | 267 | 261 | 240 | 5.5 | 2.8 | 2.1 |
| Surface | 339 | 338 | 335 | 327 | 329 | 297 | .2 | .7 | 1.5 |
| **U.S. Total** | **299** | **298** | **290** | **285** | **280** | **261** | **.3** | **1.7** | **1.5** |
| Underground | 267 | 264 | 253 | 253 | 238 | 240 | 1.1 | 2.9 | 1.2 |
| Surface | 319 | 319 | 313 | 305 | 304 | 275 | –.1 | 1.2 | 1.6 |

[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, 1997

| Coal-Producing State and Region | Mine Production Range (thousand short tons) | | | | | | Total[1] |
|---|---|---|---|---|---|---|---|
| | 1,000 and over | 500 to 1,000 | 200 to 500 | 100 to 200 | 50 to 100 | 10 to 50 | |
| Alabama | 271 | 281 | 286 | 228 | 209 | 170 | 269 |
| Alaska | 254 | – | – | – | – | – | 254 |
| Arizona | 299 | – | – | – | – | – | 299 |
| Arkansas | – | – | – | – | – | 278 | 278 |
| Colorado | 326 | 280 | 247 | – | – | 69 | 320 |
| Illinois | 276 | 304 | 205 | 168 | – | 54 | 276 |
| Indiana | 290 | 282 | 249 | 287 | – | 36 | 284 |
| Kansas | – | – | – | 312 | 158 | – | 231 |
| Kentucky Total | 276 | 278 | 232 | 205 | 165 | 131 | 255 |
| Eastern | 273 | 270 | 235 | 210 | 167 | 130 | 249 |
| Western | 280 | 314 | 192 | 136 | 105 | 144 | 276 |
| Louisiana | 314 | – | – | – | – | – | 314 |
| Maryland | 247 | – | 293 | 220 | 259 | 258 | 254 |
| Missouri | – | – | 307 | – | 229 | 81 | 275 |
| Montana | 331 | – | 248 | – | – | – | 330 |
| New Mexico | 279 | – | – | – | – | – | 279 |
| North Dakota | 294 | – | – | – | – | – | 294 |
| Ohio | 297 | 260 | 247 | 258 | 208 | 177 | 276 |
| Oklahoma | – | – | 284 | 251 | 227 | – | 268 |
| Pennsylvania Total | 281 | 257 | 269 | 244 | 243 | 207 | 269 |
| Anthracite | – | 263 | 231 | 249 | 227 | 209 | 233 |
| Bituminous | 281 | 256 | 273 | 243 | 249 | 207 | 272 |
| Tennessee | – | 243 | 235 | – | 211 | 150 | 227 |
| Texas | 354 | – | 290 | – | – | – | 353 |
| Utah | 264 | 286 | 252 | – | – | – | 265 |
| Virginia | 295 | 286 | 271 | 246 | 211 | 153 | 267 |
| Washington | 261 | – | – | – | 252 | – | 261 |
| West Virginia Total | 292 | 258 | 240 | 202 | 202 | 146 | 272 |
| Northern | 267 | 220 | 228 | 220 | 203 | 179 | 255 |
| Southern | 303 | 263 | 242 | 195 | 201 | 133 | 277 |
| Wyoming | 354 | 251 | 55 | – | – | 239 | 352 |
| **Appalachian Total[2]** | **285** | **266** | **248** | **223** | **204** | **164** | **265** |
| **Interior Total[2]** | **309** | **299** | **236** | **218** | **167** | **90** | **302** |
| **Western Total[2]** | **334** | **267** | **229** | – | **252** | **122** | **332** |
| **East of Miss. River** | **284** | **271** | **247** | **222** | **202** | **163** | **267** |
| **West of Miss. River** | **336** | **267** | **258** | **266** | **204** | **124** | **334** |
| **U.S. Total** | **315** | **271** | **247** | **222** | **203** | **162** | **299** |

1 Includes stand alone preparation plants.
2 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 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 54. Underground Coal Mining Productivity by State and Mining Method, 1997

(Short Tons of Coal Produced per Miner per Hour)

| Coal-Producing State and Region | Continuous[1] | Conventional[2] | Longwall[3] | Other[4] | Total |
|---|---|---|---|---|---|
| Alabama | 1.83 | – | 2.33 | 1.75 | 2.21 |
| Colorado | 4.32 | – | 8.93 | – | 7.44 |
| Illinois | 3.98 | 3.91 | 4.24 | – | 4.07 |
| Indiana | 3.74 | – | – | – | 3.74 |
| Kentucky Total | 3.66 | 2.75 | 4.70 | 2.12 | 3.64 |
| Eastern | 3.56 | 2.68 | 4.76 | 2.12 | 3.47 |
| Western | 3.98 | 3.38 | 4.75 | – | 4.15 |
| Maryland | 3.61 | – | 5.46 | – | 5.17 |
| Ohio | 4.40 | – | 4.15 | – | 4.18 |
| Oklahoma | 2.32 | – | – | – | 2.32 |
| Pennsylvania Total | 2.64 | 2.00 | 4.96 | .76 | 4.05 |
| Anthracite | 1.24 | .90 | – | .76 | 1.03 |
| Bituminous | 2.68 | 2.38 | 4.96 | – | 4.13 |
| Tennessee | 2.06 | 1.05 | – | – | 1.83 |
| Utah | 3.20 | 1.75 | 8.30 | – | 6.34 |
| Virginia | 2.20 | 2.33 | 3.94 | – | 2.56 |
| West Virginia Total | 3.74 | 3.00 | 4.69 | 3.28 | 4.03 |
| Northern | 3.33 | 3.58 | 4.80 | 3.28 | 4.35 |
| Southern | 3.80 | 2.79 | 4.57 | – | 3.90 |
| Wyoming | – | – | 10.10 | – | 10.10 |
| **Appalachian Total[5]** | **3.36** | **2.64** | **4.09** | **1.87** | **3.55** |
| **Interior Total[5]** | **3.95** | **3.39** | **4.42** | – | **4.07** |
| **Western Total[5]** | **3.64** | **1.75** | **8.63** | – | **6.88** |
| **East of Miss. River** | **3.48** | **2.67** | **4.13** | **1.87** | **3.63** |
| **West of Miss. River** | **3.58** | **1.75** | **8.63** | – | **6.82** |
| **U.S. Total** | **3.49** | **2.64** | **4.62** | **1.87** | **3.83** |

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 employees engaged in production, preparation, processing, development, maintenance, repair, shop or yard work at mining operations, but excludes office workers. 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, 1997

(Short Tons of Coal Produced per Miner per Hour)

| Coalbed Thickness (inches) | Underground | | | | Surface | Total |
|---|---|---|---|---|---|---|
| | Continuous[1] | Conventional[2] | Longwall[3] | Other[4] | | |
| < 7 | – | – | – | – | 3.06 | 3.06 |
| 7-12 | – | – | – | – | 4.78 | 4.78 |
| 13-18 | – | – | – | – | 5.36 | 5.36 |
| 19-24 | 1.68 | 2.10 | – | 2.11 | 5.43 | 5.36 |
| 25-30 | 2.47 | 2.66 | – | 2.85 | 4.84 | 4.48 |
| 31-36 | 3.20 | 3.02 | – | 1.69 | 5.03 | 4.24 |
| 37-42 | 3.27 | 2.40 | – | – | 5.13 | 4.26 |
| 43-48 | 3.45 | 2.77 | 3.59 | – | 6.07 | 4.80 |
| 49-54 | 4.01 | 3.02 | 3.18 | 1.78 | 6.73 | 4.95 |
| 55-60 | 4.31 | 2.94 | 4.18 | 1.14 | 5.97 | 4.92 |
| 61-66 | 3.56 | 1.30 | 5.14 | – | 6.05 | 5.04 |
| 67-72 | 5.00 | 2.59 | 4.34 | 4.31 | 6.75 | 5.37 |
| 73-78 | 3.93 | – | 4.26 | – | 6.76 | 4.77 |
| 79-84 | 5.38 | – | 5.08 | – | 7.85 | 6.15 |
| 85-90 | 5.13 | – | 5.38 | – | 7.94 | 6.66 |
| 91-96 | 5.21 | – | 5.03 | 1.06 | 6.49 | 5.51 |
| 97-102 | 6.92 | – | – | – | 7.34 | 7.31 |
| 103-108 | 4.60 | – | 6.24 | – | 7.75 | 7.03 |
| 109-114 | 5.18 | – | 7.69 | – | 7.70 | 7.65 |
| 115-120 | 6.45 | – | 5.82 | – | 5.19 | 5.43 |
| > 120 | 5.22 | 1.64 | 9.95 | – | 20.00 | 18.53 |
| **U.S. Total**[5] | **3.49** | **2.64** | **4.62** | **1.87** | **9.46** | **6.04** |

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 Includes stand alone preparation plants.

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, shop or yard work at mining operations, but excludes office workers. 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 56. Coal Mining Productivity by State, Mine Type, and Mine Production Range, 1997

(Short Tons of Coal Produced per Miner per Hour)

| Coal-Producing State and Region | Mine Production Range (thousand short tons) | | | | | | Total[1] |
|---|---|---|---|---|---|---|---|
| | 1,000 and over | 500 to 1,000 | 200 to 500 | 100 to 200 | 50 to 100 | 10 to 50 | |
| **Alabama** | **2.29** | **2.79** | **3.26** | **2.65** | **3.18** | **2.76** | **2.39** |
| Underground | 2.25 | 2.33 | – | 1.19 | – | 1.39 | 2.21 |
| Surface | 3.19 | 3.88 | 3.26 | 3.28 | 3.18 | 3.03 | 3.21 |
| **Alaska** | **6.41** | – | – | – | – | – | **6.41** |
| Surface | 6.41 | – | – | – | – | – | 6.41 |
| **Arizona** | **7.04** | – | – | – | – | – | **6.79** |
| Surface | 7.04 | – | – | – | – | – | 6.79 |
| **Arkansas** | – | – | – | – | – | **1.94** | **1.94** |
| Surface | – | – | – | – | – | 1.94 | 1.94 |
| **Colorado** | **8.45** | **4.04** | **4.03** | – | – | **3.22** | **7.68** |
| Underground | 8.63 | 4.04 | 3.29 | – | – | 3.22 | 7.44 |
| Surface | 8.16 | – | 8.33 | – | – | – | 8.17 |
| **Illinois** | **4.43** | **4.29** | **4.69** | **6.47** | – | **.88** | **4.20** |
| Underground | 4.29 | 4.08 | 3.90 | – | – | .44 | 4.07 |
| Surface | 6.04 | 4.52 | 5.25 | 6.47 | – | 8.17 | 5.11 |
| **Indiana** | **5.38** | **6.45** | **4.78** | **3.53** | – | **.78** | **5.33** |
| Underground | 4.05 | – | – | 2.82 | – | – | 3.74 |
| Surface | 5.66 | 6.45 | 4.78 | 6.21 | – | .78 | 5.59 |
| **Kansas** | – | – | – | **7.36** | **2.67** | – | **3.82** |
| Surface | – | – | – | 7.36 | 2.67 | – | 3.82 |
| **Kentucky Total** | **5.27** | **4.74** | **4.07** | **3.20** | **3.10** | **2.27** | **3.94** |
| Underground | 4.98 | 4.38 | 3.70 | 3.10 | 2.70 | 1.88 | 3.64 |
| Surface | 6.08 | 5.23 | 4.68 | 3.39 | 4.66 | 3.30 | 4.57 |
| **Eastern** | **5.64** | **4.74** | **3.99** | **3.17** | **3.08** | **2.24** | **3.83** |
| Underground | 5.41 | 4.38 | 3.68 | 3.14 | 2.70 | 1.88 | 3.47 |
| Surface | 5.93 | 5.26 | 4.57 | 3.25 | 4.65 | 3.25 | 4.47 |
| **Western** | **4.79** | **4.76** | **5.27** | **3.77** | **3.88** | **4.10** | **4.38** |
| Underground | 4.65 | 4.33 | 4.75 | 2.04 | 2.92 | – | 4.15 |
| Surface | 8.54 | 5.11 | 5.42 | 4.84 | 4.80 | 4.10 | 5.26 |
| **Louisiana** | **10.94** | – | – | – | – | – | **10.94** |
| Surface | 10.94 | – | – | – | – | – | 10.94 |
| **Maryland** | **6.13** | – | **2.28** | **4.06** | **2.11** | **2.92** | **3.93** |
| Underground | 6.13 | – | 3.70 | – | 5.25 | – | 5.17 |
| Surface | – | – | 1.54 | 4.06 | 1.90 | 2.92 | 2.02 |
| **Missouri** | – | – | **4.10** | – | **1.56** | **5.31** | **3.19** |
| Surface | – | – | 4.10 | – | 1.56 | 5.31 | 3.19 |
| **Montana** | **23.64** | – | **14.58** | – | – | – | **23.56** |
| Surface | 23.64 | – | 14.58 | – | – | – | 23.56 |
| **New Mexico** | **9.37** | – | – | – | – | – | **9.37** |
| Surface | 9.37 | – | – | – | – | – | 9.37 |
| **North Dakota** | **17.82** | – | – | – | – | – | **17.82** |
| Surface | 17.82 | – | – | – | – | – | 17.82 |
| **Ohio** | **4.25** | **5.31** | **3.96** | **3.95** | **3.30** | **2.50** | **4.02** |
| Underground | 4.24 | – | 4.23 | – | 4.10 | – | 4.18 |
| Surface | 4.36 | 5.31 | 3.93 | 3.95 | 3.22 | 2.50 | 3.81 |
| **Oklahoma** | – | – | **2.26** | **4.15** | **1.57** | – | **2.51** |
| Underground | – | – | 2.32 | – | – | – | 2.32 |
| Surface | – | – | 2.24 | 4.15 | 1.57 | – | 2.55 |
| **Pennsylvania Total** | **5.03** | **2.42** | **3.65** | **3.52** | **3.29** | **2.26** | **3.63** |
| Underground | 5.02 | 2.20 | 3.44 | 3.28 | 2.12 | 1.27 | 4.05 |
| Surface | 5.43 | 2.97 | 3.78 | 3.63 | 3.50 | 2.54 | 2.86 |
| **Anthracite** | – | **28.06** | **2.99** | **2.71** | **2.41** | **1.77** | **1.76** |
| Underground | – | – | – | 1.89 | – | 1.11 | 1.03 |
| Surface | – | 28.06 | 2.99 | 3.08 | 2.41 | 2.04 | 1.87 |
| **Bituminous** | **5.03** | **2.21** | **3.75** | **3.70** | **3.77** | **2.60** | **3.89** |
| Underground | 5.02 | 2.20 | 3.44 | 3.59 | 2.12 | 1.47 | 4.13 |
| Surface | 5.43 | 2.22 | 3.99 | 3.74 | 4.29 | 2.83 | 3.28 |
| **Tennessee** | – | **4.16** | **3.44** | – | **1.80** | **1.83** | **2.37** |
| Underground | – | – | 3.25 | – | 1.67 | 1.86 | 1.83 |
| Surface | – | 4.16 | 3.58 | – | 2.83 | 1.79 | 3.02 |
| **Texas** | **10.48** | – | **3.56** | – | – | – | **10.24** |
| Surface | 10.48 | – | 3.56 | – | – | – | 10.24 |
| **Utah** | **7.69** | **2.63** | **1.04** | – | – | – | **6.34** |
| Underground | 7.69 | 2.63 | 1.04 | – | – | – | 6.34 |
| **Virginia** | **3.94** | **4.61** | **3.07** | **2.55** | **2.21** | **1.92** | **2.77** |
| Underground | 3.94 | 4.02 | 2.79 | 2.40 | 2.19 | 1.77 | 2.56 |
| Surface | – | 5.23 | 4.02 | 3.43 | 2.39 | 3.04 | 3.69 |

See footnotes at end of table.

## Table 56. Coal Mining Productivity by State, Mine Type, and Mine Production Range, 1997 (Continued)

(Short Tons of Coal Produced per Miner per Hour)

| Coal-Producing State and Region | Mine Production Range (thousand short tons) | | | | | | Total[1] |
|---|---|---|---|---|---|---|---|
| | 1,000 and over | 500 to 1,000 | 200 to 500 | 100 to 200 | 50 to 100 | 10 to 50 | |
| **Washington** | **3.74** | – | – | – | **0.97** | – | **3.59** |
| Surface | 3.74 | – | – | – | .97 | – | 3.59 |
| **West Virginia Total** | **5.53** | **5.29** | **4.52** | **3.45** | **2.77** | **2.75** | **4.46** |
| Underground | 4.86 | 5.17 | 4.34 | 3.29 | 2.61 | 2.59 | 4.03 |
| Surface | 7.30 | 5.61 | 5.12 | 4.15 | 3.65 | 3.02 | 5.71 |
| **Northern** | **5.08** | **4.91** | **4.20** | **4.03** | **3.07** | **2.71** | **4.48** |
| Underground | 4.80 | 4.45 | 4.44 | 3.79 | 2.87 | 3.20 | 4.35 |
| Surface | 11.53 | 7.54 | 3.44 | 5.13 | 3.37 | 2.58 | 5.54 |
| **Southern** | **5.75** | **5.35** | **4.57** | **3.29** | **2.69** | **2.76** | **4.46** |
| Underground | 4.90 | 5.30 | 4.32 | 3.15 | 2.56 | 2.52 | 3.90 |
| Surface | 7.08 | 5.48 | 5.45 | 3.88 | 4.04 | 3.76 | 5.73 |
| **Wyoming** | **35.05** | **17.15** | **7.31** | – | – | **1.53** | **34.55** |
| Underground | 10.13 | – | – | – | – | – | 10.13 |
| Surface | 35.96 | 17.15 | 7.31 | – | – | 1.53 | 35.42 |
| **Appalachian Total**[2] | **4.77** | **4.49** | **3.84** | **3.19** | **2.78** | **2.30** | **3.76** |
| Underground | 4.36 | 4.18 | 3.64 | 2.97 | 2.43 | 1.90 | 3.55 |
| Surface | 6.56 | 5.02 | 4.14 | 3.57 | 3.40 | 2.74 | 4.26 |
| **Interior Total**[2] | **6.09** | **5.22** | **4.23** | **4.07** | **2.29** | **1.31** | **5.54** |
| Underground | 4.41 | 4.24 | 3.75 | 2.51 | 2.92 | .44 | 4.07 |
| Surface | 8.32 | 5.67 | 4.31 | 5.00 | 2.23 | 2.00 | 7.11 |
| **Western Total**[2] | **18.88** | **5.13** | **2.97** | – | **.97** | **2.39** | **17.75** |
| Underground | 8.14 | 2.99 | 2.04 | – | – | 3.22 | 6.88 |
| Surface | 22.06 | 17.15 | 9.15 | – | .97 | 1.53 | 21.78 |
| **East of Miss. River** | **4.77** | **4.60** | **3.90** | **3.22** | **2.79** | **2.25** | **3.89** |
| Underground | 4.38 | 4.18 | 3.65 | 2.96 | 2.43 | 1.85 | 3.63 |
| Surface | 6.31 | 5.17 | 4.24 | 3.64 | 3.42 | 2.70 | 4.49 |
| **West of Miss. River** | **17.33** | **5.13** | **2.89** | **4.65** | **1.69** | **2.59** | **16.04** |
| Underground | 8.14 | 2.99 | 2.07 | – | – | 3.22 | 6.82 |
| Surface | 19.44 | 17.15 | 3.73 | 4.65 | 1.69 | 2.12 | 18.63 |
| **U.S. Total** | **8.54** | **4.62** | **3.85** | **3.23** | **2.74** | **2.26** | **6.04** |
| Underground | 4.72 | 4.12 | 3.58 | 2.96 | 2.43 | 1.86 | 3.83 |
| Surface | 14.59 | 5.34 | 4.21 | 3.68 | 3.21 | 2.69 | 9.46 |

1 Includes stand alone preparation plants.

2 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 employees engaged in production, preparation, processing, development, maintenance, repair, shop or yard work at mining operations, but excludes office workers. 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 57. Coal Mining Productivity by State, Mine Type, and Union Type,1997

(Short Tons of Coal Produced per Miner per Hour)

| Coal-Producing State and Region | UMWA | Other Unions | Union Total | Nonunion | Total |
|---|---|---|---|---|---|
| **Alabama** | **2.33** | – | **2.33** | **2.52** | **2.39** |
| Underground | 2.23 | – | 2.23 | 2.11 | 2.21 |
| Surface | 3.44 | – | 3.44 | 3.09 | 3.21 |
| **Alaska** | – | **6.41** | **6.41** | – | **6.41** |
| Surface | – | 6.41 | 6.41 | – | 6.41 |
| **Arizona** | **6.79** | – | **6.79** | – | **6.79** |
| Surface | 6.79 | – | 6.79 | – | 6.79 |
| **Arkansas** | – | – | – | **1.94** | **1.94** |
| Surface | – | – | – | 1.94 | 1.94 |
| **Colorado** | **6.96** | **7.46** | **7.14** | **7.84** | **7.68** |
| Underground | 5.08 | – | 5.08 | 7.78 | 7.44 |
| Surface | 9.56 | 7.46 | 8.40 | 8.01 | 8.17 |
| **Illinois** | **4.44** | **3.79** | **4.34** | **3.82** | **4.20** |
| Underground | 4.33 | 3.51 | 4.21 | 3.74 | 4.07 |
| Surface | 5.06 | 5.01 | 5.05 | 5.62 | 5.11 |
| **Indiana** | **5.26** | – | **5.26** | **5.37** | **5.33** |
| Underground | 2.28 | – | 2.28 | 3.88 | 3.74 |
| Surface | 5.35 | – | 5.35 | 5.77 | 5.59 |
| **Kansas** | **1.66** | – | **1.66** | **6.85** | **3.82** |
| Surface | 1.66 | – | 1.66 | 6.85 | 3.82 |
| **Kentucky Total** | **4.17** | **3.04** | **4.13** | **3.91** | **3.94** |
| Underground | 3.88 | 3.04 | 3.85 | 3.59 | 3.64 |
| Surface | 5.59 | – | 5.59 | 4.50 | 4.57 |
| **Eastern** | **4.53** | **3.04** | **4.43** | **3.78** | **3.83** |
| Underground | 3.89 | 3.04 | 3.80 | 3.44 | 3.47 |
| Surface | 6.04 | – | 6.04 | 4.37 | 4.47 |
| **Western** | **3.87** | – | **3.87** | **4.64** | **4.38** |
| Underground | 3.88 | – | 3.88 | 4.34 | 4.15 |
| Surface | 3.71 | – | 3.71 | 5.43 | 5.26 |
| **Louisiana** | – | – | – | **10.94** | **10.94** |
| Surface | – | – | – | 10.94 | 10.94 |
| **Maryland** | – | – | – | **3.93** | **3.93** |
| Underground | – | – | – | 5.17 | 5.17 |
| Surface | – | – | – | 2.02 | 2.02 |
| **Missouri** | – | – | – | **3.19** | **3.19** |
| Surface | – | – | – | 3.19 | 3.19 |
| **Montana** | **20.15** | **23.94** | **21.87** | **33.74** | **23.56** |
| Surface | 20.15 | 23.94 | 21.87 | 33.74 | 23.56 |
| **New Mexico** | **9.80** | **8.51** | **8.93** | **12.11** | **9.37** |
| Surface | 9.80 | 8.51 | 8.93 | 12.11 | 9.37 |
| **North Dakota** | **11.43** | **16.66** | **14.47** | **19.05** | **17.82** |
| Surface | 11.43 | 16.66 | 14.47 | 19.05 | 17.82 |
| **Ohio** | **4.09** | – | **4.09** | **3.94** | **4.02** |
| Underground | 4.20 | – | 4.20 | 4.07 | 4.18 |
| Surface | 2.08 | – | 2.08 | 3.92 | 3.81 |
| **Oklahoma** | – | – | – | **2.51** | **2.51** |
| Underground | – | – | – | 2.32 | 2.32 |
| Surface | – | – | – | 2.55 | 2.55 |
| **Pennsylvania Total** | **3.16** | **.94** | **3.15** | **4.12** | **3.63** |
| Underground | 3.50 | – | 3.49 | 5.13 | 4.05 |
| Surface | 1.35 | 1.62 | 1.36 | 3.30 | 2.86 |
| **Anthracite** | **.80** | **1.77** | **.82** | **2.52** | **1.76** |
| Underground | – | – | – | 1.05 | 1.03 |
| Surface | .80 | 2.72 | .82 | 2.98 | 1.87 |
| **Bituminous** | **3.44** | – | **3.43** | **4.37** | **3.89** |
| Underground | 3.50 | – | 3.49 | 5.44 | 4.13 |
| Surface | 2.50 | – | 2.46 | 3.37 | 3.28 |
| **Tennessee** | – | – | – | **2.37** | **2.37** |
| Underground | – | – | – | 1.83 | 1.83 |
| Surface | – | – | – | 3.02 | 3.02 |
| **Texas** | – | **9.35** | **9.35** | **12.49** | **10.24** |
| Surface | – | 9.35 | 9.35 | 12.49 | 10.24 |
| **Utah** | **7.87** | – | **7.87** | **5.82** | **6.34** |
| Underground | 7.87 | – | 7.87 | 5.82 | 6.34 |
| **Virginia** | **2.87** | **3.79** | **3.00** | **2.71** | **2.77** |
| Underground | 2.87 | 3.35 | 2.92 | 2.45 | 2.56 |
| Surface | 2.81 | 4.38 | 4.15 | 3.65 | 3.69 |
| **Washington** | – | **3.74** | **3.74** | **.97** | **3.59** |
| Surface | – | 3.74 | 3.74 | .97 | 3.59 |
| **West Virginia Total** | **4.20** | – | **4.18** | **4.81** | **4.46** |
| Underground | 3.72 | – | 3.72 | 4.48 | 4.03 |
| Surface | 6.13 | – | 6.01 | 5.49 | 5.71 |

See footnotes at end of table.

## Table 57. Coal Mining Productivity by State, Mine Type, and Union Type,1997 (Continued)

(Short Tons of Coal Produced per Miner per Hour)

| Coal-Producing State and Region | UMWA | Other Unions | Union Total | Nonunion | Total |
|---|---|---|---|---|---|
| **Northern** | **4.68** | – | **4.68** | **4.14** | **4.48** |
| Underground | 4.68 | – | 4.68 | 3.56 | 4.35 |
| Surface | – | – | – | 5.54 | 5.54 |
| **Southern** | **4.01** | – | **3.98** | **4.98** | **4.46** |
| Underground | 3.21 | – | 3.21 | 4.73 | 3.90 |
| Surface | 6.13 | – | 6.01 | 5.48 | 5.73 |
| **Wyoming** | **7.38** | **9.71** | **8.83** | **41.15** | **34.55** |
| Underground | – | – | – | 10.13 | 10.13 |
| Surface | 7.38 | 9.71 | 8.83 | 42.55 | 35.42 |
| **Appalachian Total**[1] | **3.62** | **2.95** | **3.62** | **3.85** | **3.76** |
| Underground | 3.42 | 3.08 | 3.42 | 3.66 | 3.55 |
| Surface | 4.71 | 2.75 | 4.65 | 4.16 | 4.26 |
| **Interior Total**[1] | **4.47** | **8.13** | **5.55** | **5.53** | **5.54** |
| Underground | 4.16 | 3.51 | 4.09 | 4.04 | 4.07 |
| Surface | 5.15 | 9.13 | 7.22 | 7.00 | 7.11 |
| **Western Total**[1] | **9.54** | **9.90** | **9.71** | **23.94** | **17.75** |
| Underground | 7.26 | – | 7.26 | 6.78 | 6.88 |
| Surface | 10.25 | 9.90 | 10.06 | 34.66 | 21.78 |
| **East of Miss. River** | **3.79** | **3.47** | **3.78** | **3.97** | **3.89** |
| Underground | 3.54 | 3.38 | 3.54 | 3.71 | 3.63 |
| Surface | 4.87 | 3.72 | 4.83 | 4.37 | 4.49 |
| **West of Miss. River** | **9.47** | **9.67** | **9.59** | **21.69** | **16.04** |
| Underground | 7.26 | – | 7.26 | 6.71 | 6.82 |
| Surface | 10.15 | 9.67 | 9.83 | 29.08 | 18.63 |
| **U.S. Total** | **4.30** | **8.69** | **4.93** | **6.83** | **6.04** |
| Underground | 3.65 | 3.38 | 3.64 | 3.99 | 3.83 |
| Surface | 6.40 | 9.38 | 7.54 | 10.50 | 9.46 |

[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 employees engaged in production, preparation, processing, development, maintenance, repair, shop or yard work at mining operations, but excludes office workers. 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. 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

The amount of U.S. coal distributed during 1997 reached a record 1,078.4 million short tons, surpassing by 1.8 percent the previous record of 1,059.9 million short tons distributed during 1996. Compared with 1996, distribution of U.S. coal to domestic comsumers rose 2.8 percent to 995.2 million short tons, while total foreign distributions of U.S. coal declined 9.7 percent to 83.2 million short tons.

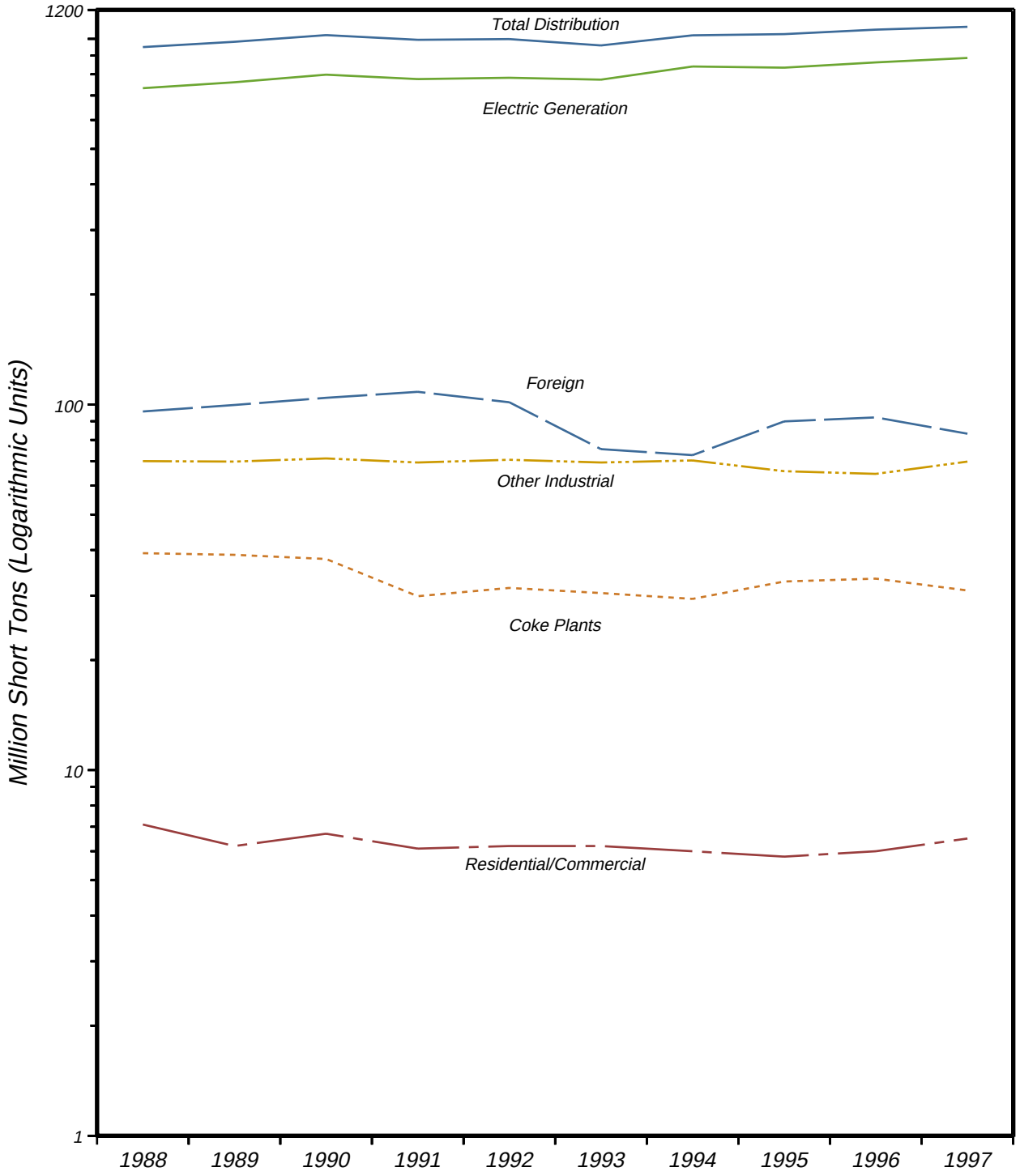
Foreign distributions of U.S. steam coal declined 22.5 percent to 27.9 million short tons, as reduced shipments of Utah coal to Japan coupled with reduced shipments of Kentucky and Pennsylvania coal to Italy offset sharply increased shipments of West Virginia and Pennsylvania coal to Canada. By comparison, foreign distributions of U.S. metallurgical coal declined by 1.6 percent to 55.3 million short tons.

West Virginia remained the leading source of U.S. coal distributed abroad during 1997, with foreign shipments totaling 38.5 million short tons, representing 46.2 percent of total foreign distributions. Other leading sources of U.S. coal distributed abroad during 1997 were Virginia, Pennsylvania, and Kentucky. Collectively, foreign distributions of coal mined in these three States totaled 28.7 million short tons, accounting for 34.6 percent of U.S. coal shipped abroad during 1997.

Texas remained the leading destination for U.S. coal distributed domestically during 1997, with shipments totaling 97.4 million short tons, representing 9.8 percent of total domestic distributions. Fifty-five percent of the coal distributed in Texas was indigenous, with virtually all of the remainder arriving from Wyoming (42.2 percent) and Colorado (2.3 percent).

Rail continued to be the primary method of transporting the U.S. coal distributed during 1997, accounting for 617.3 million short tons shipped, or 57.2 percent of total shipments. Coal transported by water (including shipment by river, shipments on the Great Lakes, and shipments through tidewater ports) accounted for 240.8 million short tons, or 22.3 percent of total coal distributed. Distributions by truck totaled 122.7 million short tons (11.4 percent of the total) while distributions by tramway and conveyor totaled 96.1 million short tons (8.9 percent).

**Figure 8. Coal Distribution, 1988-1997**




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

## Table 58. Distribution of U.S. Coal by State of Origin, 1993-1997

(Thousand Short Tons)

| Coal-Producing State and Region | 1997 | 1996 | 1995 | 1994 | 1993 | Percent Change 1996-1997 | Average Annual Percent Change 1993-1997 |
|---|---|---|---|---|---|---|---|
| Alabama | 23,921 | 24,636 | 25,159 | 23,750 | 25,556 | –2.9 | –1.6 |
| Alaska | 1,424 | 1,473 | 1,670 | 1,505 | 1,598 | –3.3 | –2.8 |
| Arizona | 11,044 | 10,970 | 11,783 | 12,011 | 12,138 | .7 | –2.3 |
| Arkansas | 9 | 7 | 11 | 28 | 25 | 32.2 | –22.7 |
| Colorado | 26,956 | 25,405 | 25,635 | 24,810 | 21,465 | 6.1 | 5.9 |
| Illinois | 41,220 | 47,076 | 47,869 | 51,973 | 42,000 | –12.4 | –.5 |
| Indiana | 34,810 | 29,674 | 25,695 | 30,684 | 29,664 | 17.3 | 4.1 |
| Iowa | – | – | – | 46 | 175 | – | – |
| Kansas | 434 | 245 | 291 | 282 | 345 | 77.1 | 5.9 |
| Kentucky Total | 152,741 | 152,891 | 151,466 | 159,130 | 160,395 | –.1 | –1.2 |
| Eastern | 119,191 | 117,404 | 117,831 | 124,257 | 125,041 | 1.5 | –1.2 |
| Western | 33,550 | 35,487 | 33,635 | 34,873 | 35,354 | –5.5 | –1.3 |
| Louisiana | 3,545 | 3,222 | 3,426 | 3,463 | 3,103 | 10.0 | 3.4 |
| Maryland | 4,116 | 4,199 | 3,570 | 3,460 | 3,572 | –2.0 | 3.6 |
| Missouri | 401 | 846 | 464 | 679 | 638 | –52.6 | –11.0 |
| Montana | 40,942 | 38,288 | 39,620 | 41,916 | 35,916 | 6.9 | 3.3 |
| New Mexico | 27,377 | 25,043 | 26,154 | 28,570 | 27,942 | 9.3 | –.5 |
| North Dakota | 29,172 | 30,025 | 30,118 | 32,056 | 32,372 | –2.8 | –2.6 |
| Ohio | 29,434 | 28,881 | 24,345 | 28,749 | 28,315 | 1.9 | 1.0 |
| Oklahoma | 1,688 | 2,216 | 2,158 | 1,925 | 2,309 | –23.8 | –7.5 |
| Pennsylvania Total | 73,725 | 69,128 | 62,240 | 61,508 | 58,990 | 6.6 | 5.7 |
| Anthracite | 5,062 | 4,836 | 3,994 | 4,700 | 3,331 | 4.7 | 11.0 |
| Bituminous | 68,664 | 64,291 | 58,246 | 56,808 | 55,659 | 6.8 | 5.4 |
| Tennessee | 2,767 | 3,052 | 2,627 | 2,547 | 2,577 | –9.3 | 1.8 |
| Texas | 53,463 | 49,655 | 52,832 | 52,256 | 54,224 | 7.7 | –.3 |
| Utah | 26,272 | 23,868 | 25,521 | 23,225 | 22,243 | 10.1 | 4.3 |
| Virginia | 35,419 | 36,208 | 34,024 | 38,548 | 41,639 | –2.2 | –4.0 |
| Washington | 4,495 | 4,569 | 4,863 | 4,877 | 4,714 | –1.6 | –1.2 |
| West Virginia Total | 172,230 | 169,200 | 165,187 | 158,985 | 135,818 | 1.8 | 6.1 |
| Northern | 46,316 | 46,436 | 42,615 | 45,535 | 37,100 | –.3 | 5.7 |
| Southern | 125,914 | 122,764 | 122,572 | 113,449 | 98,718 | 2.6 | 6.3 |
| Wyoming | 280,795 | 279,117 | 263,601 | 235,540 | 211,713 | .6 | 7.3 |
| **Appalachian Total**[1] | **460,804** | **452,707** | **434,984** | **441,805** | **421,508** | **1.8** | **2.3** |
| **Interior Total**[1] | **169,119** | **168,427** | **166,380** | **176,208** | **167,836** | **.4** | **.2** |
| **Western Total**[1] | **448,478** | **438,758** | **428,966** | **404,510** | **370,102** | **2.2** | **4.9** |
| **East of Miss. River** | **570,383** | **564,944** | **542,182** | **559,334** | **528,525** | **1.0** | **1.9** |
| **West of Miss. River** | **508,018** | **494,948** | **488,148** | **463,190** | **430,920** | **2.6** | **4.2** |
| **U.S. Total** | **1,078,401** | **1,059,892** | **1,030,330** | **1,022,523** | **959,445** | **1.8** | **3.0** |

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

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 and Foreign Distribution of U.S. Coal by State of Origin, 1993-1997
(Thousand Short Tons)

| Coal-Producing State and Region | 1997 | 1996 | 1995 | 1994 | 1993 | Percent Change 1996-1997 | Average Annual Percent Change 1993-1997 |
|---|---|---|---|---|---|---|---|
| **Domestic** | | | | | | | |
| Alabama | 18,108 | 19,772 | 19,127 | 19,220 | 19,668 | –8.4 | –2.0 |
| Alaska | 743 | 697 | 815 | 789 | 855 | 6.7 | –3.4 |
| Arizona | 11,044 | 10,970 | 11,783 | 12,011 | 12,138 | .7 | –2.3 |
| Arkansas | 9 | 7 | 11 | 28 | 25 | 32.2 | –22.7 |
| Colorado | 25,445 | 23,990 | 24,734 | 24,059 | 20,338 | 6.1 | 5.8 |
| Illinois | 40,447 | 45,190 | 45,170 | 51,737 | 41,330 | –10.5 | –.5 |
| Indiana | 34,805 | 29,664 | 25,625 | 30,477 | 29,475 | 17.3 | 4.2 |
| Iowa | – | – | – | 46 | 175 | – | – |
| Kansas | 434 | 245 | 291 | 282 | 345 | 77.1 | 5.9 |
| Kentucky Total | 145,521 | 143,748 | 141,771 | 151,963 | 150,874 | 1.2 | –.9 |
| Eastern | 112,491 | 108,927 | 108,781 | 117,234 | 115,723 | 3.3 | –.7 |
| Western | 33,030 | 34,821 | 32,990 | 34,729 | 35,151 | –5.1 | –1.5 |
| Louisiana | 3,545 | 3,222 | 3,426 | 3,463 | 3,103 | 10.0 | 3.4 |
| Maryland | 3,880 | 3,555 | 3,382 | 3,277 | 3,278 | 9.1 | 4.3 |
| Missouri | 401 | 846 | 464 | 679 | 638 | –52.6 | –11.0 |
| Montana | 40,363 | 37,770 | 39,362 | 41,672 | 35,795 | 6.9 | 3.0 |
| New Mexico | 27,352 | 25,035 | 25,640 | 28,540 | 27,942 | 9.3 | –.5 |
| North Dakota | 29,172 | 30,025 | 30,118 | 32,056 | 32,372 | –2.8 | –2.6 |
| Ohio | 29,024 | 28,609 | 24,318 | 28,688 | 28,315 | 1.4 | .6 |
| Oklahoma | 1,688 | 2,136 | 2,158 | 1,925 | 2,297 | –21.0 | –7.4 |
| Pennsylvania Total | 65,027 | 59,882 | 53,961 | 55,207 | 53,482 | 8.6 | 5.0 |
| Anthracite | 4,575 | 4,330 | 3,497 | 4,346 | 3,015 | 5.7 | 11.0 |
| Bituminous | 60,452 | 55,552 | 50,464 | 50,861 | 50,467 | 8.8 | 4.6 |
| Tennessee | 2,767 | 3,052 | 2,627 | 2,547 | 2,577 | –9.3 | 1.8 |
| Texas | 53,463 | 49,538 | 52,812 | 52,256 | 54,224 | 7.9 | –.3 |
| Utah | 22,857 | 18,563 | 21,591 | 20,527 | 19,283 | 23.1 | 4.3 |
| Virginia | 22,578 | 22,776 | 24,283 | 26,866 | 27,388 | –.9 | –4.7 |
| Washington | 4,481 | 4,526 | 4,756 | 4,731 | 4,621 | –1.0 | –.8 |
| West Virginia Total | 133,771 | 127,156 | 120,866 | 122,779 | 102,659 | 5.2 | 6.8 |
| Northern | 41,494 | 40,398 | 36,073 | 39,985 | 34,573 | 2.7 | 4.7 |
| Southern | 92,277 | 86,757 | 84,793 | 82,794 | 68,086 | 6.4 | 7.9 |
| Wyoming | 278,255 | 276,723 | 261,333 | 234,016 | 210,739 | .5 | 7.2 |
| **Appalachian Total**[1] | **387,646** | **373,728** | **357,344** | **375,819** | **353,089** | **3.7** | **2.4** |
| **Interior Total**[1] | **167,821** | **165,668** | **162,947** | **175,622** | **166,763** | **1.3** | **.2** |
| **Western Total**[1] | **439,713** | **428,297** | **420,132** | **398,402** | **364,083** | **2.7** | **4.8** |
| **East of Miss. River** | **495,928** | **483,402** | **461,128** | **492,762** | **459,045** | **2.6** | **1.9** |
| **West of Miss. River** | **499,252** | **484,291** | **479,294** | **457,081** | **424,890** | **3.1** | **4.1** |
| **U.S. Total** | **995,181** | **967,693** | **940,423** | **949,843** | **883,934** | **2.8** | **3.0** |
| **Foreign** | | | | | | | |
| Alabama | 5,813 | 4,864 | 6,032 | 4,529 | 5,888 | 19.5 | –0.3 |
| Alaska | 680 | 776 | 855 | 716 | 743 | –12.4 | –2.2 |
| Colorado | 1,512 | 1,415 | 900 | 752 | 1,128 | 6.8 | 7.6 |
| Illinois | 773 | 1,886 | 2,699 | 236 | 670 | –59.0 | 3.6 |
| Indiana | 5 | 11 | 70 | 206 | 188 | –56.0 | –60.3 |
| Kentucky Total | 7,220 | 9,143 | 9,695 | 7,167 | 9,521 | –21.0 | –6.7 |
| Eastern | 6,700 | 8,477 | 9,051 | 7,023 | 9,318 | –21.0 | –7.9 |
| Western | 520 | 666 | 645 | 144 | 204 | –21.9 | 26.4 |
| Maryland | 236 | 645 | 188 | 184 | 295 | –63.4 | –5.4 |
| Montana | 579 | 518 | 259 | 243 | 121 | 11.8 | 47.9 |
| New Mexico | 25 | 9 | 514 | 30 | – | 190.1 | – |
| Ohio | 410 | 271 | 28 | 61 | – | 51.2 | – |
| Oklahoma | – | 80 | – | – | 11 | –100.0 | – |
| Pennsylvania Total | 8,698 | 9,246 | 8,279 | 6,301 | 5,508 | –5.9 | 12.1 |
| Anthracite | 486 | 506 | 497 | 354 | 316 | –4.0 | 11.3 |
| Bituminous | 8,212 | 8,740 | 7,782 | 5,947 | 5,192 | –6.0 | 12.1 |
| Texas | – | 117 | 20 | – | – | –100.0 | – |
| Utah | 3,414 | 5,305 | 3,930 | 2,698 | 2,959 | –35.6 | 3.6 |
| Virginia | 12,841 | 13,432 | 9,742 | 11,683 | 14,251 | –4.4 | –2.6 |
| Washington | 14 | 43 | 107 | 146 | 94 | –66.5 | –37.4 |
| West Virginia Total | 38,459 | 42,044 | 44,321 | 36,205 | 33,159 | –8.5 | 3.8 |
| Northern | 4,822 | 6,038 | 6,542 | 5,550 | 2,527 | –20.1 | 17.5 |
| Southern | 33,637 | 36,006 | 37,779 | 30,655 | 30,632 | –6.6 | 2.4 |
| Wyoming | 2,541 | 2,395 | 2,269 | 1,524 | 974 | 6.1 | 27.1 |
| **Appalachian Total**[1] | **73,157** | **78,979** | **77,640** | **65,986** | **68,419** | **–7.4** | **1.7** |
| **Interior Total**[1] | **1,298** | **2,759** | **3,433** | **586** | **1,073** | **–53.0** | **4.9** |

See footnotes at end of table.

## Table 59. Domestic and Foreign Distribution of U.S. Coal by State of Origin, 1993-1997 (Continued)

(Thousand Short Tons)

| Coal-Producing State and Region | 1997 | 1996 | 1995 | 1994 | 1993 | Percent Change 1996-1997 | Average Annual Percent Change 1993-1997 |
|---|---|---|---|---|---|---|---|
| | Foreign | | | | | | |
| **Western Total**[1] | **8,765** | **10,460** | **8,834** | **6,108** | **6,018** | **–16.2** | **9.9** |
| **East of Miss. River** | **74,455** | **81,542** | **81,054** | **66,572** | **69,481** | **–8.7** | **1.7** |
| **West of Miss. River** | **8,765** | **10,657** | **8,854** | **6,108** | **6,030** | **–17.8** | **9.8** |
| **U.S. Total** | **83,220** | **92,199** | **89,907** | **72,680** | **75,510** | **–9.7** | **2.5** |

[1] 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-6, ''Coal Distribution Report.''

## Table 60. Major U.S. Coal Distributors, 1997

| Company Name | |
|---|---|
| **Top Ten Distributors** | |
| Atlantic Richfield Co. | Kennecott Energy Co. |
| Arch Minerial Corp. | Kerr-McGee Coal Corp. |
| A.T. Massey Coal Co., Inc. | Peabody Holding Co. |
| Consol Energy Inc. | Texas Utilities Co. |
| Cyprus AMAX Minerals Co. | Zeigler Coal Holding Co. |
| **Other Major Distributors** | |
| Addington Enterprises Inc. | Mapco Coal Inc. |
| AEP Service Corp. | MDU Resources |
| Aluminum Co. of America | Minicorp Inc. |
| American Metals & Coal | Minnesota Power & Light |
| AMVEST Minerals | Montana Power Co. |
| Andalex Resources Inc. | North American Coal Corp. |
| Anker Energy Corp. | Orion Resources Inc. |
| BHP Minerials Int 'l | Pacific Basin Resources |
| Black Beauty Coal Co. | Pacificorp Electric |
| Black Hills Corp. | Pardee Coal Co. Inc. |
| Blue Diamond Coal Co. | Pen Holdings |
| Canyon Fuel Co. | Peter Kiewit Son 's Inc. |
| Chevron Corp. | Quaker Coal Co. |
| Coal Resources Inc. | Renco Group Inc. |
| Coastal Corp. | Rochester & Pittsburgh Coal |
| Diversified Energy Inc. | San Miguel Electric CoOp |
| Dolet Hills Mining Venture | Smokey Mountain Coal |
| Drummond Co. | Solar Sources Inc. |
| Electric Fuels Corp. | Sun Coal Co. |
| Exxon Coal USA Inc. | Teco Coal Corp. |
| General Dynamics Corp. | Thames Development LTD |
| Hanson PLC | U.S. Steel Mining Co. |
| James River Coal Co. | United Coal Co. |
| Jim Walters Resources Inc. | Western Fuels Association |
| Kindall Mining | Westmoreland Resources Inc. |

Notes: The top 10 distribution companies accounted for 53 percent of the total distribution. Companies are listed in alphabetical order to ensure nondisclosure of company data.

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

## Table 61. Domestic Distribution of U.S. Coal by Coal-Producing Region and State, and Destination Census Division and State, 1993-1997

(Thousand Short Tons)

| Coal-Producing Region and State, and Destination Census Division and State | 1997 | 1996 | 1995 | 1994 | 1993 | Percent Change 1996-1997 | Average Annual Percent Change 1993-1997 |
|---|---|---|---|---|---|---|---|
| **Appalachian Total** | **387,646** | **373,728** | **357,344** | **375,819** | **353,089** | **3.7** | **2.4** |
| **Alabama** | **18,108** | **19,772** | **19,127** | **19,220** | **19,668** | **–8.4** | **–2.0** |
| Middle Atlantic | 365 | 579 | 616 | 496 | 492 | –36.9 | –7.2 |
| Pennsylvania | 365 | 579 | 616 | 496 | 492 | –36.9 | –7.2 |
| East North Central | – | 108 | – | – | – | –100.0 | – |
| Indiana | – | 57 | – | – | – | –100.0 | – |
| Ohio | – | 51 | – | – | – | –100.0 | – |
| West North Central | – | * | – | – | – | –100.0 | – |
| Minnesota | – | * | – | – | – | –100.0 | – |
| Missouri | – | * | – | – | – | –100.0 | – |
| South Atlantic | 77 | 385 | 253 | 89 | 207 | –80.1 | –22.1 |
| Florida | 26 | 8 | 115 | 85 | 202 | 213.2 | –39.9 |
| Georgia | 50 | 373 | 134 | * | 1 | –86.6 | 167.8 |
| North Carolina | – | 4 | – | – | – | –100.0 | – |
| South Carolina | – | – | 4 | 3 | 4 | – | – |
| East South Central | 17,594 | 18,628 | 18,182 | 18,484 | 18,851 | –5.5 | –1.7 |
| Alabama | 17,489 | 18,503 | 18,024 | 18,351 | 18,716 | –5.5 | –1.7 |
| Kentucky | – | 15 | – | – | – | –100.0 | – |
| Mississippi | 105 | 110 | 156 | 129 | 132 | –4.8 | –5.5 |
| Tennessee | – | 1 | 2 | 4 | 3 | –100.0 | – |
| West South Central | 47 | 39 | 24 | 63 | 18 | 23.1 | 28.1 |
| Arkansas | 47 | 39 | 24 | 60 | 9 | 23.1 | 49.7 |
| Texas | – | – | – | 3 | 8 | – | – |
| **Kentucky, Eastern** | **112,491** | **108,927** | **108,781** | **117,234** | **115,723** | **3.3** | **–.7** |
| New England | 1,884 | 1,337 | 1,764 | 1,447 | 1,106 | 40.8 | 14.2 |
| Connecticut | 755 | 659 | 811 | 787 | 576 | 14.4 | 7.0 |
| Maine | 412 | 271 | 258 | 433 | 380 | 51.7 | 2.0 |
| Massachusetts | 717 | 407 | 695 | 227 | 71 | 76.4 | 78.5 |
| New Hampshire | – | – | – | – | 79 | – | – |
| Middle Atlantic | 2,754 | 3,977 | 4,145 | 4,522 | 3,679 | –30.8 | –7.0 |
| New Jersey | 91 | 29 | 381 | 63 | 61 | 209.4 | 10.5 |
| New York | 1,494 | 1,227 | 996 | 1,288 | 1,188 | 21.8 | 5.9 |
| Pennsylvania | 1,169 | 2,721 | 2,767 | 3,171 | 2,429 | –57.0 | –16.7 |
| East North Central | 21,644 | 20,340 | 22,832 | 24,669 | 25,309 | 6.4 | –3.8 |
| Illinois | 2,327 | 1,478 | 1,442 | 1,555 | 2,333 | 57.4 | –.1 |
| Indiana | 2,065 | 1,962 | 2,397 | 2,109 | 2,074 | 5.3 | –.1 |
| Michigan | 6,759 | 6,671 | 6,977 | 9,524 | 8,857 | 1.3 | –6.5 |
| Ohio | 9,711 | 9,490 | 11,200 | 10,532 | 11,294 | 2.3 | –3.7 |
| Wisconsin | 781 | 738 | 816 | 949 | 751 | 5.7 | 1.0 |
| West North Central | 543 | 889 | 611 | 564 | 482 | –38.9 | 3.0 |
| Iowa | 259 | 439 | 160 | 40 | 25 | –40.9 | 79.3 |
| Minnesota | 136 | 135 | 211 | 172 | 124 | .8 | 2.4 |
| Missouri | 145 | 315 | 238 | 351 | 334 | –54.1 | –18.9 |
| Nebraska | – | – | 3 | – | – | – | – |
| South Dakota | 3 | – | – | 1 | – | – | – |
| South Atlantic | 65,034 | 63,554 | 57,820 | 60,914 | 57,532 | 2.3 | 3.1 |
| Delaware | – | – | – | 37 | 27 | – | – |
| District of Columbia | – | – | – | 13 | 16 | – | – |
| Florida | 14,342 | 14,015 | 12,121 | 12,069 | 11,311 | 2.3 | 6.1 |
| Georgia | 15,913 | 14,689 | 15,803 | 15,649 | 14,163 | 8.3 | 3.0 |
| Maryland | 139 | 105 | 29 | 423 | 958 | 32.5 | –38.2 |
| North Carolina | 15,840 | 17,240 | 12,902 | 13,590 | 13,491 | –8.1 | 4.1 |
| South Carolina | 12,100 | 11,417 | 10,007 | 11,443 | 9,962 | 6.0 | 5.0 |
| Virginia | 6,449 | 5,662 | 6,129 | 6,539 | 6,672 | 13.9 | –.8 |
| West Virginia | 250 | 426 | 829 | 1,151 | 932 | –41.3 | –28.0 |
| East South Central | 20,065 | 18,182 | 20,332 | 22,813 | 26,008 | 10.4 | –6.3 |
| Alabama | 727 | 727 | 1,434 | 2,402 | 2,320 | * | –25.2 |
| Kentucky | 8,639 | 9,326 | 9,653 | 10,317 | 10,145 | –7.4 | –3.9 |
| Mississippi | 1,219 | 928 | 815 | 1,006 | 1,731 | 31.3 | –8.4 |
| Tennessee | 9,480 | 7,202 | 8,430 | 9,088 | 11,811 | 31.6 | –5.3 |
| West South Central | 116 | 71 | 513 | 802 | 104 | 63.8 | 2.9 |
| Arkansas | – | – | – | * | – | – | – |
| Louisiana | 78 | 44 | 500 | 791 | 104 | 77.0 | –6.9 |
| Oklahoma | * | 2 | 4 | – | – | –71.9 | – |
| Texas | 38 | 26 | 8 | 10 | – | 49.1 | – |
| Mountain | – | – | 2 | 10 | – | – | – |
| Idaho | – | – | 2 | – | – | – | – |
| Wyoming | – | – | – | 10 | – | – | – |

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, 1993-1997 (Continued)

(Thousand Short Tons)

| Coal-Producing Region and State, and Destination Census Division and State | 1997 | 1996 | 1995 | 1994 | 1993 | Percent Change 1996-1997 | Average Annual Percent Change 1993-1997 |
|---|---|---|---|---|---|---|---|
| **Kentucky, Eastern (Continued)** | | | | | | | |
| Pacific | 16 | 24 | 15 | 15 | 4 | –31.4 | 41.9 |
| Oregon | 16 | 24 | 15 | 15 | 4 | –31.4 | 41.9 |
| **Maryland** | **3,880** | **3,555** | **3,382** | **3,277** | **3,278** | **9.1** | **4.3** |
| New England | – | 3 | 32 | – | 11 | –100.0 | – |
| Connecticut | – | 3 | 32 | – | – | –100.0 | – |
| Massachusetts | – | * | – | – | 11 | –100.0 | – |
| Middle Atlantic | 24 | 4 | 45 | – | 19 | NM | 5.9 |
| Pennsylvania | 24 | 4 | 45 | – | 19 | NM | 5.9 |
| East North Central | – | 19 | – | – | – | –100.0 | – |
| Michigan | – | 15 | – | – | – | –100.0 | – |
| Wisconsin | – | 3 | – | – | – | –100.0 | – |
| South Atlantic | 3,847 | 3,518 | 3,297 | 3,277 | 3,230 | 9.4 | 4.5 |
| Delaware | – | 130 | 97 | 125 | 37 | –100.0 | – |
| Maryland | 955 | 1,147 | 1,216 | 1,034 | 820 | –16.8 | 3.9 |
| Virginia | 163 | 27 | 12 | 1 | – | 493.4 | – |
| West Virginia | 2,730 | 2,213 | 1,971 | 2,116 | 2,373 | 23.4 | 3.6 |
| **Ohio** | **29,024** | **28,609** | **24,318** | **28,688** | **28,315** | **1.4** | **.6** |
| New England | – | – | – | * | 17 | – | – |
| Connecticut | – | – | – | * | * | – | – |
| Massachusetts | – | – | – | – | 17 | – | – |
| Middle Atlantic | 770 | 1,168 | 1,568 | 2,443 | 1,388 | –34.1 | –13.7 |
| New York | 18 | 125 | 25 | 124 | 52 | –85.6 | –23.3 |
| Pennsylvania | 752 | 1,043 | 1,543 | 2,318 | 1,336 | –27.9 | –13.4 |
| East North Central | 25,162 | 25,201 | 20,912 | 24,810 | 25,119 | –.2 | * |
| Illinois | – | 5 | – | 17 | * | –100.0 | – |
| Indiana | 337 | 464 | 243 | 345 | 274 | –27.3 | 5.3 |
| Michigan | 303 | 246 | 431 | 522 | 474 | 23.2 | –10.6 |
| Ohio | 24,521 | 24,478 | 20,228 | 23,907 | 24,370 | .2 | .1 |
| Wisconsin | – | 9 | 10 | 18 | – | –100.0 | – |
| West North Central | 7 | – | 10 | 33 | 83 | – | –45.5 |
| Iowa | – | – | – | 15 | 67 | – | – |
| Minnesota | 7 | – | – | – | – | – | – |
| Missouri | – | – | 10 | 18 | 16 | – | – |
| South Atlantic | 2,323 | 2,036 | 1,620 | 971 | 1,041 | 14.1 | 22.2 |
| Delaware | – | – | – | 29 | 48 | – | – |
| West Virginia | 2,323 | 2,036 | 1,620 | 942 | 993 | 14.1 | 23.7 |
| East South Central | 636 | 137 | 53 | 130 | 261 | 364.5 | 24.9 |
| Alabama | 69 | 103 | 18 | 37 | 151 | –33.1 | –17.8 |
| Kentucky | 567 | 30 | 14 | 93 | 29 | NM | 109.9 |
| Tennessee | – | 4 | 21 | – | 81 | –100.0 | – |
| **Pennsylvania, Anthracite** | **4,575** | **4,330** | **3,497** | **4,346** | **3,015** | **5.7** | **11.0** |
| New England | 35 | 31 | 37 | 54 | 64 | 12.0 | –13.9 |
| Connecticut | 7 | 5 | 8 | 11 | 13 | 32.2 | –13.4 |
| Maine | 4 | 4 | 3 | 6 | 8 | –3.3 | –19.4 |
| Massachusetts | 14 | 14 | 16 | 20 | 24 | 4.3 | –12.0 |
| New Hampshire | 5 | 4 | 5 | 8 | 10 | 31.5 | –16.8 |
| Rhode Island | 3 | 3 | 3 | 3 | 3 | –12.2 | –3.1 |
| Vermont | 2 | 2 | 3 | 5 | 6 | 47.3 | –18.6 |
| Middle Atlantic | 4,236 | 3,985 | 2,922 | 3,227 | 2,618 | 6.3 | 12.8 |
| New Jersey | 15 | 14 | 15 | 17 | 20 | 9.6 | –7.1 |
| New York | 130 | 151 | 140 | 121 | 179 | –13.7 | –7.6 |
| Pennsylvania | 4,091 | 3,821 | 2,768 | 3,089 | 2,420 | 7.1 | 14.0 |
| East North Central | 41 | 41 | 37 | 36 | 39 | .2 | 1.2 |
| Illinois | 15 | 7 | 9 | 8 | 14 | 104.1 | 1.6 |
| Indiana | 7 | 6 | 6 | 4 | 5 | 11.7 | 10.8 |
| Michigan | 1 | 3 | 9 | 2 | * | –67.5 | 23.1 |
| Ohio | 13 | 19 | 8 | 21 | 19 | –35.7 | –9.6 |
| Wisconsin | 6 | 5 | 6 | 2 | 1 | 15.6 | 43.3 |
| West North Central | 52 | 64 | 46 | 31 | 34 | –18.7 | 10.9 |
| Iowa | 43 | 54 | 39 | 26 | 28 | –20.0 | 12.0 |
| Kansas | 1 | * | – | – | * | NM | 123.7 |
| Minnesota | 4 | 7 | 7 | 3 | 3 | –46.2 | 5.7 |
| Missouri | * | * | * | 2 | 2 | NM | –29.7 |

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, 1993-1997 (Continued)

(Thousand Short Tons)

| Coal-Producing Region and State, and Destination Census Division and State | 1997 | 1996 | 1995 | 1994 | 1993 | Percent Change 1996-1997 | Average Annual Percent Change 1993-1997 |
|---|---|---|---|---|---|---|---|
| **Pennsylvania, Anthracite (Continued)** | | | | | | | |
| Nebraska | 4 | 1 | * | * | 2 | 312.0 | 19.0 |
| North Dakota | * | 2 | * | * | * | –99.1 | –26.9 |
| South Dakota | – | – | – | * | – | – | – |
| South Atlantic | 97 | 56 | 91 | 79 | 64 | 73.3 | 10.9 |
| Delaware | 8 | 10 | 11 | 11 | 11 | –20.9 | –6.3 |
| District of Columbia | * | * | * | * | * | 45.6 | 14.0 |
| Florida | 7 | 6 | 9 | 8 | 6 | 15.1 | 1.6 |
| Georgia | * | * | * | * | * | –53.7 | –20.7 |
| Maryland | 3 | 1 | 27 | 6 | 4 | 181.5 | –3.8 |
| North Carolina | * | * | * | * | * | 335.3 | –3.4 |
| South Carolina | 31 | * | 3 | 8 | 11 | NM | 30.1 |
| Virginia | 6 | 6 | 9 | 11 | 14 | 4.6 | –18.1 |
| West Virginia | 41 | 32 | 31 | 35 | 18 | 27.6 | 22.7 |
| East South Central | 31 | 50 | 44 | 28 | 34 | –37.7 | –2.3 |
| Alabama | 4 | 2 | 1 | 1 | 3 | 103.2 | 12.1 |
| Kentucky | 18 | 22 | 21 | 12 | 18 | –17.2 | .3 |
| Mississippi | * | * | * | * | * | 166.7 | 55.6 |
| Tennessee | 9 | 26 | 22 | 15 | 14 | –66.6 | –10.7 |
| West South Central | 11 | 8 | 12 | 8 | 11 | 41.0 | 1.1 |
| Arkansas | * | * | * | 1 | * | 79.5 | 13.7 |
| Louisiana | 8 | 6 | 10 | 3 | 8 | 23.3 | .6 |
| Oklahoma | * | * | * | * | * | –17.5 | –6.4 |
| Texas | 3 | 1 | 2 | 3 | 3 | 135.7 | 2.3 |
| Mountain | 26 | 21 | 13 | 18 | 3 | 28.7 | 77.3 |
| Arizona | 3 | 1 | * | * | * | 92.5 | 271.5 |
| Colorado | 20 | 16 | 12 | 15 | 3 | 23.1 | 65.8 |
| Idaho | – | * | * | 3 | * | –100.0 | – |
| Montana | – | 2 | – | * | * | –100.0 | – |
| Nevada | – | * | – | – | – | –100.0 | – |
| New Mexico | – | * | * | * | * | –100.0 | – |
| Utah | 3 | * | * | * | * | NM | 195.8 |
| Wyoming | 2 | 1 | – | * | * | 17.1 | 289.1 |
| Pacific | 14 | 12 | 12 | 7 | 10 | 13.5 | 10.0 |
| Alaska | – | – | – | * | – | – | – |
| California | 1 | * | * | * | * | 36.5 | 37.6 |
| Oregon | 13 | 12 | 12 | 7 | 9 | 12.5 | 9.2 |
| Washington | * | – | * | – | – | – | – |
| **Pennsylvania, Bituminous** | **60,452** | **55,552** | **50,464** | **50,861** | **50,467** | **8.8** | **4.6** |
| New England | 1,214 | 1,021 | 1,009 | 1,025 | 989 | 18.9 | 5.3 |
| Connecticut | 1 | 227 | 516 | 12 | * | –99.6 | 34.2 |
| Maine | 7 | – | 32 | 24 | 2 | – | 34.0 |
| Massachusetts | 497 | 202 | 4 | 292 | 330 | 145.8 | 10.8 |
| New Hampshire | 710 | 592 | 458 | 698 | 656 | 20.0 | 2.0 |
| Vermont | * | * | – | – | * | 4.5 | –33.4 |
| Middle Atlantic | 41,194 | 40,063 | 37,612 | 38,188 | 37,417 | 2.8 | 2.4 |
| New Jersey | 567 | 538 | 558 | 537 | 153 | 5.4 | 38.8 |
| New York | 3,884 | 4,125 | 3,675 | 5,551 | 6,228 | –5.8 | –11.1 |
| Pennsylvania | 36,743 | 35,400 | 33,379 | 32,100 | 31,036 | 3.8 | 4.3 |
| East North Central | 10,238 | 8,460 | 6,682 | 6,288 | 6,502 | 21.0 | 12.0 |
| Illinois | – | – | – | 206 | 43 | – | – |
| Indiana | 548 | 559 | 222 | 629 | 505 | –2.0 | 2.1 |
| Michigan | 2,876 | 2,075 | 2,650 | 1,756 | 1,607 | 38.6 | 15.7 |
| Ohio | 4,756 | 4,463 | 2,707 | 2,769 | 3,848 | 6.5 | 5.4 |
| Wisconsin | 2,058 | 1,362 | 1,103 | 928 | 500 | 51.1 | 42.4 |
| West North Central | 178 | 248 | 228 | 46 | 205 | –28.1 | –3.5 |
| Iowa | 178 | 225 | 227 | 46 | 103 | –20.8 | 14.6 |
| Minnesota | – | 23 | – | – | – | –100.0 | – |
| Missouri | – | – | 1 | – | 102 | – | – |
| North Dakota | – | – | – | – | * | – | – |
| South Atlantic | 5,783 | 3,968 | 3,377 | 3,783 | 3,955 | 45.7 | 10.0 |
| Delaware | 655 | 528 | 452 | 314 | 252 | 24.1 | 27.0 |
| Florida | – | – | – | 135 | – | – | – |
| Maryland | 1,921 | 1,602 | 1,741 | 2,278 | 2,372 | 19.8 | –5.1 |
| South Carolina | – | – | 6 | – | – | – | – |

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, 1993-1997 (Continued)

(Thousand Short Tons)

| Coal-Producing Region and State, and Destination Census Division and State | 1997 | 1996 | 1995 | 1994 | 1993 | Percent Change 1996-1997 | Average Annual Percent Change 1993-1997 |
|---|---|---|---|---|---|---|---|
| **Pennsylvania, Bituminous (Continued)** | | | | | | | |
| Virginia | 226 | 5 | 20 | 55 | 29 | NM | 66.6 |
| West Virginia | 2,982 | 1,833 | 1,157 | 1,002 | 1,302 | 62.7 | 23.0 |
| East South Central | 1,302 | 1,144 | 1,078 | 993 | 772 | 13.8 | 14.0 |
| Alabama | 95 | 6 | 39 | 34 | 46 | NM | 20.1 |
| Kentucky | 344 | 500 | 363 | 460 | 225 | –31.1 | 11.2 |
| Mississippi | – | – | – | – | 3 | – | – |
| Tennessee | 864 | 639 | 675 | 500 | 498 | 35.2 | 14.7 |
| West South Central | 11 | 195 | 6 | – | * | –94.2 | 366.2 |
| Louisiana | 11 | 195 | – | – | – | –94.5 | – |
| Texas | 1 | * | 6 | – | * | 110.6 | 133.7 |
| Mountain | 199 | 230 | 215 | 183 | 240 | –13.7 | –4.6 |
| Utah | 199 | 230 | 215 | 183 | 240 | –13.7 | –4.6 |
| **Tennessee** | **2,767** | **3,052** | **2,627** | **2,547** | **2,577** | **–9.3** | **1.8** |
| East North Central | * | * | * | 1 | * | –26.6 | 42.1 |
| Illinois | – | – | – | 1 | – | – | – |
| Indiana | – | – | – | – | * | – | – |
| Michigan | – | – | * | – | – | – | – |
| Ohio | * | * | * | – | – | –26.6 | – |
| South Atlantic | 172 | 141 | 251 | 301 | 303 | 21.4 | –13.2 |
| Florida | – | – | 39 | 40 | – | – | – |
| Georgia | 90 | 141 | 189 | 202 | 204 | –36.4 | –18.6 |
| North Carolina | 45 | 1 | 23 | 58 | 96 | NM | –17.3 |
| South Carolina | 37 | – | – | – | 3 | – | 94.8 |
| Virginia | – | – | – | – | * | – | – |
| East South Central | 2,593 | 2,902 | 2,363 | 2,223 | 2,215 | –10.6 | 4.0 |
| Alabama | 743 | 331 | 936 | 710 | 592 | 124.5 | 5.9 |
| Kentucky | – | 23 | 5 | 135 | 122 | –100.0 | – |
| Tennessee | 1,850 | 2,548 | 1,422 | 1,378 | 1,501 | –27.4 | 5.4 |
| **Virginia** | **22,578** | **22,776** | **24,283** | **26,866** | **27,388** | **–.9** | **–4.7** |
| New England | 15 | 18 | 19 | – | – | –18.7 | – |
| Connecticut | 5 | – | – | – | – | – | – |
| Massachusetts | – | 8 | – | – | – | –100.0 | – |
| New Hampshire | 10 | 10 | 19 | – | – | –1.8 | – |
| Middle Atlantic | 3,469 | 2,045 | 2,311 | 1,490 | 2,073 | 69.6 | 13.7 |
| New Jersey | 805 | 601 | 635 | 190 | 359 | 34.1 | 22.4 |
| New York | 13 | 146 | 362 | 156 | 108 | –91.1 | –41.0 |
| Pennsylvania | 2,651 | 1,299 | 1,314 | 1,143 | 1,607 | 104.0 | 13.3 |
| East North Central | 3,484 | 3,237 | 3,557 | 2,455 | 3,475 | 7.6 | .1 |
| Illinois | 677 | 583 | 578 | 302 | 260 | 16.2 | 27.0 |
| Indiana | 1,587 | 2,290 | 2,395 | 1,202 | 2,045 | –30.7 | –6.1 |
| Michigan | * | 25 | 83 | 376 | 188 | –99.9 | –89.4 |
| Ohio | 1,220 | 331 | 493 | 488 | 875 | 268.5 | 8.7 |
| Wisconsin | – | 9 | 9 | 86 | 108 | –100.0 | – |
| West North Central | – | – | 8 | – | – | – | – |
| Missouri | – | – | 8 | – | – | – | – |
| South Atlantic | 11,989 | 13,507 | 14,600 | 18,898 | 18,553 | –11.2 | –10.3 |
| Delaware | 179 | 166 | 152 | 203 | 155 | 7.9 | 3.7 |
| Florida | 451 | 549 | 377 | 531 | 457 | –17.9 | –.4 |
| Georgia | 1,860 | 1,785 | 2,064 | 3,038 | 3,496 | 4.2 | –14.6 |
| Maryland | * | 1 | 392 | 90 | 8 | –80.0 | –64.3 |
| North Carolina | 840 | 1,883 | 4,056 | 5,634 | 5,867 | –55.4 | –38.5 |
| South Carolina | 1,492 | 1,605 | 1,468 | 1,604 | 1,663 | –7.0 | –2.7 |
| Virginia | 6,695 | 7,231 | 5,657 | 6,867 | 6,076 | –7.4 | 2.5 |
| West Virginia | 471 | 287 | 433 | 930 | 832 | 64.1 | –13.3 |
| East South Central | 3,286 | 3,581 | 3,413 | 3,658 | 3,026 | –8.2 | 2.1 |
| Alabama | 1,057 | 1,036 | 1,083 | 1,156 | 887 | 2.0 | 4.5 |
| Kentucky | 18 | 3 | 142 | 41 | 1 | NM | 98.8 |
| Mississippi | 8 | 13 | – | – | – | –36.0 | – |
| Tennessee | 2,203 | 2,529 | 2,187 | 2,462 | 2,138 | –12.9 | .7 |
| West South Central | 14 | 13 | 21 | – | 2 | 9.7 | 72.1 |
| Louisiana | – | – | 21 | – | – | – | – |
| Texas | 14 | 13 | – | – | 2 | 9.7 | 72.1 |
| Mountain | 298 | 332 | 313 | 320 | 103 | –10.3 | 30.5 |
| Colorado | – | – | – | – | * | – | – |

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, 1993-1997 (Continued)

(Thousand Short Tons)

| Coal-Producing Region and State, and Destination Census Division and State | 1997 | 1996 | 1995 | 1994 | 1993 | Percent Change 1996-1997 | Average Annual Percent Change 1993-1997 |
|---|---|---|---|---|---|---|---|
| **Virginia (Continued)** | | | | | | | |
| Utah | 298 | 332 | 313 | 320 | 103 | –10.3 | 30.5 |
| Pacific | * | – | – | – | – | – | – |
| California | * | – | – | – | – | – | – |
| **West Virginia, Northern** | **41,494** | **40,398** | **36,073** | **39,985** | **34,573** | **2.7** | **4.7** |
| New England | 1,161 | 1,070 | 918 | 1,086 | 1,002 | 8.4 | 3.8 |
| Connecticut | 687 | 683 | 572 | 166 | – | .7 | – |
| Maine | 1 | 13 | 9 | – | – | –90.5 | – |
| Massachusetts | 132 | 53 | 113 | 648 | 613 | 149.5 | –31.9 |
| New Hampshire | 340 | 322 | 225 | 272 | 389 | 5.5 | –3.3 |
| Middle Atlantic | 14,973 | 14,276 | 13,740 | 12,566 | 9,769 | 4.9 | 11.3 |
| New Jersey | 1,365 | 1,530 | 1,182 | 1,096 | 1,234 | –10.8 | 2.6 |
| New York | 4,708 | 4,140 | 4,040 | 3,079 | 1,336 | 13.7 | 37.0 |
| Pennsylvania | 8,900 | 8,606 | 8,518 | 8,391 | 7,200 | 3.4 | 5.4 |
| East North Central | 5,513 | 5,410 | 2,887 | 5,924 | 4,220 | 1.9 | 6.9 |
| Illinois | – | 9 | 51 | 23 | 44 | –100.0 | – |
| Indiana | 157 | 479 | 38 | 1,060 | 216 | –67.1 | –7.6 |
| Michigan | 679 | 640 | 437 | 392 | 113 | 6.1 | 56.5 |
| Ohio | 4,155 | 3,966 | 1,977 | 4,098 | 3,659 | 4.8 | 3.2 |
| Wisconsin | 522 | 317 | 384 | 350 | 188 | 64.7 | 29.1 |
| West North Central | – | * | 3 | 12 | 54 | –100.0 | – |
| Iowa | – | – | – | 2 | – | – | – |
| Minnesota | – | – | 3 | 10 | – | – | – |
| Missouri | – | – | – | – | 54 | – | – |
| North Dakota | – | * | – | – | – | –100.0 | – |
| South Atlantic | 17,631 | 17,820 | 17,213 | 19,270 | 17,772 | –1.1 | –.2 |
| Delaware | 442 | 449 | 737 | 969 | 1,096 | –1.7 | –20.3 |
| District of Columbia | 3 | 6 | 5 | 10 | 12 | –50.5 | –28.7 |
| Florida | 610 | 551 | 259 | 449 | 580 | 10.7 | 1.2 |
| Maryland | 4,862 | 4,773 | 3,341 | 3,443 | 4,314 | 1.9 | 3.0 |
| North Carolina | – | 13 | – | 7 | – | –100.0 | – |
| South Carolina | – | 3 | – | 1 | – | –100.0 | – |
| Virginia | 635 | 66 | 30 | 75 | 306 | NM | 20.0 |
| West Virginia | 11,080 | 11,959 | 12,841 | 14,316 | 11,464 | –7.3 | –.8 |
| East South Central | 1,866 | 1,522 | 1,178 | 492 | 749 | 22.6 | 25.6 |
| Alabama | 442 | 419 | 604 | 34 | 27 | 5.5 | 102.0 |
| Kentucky | 1,424 | 1,026 | 527 | 160 | 130 | 38.8 | 82.1 |
| Mississippi | – | – | – | 5 | 5 | – | – |
| Tennessee | – | 78 | 46 | 293 | 589 | –100.0 | – |
| West South Central | 282 | 203 | – | 368 | 154 | 38.6 | 16.2 |
| Louisiana | 282 | 203 | – | 368 | 154 | 38.6 | 16.2 |
| Mountain | – | – | * | – | – | – | – |
| Nevada | – | – | * | – | – | – | – |
| Pacific | – | – | – | – | * | – | – |
| California | – | – | – | – | * | – | – |
| **West Virginia, Southern** | **92,277** | **86,757** | **84,793** | **82,794** | **68,086** | **6.4** | **7.9** |
| New England | 1,909 | 1,853 | 1,404 | 1,351 | 917 | 3.0 | 20.1 |
| Connecticut | 135 | 24 | – | – | 106 | 453.3 | 6.3 |
| Maine | * | 13 | – | * | 14 | –99.8 | –80.0 |
| Massachusetts | 1,774 | 1,792 | 1,330 | 1,351 | 739 | –1.0 | 24.5 |
| New Hampshire | – | 24 | 74 | – | 58 | –100.0 | – |
| Rhode Island | * | – | – | – | * | – | 2.3 |
| Vermont | – | – | – | * | – | – | – |
| Middle Atlantic | 8,702 | 7,391 | 7,170 | 6,738 | 6,965 | 17.7 | 5.7 |
| New Jersey | 492 | 216 | 165 | 260 | 343 | 127.8 | 9.5 |
| New York | 1,560 | 1,545 | 1,466 | 1,345 | 1,860 | .9 | –4.3 |
| Pennsylvania | 6,651 | 5,630 | 5,538 | 5,133 | 4,763 | 18.1 | 8.7 |
| East North Central | 29,392 | 30,404 | 28,905 | 27,503 | 22,906 | –3.3 | 6.4 |
| Illinois | 1,807 | 1,841 | 1,400 | 1,403 | 1,971 | –1.8 | –2.1 |
| Indiana | 5,773 | 4,809 | 5,142 | 4,918 | 3,401 | 20.1 | 14.1 |
| Michigan | 5,415 | 4,869 | 4,416 | 5,903 | 4,048 | 11.2 | 7.5 |
| Ohio | 16,057 | 18,770 | 17,566 | 14,802 | 12,485 | –14.4 | 6.5 |
| Wisconsin | 340 | 115 | 381 | 478 | 1,002 | 194.1 | –23.7 |
| West North Central | 245 | 113 | 313 | 237 | 223 | 117.2 | 2.4 |
| Iowa | 119 | 44 | 119 | 70 | 69 | 170.1 | 14.4 |

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, 1993-1997 (Continued)

(Thousand Short Tons)

| Coal-Producing Region and State, and Destination Census Division and State | 1997 | 1996 | 1995 | 1994 | 1993 | Percent Change 1996-1997 | Average Annual Percent Change 1993-1997 |
|---|---|---|---|---|---|---|---|
| **West Virginia, Southern (Continued)** | | | | | | | |
| Minnesota | 87 | 32 | 107 | 92 | 11 | 170.6 | 67.3 |
| Missouri | 39 | 36 | 85 | 70 | 142 | 8.9 | –27.8 |
| North Dakota | – | – | * | * | – | – | – |
| South Dakota | – | 1 | 2 | 6 | – | –100.0 | – |
| South Atlantic | 42,159 | 37,986 | 36,164 | 36,045 | 26,459 | 11.0 | 12.3 |
| Delaware | 450 | 551 | 485 | 621 | 617 | –18.3 | –7.6 |
| District of Columbia | 37 | 17 | – | 24 | 23 | 116.7 | 12.3 |
| Florida | 1,896 | 1,123 | 1,341 | 1,372 | 817 | 68.8 | 23.4 |
| Georgia | 4,969 | 4,064 | 4,159 | 4,106 | 2,958 | 22.3 | 13.8 |
| Maryland | 2,607 | 3,132 | 3,209 | 2,855 | 1,376 | –16.8 | 17.3 |
| North Carolina | 9,740 | 8,274 | 7,169 | 6,910 | 6,167 | 17.7 | 12.1 |
| South Carolina | 100 | 347 | 257 | 394 | 107 | –71.2 | –1.7 |
| Virginia | 4,306 | 3,217 | 3,367 | 3,188 | 2,971 | 33.8 | 9.7 |
| West Virginia | 18,054 | 17,261 | 16,177 | 16,575 | 11,423 | 4.6 | 12.1 |
| East South Central | 9,269 | 8,677 | 10,433 | 10,551 | 10,095 | 6.8 | –2.1 |
| Alabama | 3,078 | 2,922 | 3,487 | 4,392 | 3,736 | 5.4 | –4.7 |
| Kentucky | 5,540 | 4,250 | 5,330 | 4,744 | 4,704 | 30.3 | 4.2 |
| Mississippi | 20 | 24 | 44 | 93 | 87 | –17.6 | –30.9 |
| Tennessee | 631 | 1,482 | 1,571 | 1,322 | 1,569 | –57.4 | –20.4 |
| West South Central | 66 | 81 | 48 | 60 | 49 | –18.5 | 7.5 |
| Louisiana | 18 | – | – | 4 | 2 | – | 81.3 |
| Oklahoma | 47 | 77 | 48 | 56 | 48 | –38.8 | –.5 |
| Texas | 2 | 4 | – | 1 | – | –65.2 | – |
| Mountain | 229 | 18 | 206 | 212 | 135 | NM | 14.1 |
| Idaho | – | – | – | * | – | – | – |
| Utah | 229 | 18 | 206 | 211 | 135 | NM | 14.1 |
| Pacific | 10 | 28 | 2 | 1 | * | –64.2 | 217.4 |
| California | – | – | – | – | * | – | – |
| Oregon | 10 | 2 | 2 | 1 | – | NM | – |
| Washington | – | 26 | – | – | – | –100.0 | – |
| **Interior Total** | **167,821** | **165,668** | **162,947** | **175,622** | **166,763** | **1.3** | **.2** |
| **Arkansas** | **9** | **7** | **11** | **28** | **25** | **32.2** | **–22.7** |
| West North Central | 1 | – | – | 4 | 8 | – | –40.8 |
| Missouri | 1 | – | – | 4 | 8 | – | –40.8 |
| West South Central | 8 | 7 | 11 | 24 | 17 | 17.2 | –17.0 |
| Arkansas | 4 | 7 | 11 | 13 | 12 | –41.3 | –24.2 |
| Oklahoma | – | – | – | * | 5 | – | – |
| Texas | 4 | – | – | 12 | – | – | – |
| **Illinois** | **40,447** | **45,190** | **45,170** | **51,737** | **41,330** | **–10.5** | **–.5** |
| New England | – | – | * | – | – | – | – |
| Connecticut | – | – | * | – | – | – | – |
| Middle Atlantic | * | * | * | * | * | –68.3 | –36.2 |
| New Jersey | – | * | * | – | – | –100.0 | – |
| New York | – | * | * | * | * | –100.0 | – |
| Pennsylvania | * | * | * | * | – | –51.0 | – |
| East North Central | 23,224 | 25,316 | 25,629 | 28,299 | 20,483 | –8.3 | 3.2 |
| Illinois | 18,085 | 16,052 | 15,587 | 17,517 | 15,206 | 12.7 | 4.4 |
| Indiana | 4,272 | 8,178 | 8,559 | 9,574 | 4,541 | –47.8 | –1.5 |
| Michigan | – | 59 | 70 | 51 | – | –100.0 | – |
| Ohio | – | 18 | 1 | 18 | – | –100.0 | – |
| Wisconsin | 868 | 1,008 | 1,412 | 1,139 | 736 | –13.9 | 4.2 |
| West North Central | 3,934 | 5,347 | 6,270 | 9,448 | 7,783 | –26.4 | –15.7 |
| Iowa | 731 | 694 | 1,216 | 1,535 | 1,534 | 5.3 | –16.9 |
| Kansas | 129 | 149 | 128 | 193 | 179 | –13.2 | –7.8 |
| Minnesota | 176 | 100 | 111 | 179 | 43 | 75.4 | 41.9 |
| Missouri | 2,897 | 4,403 | 4,815 | 7,541 | 6,027 | –34.2 | –16.7 |
| North Dakota | * | – | – | – | * | – | –47.3 |
| South Atlantic | 6,612 | 7,255 | 6,651 | 8,403 | 8,137 | –8.9 | –5.1 |
| Florida | 5,585 | 6,052 | 6,056 | 5,846 | 4,782 | –7.7 | 4.0 |
| Georgia | 1,027 | 1,204 | 584 | 2,557 | 3,355 | –14.7 | –25.6 |
| Maryland | – | – | 5 | – | – | – | – |
| North Carolina | * | – | * | – | – | – | – |
| Virginia | – | * | * | – | * | –100.0 | – |
| West Virginia | – | – | 6 | * | – | – | – |

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, 1993-1997 (Continued)

(Thousand Short Tons)

| Coal-Producing Region and State, and Destination Census Division and State | 1997 | 1996 | 1995 | 1994 | 1993 | Percent Change 1996-1997 | Average Annual Percent Change 1993-1997 |
|---|---|---|---|---|---|---|---|
| **Illinois (Continued)** | | | | | | | |
| East South Central | 5,600 | 7,130 | 6,510 | 5,453 | 4,823 | –21.5 | 3.8 |
| Alabama | 1,348 | 2,155 | 1,146 | 750 | 401 | –37.4 | 35.4 |
| Kentucky | 152 | 1 | 274 | 343 | 535 | NM | –27.0 |
| Mississippi | 1,228 | 1,749 | 1,304 | 1,164 | 1,106 | –29.8 | 2.6 |
| Tennessee | 2,872 | 3,225 | 3,787 | 3,195 | 2,780 | –10.9 | .8 |
| West South Central | 1,055 | 86 | 86 | 46 | 58 | NM | 106.4 |
| Arkansas | 67 | 76 | 76 | 30 | 37 | –12.0 | 15.9 |
| Louisiana | 987 | – | – | – | 21 | – | 161.9 |
| Oklahoma | 1 | 10 | 10 | 16 | – | –87.3 | – |
| Mountain | – | 40 | – | – | – | –100.0 | – |
| Colorado | – | 40 | – | – | – | –100.0 | – |
| **Indiana** | **34,805** | **29,664** | **25,625** | **30,477** | **29,475** | **17.3** | **4.2** |
| New England | – | * | – | * | 21 | –100.0 | – |
| Connecticut | – | * | – | * | – | –100.0 | – |
| Massachusetts | – | – | – | – | 21 | – | – |
| East North Central | 32,267 | 26,318 | 22,461 | 27,088 | 26,347 | 22.6 | 5.2 |
| Illinois | 1,920 | 1,444 | 963 | 1,597 | 1,562 | 33.0 | 5.3 |
| Indiana | 29,916 | 24,309 | 21,185 | 24,733 | 23,913 | 23.1 | 5.8 |
| Michigan | 162 | 181 | 180 | 135 | 184 | –10.5 | –3.1 |
| Ohio | 4 | 34 | 26 | 36 | 60 | –88.8 | –49.5 |
| Wisconsin | 265 | 350 | 106 | 587 | 628 | –24.3 | –19.4 |
| West North Central | 359 | 655 | 454 | 973 | 1,249 | –45.1 | –26.8 |
| Iowa | 347 | 638 | 435 | 426 | 646 | –45.6 | –14.4 |
| Kansas | – | – | – | – | 18 | – | – |
| Minnesota | 4 | – | – | 43 | – | – | – |
| Missouri | 8 | 17 | 19 | 504 | 585 | –50.9 | –65.7 |
| South Atlantic | – | – | – | 19 | 264 | – | – |
| Florida | – | – | – | – | 96 | – | – |
| Georgia | – | – | – | 19 | 153 | – | – |
| Virginia | – | – | – | – | 15 | – | – |
| East South Central | 2,148 | 2,677 | 2,586 | 2,313 | 1,506 | –19.8 | 9.3 |
| Alabama | – | 26 | 1 | 56 | 60 | –100.0 | – |
| Kentucky | 2,148 | 2,610 | 2,466 | 2,219 | 1,313 | –17.7 | 13.1 |
| Tennessee | – | 41 | 119 | 38 | 132 | –100.0 | – |
| West South Central | 2 | 6 | 1 | 4 | 1 | –74.3 | 13.7 |
| Oklahoma | * | 4 | – | 3 | 1 | –98.4 | –48.3 |
| Texas | 2 | 2 | 1 | * | – | –25.3 | – |
| **Iowa** | – | – | – | **46** | **175** | – | – |
| West North Central | – | – | – | 46 | 175 | – | – |
| Iowa | – | – | – | 46 | 175 | – | – |
| **Kansas** | **434** | **245** | **291** | **282** | **345** | **77.1** | **5.9** |
| West North Central | 434 | 233 | 291 | 282 | 345 | 85.9 | 5.9 |
| Kansas | 354 | 164 | 160 | 165 | 167 | 115.5 | 20.6 |
| Missouri | 80 | 69 | 131 | 117 | 178 | 15.6 | –18.1 |
| West South Central | – | 12 | – | – | – | –100.0 | – |
| Oklahoma | – | 12 | – | – | – | –100.0 | – |
| **Kentucky, Western** | **33,030** | **34,821** | **32,990** | **34,729** | **35,151** | **–5.1** | **–1.5** |
| Middle Atlantic | – | – | – | * | * | – | – |
| Pennsylvania | – | – | – | * | * | – | – |
| East North Central | 575 | 1,016 | 542 | 2,762 | 4,169 | –43.5 | –39.1 |
| Illinois | 103 | 119 | – | 192 | 659 | –13.5 | –37.1 |
| Indiana | 257 | 680 | 243 | 2,214 | 3,229 | –62.3 | –46.9 |
| Michigan | – | – | – | 12 | 28 | – | – |
| Ohio | 30 | 31 | 103 | 180 | 146 | –2.5 | –32.7 |
| Wisconsin | 185 | 187 | 196 | 165 | 108 | –.8 | 14.5 |
| West North Central | 350 | 237 | 101 | 1,170 | 352 | 47.5 | –.1 |
| Iowa | 320 | 211 | 75 | 377 | 217 | 52.1 | 10.1 |
| Minnesota | – | 22 | 19 | 26 | 32 | –100.0 | – |
| Missouri | 30 | 5 | 6 | 766 | 102 | 476.4 | –26.4 |
| South Atlantic | 3,806 | 3,254 | 2,375 | 2,709 | 3,040 | 16.9 | 5.8 |
| Florida | 3,804 | 3,254 | 2,375 | 2,706 | 3,039 | 16.9 | 5.8 |
| Maryland | 2 | – | – | – | – | – | – |
| North Carolina | – | – | – | * | – | – | – |

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, 1993-1997 (Continued)

(Thousand Short Tons)

| Coal-Producing Region and State, and Destination Census Division and State | 1997 | 1996 | 1995 | 1994 | 1993 | Percent Change 1996-1997 | Average Annual Percent Change 1993-1997 |
|---|---|---|---|---|---|---|---|
| **Kentucky, Western (Continued)** | | | | | | | |
| South Carolina | – | – | – | * | – | – | – |
| Virginia | * | * | – | – | – | 333.3 | – |
| West Virginia | – | – | – | 3 | 1 | – | – |
| East South Central | 28,155 | 29,605 | 29,927 | 28,048 | 27,512 | –4.9 | 0.6 |
| Alabama | 1,798 | 3,142 | 1,717 | 2,038 | 1,761 | –42.8 | .5 |
| Kentucky | 14,169 | 16,375 | 17,488 | 16,401 | 17,990 | –13.5 | –5.8 |
| Mississippi | – | 107 | – | – | 10 | –100.0 | – |
| Tennessee | 12,188 | 9,981 | 10,723 | 9,609 | 7,751 | 22.1 | 12.0 |
| West South Central | 112 | 657 | 13 | 8 | 12 | –82.9 | 74.6 |
| Arkansas | 4 | 11 | 13 | 8 | 12 | –62.3 | –23.2 |
| Louisiana | 108 | 646 | – | – | – | –83.3 | – |
| **Louisiana** | **3,545** | **3,222** | **3,426** | **3,463** | **3,103** | **10.0** | **3.4** |
| West North Central | – | – | – | – | * | – | – |
| Missouri | – | – | – | – | * | – | – |
| West South Central | 3,545 | 3,222 | 3,426 | 3,463 | 3,103 | 10.0 | 3.4 |
| Louisiana | 3,545 | 3,222 | 3,426 | 3,463 | 3,103 | 10.0 | 3.4 |
| **Missouri** | **401** | **846** | **464** | **679** | **638** | **–52.6** | **–11.0** |
| West North Central | 389 | 846 | 464 | 679 | 614 | –54.0 | –10.8 |
| Kansas | 40 | 345 | 91 | 77 | 23 | –88.5 | 15.2 |
| Missouri | 349 | 501 | 373 | 602 | 592 | –30.2 | –12.3 |
| West South Central | 9 | – | – | – | 2 | – | 45.2 |
| Arkansas | 9 | – | – | – | – | – | – |
| Oklahoma | – | – | – | – | 2 | – | – |
| **Oklahoma** | **1,688** | **2,136** | **2,158** | **1,925** | **2,297** | **–21.0** | **–7.4** |
| West North Central | 110 | 63 | 31 | 27 | 57 | 76.6 | 18.0 |
| Kansas | 110 | 63 | 31 | 22 | 41 | 76.6 | 28.3 |
| Missouri | – | – | * | 5 | 16 | – | – |
| East South Central | – | – | 2 | – | – | – | – |
| Kentucky | – | – | 2 | – | – | – | – |
| West South Central | 1,568 | 2,066 | 2,121 | 1,896 | 2,240 | –24.1 | –8.5 |
| Arkansas | 160 | 170 | 159 | 205 | 196 | –6.2 | –5.0 |
| Oklahoma | 1,260 | 1,712 | 1,790 | 1,532 | 1,869 | –26.4 | –9.4 |
| Texas | 148 | 184 | 171 | 159 | 175 | –19.9 | –4.1 |
| Pacific | – | – | – | * | * | – | – |
| California | – | – | – | * | * | – | – |
| **Texas** | **53,463** | **49,538** | **52,812** | **52,256** | **54,224** | **7.9** | **–.3** |
| West South Central | 53,463 | 49,538 | 52,812 | 52,256 | 54,224 | 7.9 | –.3 |
| Texas | 53,463 | 49,538 | 52,812 | 52,256 | 54,224 | 7.9 | –.3 |
| **Western Total** | **439,713** | **428,297** | **420,132** | **398,402** | **364,083** | **2.7** | **4.8** |
| **Alaska** | **743** | **697** | **815** | **789** | **855** | **6.7** | **–3.4** |
| Pacific | 743 | 697 | 815 | 789 | 855 | 6.7 | –3.4 |
| Alaska | 743 | 697 | 815 | 789 | 855 | 6.7 | –3.4 |
| **Arizona** | **11,044** | **10,970** | **11,783** | **12,011** | **12,138** | **.7** | **–2.3** |
| Mountain | 11,044 | 10,970 | 11,783 | 12,011 | 12,138 | .7 | –2.3 |
| Arizona | 6,646 | 6,499 | 6,956 | 7,580 | 7,566 | 2.3 | –3.2 |
| Nevada | 4,398 | 4,470 | 4,827 | 4,431 | 4,572 | –1.6 | –1.0 |
| **Colorado** | **25,445** | **23,990** | **24,734** | **24,059** | **20,338** | **6.1** | **5.8** |
| New England | 107 | – | – | – | – | – | – |
| Vermont | 107 | – | – | – | – | – | – |
| East North Central | 1,873 | 1,366 | 2,333 | 2,357 | 2,471 | 37.1 | –6.7 |
| Illinois | 1,196 | 640 | 1,628 | 1,439 | 1,246 | 86.8 | –1.0 |
| Indiana | – | – | 20 | 457 | 978 | – | – |
| Michigan | 10 | – | 44 | – | – | – | – |
| Wisconsin | 667 | 726 | 641 | 462 | 246 | –8.2 | 28.3 |
| West North Central | 2,879 | 3,218 | 3,109 | 2,194 | 871 | –10.5 | 34.8 |
| Iowa | 644 | 591 | 550 | 171 | 135 | 8.8 | 47.8 |
| Kansas | 1,264 | 1,493 | 1,436 | 1,148 | 90 | –15.3 | 93.3 |
| Minnesota | – | – | 13 | 23 | 8 | – | – |
| Missouri | 907 | 1,077 | 1,005 | 775 | 566 | –15.8 | 12.5 |
| Nebraska | 65 | 56 | 104 | 77 | 72 | 16.7 | –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, 1993-1997 (Continued)

(Thousand Short Tons)

| Coal-Producing Region and State, and Destination Census Division and State | 1997 | 1996 | 1995 | 1994 | 1993 | Percent Change 1996-1997 | Average Annual Percent Change 1993-1997 |
|---|---|---|---|---|---|---|---|
| **Colorado (Continued)** | | | | | | | |
| South Atlantic | – | 136 | 811 | 435 | 44 | –100.0 | – |
| Florida | – | 136 | 811 | 423 | – | –100.0 | – |
| Georgia | – | – | – | 11 | 44 | – | – |
| West Virginia | – | – | – | 2 | – | – | – |
| East South Central | 3,349 | 3,817 | 2,797 | 2,038 | 711 | –12.3 | 47.3 |
| Kentucky | 190 | 260 | 1,098 | 710 | – | –26.9 | – |
| Mississippi | 35 | 519 | 963 | 735 | 170 | –93.3 | –32.8 |
| Tennessee | 3,125 | 3,038 | 736 | 593 | 541 | 2.8 | 55.0 |
| West South Central | 2,296 | 2,443 | 2,258 | 2,563 | 2,628 | –6.0 | –3.3 |
| Arkansas | 29 | – | – | – | – | – | – |
| Oklahoma | – | – | 31 | 26 | 121 | – | – |
| Texas | 2,267 | 2,443 | 2,228 | 2,537 | 2,507 | –7.2 | –2.5 |
| Mountain | 14,792 | 12,861 | 13,353 | 14,362 | 13,497 | 15.0 | 2.3 |
| Arizona | 74 | 355 | 105 | 219 | 117 | –79.1 | –10.7 |
| Colorado | 12,307 | 10,704 | 11,820 | 12,035 | 11,181 | 15.0 | 2.4 |
| Idaho | – | – | 3 | – | – | – | – |
| Nevada | 69 | 132 | 161 | 306 | 514 | –47.8 | –39.5 |
| New Mexico | 99 | 88 | 97 | 84 | 84 | 13.1 | 4.2 |
| Utah | 2,111 | 1,204 | 1,113 | 1,714 | 1,598 | 75.3 | 7.2 |
| Wyoming | 131 | 378 | 53 | 4 | 3 | –65.3 | 161.0 |
| Pacific | 138 | 131 | 37 | 73 | 80 | 4.9 | 14.5 |
| California | 47 | – | 1 | 22 | 33 | – | 9.4 |
| Oregon | 67 | 94 | – | – | – | –29.3 | – |
| Washington | 24 | 37 | 36 | 52 | 47 | –34.3 | –15.3 |
| **Montana** | **40,363** | **37,770** | **39,362** | **41,672** | **35,795** | **6.9** | **3.0** |
| East North Central | 16,361 | 15,814 | 16,582 | 17,875 | 15,841 | 3.5 | .8 |
| Illinois | 1,545 | 2,162 | 2,713 | 4,338 | 3,295 | –28.5 | –17.3 |
| Indiana | 1,259 | 869 | 720 | 749 | 433 | 44.9 | 30.6 |
| Michigan | 10,866 | 9,806 | 11,014 | 10,481 | 10,055 | 10.8 | 2.0 |
| Ohio | 42 | 26 | – | – | – | 63.3 | – |
| Wisconsin | 2,649 | 2,950 | 2,135 | 2,307 | 2,057 | –10.2 | 6.5 |
| West North Central | 11,372 | 11,622 | 11,338 | 10,668 | 9,411 | –2.1 | 4.8 |
| Iowa | 105 | – | 2 | * | 1 | – | 210.5 |
| Kansas | 104 | – | – | – | – | – | – |
| Minnesota | 8,847 | 9,791 | 10,199 | 10,038 | 8,852 | –9.6 | * |
| Missouri | – | – | 6 | – | – | – | – |
| Nebraska | 47 | 113 | 205 | 71 | 136 | –58.0 | –23.1 |
| North Dakota | 402 | 417 | 469 | 559 | 422 | –3.7 | –1.2 |
| South Dakota | 1,867 | 1,301 | 457 | – | – | 43.5 | – |
| East South Central | 3,235 | 2,226 | 1,234 | 1,314 | 178 | 45.3 | 106.6 |
| Mississippi | 3,235 | 2,226 | 1,234 | 1,314 | 178 | 45.3 | 106.6 |
| Mountain | 9,052 | 7,995 | 9,611 | 10,718 | 9,233 | 13.2 | –.5 |
| Colorado | – | 26 | 63 | 89 | 86 | –100.0 | – |
| Montana | 9,019 | 7,844 | 9,477 | 10,581 | 9,115 | 15.0 | –.3 |
| Wyoming | 34 | 125 | 71 | 49 | 31 | –73.2 | 1.8 |
| Pacific | 333 | 113 | 583 | 1,097 | 1,108 | 195.7 | –25.9 |
| Oregon | – | – | – | – | 355 | – | – |
| Washington | 333 | 113 | 583 | 1,097 | 753 | 195.7 | –18.4 |
| **New Mexico** | **27,352** | **25,035** | **25,640** | **28,540** | **27,942** | **9.3** | **–.5** |
| East North Central | 523 | 732 | 1,591 | 1,495 | 1,392 | –28.6 | –21.7 |
| Wisconsin | 523 | 732 | 1,591 | 1,495 | 1,392 | –28.6 | –21.7 |
| West North Central | 68 | 92 | – | – | – | –25.9 | – |
| Nebraska | 68 | 92 | – | – | – | –25.9 | – |
| West South Central | 482 | 334 | 160 | 296 | 350 | 44.5 | 8.4 |
| Arkansas | – | 1 | – | – | – | –100.0 | – |
| Oklahoma | 108 | 17 | – | – | 5 | NM | 115.0 |
| Texas | 375 | 316 | 160 | 296 | 345 | 18.6 | 2.1 |
| Mountain | 26,279 | 23,877 | 23,889 | 26,749 | 26,201 | 10.1 | .1 |
| Arizona | 10,492 | 8,860 | 9,259 | 11,284 | 11,263 | 18.4 | –1.8 |
| Colorado | – | 9 | – | – | – | –100.0 | – |
| New Mexico | 15,786 | 15,009 | 14,630 | 15,464 | 14,938 | 5.2 | 1.4 |
| **North Dakota** | **29,172** | **30,025** | **30,118** | **32,056** | **32,372** | **–2.8** | **–2.6** |
| East North Central | – | – | – | * | * | – | – |
| Wisconsin | – | – | – | * | * | – | – |

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, 1993-1997 (Continued)

(Thousand Short Tons)

| Coal-Producing Region and State, and Destination Census Division and State | 1997 | 1996 | 1995 | 1994 | 1993 | Percent Change 1996-1997 | Average Annual Percent Change 1993-1997 |
|---|---|---|---|---|---|---|---|
| **North Dakota** | | | | | | | |
| West North Central | 29,172 | 30,025 | 30,113 | 32,055 | 32,367 | –2.8 | –2.6 |
| North Dakota | 29,172 | 30,025 | 28,838 | 29,731 | 30,215 | –2.8 | –.9 |
| South Dakota | – | – | 1,276 | 2,325 | 2,153 | – | – |
| Mountain | – | – | – | – | * | – | – |
| Montana | – | – | – | – | * | – | – |
| **Utah** | **22,857** | **18,563** | **21,591** | **20,527** | **19,283** | **23.1** | **4.3** |
| New England | 90 | – | 17 | – | – | – | – |
| Connecticut | – | – | 17 | – | – | – | – |
| Massachusetts | 90 | – | – | – | – | – | – |
| Middle Atlantic | – | – | 20 | 68 | – | – | – |
| Pennsylvania | – | – | 20 | 68 | – | – | – |
| East North Central | 1,518 | 2,650 | 1,932 | 656 | 421 | –42.7 | 37.8 |
| Illinois | 1,446 | 2,473 | 1,776 | 369 | 207 | –41.5 | 62.6 |
| Indiana | – | – | – | 178 | 204 | – | – |
| Michigan | – | 44 | 76 | 66 | – | –100.0 | – |
| Ohio | – | – | – | – | * | – | – |
| Wisconsin | 72 | 133 | 81 | 43 | 10 | –45.6 | 63.6 |
| West North Central | 140 | 330 | 395 | 414 | 382 | –57.4 | –22.1 |
| Kansas | – | – | * | 2 | – | – | – |
| Minnesota | – | – | 1 | – | – | – | – |
| Missouri | 140 | 330 | 393 | 412 | 382 | –57.4 | –22.1 |
| Nebraska | – | – | – | – | * | – | – |
| South Atlantic | – | – | – | – | 159 | – | – |
| Florida | – | – | – | – | 155 | – | – |
| West Virginia | – | – | – | – | 4 | – | – |
| East South Central | 1,521 | 1,421 | 1,095 | 218 | – | 7.1 | – |
| Tennessee | 1,521 | 1,421 | 1,095 | 218 | – | 7.1 | – |
| West South Central | – | – | 4 | 33 | – | – | – |
| Texas | – | – | 4 | 33 | – | – | – |
| Mountain | 16,710 | 11,791 | 15,163 | 15,793 | 15,456 | 41.7 | 2.0 |
| Arizona | 78 | 69 | 80 | 86 | 89 | 13.6 | –3.1 |
| Colorado | 3 | 2 | 6 | 4 | 14 | 56.4 | –29.6 |
| Idaho | 39 | 65 | 141 | 59 | 95 | –40.0 | –20.0 |
| Montana | 27 | – | 9 | 29 | 42 | – | –9.9 |
| Nevada | 2,626 | 2,265 | 2,150 | 2,027 | 1,781 | 15.9 | 10.2 |
| Utah | 13,936 | 9,389 | 12,755 | 13,586 | 13,418 | 48.4 | .9 |
| Wyoming | – | * | 22 | 2 | 18 | –100.0 | – |
| Pacific | 2,865 | 2,366 | 2,965 | 3,317 | 2,843 | 21.1 | .2 |
| California | 2,718 | 2,240 | 2,838 | 3,074 | 2,575 | 21.3 | 1.4 |
| Hawaii | 21 | – | – | – | – | – | – |
| Oregon | 7 | * | 2 | 127 | 123 | NM | –51.4 |
| Washington | 119 | 125 | 126 | 115 | 145 | –4.8 | –4.8 |
| **Washington** | **4,481** | **4,526** | **4,756** | **4,731** | **4,621** | **–1.0** | **–.8** |
| Pacific | 4,481 | 4,526 | 4,756 | 4,731 | 4,621 | –1.0 | –.8 |
| Oregon | * | 3 | 2 | – | – | –87.9 | – |
| Washington | 4,480 | 4,523 | 4,754 | 4,731 | 4,621 | –.9 | –.8 |
| **Wyoming** | **278,255** | **276,723** | **261,333** | **234,016** | **210,739** | **.5** | **7.2** |
| New England | – | – | – | * | 14 | – | – |
| Connecticut | – | – | – | * | – | – | – |
| Massachusetts | – | – | – | – | 14 | – | – |
| East North Central | 65,944 | 62,041 | 55,223 | 42,685 | 37,648 | 6.3 | 15.0 |
| Illinois | 20,528 | 17,734 | 15,480 | 9,779 | 7,593 | 15.8 | 28.2 |
| Indiana | 16,451 | 18,079 | 18,306 | 15,417 | 12,635 | –9.0 | 6.8 |
| Michigan | 9,558 | 8,551 | 7,543 | 4,267 | 4,487 | 11.8 | 20.8 |
| Ohio | 1,481 | 37 | – | – | – | NM | – |
| Wisconsin | 17,925 | 17,640 | 13,895 | 13,221 | 12,934 | 1.6 | 8.5 |
| West North Central | 81,627 | 82,593 | 77,051 | 67,523 | 61,641 | –1.2 | 7.3 |
| Iowa | 17,593 | 18,121 | 16,955 | 15,505 | 15,950 | –2.9 | 2.5 |
| Kansas | 11,759 | 11,772 | 14,243 | 16,490 | 16,484 | –.1 | –8.1 |
| Minnesota | 9,224 | 8,569 | 8,816 | 9,911 | 9,093 | 7.6 | .4 |
| Missouri | 33,300 | 33,312 | 25,731 | 16,112 | 10,815 | * | 32.5 |
| Nebraska | 9,198 | 10,464 | 10,065 | 8,908 | 8,801 | –12.1 | 1.1 |
| North Dakota | 144 | * | * | – | 5 | NM | 131.1 |
| South Dakota | 410 | 355 | 1,241 | 597 | 493 | 15.7 | –4.5 |

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, 1993-1997 (Continued)

(Thousand Short Tons)

| Coal-Producing Region and State, and Destination Census Division and State | 1997 | 1996 | 1995 | 1994 | 1993 | Percent Change 1996-1997 | Average Annual Percent Change 1993-1997 |
|---|---|---|---|---|---|---|---|
| **Wyoming (Continued)** | | | | | | | |
| South Atlantic | 6,705 | 7,409 | 7,432 | 5,836 | 938 | –9.5 | 63.5 |
| Florida | 971 | 591 | – | 93 | – | 64.3 | – |
| Georgia | 5,688 | 6,818 | 6,796 | 4,914 | 726 | –16.6 | 67.3 |
| Maryland | – | – | 636 | 829 | 213 | – | – |
| North Carolina | 40 | – | – | – | – | – | – |
| West Virginia | 7 | – | – | – | – | – | – |
| East South Central | 7,826 | 4,010 | 2,970 | 594 | 317 | 95.2 | 123.0 |
| Alabama | 5,205 | 3,686 | 2,950 | 251 | – | 41.2 | – |
| Kentucky | – | – | – | – | 248 | – | – |
| Mississippi | 291 | 26 | – | – | – | NM | – |
| Tennessee | 2,330 | 298 | 20 | 342 | 68 | NM | 141.8 |
| West South Central | 80,727 | 86,413 | 82,918 | 80,246 | 76,692 | –6.6 | 1.3 |
| Arkansas | 11,600 | 14,614 | 14,033 | 12,184 | 10,826 | –20.6 | 1.7 |
| Louisiana | 9,628 | 9,209 | 10,309 | 11,215 | 11,133 | 4.5 | –3.6 |
| Oklahoma | 18,462 | 19,751 | 20,326 | 17,577 | 16,726 | –6.5 | 2.5 |
| Texas | 41,037 | 42,839 | 38,250 | 39,270 | 38,007 | –4.2 | 1.9 |
| Mountain | 34,418 | 33,363 | 32,950 | 34,935 | 32,195 | 3.2 | 1.7 |
| Arizona | 57 | – | – | – | 5 | – | 88.4 |
| Colorado | 6,692 | 6,124 | 5,602 | 5,132 | 5,538 | 9.3 | 4.8 |
| Idaho | 324 | 268 | 293 | 337 | 343 | 21.0 | –1.4 |
| Montana | 572 | 513 | 193 | 119 | 37 | 11.5 | 97.9 |
| Nevada | 17 | 204 | 342 | 1,014 | 753 | –91.6 | –61.2 |
| Utah | * | 1 | * | – | – | –95.3 | – |
| Wyoming | 26,756 | 26,253 | 26,521 | 28,334 | 25,519 | 1.9 | 1.2 |
| Pacific | 996 | 894 | 2,775 | 2,198 | 1,271 | 11.3 | –5.9 |
| California | 29 | – | – | – | – | – | – |
| Oregon | 966 | 894 | 1,485 | 2,197 | 1,270 | 8.1 | –6.6 |
| Washington | 1 | 1 | 1,290 | 1 | 1 | –22.8 | –19.0 |
| **U.S. Total** | **995,181** | **967,693** | **940,423** | **949,843** | **883,934** | **2.8** | **3.0** |
| New England | 6,414 | 5,334 | 5,199 | 4,963 | 4,141 | 20.3 | 11.6 |
| Connecticut | 1,590 | 1,602 | 1,955 | 976 | 695 | –.8 | 23.0 |
| Maine | 423 | 301 | 302 | 463 | 405 | 40.7 | 1.1 |
| Massachusetts | 3,225 | 2,475 | 2,157 | 2,538 | 1,840 | 30.3 | 15.1 |
| New Hampshire | 1,064 | 951 | 780 | 978 | 1,192 | 11.9 | –2.8 |
| Rhode Island | 3 | 3 | 3 | 3 | 3 | –11.5 | –3.1 |
| Vermont | 110 | 2 | 3 | 5 | 6 | NM | 108.9 |
| Middle Atlantic | 76,487 | 73,489 | 70,149 | 69,737 | 64,421 | 4.1 | 4.4 |
| New Jersey | 3,334 | 2,927 | 2,936 | 2,163 | 2,169 | 13.9 | 11.3 |
| New York | 11,807 | 11,459 | 10,705 | 11,664 | 10,950 | 3.0 | 1.9 |
| Pennsylvania | 61,345 | 59,103 | 56,509 | 55,910 | 51,302 | 3.8 | 4.6 |
| East North Central | 237,757 | 228,473 | 212,105 | 214,903 | 196,343 | 4.1 | 4.9 |
| Illinois | 49,647 | 44,547 | 41,626 | 38,745 | 34,433 | 11.4 | 9.6 |
| Indiana | 62,630 | 62,741 | 59,476 | 63,589 | 54,452 | –.2 | 3.6 |
| Michigan | 36,629 | 33,186 | 33,928 | 33,487 | 30,041 | 10.4 | 5.1 |
| Ohio | 61,990 | 61,713 | 54,310 | 56,850 | 56,755 | .4 | 2.2 |
| Wisconsin | 26,860 | 26,285 | 22,766 | 22,231 | 20,662 | 2.2 | 6.8 |
| West North Central | 131,862 | 136,573 | 130,836 | 126,407 | 116,337 | –3.4 | 3.2 |
| Iowa | 20,339 | 21,017 | 19,777 | 18,259 | 18,950 | –3.2 | 1.8 |
| Kansas | 13,761 | 13,987 | 16,091 | 18,097 | 17,002 | –1.6 | –5.1 |
| Minnesota | 18,485 | 18,679 | 19,488 | 20,498 | 18,166 | –1.0 | .4 |
| Missouri | 37,897 | 40,064 | 32,821 | 27,278 | 19,921 | –5.4 | 17.4 |
| Nebraska | 9,382 | 10,726 | 10,377 | 9,055 | 9,011 | –12.5 | 1.0 |
| North Dakota | 29,717 | 30,444 | 29,307 | 30,290 | 30,642 | –2.4 | –.8 |
| South Dakota | 2,281 | 1,657 | 2,976 | 2,929 | 2,646 | 37.6 | –3.6 |
| South Atlantic | 166,234 | 161,026 | 151,954 | 161,029 | 141,701 | 3.2 | 4.1 |
| Delaware | 1,734 | 1,834 | 1,933 | 2,309 | 2,242 | –5.5 | –6.2 |
| District of Columbia | 40 | 23 | 6 | 47 | 51 | 72.0 | –6.0 |
| Florida | 27,692 | 26,285 | 23,505 | 23,757 | 21,446 | 5.3 | 6.6 |
| Georgia | 29,597 | 29,074 | 29,730 | 30,497 | 25,101 | 1.8 | 4.2 |
| Maryland | 10,489 | 10,762 | 10,596 | 10,959 | 10,063 | –2.5 | 1.0 |
| North Carolina | 26,505 | 27,414 | 24,149 | 26,199 | 25,621 | –3.3 | .8 |
| South Carolina | 13,761 | 13,373 | 11,745 | 13,454 | 11,749 | 2.9 | 4.0 |
| Virginia | 18,479 | 16,214 | 15,225 | 16,735 | 16,084 | 14.0 | 3.5 |
| West Virginia | 37,938 | 36,047 | 35,065 | 37,071 | 29,343 | 5.2 | 6.6 |
| East South Central | 108,478 | 105,708 | 104,194 | 99,350 | 97,057 | 2.6 | 2.8 |
| Alabama | 32,056 | 33,057 | 31,440 | 30,210 | 28,698 | –3.0 | 2.8 |

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, 1993-1997 (Continued)

(Thousand Short Tons)

| Coal-Producing Region and State, and Destination Census Division and State | 1997 | 1996 | 1995 | 1994 | 1993 | Percent Change 1996-1997 | Average Annual Percent Change 1993-1997 |
|---|---|---|---|---|---|---|---|
| **U.S. Total (Continued)** | | | | | | | |
| Kentucky | 33,209 | 34,438 | 37,382 | 35,636 | 35,461 | –3.6 | –1.6 |
| Mississippi | 6,141 | 5,702 | 4,516 | 4,446 | 3,421 | 7.7 | 15.8 |
| Tennessee | 37,071 | 32,510 | 30,856 | 29,057 | 29,477 | 14.0 | 5.9 |
| West South Central | 143,816 | 145,394 | 144,435 | 142,136 | 139,664 | –1.1 | .7 |
| Arkansas | 11,921 | 14,918 | 14,317 | 12,501 | 11,094 | –20.1 | 1.8 |
| Louisiana | 14,663 | 13,526 | 14,267 | 15,844 | 14,524 | 8.4 | .2 |
| Oklahoma | 19,879 | 21,584 | 22,210 | 19,210 | 18,777 | –7.9 | 1.4 |
| Texas | 97,353 | 95,367 | 93,642 | 94,581 | 95,269 | 2.1 | .5 |
| Mountain | 113,046 | 101,497 | 107,497 | 115,311 | 109,200 | 11.4 | .9 |
| Arizona | 17,351 | 15,785 | 16,401 | 19,169 | 19,039 | 9.9 | –2.3 |
| Colorado | 19,022 | 16,920 | 17,502 | 17,274 | 16,821 | 12.4 | 3.1 |
| Idaho | 363 | 333 | 440 | 400 | 438 | 9.1 | –4.6 |
| Montana | 9,617 | 8,359 | 9,678 | 10,729 | 9,194 | 15.1 | 1.1 |
| Nevada | 7,110 | 7,072 | 7,479 | 7,777 | 7,621 | .5 | –1.7 |
| New Mexico | 15,885 | 15,097 | 14,727 | 15,549 | 15,022 | 5.2 | 1.4 |
| Utah | 16,775 | 11,175 | 14,602 | 16,015 | 15,493 | 50.1 | 2.0 |
| Wyoming | 26,922 | 26,757 | 26,668 | 28,399 | 25,571 | .6 | 1.3 |
| Pacific | 9,596 | 8,790 | 11,962 | 12,228 | 10,791 | 9.2 | –2.9 |
| Alaska | 743 | 697 | 815 | 789 | 855 | 6.7 | –3.4 |
| California | 2,794 | 2,240 | 2,839 | 3,096 | 2,608 | 24.7 | 1.7 |
| Hawaii | 21 | – | – | – | – | – | – |
| Oregon | 1,079 | 1,028 | 1,518 | 2,347 | 1,761 | 5.0 | –11.5 |
| Washington | 4,958 | 4,825 | 6,790 | 5,996 | 5,567 | 2.8 | –2.9 |

* Data round to zero.

**NM** Not meaningful as value is greater than 500 percent.

Note: Destination State totals may not sum to the Coal-Producing State totals due to unknown or unavailable Destination State(s). 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, 1993-1997

(Thousand Short Tons)

| Coal-Exporting State and Destination | 1997 | 1996 | 1995 | 1994 | 1993 | Percent Change 1996-1997 | Average Annual Percent Change 1993-1997 |
|---|---|---|---|---|---|---|---|
| **Alabama** | **5,813** | **4,864** | **6,032** | **4,529** | **5,888** | **19.5** | **–0.3** |
| Argentina | 259 | 216 | 306 | 268 | 319 | 20.1 | –5.0 |
| Belgium & Luxembourg | 898 | 703 | 574 | 627 | 866 | 27.8 | .9 |
| Brazil | **901** | **566** | **564** | **42** | **193** | **59.2** | **47.1** |
| Bulgaria | 244 | 208 | 128 | 35 | 109 | 17.2 | 22.4 |
| China (Taiwan) | – | – | – | – | 42 | – | – |
| Denmark | – | – | 26 | – | – | – | – |
| Egypt | – | – | 111 | – | – | – | – |
| France | – | – | – | * | – | – | – |
| Germany, FR | 224 | 184 | 201 | – | – | 21.6 | – |
| Italy | 491 | 659 | 930 | 565 | 429 | –25.5 | 3.4 |
| Japan | 459 | 861 | 1,358 | 1,266 | 2,202 | –46.7 | –32.4 |
| Morocco | – | – | – | – | 39 | – | – |
| Netherlands | 303 | 73 | 276 | 88 | – | 312.9 | – |
| Romania | 274 | 170 | 492 | 602 | 171 | 61.8 | 12.6 |
| South Africa, Rep of | – | 57 | – | – | – | –100.0 | – |
| Spain | 200 | 52 | 48 | 27 | – | 285.2 | – |
| Turkey | 408 | 326 | 302 | 137 | 253 | 25.2 | 12.7 |
| United Kingdom | 1,151 | 789 | 717 | 872 | 1,266 | 45.9 | –2.3 |
| **Alaska** | 680 | 776 | 855 | 716 | 743 | –12.4 | –2.2 |
| Korea, Republic of | 662 | 776 | 855 | 716 | 743 | –14.7 | –2.8 |
| Russia | 18 | – | – | – | – | – | – |
| **Colorado** | 1,512 | 1,415 | 900 | 752 | 1,128 | 6.8 | 7.6 |
| China (Taiwan) | 73 | 219 | 235 | 134 | – | –66.9 | – |
| Hong Kong | – | – | – | 46 | – | – | – |
| Israel | – | 30 | – | – | – | –100.0 | – |
| Japan | 287 | 343 | 651 | 395 | 918 | –16.5 | –25.3 |
| Korea, Republic of | – | 65 | – | 177 | 209 | –100.0 | – |
| Mexico | 1,152 | 758 | – | – | – | 52.1 | – |
| Turkey | – | – | 14 | – | – | – | – |
| **Illinois** | 773 | 1,886 | 2,699 | 236 | 670 | –59.0 | 3.6 |
| Belgium & Luxembourg | – | 76 | – | – | – | –100.0 | – |
| Brazil | – | 1 | – | – | – | –100.0 | – |
| Denmark | – | 364 | 516 | – | – | –100.0 | – |
| France | – | – | 57 | – | – | – | – |
| Germany, FR | 56 | 325 | 722 | – | – | –82.8 | – |
| Ireland | – | – | – | – | 108 | – | – |
| Italy | – | – | 42 | – | – | – | – |
| Japan | 55 | 66 | 49 | 236 | 109 | –17.3 | –15.9 |
| Morocco | – | 103 | 775 | – | 452 | –100.0 | – |
| Netherlands | – | 120 | – | – | – | –100.0 | – |
| Sweden | – | 25 | – | – | – | –100.0 | – |
| United Kingdom | 662 | 805 | 538 | – | – | –17.8 | – |
| **Kentucky** | 7,220 | 9,143 | 9,695 | 7,167 | 9,521 | –21.0 | –6.7 |
| Belgium & Luxembourg | 54 | 67 | 366 | 472 | 493 | –18.4 | –42.3 |
| Brazil | – | – | 52 | 23 | 392 | – | – |
| Canada | 739 | 1,178 | 777 | 1,099 | 1,416 | –37.3 | –15.0 |
| China (Taiwan) | 2,292 | 1,978 | 2,397 | 2,643 | 3,625 | 15.9 | –10.8 |
| Denmark | – | – | – | – | 33 | – | – |
| Finland | – | 4 | – | – | 2 | –100.0 | – |
| France | 569 | 548 | 262 | 146 | 665 | 3.9 | –3.8 |
| Germany, FR | – | – | 187 | – | – | – | – |
| Iceland | 107 | 119 | 76 | 7 | – | –10.1 | – |
| Ireland | – | – | 58 | – | 16 | – | – |
| Israel | – | – | 217 | – | – | – | – |
| Italy | 182 | 1,745 | 1,714 | 805 | 719 | –89.6 | –29.1 |
| Jamaica | 56 | 17 | 62 | 26 | 39 | 233.6 | 9.9 |
| Japan | 223 | 93 | 53 | 100 | 269 | 141.0 | –4.5 |
| Korea, Republic of | 795 | 1,876 | 1,523 | 1,163 | 1,256 | –57.6 | –10.8 |
| Netherlands | 1,364 | 581 | 621 | 268 | 241 | 134.7 | 54.3 |
| Norway | 198 | 140 | 142 | 74 | 91 | 42.0 | 21.6 |
| Portugal | – | 229 | – | 24 | – | –100.0 | – |
| Saudi Arabia | 48 | 22 | – | – | – | 114.4 | – |
| Spain | – | – | 231 | – | – | – | – |
| Sweden | – | – | – | 16 | 195 | – | – |

See footnotes at end of table.

## Table 62. Foreign Distribution of U.S. Coal by Major Coal-Exporting States and Destination, 1993-1997 (Continued)

(Thousand Short Tons)

| Coal-Exporting State and Destination | 1997 | 1996 | 1995 | 1994 | 1993 | Percent Change 1996-1997 | Average Annual Percent Change 1993-1997 |
|---|---|---|---|---|---|---|---|
| **Kentucky (Continued)** | | | | | | | |
| Turkey | – | – | 197 | – | – | – | – |
| United Kingdom | 592 | 548 | 758 | 301 | 70 | 8.0 | 70.3 |
| **Pennsylvania** | 8,698 | 9,246 | 8,279 | 6,301 | 5,508 | –5.9 | 12.1 |
| Argentina | – | – | – | – | 46 | – | – |
| Belgium & Luxembourg | 146 | – | – | 29 | – | – | – |
| Brazil | 715 | 261 | 380 | 338 | 156 | 174.1 | 46.4 |
| Bulgaria | – | – | – | – | 71 | – | – |
| Canada | 2,612 | 1,050 | 713 | 844 | 597 | 148.7 | 44.6 |
| Croatia | – | – | – | – | 159 | – | – |
| Denmark | 467 | 801 | 1,589 | 508 | 187 | –41.7 | 25.8 |
| Dominican Republic | 64 | 50 | 18 | 65 | 59 | 27.6 | 2.0 |
| Finland | 229 | 283 | 544 | 71 | 56 | –18.9 | 42.4 |
| France | – | 89 | 9 | – | 188 | –100.0 | – |
| Germany, FR | 135 | 256 | 383 | 197 | 102 | –47.0 | 7.3 |
| Greece | – | 491 | – | – | – | –100.0 | – |
| Ireland | 1,116 | 1,067 | 1,161 | 1,015 | 911 | 4.6 | 5.2 |
| Israel | 861 | 1,068 | 995 | 922 | 940 | –19.4 | –2.2 |
| Italy | – | 89 | – | 601 | 50 | –100.0 | – |
| Japan | 903 | 1,057 | 916 | 834 | 1,384 | –14.6 | –10.1 |
| Korea, Republic of | 175 | 195 | 109 | 214 | 91 | –9.9 | 17.8 |
| Morocco | 118 | 173 | – | – | – | –31.8 | – |
| Netherlands | 482 | 732 | 593 | 261 | – | –34.1 | – |
| Norway | 11 | 30 | 28 | 14 | 30 | –61.6 | –21.9 |
| Peru | 13 | – | – | – | – | – | – |
| Portugal | 261 | 592 | 472 | 378 | 467 | –55.9 | –13.5 |
| Saudi Arabia | – | – | – | – | * | – | – |
| South Africa, Rep of | 384 | 112 | – | – | – | 242.2 | – |
| Spain | – | – | 18 | – | – | – | – |
| Surinam | – | – | – | – | * | – | – |
| Trinidad & Tobago | – | – | – | – | 1 | – | – |
| Turkey | – | – | 43 | – | – | – | – |
| United Arab Emirates | – | – | – | – | * | – | – |
| United Kingdom | – | 851 | 299 | – | * | –100.0 | – |
| Venezuela | 5 | 1 | 9 | 11 | 15 | 373.1 | –23.8 |
| **Utah** | 3,414 | 5,305 | 3,930 | 2,698 | 2,959 | –35.6 | 3.6 |
| Canada | – | – | – | – | 346 | – | – |
| Chile | 38 | 445 | 170 | – | – | –91.4 | – |
| China (Taiwan) | 597 | 648 | 323 | 321 | 849 | –7.8 | –8.4 |
| Ecuador | 38 | – | – | – | – | – | – |
| Japan | 2,499 | 4,058 | 3,000 | 2,377 | 1,764 | –38.4 | 9.1 |
| Korea, Republic of | 242 | 154 | 438 | – | – | 56.4 | – |
| **Virginia** | 12,841 | 13,432 | 9,742 | 11,683 | 14,251 | –4.4 | –2.6 |
| Algeria | 299 | 206 | 166 | 269 | 344 | 45.1 | –3.5 |
| Argentina | – | – | – | 53 | 52 | – | – |
| Belgium & Luxembourg | 945 | 1,078 | 764 | 884 | 1,147 | –12.4 | –4.7 |
| Brazil | 1,347 | 1,228 | 1,091 | 1,218 | 1,741 | 9.8 | –6.2 |
| Bulgaria | – | – | – | – | 242 | – | – |
| Canada | 508 | 387 | 445 | 786 | 1,229 | 31.0 | –19.8 |
| China (Taiwan) | 180 | – | – | 15 | * | – | NM |
| Croatia | – | – | – | – | 251 | – | – |
| Egypt | 178 | 835 | 333 | 436 | 234 | –78.6 | –6.5 |
| Finland | 55 | – | – | – | – | – | – |
| France | 984 | 910 | 625 | 563 | 737 | 8.0 | 7.5 |
| Germany, FR | 93 | – | 68 | 9 | 50 | – | 16.6 |
| Italy | 2,318 | 2,198 | 1,474 | 1,804 | 1,364 | 5.5 | 14.2 |
| Japan | 1,508 | 2,300 | 1,796 | 2,114 | 2,410 | –34.4 | –11.1 |
| Korea, Republic of | 1,272 | 466 | 589 | 539 | 853 | 173.1 | 10.5 |
| Netherlands | 650 | 1,193 | 793 | 766 | 1,009 | –45.5 | –10.4 |
| Portugal | 62 | 145 | 105 | 91 | – | –57.5 | – |
| Romania | 72 | 32 | – | 223 | – | 122.1 | – |
| South Africa, Rep of | – | 76 | – | – | – | –100.0 | – |
| Spain | 1,361 | 1,370 | 847 | 1,297 | 1,682 | –.6 | –5.2 |
| Sweden | – | 185 | 115 | 37 | – | –100.0 | – |
| Turkey | 81 | 24 | – | – | – | 232.1 | – |
| United Kingdom | 928 | 798 | 531 | 579 | 905 | 16.3 | .6 |

See footnotes at end of table.

## Table 62. Foreign Distribution of U.S. Coal by Major Coal-Exporting States and Destination, 1993-1997 (Continued)

(Thousand Short Tons)

| Coal-Exporting State and Destination | 1997 | 1996 | 1995 | 1994 | 1993 | Percent Change 1996-1997 | Average Annual Percent Change 1993-1997 |
|---|---|---|---|---|---|---|---|
| **West Virginia** | 38,459 | 42,044 | 44,321 | 36,205 | 33,159 | –8.5 | 3.8 |
| Algeria | – | – | – | * | – | – | – |
| Argentina | – | – | – | 35 | 132 | – | – |
| Belgium & Luxembourg | 1,463 | 2,182 | 2,020 | 2,312 | 2,209 | –33.0 | –9.8 |
| Brazil | 3,929 | 4,256 | 4,329 | 4,109 | 2,496 | –7.7 | 12.0 |
| Bulgaria | 1,008 | 1,214 | 1,360 | 1,571 | 644 | –17.0 | 11.9 |
| Canada | 8,291 | 7,222 | 5,784 | 5,644 | 4,108 | 14.8 | 19.2 |
| Chile | 25 | 195 | 118 | – | – | –86.9 | – |
| China (Taiwan) | 188 | 353 | 355 | 284 | 141 | –46.8 | 7.3 |
| Croatia | – | – | 72 | – | 63 | – | – |
| Denmark | 70 | – | 189 | – | 168 | – | –19.6 |
| Egypt | 807 | 303 | 714 | 593 | 601 | 166.2 | 7.7 |
| Finland | 324 | 507 | 792 | 375 | 212 | –36.0 | 11.3 |
| France | 2,579 | 3,676 | 4,408 | 3,514 | 3,400 | –29.8 | –6.7 |
| Germany, FR | 453 | 943 | 1,107 | 382 | 635 | –51.9 | –8.1 |
| India | – | 11 | – | – | – | –100.0 | – |
| Ireland | – | – | – | – | 117 | – | – |
| Israel | 211 | 375 | – | – | – | –43.8 | – |
| Italy | 3,879 | 4,965 | 5,138 | 3,634 | 3,815 | –21.9 | .4 |
| Jamaica | 8 | 36 | – | – | – | –78.6 | – |
| Japan | 2,585 | 2,062 | 3,431 | 2,595 | 2,691 | 25.4 | –1.0 |
| Korea, Republic of | 829 | 1,050 | 1,013 | 523 | 318 | –21.1 | 27.1 |
| Mexico | 25 | – | – | – | – | – | – |
| Morocco | 96 | 1,111 | 275 | 101 | 79 | –91.4 | 4.9 |
| Netherlands | 2,425 | 1,636 | 3,628 | 3,340 | 3,205 | 48.3 | –6.7 |
| Nigeria | – | – | – | – | 43 | – | – |
| Portugal | 889 | 1,128 | 1,390 | 674 | 1,144 | –21.1 | –6.1 |
| Romania | 1,737 | 1,315 | 1,623 | 925 | 820 | 32.1 | 20.6 |
| South Africa, Rep of | 706 | 947 | 946 | 771 | 577 | –25.4 | 5.1 |
| Spain | 758 | 887 | 1,084 | 1,255 | 1,211 | –14.6 | –11.1 |
| Sweden | 657 | 882 | 1,352 | 886 | 603 | –25.5 | 2.2 |
| Turkey | 1,295 | 1,655 | 1,560 | 1,468 | 1,370 | –21.8 | –1.4 |
| United Kingdom | 3,223 | 3,133 | 1,633 | 1,212 | 2,359 | 2.9 | 8.1 |
| **Wyoming** | 2,541 | 2,395 | 2,269 | 1,524 | 974 | 6.1 | 27.1 |
| Canada | 818 | 443 | 32 | – | – | 84.5 | – |
| Japan | – | – | – | – | * | – | – |
| Netherlands | – | 63 | – | – | – | –100.0 | – |
| Spain | 1,723 | 1,889 | 2,237 | 1,524 | 974 | –8.8 | 15.3 |
| **Major States Total** | 81,950 | 90,506 | 88,722 | 71,811 | 74,801 | –9.4 | 2.3 |
| Algeria | 299 | 206 | 166 | 269 | 344 | 45.1 | –3.5 |
| Argentina | 259 | 216 | 306 | 356 | 548 | 20.1 | –17.1 |
| Belgium & Luxembourg | 3,506 | 4,106 | 3,724 | 4,324 | 4,715 | –14.6 | –7.1 |
| Brazil | 6,892 | 6,312 | 6,416 | 5,730 | 4,977 | 9.2 | 8.5 |
| Bulgaria | 1,252 | 1,422 | 1,488 | 1,607 | 1,065 | –12.0 | 4.1 |
| Canada | 12,967 | 10,280 | 7,750 | 8,373 | 7,696 | 26.1 | 13.9 |
| Chile | 64 | 640 | 287 | – | – | –90.0 | – |
| China (Taiwan) | 3,330 | 3,197 | 3,310 | 3,397 | 4,656 | 4.1 | –8.0 |
| Croatia | – | – | 72 | – | 473 | – | – |
| Denmark | 538 | 1,165 | 2,320 | 508 | 388 | –53.9 | 8.5 |
| Dominican Republic | 64 | 50 | 18 | 65 | 59 | 27.6 | 2.0 |
| Ecuador | 38 | – | – | – | – | – | – |
| Egypt | 985 | 1,138 | 1,158 | 1,029 | 834 | –13.4 | 4.3 |
| Finland | 609 | 794 | 1,337 | 446 | 269 | –23.3 | 22.6 |
| France | 4,132 | 5,223 | 5,362 | 4,223 | 4,990 | –20.9 | –4.6 |
| Germany, FR | 962 | 1,708 | 2,668 | 588 | 787 | –43.7 | 5.1 |
| Greece | – | 491 | – | – | – | –100.0 | – |
| Hong Kong | – | – | – | 46 | – | – | – |
| Iceland | 107 | 119 | 76 | 7 | – | –10.1 | – |
| India | – | 11 | – | – | – | –100.0 | – |
| Ireland | 1,116 | 1,067 | 1,219 | 1,015 | 1,152 | 4.6 | –.8 |
| Israel | 1,071 | 1,473 | 1,212 | 922 | 940 | –27.3 | 3.3 |
| Italy | 6,869 | 9,656 | 9,298 | 7,409 | 6,377 | –28.9 | 1.9 |
| Jamaica | 64 | 53 | 62 | 26 | 39 | 21.4 | 13.5 |
| Japan | 8,518 | 10,840 | 11,254 | 9,918 | 11,747 | –21.4 | –7.7 |
| Korea, Republic of | 3,974 | 4,582 | 4,526 | 3,332 | 3,470 | –13.3 | 3.4 |
| Mexico | 1,177 | 758 | – | – | – | 55.4 | – |

See footnotes at end of table.

## Table 62. Foreign Distribution of U.S. Coal by Major Coal-Exporting States and Destination, 1993-1997 (Continued)

(Thousand Short Tons)

| Coal-Exporting State and Destination | 1997 | 1996 | 1995 | 1994 | 1993 | Percent Change 1996-1997 | Average Annual Percent Change 1993-1997 |
|---|---|---|---|---|---|---|---|
| **Major States Total (Continued)** | | | | | | | |
| Morocco | 214 | 1,388 | 1,050 | 101 | 571 | –84.6 | –21.8 |
| Netherlands | 5,224 | 4,398 | 5,911 | 4,723 | 4,455 | 18.8 | 4.1 |
| Nigeria | – | – | – | – | 43 | – | – |
| Norway | 210 | 169 | 170 | 88 | 121 | 23.9 | 14.7 |
| Peru | 13 | – | – | – | – | – | – |
| Portugal | 1,212 | 2,094 | 1,967 | 1,167 | 1,611 | –42.1 | –6.9 |
| Romania | 2,083 | 1,517 | 2,115 | 1,750 | 991 | 37.3 | 20.4 |
| Russia | 18 | – | – | – | – | – | – |
| Saudi Arabia | 48 | 22 | – | – | * | 114.4 | NM |
| South Africa, Rep of | 1,090 | 1,192 | 946 | 771 | 577 | –8.6 | 17.2 |
| Spain | 4,042 | 4,197 | 4,465 | 4,103 | 3,867 | –3.7 | 1.1 |
| Surinam | – | – | – | – | * | – | – |
| Sweden | 657 | 1,091 | 1,466 | 939 | 798 | –39.8 | –4.8 |
| Trinidad & Tobago | – | – | – | – | 1 | – | – |
| Turkey | 1,784 | 2,005 | 2,116 | 1,606 | 1,623 | –11.0 | 2.4 |
| United Arab Emirates | – | – | – | – | * | – | – |
| United Kingdom | 6,556 | 6,925 | 4,476 | 2,963 | 4,600 | –5.3 | 9.3 |
| Venezuela | 5 | 1 | 9 | 11 | 15 | 373.1 | –23.8 |
| **Other States Total** | 1,270 | 1,693 | 1,185 | 870 | 709 | –25.0 | 15.7 |
| Brazil | – | – | 188 | 184 | 295 | – | – |
| Canada | 438 | 319 | 273 | 93 | 55 | 37.5 | 68.2 |
| Ireland | – | 80 | – | – | 11 | –100.0 | – |
| Japan | 25 | – | – | – | – | – | – |
| Mexico | – | – | 498 | – | – | – | – |
| Spain | – | – | – | 153 | – | – | – |
| Unknown | 806 | 1,294 | 226 | 439 | 348 | –37.7 | 23.3 |
| **U.S. Total** | 83,220 | 92,199 | 89,907 | 72,680 | 75,510 | –9.7 | 2.5 |
| Algeria | 299 | 206 | 166 | 269 | 344 | 45.1 | –3.5 |
| Argentina | 259 | 216 | 306 | 356 | 548 | 20.1 | –17.1 |
| Belgium & Luxembourg | 3,506 | 4,106 | 3,724 | 4,324 | 4,715 | –14.6 | –7.1 |
| Brazil | 6,892 | 6,312 | 6,605 | 5,914 | 5,271 | 9.2 | 6.9 |
| Bulgaria | 1,252 | 1,422 | 1,488 | 1,607 | 1,065 | –12.0 | 4.1 |
| Canada | 13,405 | 10,599 | 8,023 | 8,467 | 7,751 | 26.5 | 14.7 |
| Chile | 64 | 640 | 287 | – | – | –90.0 | – |
| China (Taiwan) | 3,330 | 3,197 | 3,310 | 3,397 | 4,656 | 4.1 | –8.0 |
| Croatia | – | – | 72 | – | 473 | – | – |
| Denmark | 538 | 1,165 | 2,320 | 508 | 388 | –53.9 | 8.5 |
| Dominican Republic | 64 | 50 | 18 | 65 | 59 | 27.6 | 2.0 |
| Ecuador | 38 | – | – | – | – | – | – |
| Egypt | 985 | 1,138 | 1,158 | 1,029 | 834 | –13.4 | 4.3 |
| Finland | 609 | 794 | 1,337 | 446 | 269 | –23.3 | 22.6 |
| France | 4,132 | 5,223 | 5,362 | 4,223 | 4,990 | –20.9 | –4.6 |
| Germany, FR | 962 | 1,708 | 2,668 | 588 | 787 | –43.7 | 5.1 |
| Greece | – | 491 | – | – | – | –100.0 | – |
| Hong Kong | – | – | – | 46 | – | – | – |
| Iceland | 107 | 119 | 76 | 7 | – | –10.1 | – |
| India | – | 11 | – | – | – | –100.0 | – |
| Ireland | 1,116 | 1,147 | 1,219 | 1,015 | 1,163 | –2.7 | –1.0 |
| Israel | 1,071 | 1,473 | 1,212 | 922 | 940 | –27.3 | 3.3 |
| Italy | 6,869 | 9,656 | 9,298 | 7,409 | 6,377 | –28.9 | 1.9 |
| Jamaica | 64 | 53 | 62 | 26 | 39 | 21.4 | 13.5 |
| Japan | 8,544 | 10,840 | 11,254 | 9,918 | 11,747 | –21.2 | –7.6 |
| Korea, Republic of | 3,974 | 4,582 | 4,526 | 3,332 | 3,470 | –13.3 | 3.4 |
| Mexico | 1,177 | 758 | 498 | – | – | 55.4 | – |
| Morocco | 214 | 1,388 | 1,050 | 101 | 571 | –84.6 | –21.8 |
| Netherlands | 5,224 | 4,398 | 5,911 | 4,723 | 4,455 | 18.8 | 4.1 |
| Nigeria | – | – | – | – | 43 | – | – |
| Norway | 210 | 169 | 170 | 88 | 121 | 23.9 | 14.7 |
| Peru | 13 | – | – | – | – | – | – |
| Portugal | 1,212 | 2,094 | 1,967 | 1,167 | 1,611 | –42.1 | –6.9 |
| Romania | 2,083 | 1,517 | 2,115 | 1,750 | 991 | 37.3 | 20.4 |
| Russia | 18 | – | – | – | – | – | – |
| Saudi Arabia | 48 | 22 | – | – | * | 114.4 | NM |
| South Africa, Rep of | 1,090 | 1,192 | 946 | 771 | 577 | –8.6 | 17.2 |
| Spain | 4,042 | 4,197 | 4,465 | 4,256 | 3,867 | –3.7 | 1.1 |

See footnotes at end of table.

## Table 62. Foreign Distribution of U.S. Coal by Major Coal-Exporting States and Destination, 1993-1997 (Continued)

(Thousand Short Tons)

| Coal-Exporting State and Destination | 1997 | 1996 | 1995 | 1994 | 1993 | Percent Change 1996-1997 | Average Annual Percent Change 1993-1997 |
|---|---|---|---|---|---|---|---|
| **U.S. Total (Continued)** | | | | | | | |
| Surinam | – | – | – | – | * | – | – |
| Sweden | 657 | 1,091 | 1,466 | 939 | 798 | –39.8 | –4.8 |
| Trinidad & Tobago | – | – | – | – | 1 | – | – |
| Turkey | 1,784 | 2,005 | 2,116 | 1,606 | 1,623 | –11.0 | 2.4 |
| United Arab Emirates | – | – | – | – | * | – | – |
| United Kingdom | 6,556 | 6,925 | 4,476 | 2,963 | 4,600 | –5.3 | 9.3 |
| Venezuela | 5 | 1 | 9 | 11 | 15 | 373.1 | –23.8 |
| Unknown | 806 | 1,294 | 226 | 439 | 348 | –37.7 | 23.3 |

* Data round to zero.

**NM** Not meaningful as value is greater than 500 percent.

Notes: Major coal-exporting States are those with total coal exports of over 600,000 short tons in 1997. 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 Corporation, 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, 1993-1997

(Thousand Short Tons)

| Coal-Exporting State and Destination | 1997 | 1996 | 1995 | 1994 | 1993 | Percent Change 1996-1997 | Average Annual Percent Change 1993-1997 |
|---|---|---|---|---|---|---|---|
| **Alabama** | **5,699** | **4,523** | **5,330** | **4,359** | **5,846** | **26.0** | **–0.6** |
| Argentina | 259 | 216 | 306 | 268 | 319 | 20.1 | –5.0 |
| Belgium & Luxembourg | 898 | 703 | 574 | 627 | 866 | 27.8 | .9 |
| Brazil | 901 | 566 | 564 | 42 | 193 | 59.2 | 47.1 |
| Bulgaria | 244 | 208 | 128 | 35 | 109 | 17.2 | 22.4 |
| China (Taiwan) | – | – | – | – | 42 | – | – |
| Egypt | – | – | 111 | – | – | – | – |
| France | – | – | – | * | – | – | – |
| Germany, FR | 224 | 184 | 201 | – | – | 21.6 | – |
| Italy | 377 | 318 | 314 | 421 | 429 | 18.5 | –3.2 |
| Japan | 459 | 861 | 1,358 | 1,266 | 2,199 | –46.7 | –32.4 |
| Netherlands | 303 | 73 | 217 | 88 | – | 312.9 | – |
| Romania | 274 | 170 | 492 | 602 | 171 | 61.8 | 12.6 |
| South Africa, Rep of | – | 57 | – | – | – | –100.0 | – |
| Spain | 200 | 52 | 48 | – | – | 285.2 | – |
| Turkey | 408 | 326 | 302 | 137 | 253 | 25.2 | 12.7 |
| United Kingdom | 1,151 | 789 | 717 | 872 | 1,266 | 45.9 | –2.3 |
| **Colorado** | – | 30 | – | – | – | –100.0 | – |
| Japan | – | 30 | – | – | – | –100.0 | – |
| **Illinois** | – | – | 49 | 236 | 109 | – | –100.0 |
| Japan | – | – | 49 | 236 | 109 | – | – |
| **Kentucky** | 4,762 | 5,303 | 3,640 | 3,120 | 4,415 | –10.2 | 1.9 |
| Belgium & Luxembourg | 54 | 67 | – | 66 | 56 | –18.4 | –.6 |
| Brazil | – | – | 52 | 23 | 392 | – | – |
| Canada | 739 | 1,178 | 777 | 1,073 | 1,356 | –37.3 | –14.1 |
| China (Taiwan) | 181 | – | 76 | 98 | 140 | – | 6.7 |
| France | 569 | 548 | 262 | 146 | 400 | 3.9 | 9.2 |
| Germany, FR | – | – | 93 | – | – | – | – |
| Iceland | 107 | 119 | 76 | 7 | – | –10.1 | – |
| Italy | – | 132 | – | 42 | – | –100.0 | – |
| Japan | 223 | 93 | 53 | 67 | 219 | 141.0 | .5 |
| Korea, Republic of | 795 | 1,876 | 1,523 | 1,163 | 1,256 | –57.6 | –10.8 |
| Netherlands | 1,255 | 581 | 102 | 45 | 241 | 115.9 | 51.1 |
| Norway | 198 | 140 | 142 | 74 | 91 | 42.0 | 21.6 |
| Saudi Arabia | 48 | 22 | – | – | – | 114.4 | – |
| Sweden | – | – | – | 16 | 195 | – | – |
| United Kingdom | 592 | 548 | 483 | 301 | 70 | 8.0 | 70.3 |
| **Pennsylvania** | 2,105 | 1,642 | 1,467 | 1,624 | 1,919 | 28.3 | 2.3 |
| Argentina | – | – | – | – | 46 | – | – |
| Belgium & Luxembourg | – | – | – | 29 | – | – | – |
| Brazil | 713 | 258 | 371 | 333 | 148 | 176.0 | 48.1 |
| Bulgaria | – | – | – | – | 71 | – | – |
| Canada | – | – | 4 | – | 10 | – | – |
| Croatia | – | – | – | – | 114 | – | – |
| Dominican Republic | – | – | – | 23 | – | – | – |
| Finland | – | – | – | – | 56 | – | – |
| France | – | 89 | – | – | – | –100.0 | – |
| Germany, FR | – | – | 66 | 174 | – | – | – |
| Japan | 903 | 920 | 916 | 834 | 1,384 | –1.9 | –10.1 |
| Korea, Republic of | 106 | 101 | 109 | 214 | 91 | 5.1 | 3.8 |
| Netherlands | – | 162 | – | 17 | – | –100.0 | – |
| South Africa, Rep of | 384 | 112 | – | – | – | 242.2 | – |
| **Utah** | 97 | 187 | – | – | – | –47.9 | – |
| Japan | 97 | 187 | – | – | – | –47.9 | – |
| **Virginia** | 12,288 | 12,760 | 8,921 | 11,155 | 13,747 | –3.7 | –2.8 |
| Algeria | 299 | 206 | 166 | 269 | 344 | 45.1 | –3.5 |
| Argentina | – | – | – | 53 | 52 | – | – |
| Belgium & Luxembourg | 945 | 1,078 | 764 | 884 | 1,147 | –12.4 | –4.7 |
| Brazil | 1,347 | 1,228 | 1,091 | 1,218 | 1,741 | 9.8 | –6.2 |
| Bulgaria | – | – | – | – | 242 | – | – |
| Canada | 508 | 387 | 445 | 786 | 1,229 | 31.0 | –19.8 |
| China (Taiwan) | 180 | – | – | 15 | * | – | NM |
| Croatia | – | – | – | – | 251 | – | – |

See footnotes at end of table.

## Table 63. Foreign Distribution of U.S. Metallurgical Coal by Major Coal-Exporting States and Destination, 1993-1997 (Continued)

(Thousand Short Tons)

| Coal-Exporting State and Destination | 1997 | 1996 | 1995 | 1994 | 1993 | Percent Change 1996-1997 | Average Annual Percent Change 1993-1997 |
|---|---|---|---|---|---|---|---|
| **Virginia (Continued)** | | | | | | | |
| Egypt | 178 | 835 | 333 | 436 | 234 | –78.6 | –6.5 |
| Finland | 55 | – | – | – | – | – | – |
| France | 984 | 910 | 625 | 563 | 737 | 8.0 | 7.5 |
| Germany, FR | 93 | – | 68 | 9 | 50 | – | 16.6 |
| Italy | 1,776 | 1,696 | 758 | 1,445 | 951 | 4.8 | 16.9 |
| Japan | 1,508 | 2,300 | 1,796 | 2,037 | 2,355 | –34.4 | –10.5 |
| Korea, Republic of | 1,272 | 466 | 589 | 539 | 853 | 173.1 | 10.5 |
| Netherlands | 650 | 1,193 | 793 | 766 | 973 | –45.5 | –9.6 |
| Portugal | 62 | – | – | – | – | – | – |
| Romania | 72 | 32 | – | 223 | – | 122.1 | – |
| South Africa, Rep of | – | 76 | – | – | – | –100.0 | – |
| Spain | 1,350 | 1,370 | 847 | 1,297 | 1,682 | –1.5 | –5.4 |
| Sweden | – | 185 | 115 | 37 | – | –100.0 | – |
| Turkey | 81 | – | – | – | – | – | – |
| United Kingdom | 928 | 798 | 531 | 579 | 905 | 16.3 | .6 |
| **West Virginia** | 30,327 | 31,717 | 34,633 | 31,603 | 26,504 | –4.4 | 3.4 |
| Algeria | – | – | – | * | – | – | – |
| Argentina | – | – | – | 35 | 132 | – | – |
| Belgium & Luxembourg | 822 | 1,261 | 1,175 | 1,302 | 1,396 | –34.8 | –12.4 |
| Brazil | 3,927 | 4,247 | 4,329 | 4,109 | 2,496 | –7.5 | 12.0 |
| Bulgaria | 1,008 | 1,152 | 1,360 | 1,571 | 644 | –12.5 | 11.9 |
| Canada | 6,956 | 6,907 | 5,759 | 5,605 | 4,071 | .7 | 14.3 |
| Chile | – | 43 | – | – | – | –100.0 | – |
| China (Taiwan) | 188 | 353 | 355 | 284 | 141 | –46.8 | 7.3 |
| Croatia | – | – | – | – | 63 | – | – |
| Egypt | 807 | 303 | 714 | 593 | 601 | 166.2 | 7.7 |
| Finland | 324 | 507 | 683 | 375 | 212 | –36.0 | 11.3 |
| France | 2,286 | 2,859 | 3,594 | 3,514 | 2,864 | –20.0 | –5.5 |
| Germany, FR | 419 | 584 | 254 | 382 | 286 | –28.3 | 10.0 |
| India | – | 11 | – | – | – | –100.0 | – |
| Italy | 2,084 | 2,361 | 2,873 | 2,927 | 3,111 | –11.7 | –9.5 |
| Japan | 2,585 | 2,062 | 3,222 | 2,148 | 2,260 | 25.4 | 3.4 |
| Korea, Republic of | 829 | 1,050 | 1,013 | 523 | 318 | –21.1 | 27.1 |
| Mexico | 25 | – | – | – | – | – | – |
| Netherlands | 1,977 | 1,223 | 1,523 | 1,717 | 2,014 | 61.7 | –.5 |
| Nigeria | – | – | – | – | 43 | – | – |
| Portugal | 118 | 164 | 33 | – | 151 | –28.1 | –6.0 |
| Romania | 1,737 | 1,315 | 1,623 | 925 | 820 | 32.1 | 20.6 |
| South Africa, Rep of | 706 | 947 | 946 | 771 | 577 | –25.4 | 5.1 |
| Spain | 681 | 818 | 1,084 | 1,255 | 1,071 | –16.8 | –10.7 |
| Sweden | 657 | 882 | 1,352 | 886 | 603 | –25.5 | 2.2 |
| Turkey | 1,295 | 1,643 | 1,560 | 1,468 | 1,370 | –21.2 | –1.4 |
| United Kingdom | 897 | 1,024 | 1,182 | 1,212 | 1,261 | –12.5 | –8.2 |
| **Major States Total** | 55,278 | 56,162 | 54,039 | 52,098 | 52,541 | –1.6 | 1.3 |
| Algeria | 299 | 206 | 166 | 269 | 344 | 45.1 | –3.5 |
| Argentina | 259 | 216 | 306 | 356 | 548 | 20.1 | –17.1 |
| Belgium & Luxembourg | 2,719 | 3,109 | 2,513 | 2,908 | 3,465 | –12.5 | –5.9 |
| Brazil | 6,888 | 6,298 | 6,407 | 5,725 | 4,969 | 9.4 | 8.5 |
| Bulgaria | 1,252 | 1,361 | 1,488 | 1,607 | 1,065 | –8.0 | 4.1 |
| Canada | 8,203 | 8,472 | 6,986 | 7,464 | 6,666 | –3.2 | 5.3 |
| Chile | – | 43 | – | – | – | –100.0 | – |
| China (Taiwan) | 549 | 353 | 431 | 397 | 323 | 55.6 | 14.2 |
| Croatia | – | – | – | – | 428 | – | – |
| Dominican Republic | – | – | – | 23 | – | – | – |
| Egypt | 985 | 1,138 | 1,158 | 1,029 | 834 | –13.4 | 4.3 |
| Finland | 379 | 507 | 683 | 375 | 267 | –25.2 | 9.1 |
| France | 3,839 | 4,406 | 4,481 | 4,223 | 4,001 | –12.9 | –1.0 |
| Germany, FR | 736 | 769 | 681 | 565 | 336 | –4.3 | 21.7 |
| Iceland | 107 | 119 | 76 | 7 | – | –10.1 | – |
| India | – | 11 | – | – | – | –100.0 | – |
| Italy | 4,238 | 4,507 | 3,944 | 4,836 | 4,491 | –6.0 | –1.4 |
| Japan | 5,775 | 6,453 | 7,395 | 6,588 | 8,525 | –10.5 | –9.3 |
| Korea, Republic of | 3,001 | 3,493 | 3,234 | 2,438 | 2,517 | –14.1 | 4.5 |
| Mexico | 25 | – | – | – | – | – | – |
| Netherlands | 4,185 | 3,233 | 2,635 | 2,633 | 3,228 | 29.5 | 6.7 |

See footnotes at end of table.

## Table 63. Foreign Distribution of U.S. Metallurgical Coal by Major Coal-Exporting States and Destination, 1993-1997 (Continued)

(Thousand Short Tons)

| Coal-Exporting State and Destination | 1997 | 1996 | 1995 | 1994 | 1993 | Percent Change 1996-1997 | Average Annual Percent Change 1993-1997 |
|---|---|---|---|---|---|---|---|
| **Major States Total (Continued)** | | | | | | | |
| Nigeria | – | – | – | – | 43 | – | – |
| Norway | 198 | 140 | 142 | 74 | 91 | 42.0 | 21.6 |
| Portugal | 179 | 164 | 33 | – | 151 | 9.5 | 4.4 |
| Romania | 2,083 | 1,517 | 2,115 | 1,750 | 991 | 37.3 | 20.4 |
| Saudi Arabia | 48 | 22 | – | – | – | 114.4 | – |
| South Africa, Rep of | 1,090 | 1,192 | 946 | 771 | 577 | –8.6 | 17.2 |
| Spain | 2,231 | 2,240 | 1,979 | 2,552 | 2,754 | –.4 | –5.1 |
| Sweden | 657 | 1,066 | 1,466 | 939 | 798 | –38.4 | –4.8 |
| Turkey | 1,784 | 1,969 | 1,862 | 1,606 | 1,623 | –9.4 | 2.4 |
| United Kingdom | 3,568 | 3,160 | 2,913 | 2,963 | 3,503 | 12.9 | .5 |
| **Other States Total** | – | – | 188 | 184 | 295 | – | –100.0 |
| Brazil | – | – | 188 | 184 | 295 | – | – |
| **U.S. Total** | 55,278 | 56,162 | 54,228 | 52,282 | 52,835 | –1.6 | 1.1 |
| Algeria | 299 | 206 | 166 | 269 | 344 | 45.1 | –3.5 |
| Argentina | 259 | 216 | 306 | 356 | 548 | 20.1 | –17.1 |
| Belgium & Luxembourg | 2,719 | 3,109 | 2,513 | 2,908 | 3,465 | –12.5 | –5.9 |
| Brazil | 6,888 | 6,298 | 6,596 | 5,909 | 5,264 | 9.4 | 6.9 |
| Bulgaria | 1,252 | 1,361 | 1,488 | 1,607 | 1,065 | –8.0 | 4.1 |
| Canada | 8,203 | 8,472 | 6,986 | 7,464 | 6,666 | –3.2 | 5.3 |
| Chile | – | 43 | – | – | – | –100.0 | – |
| China (Taiwan) | 549 | 353 | 431 | 397 | 323 | 55.6 | 14.2 |
| Croatia | – | – | – | – | 428 | – | – |
| Dominican Republic | – | – | – | 23 | – | – | – |
| Egypt | 985 | 1,138 | 1,158 | 1,029 | 834 | –13.4 | 4.3 |
| Finland | 379 | 507 | 683 | 375 | 267 | –25.2 | 9.1 |
| France | 3,839 | 4,406 | 4,481 | 4,223 | 4,001 | –12.9 | –1.0 |
| Germany, FR | 736 | 769 | 681 | 565 | 336 | –4.3 | 21.7 |
| Iceland | 107 | 119 | 76 | 7 | – | –10.1 | – |
| India | – | 11 | – | – | – | –100.0 | – |
| Italy | 4,238 | 4,507 | 3,944 | 4,836 | 4,491 | –6.0 | –1.4 |
| Japan | 5,775 | 6,453 | 7,395 | 6,588 | 8,525 | –10.5 | –9.3 |
| Korea, Republic of | 3,001 | 3,493 | 3,234 | 2,438 | 2,517 | –14.1 | 4.5 |
| Mexico | 25 | – | – | – | – | – | – |
| Netherlands | 4,185 | 3,233 | 2,635 | 2,633 | 3,228 | 29.5 | 6.7 |
| Nigeria | – | – | – | – | 43 | – | – |
| Norway | 198 | 140 | 142 | 74 | 91 | 42.0 | 21.6 |
| Portugal | 179 | 164 | 33 | – | 151 | 9.5 | 4.4 |
| Romania | 2,083 | 1,517 | 2,115 | 1,750 | 991 | 37.3 | 20.4 |
| Saudi Arabia | 48 | 22 | – | – | – | 114.4 | – |
| South Africa, Rep of | 1,090 | 1,192 | 946 | 771 | 577 | –8.6 | 17.2 |
| Spain | 2,231 | 2,240 | 1,979 | 2,552 | 2,754 | –.4 | –5.1 |
| Sweden | 657 | 1,066 | 1,466 | 939 | 798 | –38.4 | –4.8 |
| Turkey | 1,784 | 1,969 | 1,862 | 1,606 | 1,623 | –9.4 | 2.4 |
| United Kingdom | 3,568 | 3,160 | 2,913 | 2,963 | 3,503 | 12.9 | .5 |

* Data round to zero.

**NM** Not meaningful as value is greater than 500 percent.

Notes: Major coal-exporting States are those with total coal exports of over 600,000 short tons in 1997. 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 Corporation, 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, 1993-1997

(Thousand Short Tons)

| Coal-Exporting State and Destination | 1997 | 1996 | 1995 | 1994 | 1993 | Percent Change 1996-1997 | Average Annual Percent Change 1993-1997 |
|---|---|---|---|---|---|---|---|
| **Alabama** | **114** | **341** | **702** | **170** | **43** | **–66.6** | **27.7** |
| Denmark | – | – | 26 | – | – | – | – |
| Italy | 114 | 341 | 617 | 144 | – | –66.6 | – |
| Japan | – | – | – | – | 3 | – | – |
| Morocco | – | – | – | – | 39 | – | – |
| Netherlands | – | – | 59 | – | – | – | – |
| Spain | – | – | – | 27 | – | – | – |
| **Alaska** | 680 | 776 | 855 | 716 | 743 | –12.4 | –2.2 |
| Korea, Republic of | 662 | 776 | 855 | 716 | 743 | –14.7 | –2.8 |
| Russia | 18 | – | – | – | – | – | – |
| **Colorado** | 1,512 | 1,385 | 900 | 752 | 1,128 | 9.1 | 7.6 |
| China (Taiwan) | 73 | 219 | 235 | 134 | – | –66.9 | – |
| Hong Kong | – | – | – | 46 | – | – | – |
| Israel | – | 30 | – | – | – | –100.0 | – |
| Japan | 287 | 314 | 651 | 395 | 918 | –8.6 | –25.3 |
| Korea, Republic of | – | 65 | – | 177 | 209 | –100.0 | – |
| Mexico | 1,152 | 758 | – | – | – | 52.1 | – |
| Turkey | – | – | 14 | – | – | – | – |
| **Illinois** | 773 | 1,886 | 2,650 | – | 561 | –59.0 | 8.4 |
| Belgium & Luxembourg | – | 76 | – | – | – | –100.0 | – |
| Brazil | – | 1 | – | – | – | –100.0 | – |
| Denmark | – | 364 | 516 | – | – | –100.0 | – |
| France | – | – | 57 | – | – | – | – |
| Germany, FR | 56 | 325 | 722 | – | – | –82.8 | – |
| Ireland | – | – | – | – | 108 | – | – |
| Italy | – | – | 42 | – | – | – | – |
| Japan | 55 | 66 | – | – | – | –17.3 | – |
| Morocco | – | 103 | 775 | – | 452 | –100.0 | – |
| Netherlands | – | 120 | – | – | – | –100.0 | – |
| Sweden | – | 25 | – | – | – | –100.0 | – |
| United Kingdom | 662 | 805 | 538 | – | – | –17.8 | – |
| **Kentucky** | 2,458 | 3,841 | 6,055 | 4,047 | 5,106 | –36.0 | –16.7 |
| Belgium & Luxembourg | – | – | 366 | 406 | 437 | – | – |
| Canada | – | – | – | 26 | 60 | – | – |
| China (Taiwan) | 2,111 | 1,978 | 2,321 | 2,545 | 3,485 | 6.7 | –11.8 |
| Denmark | – | – | – | – | 33 | – | – |
| Finland | – | 4 | – | – | 2 | –100.0 | – |
| France | – | – | – | – | 266 | – | – |
| Germany, FR | – | – | 95 | – | – | – | – |
| Ireland | – | – | 58 | – | 16 | – | – |
| Israel | – | – | 217 | – | – | – | – |
| Italy | 182 | 1,613 | 1,714 | 763 | 719 | –88.7 | –29.1 |
| Jamaica | 56 | 17 | 62 | 26 | 39 | 233.6 | 9.9 |
| Japan | – | – | – | 33 | 50 | – | – |
| Netherlands | 109 | – | 519 | 223 | – | – | – |
| Portugal | – | 229 | – | 24 | – | –100.0 | – |
| Spain | – | – | 231 | – | – | – | – |
| Turkey | – | – | 197 | – | – | – | – |
| United Kingdom | – | – | 275 | – | – | – | – |
| **Pennsylvania** | 6,593 | 7,604 | 6,812 | 4,677 | 3,589 | –13.3 | 16.4 |
| Belgium & Luxembourg | 146 | – | – | – | – | – | – |
| Brazil | 2 | 3 | 9 | 5 | 7 | –11.3 | –25.6 |
| Canada | 2,612 | 1,050 | 708 | 844 | 587 | 148.7 | 45.2 |
| Croatia | – | – | – | – | 45 | – | – |
| Denmark | 467 | 801 | 1,589 | 508 | 187 | –41.7 | 25.8 |
| Dominican Republic | 64 | 50 | 18 | 42 | 59 | 27.6 | 2.0 |
| Finland | 229 | 283 | 544 | 71 | – | –18.9 | – |
| France | – | – | 9 | – | 188 | – | – |
| Germany, FR | 135 | 256 | 317 | 23 | 102 | –47.0 | 7.3 |
| Greece | – | 491 | – | – | – | –100.0 | – |
| Ireland | 1,116 | 1,067 | 1,161 | 1,015 | 911 | 4.6 | 5.2 |
| Israel | 861 | 1,068 | 995 | 922 | 940 | –19.4 | –2.2 |
| Italy | – | 89 | – | 601 | 50 | –100.0 | – |
| Japan | – | 136 | – | – | – | –100.0 | – |

See footnotes at end of table.

## Table 64. Foreign Distribution of U.S. Steam Coal by Major Coal-Exporting States and Destination, 1993-1997 (Continued)

(Thousand Short Tons)

| Coal-Exporting State and Destination | 1997 | 1996 | 1995 | 1994 | 1993 | Percent Change 1996-1997 | Average Annual Percent Change 1993-1997 |
|---|---|---|---|---|---|---|---|
| **Pennsylvania (Continued)** | | | | | | | |
| Korea, Republic of | 70 | 94 | – | – | – | –25.9 | – |
| Morocco | 118 | 173 | – | – | – | –31.8 | – |
| Netherlands | 482 | 570 | 593 | 244 | – | –15.5 | – |
| Norway | 11 | 30 | 28 | 14 | 30 | –61.6 | –21.9 |
| Peru | 13 | – | – | – | – | – | – |
| Portugal | 261 | 592 | 472 | 378 | 467 | –55.9 | –13.5 |
| Saudi Arabia | – | – | – | – | * | – | – |
| Spain | – | – | 18 | – | – | – | – |
| Surinam | – | – | – | – | * | – | – |
| Trinidad & Tobago | – | – | – | – | 1 | – | – |
| Turkey | – | – | 43 | – | – | – | – |
| United Arab Emirates | – | – | – | – | * | – | – |
| United Kingdom | – | 851 | 299 | – | * | –100.0 | – |
| Venezuela | 5 | 1 | 9 | 11 | 15 | 373.1 | –23.8 |
| **Utah** | 3,317 | 5,118 | 3,930 | 2,698 | 2,959 | –35.2 | 2.9 |
| Canada | – | – | – | – | 346 | – | – |
| Chile | 38 | 445 | 170 | – | – | –91.4 | – |
| China (Taiwan) | 597 | 648 | 323 | 321 | 849 | –7.8 | –8.4 |
| Ecuador | 38 | – | – | – | – | – | – |
| Japan | 2,402 | 3,871 | 3,000 | 2,377 | 1,764 | –38.0 | 8.0 |
| Korea, Republic of | 242 | 154 | 438 | – | – | 56.4 | – |
| **Virginia** | 553 | 671 | 821 | 527 | 503 | –17.6 | 2.4 |
| Italy | 542 | 502 | 716 | 359 | 413 | 7.9 | 7.0 |
| Japan | – | – | – | 77 | 55 | – | – |
| Netherlands | – | – | – | – | 36 | – | – |
| Portugal | – | 145 | 105 | 91 | – | –100.0 | – |
| Spain | 11 | – | – | – | – | – | – |
| Turkey | – | 24 | – | – | – | –100.0 | – |
| **West Virginia** | 8,132 | 10,327 | 9,688 | 4,602 | 6,655 | –21.3 | 5.1 |
| Belgium & Luxembourg | 641 | 921 | 845 | 1,010 | 813 | –30.4 | –5.8 |
| Brazil | 2 | 10 | * | – | – | –80.8 | – |
| Bulgaria | – | 62 | – | – | – | –100.0 | – |
| Canada | 1,335 | 315 | 25 | 40 | 37 | 323.3 | 145.3 |
| Chile | 25 | 152 | 118 | – | – | –83.3 | – |
| Croatia | – | – | 72 | – | – | – | – |
| Denmark | 70 | – | 189 | – | 168 | – | –19.6 |
| Finland | – | – | 109 | – | – | – | – |
| France | 293 | 817 | 815 | – | 536 | –64.1 | –14.0 |
| Germany, FR | 35 | 358 | 854 | – | 349 | –90.3 | –43.8 |
| Ireland | – | – | – | – | 117 | – | – |
| Israel | 211 | 375 | – | – | – | –43.8 | – |
| Italy | 1,794 | 2,604 | 2,266 | 707 | 705 | –31.1 | 26.3 |
| Jamaica | 8 | 36 | – | – | – | –78.6 | – |
| Japan | – | – | 209 | 448 | 431 | – | – |
| Morocco | 96 | 1,111 | 275 | 101 | 79 | –91.4 | 4.9 |
| Netherlands | 448 | 413 | 2,105 | 1,623 | 1,191 | 8.6 | –21.7 |
| Portugal | 771 | 964 | 1,357 | 674 | 993 | –20.0 | –6.1 |
| Spain | 77 | 69 | – | – | 140 | 11.6 | –13.9 |
| Turkey | – | 12 | – | – | – | –100.0 | – |
| United Kingdom | 2,326 | 2,109 | 451 | – | 1,097 | 10.3 | 20.7 |
| **Wyoming** | 2,541 | 2,395 | 2,269 | 1,524 | 974 | 6.1 | 27.1 |
| Canada | 818 | 443 | 32 | – | – | 84.5 | – |
| Japan | – | – | – | – | * | – | – |
| Netherlands | – | 63 | – | – | – | –100.0 | – |
| Spain | 1,723 | 1,889 | 2,237 | 1,524 | 974 | –8.8 | 15.3 |
| **Major States Total** | 26,672 | 34,344 | 34,683 | 19,713 | 22,261 | –22.3 | 4.6 |
| Belgium & Luxembourg | 787 | 997 | 1,211 | 1,416 | 1,250 | –21.1 | –10.9 |
| Brazil | 4 | 14 | 9 | 5 | 7 | –69.5 | –13.7 |
| Bulgaria | – | 62 | – | – | – | –100.0 | – |
| Canada | 4,764 | 1,808 | 765 | 910 | 1,030 | 163.4 | 46.6 |
| Chile | 64 | 597 | 287 | – | – | –89.3 | – |
| China (Taiwan) | 2,781 | 2,845 | 2,879 | 3,000 | 4,334 | –2.2 | –10.5 |

See footnotes at end of table.

## Table 64. Foreign Distribution of U.S. Steam Coal by Major Coal-Exporting States and Destination, 1993-1997 (Continued)

(Thousand Short Tons)

| Coal-Exporting State and Destination | 1997 | 1996 | 1995 | 1994 | 1993 | Percent Change 1996-1997 | Average Annual Percent Change 1993-1997 |
|---|---|---|---|---|---|---|---|
| **Major States Total (Continued)** | | | | | | | |
| Croatia | – | – | 72 | – | 45 | – | – |
| Denmark | 538 | 1,165 | 2,320 | 508 | 388 | –53.9 | 8.5 |
| Dominican Republic | 64 | 50 | 18 | 42 | 59 | 27.6 | 2.0 |
| Ecuador | 38 | – | – | – | – | – | – |
| Finland | 229 | 287 | 654 | 71 | 2 | –20.0 | 227.8 |
| France | 293 | 817 | 882 | – | 989 | –64.1 | –26.2 |
| Germany, FR | 226 | 939 | 1,987 | 23 | 451 | –75.9 | –15.8 |
| Greece | – | 491 | – | – | – | –100.0 | – |
| Hong Kong | – | – | – | 46 | – | – | – |
| Ireland | 1,116 | 1,067 | 1,219 | 1,015 | 1,152 | 4.6 | –.8 |
| Israel | 1,071 | 1,473 | 1,212 | 922 | 940 | –27.3 | 3.3 |
| Italy | 2,632 | 5,149 | 5,354 | 2,573 | 1,886 | –48.9 | 8.7 |
| Jamaica | 64 | 53 | 62 | 26 | 39 | 21.4 | 13.5 |
| Japan | 2,743 | 4,387 | 3,860 | 3,330 | 3,222 | –37.5 | –3.9 |
| Korea, Republic of | 973 | 1,089 | 1,292 | 894 | 952 | –10.7 | .5 |
| Mexico | 1,152 | 758 | – | – | – | 52.1 | – |
| Morocco | 214 | 1,388 | 1,050 | 101 | 571 | –84.6 | –21.8 |
| Netherlands | 1,039 | 1,165 | 3,276 | 2,090 | 1,227 | –10.8 | –4.1 |
| Norway | 11 | 30 | 28 | 14 | 30 | –61.6 | –21.9 |
| Peru | 13 | – | – | – | – | – | – |
| Portugal | 1,032 | 1,930 | 1,933 | 1,167 | 1,460 | –46.5 | –8.3 |
| Russia | 18 | – | – | – | – | – | – |
| Saudi Arabia | – | – | – | – | * | – | – |
| Spain | 1,811 | 1,957 | 2,486 | 1,550 | 1,113 | –7.5 | 12.9 |
| Surinam | – | – | – | – | * | – | – |
| Sweden | – | 25 | – | – | – | –100.0 | – |
| Trinidad & Tobago | – | – | – | – | 1 | – | – |
| Turkey | – | 37 | 254 | – | – | –100.0 | – |
| United Arab Emirates | – | – | – | – | * | – | – |
| United Kingdom | 2,988 | 3,765 | 1,563 | – | 1,098 | –20.6 | 28.5 |
| Venezuela | 5 | 1 | 9 | 11 | 15 | 373.1 | –23.8 |
| **Other States Total** | 1,270 | 1,693 | 997 | 686 | 414 | –25.0 | 32.3 |
| Canada | 438 | 319 | 273 | 93 | 55 | 37.5 | 68.2 |
| Ireland | – | 80 | – | – | 11 | –100.0 | – |
| Japan | 25 | – | – | – | – | – | – |
| Mexico | – | – | 498 | – | – | – | – |
| Spain | – | – | – | 153 | – | – | – |
| Unknown | 806 | 1,294 | 226 | 439 | 348 | –37.7 | 23.3 |
| **U.S. Total** | 27,942 | 36,037 | 35,680 | 20,399 | 22,675 | –22.5 | 5.4 |
| Belgium & Luxembourg | 787 | 997 | 1,211 | 1,416 | 1,250 | –21.1 | –10.9 |
| Brazil | 4 | 14 | 9 | 5 | 7 | –69.5 | –13.7 |
| Bulgaria | – | 62 | – | – | – | –100.0 | – |
| Canada | 5,202 | 2,127 | 1,037 | 1,003 | 1,085 | 144.6 | 48.0 |
| Chile | 64 | 597 | 287 | – | – | –89.3 | – |
| China (Taiwan) | 2,781 | 2,845 | 2,879 | 3,000 | 4,334 | –2.2 | –10.5 |
| Croatia | – | – | 72 | – | 45 | – | – |
| Denmark | 538 | 1,165 | 2,320 | 508 | 388 | –53.9 | 8.5 |
| Dominican Republic | 64 | 50 | 18 | 42 | 59 | 27.6 | 2.0 |
| Ecuador | 38 | – | – | – | – | – | – |
| Finland | 229 | 287 | 654 | 71 | 2 | –20.0 | 227.8 |
| France | 293 | 817 | 882 | – | 989 | –64.1 | –26.2 |
| Germany, FR | 226 | 939 | 1,987 | 23 | 451 | –75.9 | –15.8 |
| Greece | – | 491 | – | – | – | –100.0 | – |
| Hong Kong | – | – | – | 46 | – | – | – |
| Ireland | 1,116 | 1,147 | 1,219 | 1,015 | 1,163 | –2.7 | –1.0 |
| Israel | 1,071 | 1,473 | 1,212 | 922 | 940 | –27.3 | 3.3 |
| Italy | 2,632 | 5,149 | 5,354 | 2,573 | 1,886 | –48.9 | 8.7 |
| Jamaica | 64 | 53 | 62 | 26 | 39 | 21.4 | 13.5 |
| Japan | 2,768 | 4,387 | 3,860 | 3,330 | 3,222 | –36.9 | –3.7 |
| Korea, Republic of | 973 | 1,089 | 1,292 | 894 | 952 | –10.7 | .5 |
| Mexico | 1,152 | 758 | 498 | – | – | 52.1 | – |
| Morocco | 214 | 1,388 | 1,050 | 101 | 571 | –84.6 | –21.8 |
| Netherlands | 1,039 | 1,165 | 3,276 | 2,090 | 1,227 | –10.8 | –4.1 |
| Norway | 11 | 30 | 28 | 14 | 30 | –61.6 | –21.9 |
| Peru | 13 | – | – | – | – | – | – |

See footnotes at end of table.

## Table 64. Foreign Distribution of U.S. Steam Coal by Major Coal-Exporting States and Destination, 1993-1997 (Continued)

(Thousand Short Tons)

| Coal-Exporting State and Destination | 1997 | 1996 | 1995 | 1994 | 1993 | Percent Change 1996-1997 | Average Annual Percent Change 1993-1997 |
|---|---|---|---|---|---|---|---|
| **U.S. Total (Continued)** | | | | | | | |
| Portugal | 1,032 | 1,930 | 1,933 | 1,167 | 1,460 | –46.5 | –8.3 |
| Russia | 18 | – | – | – | – | – | – |
| Saudi Arabia | – | – | – | – | * | – | – |
| Spain | 1,811 | 1,957 | 2,486 | 1,704 | 1,113 | –7.5 | 12.9 |
| Surinam | – | – | – | – | * | – | – |
| Sweden | – | 25 | – | – | – | –100.0 | – |
| Trinidad & Tobago | – | – | – | – | 1 | – | – |
| Turkey | – | 37 | 254 | – | – | –100.0 | – |
| United Arab Emirates | – | – | – | – | * | – | – |
| United Kingdom | 2,988 | 3,765 | 1,563 | – | 1,098 | –20.6 | 28.5 |
| Venezuela | 5 | 1 | 9 | 11 | 15 | 373.1 | –23.8 |
| Unknown | 806 | 1,294 | 226 | 439 | 348 | –37.7 | 23.3 |

* Data round to zero.

Notes: Major coal-exporting States are those with total coal exports of over 600,000 short tons in 1997. 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 Corporation, 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, 1997

(Thousand Short Tons)

| Origin State and Destination State | Railroad | Water | | | | Truck | Tramway, Conveyor, and Slurry Pipeline | Unknown | Total |
|---|---|---|---|---|---|---|---|---|---|
| | | River | Great Lakes | Tidewater | Total | | | | |
| **Alabama** | **7,652** | **2,577** | **–** | **5,813** | **8,390** | **4,077** | **3,777** | **25** | **23,921** |
| Alabama | 7,542 | 2,211 | – | – | 2,211 | 3,958 | 3,777 | – | 17,489 |
| Arkansas | 32 | – | – | – | – | 15 | – | – | 47 |
| Florida | – | – | – | – | – | 26 | – | – | 26 |
| Georgia | 50 | – | – | – | – | – | – | – | 50 |
| Mississippi | 27 | – | – | – | – | 78 | – | – | 105 |
| Pennsylvania | – | 365 | – | – | 365 | – | – | – | 365 |
| Unknown State | – | – | – | – | – | – | – | 25 | 25 |
| Foreign | – | – | – | 5,813 | 5,813 | – | – | – | 5,813 |
| **Alaska** | **544** | **–** | **–** | **680** | **680** | **200** | **–** | **–** | **1,424** |
| Alaska | 544 | – | – | – | – | 200 | – | – | 743 |
| Foreign | – | – | – | 680 | 680 | – | – | – | 680 |
| **Arizona** | **6,646** | **–** | **–** | **–** | **–** | **–** | **4,398** | **–** | **11,044** |
| Arizona | 6,646 | – | – | – | – | – | – | – | 6,646 |
| Nevada | – | – | – | – | – | – | 4,398 | – | 4,398 |
| **Arkansas** | **–** | **–** | **–** | **–** | **–** | **9** | **–** | **–** | **9** |
| Arkansas | – | – | – | – | – | 4 | – | – | 4 |
| Missouri | – | – | – | – | – | 1 | – | – | 1 |
| Texas | – | – | – | – | – | 4 | – | – | 4 |
| **Colorado** | **21,818** | **–** | **–** | **359** | **359** | **4,769** | **–** | **11** | **26,956** |
| Arizona | 69 | – | – | – | – | 5 | – | – | 74 |
| Arkansas | 29 | – | – | – | – | – | – | – | 29 |
| California | 47 | – | – | – | – | – | – | – | 47 |
| Colorado | 7,774 | – | – | – | – | 4,533 | – | – | 12,307 |
| Illinois | 1,196 | – | – | – | – | – | – | – | 1,196 |
| Iowa | 644 | – | – | – | – | – | – | – | 644 |
| Kansas | 1,264 | – | – | – | – | – | – | – | 1,264 |
| Kentucky | 190 | – | – | – | – | – | – | – | 190 |
| Michigan | 10 | – | – | – | – | – | – | – | 10 |
| Mississippi | 35 | – | – | – | – | – | – | – | 35 |
| Missouri | 907 | – | – | – | – | – | – | – | 907 |
| Nebraska | 65 | – | – | – | – | – | – | – | 65 |
| Nevada | 69 | – | – | – | – | – | – | – | 69 |
| New Mexico | – | – | – | – | – | 99 | – | – | 99 |
| Oregon | 67 | – | – | – | – | – | – | – | 67 |
| Tennessee | 3,125 | – | – | – | – | – | – | – | 3,125 |
| Texas | 2,267 | – | – | – | – | – | – | – | 2,267 |
| Utah | 2,111 | – | – | – | – | – | – | – | 2,111 |
| Vermont | 107 | – | – | – | – | – | – | – | 107 |
| Washington | 24 | – | – | – | – | – | – | – | 24 |
| Wisconsin | 667 | – | – | – | – | – | – | – | 667 |
| Wyoming | – | – | – | – | – | 131 | – | – | 131 |
| Unknown State | – | – | – | – | – | – | – | 11 | 11 |
| Foreign | 1,152 | – | – | 359 | 359 | – | – | – | 1,512 |
| **Illinois** | **23,422** | **8,471** | **27** | **773** | **9,271** | **8,479** | **25** | **22** | **41,220** |
| Alabama | 871 | 477 | – | – | 477 | – | – | – | 1,348 |
| Arkansas | 67 | – | – | – | – | – | – | – | 67 |
| Florida | 1,964 | 3,586 | – | – | 3,586 | 36 | – | – | 5,585 |
| Georgia | 1,027 | – | – | – | – | – | – | – | 1,027 |
| Illinois | 11,220 | 916 | – | – | 916 | 5,924 | 25 | – | 18,085 |
| Indiana | 3,710 | 55 | – | – | 55 | 507 | – | – | 4,272 |
| Iowa | 107 | 406 | – | – | 406 | 219 | – | – | 731 |
| Kansas | 129 | – | – | – | – | – | – | – | 129 |
| Kentucky | 136 | 16 | – | – | 16 | * | – | – | 152 |
| Louisiana | – | 987 | – | – | 987 | – | – | – | 987 |
| Minnesota | 158 | 17 | – | – | 17 | – | – | – | 176 |
| Mississippi | 1,103 | 123 | – | – | 123 | 2 | – | – | 1,228 |
| Missouri | 1,938 | 21 | – | – | 21 | 938 | – | – | 2,897 |
| North Carolina | – | – | – | – | – | * | – | – | * |
| North Dakota | – | – | – | – | – | * | – | – | * |
| Oklahoma | – | 1 | – | – | 1 | – | – | – | 1 |
| Pennsylvania | – | – | – | – | – | * | – | – | * |
| Tennessee | 817 | 1,202 | – | – | 1,202 | 854 | – | – | 2,872 |
| Wisconsin | 176 | 665 | 27 | – | 692 | – | – | – | 868 |
| Unknown State | – | – | – | – | – | – | – | 22 | 22 |

See footnotes at end of table.

## Table 65. Distribution of U.S. Coal by Origin, Destination, and Method of Transportation, 1997 (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)** | | | | | | | | | |
| Foreign | – | – | – | 773 | 773 | – | – | – | 773 |
| **Indiana** | **18,819** | **1,625** | **323** | **5** | **1,952** | **13,399** | **610** | **30** | **34,810** |
| Illinois | 1,680 | – | – | – | – | 240 | – | – | 1,920 |
| Indiana | 16,502 | – | 161 | – | 161 | 12,643 | 610 | – | 29,916 |
| Iowa | 347 | – | – | – | – | – | – | – | 347 |
| Kentucky | 21 | 1,621 | – | – | 1,621 | 506 | – | – | 2,148 |
| Michigan | – | – | 162 | – | 162 | – | – | – | 162 |
| Minnesota | 4 | – | – | – | – | – | – | – | 4 |
| Missouri | – | – | – | – | – | 8 | – | – | 8 |
| Ohio | – | 4 | – | – | 4 | – | – | – | 4 |
| Oklahoma | – | * | – | – | * | – | – | – | * |
| Texas | – | – | – | – | – | 2 | – | – | 2 |
| Wisconsin | 264 | – | – | – | – | – | – | – | 264 |
| Unknown State | – | – | – | – | – | – | – | 30 | 30 |
| Foreign | – | – | – | 5 | 5 | – | – | – | 5 |
| **Kansas** | – | – | – | – | – | **434** | – | – | **434** |
| Kansas | – | – | – | – | – | 354 | – | – | 354 |
| Missouri | – | – | – | – | – | 80 | – | – | 80 |
| **Kentucky** | **92,741** | **35,800** | **2,141** | **8,874** | **46,816** | **12,717** | – | **467** | **152,741** |
| Alabama | 994 | 1,492 | – | – | 1,492 | 39 | – | – | 2,525 |
| Arkansas | – | – | – | – | – | 4 | – | – | 4 |
| Connecticut | 39 | – | – | 715 | 715 | – | – | – | 755 |
| Florida | 13,006 | 4,254 | – | 886 | 5,140 | – | – | – | 18,146 |
| Georgia | 15,773 | 9 | – | – | 9 | 131 | – | – | 15,913 |
| Illinois | 1,987 | 354 | – | – | 354 | 89 | – | – | 2,430 |
| Indiana | 889 | 1,062 | – | – | 1,062 | 372 | – | – | 2,322 |
| Iowa | – | 579 | – | – | 579 | – | – | – | 579 |
| Kentucky | 6,914 | 7,129 | – | – | 7,129 | 8,766 | – | – | 22,808 |
| Louisiana | – | 186 | – | – | 186 | – | – | – | 186 |
| Maine | 116 | – | – | 295 | 295 | – | – | – | 412 |
| Maryland | 124 | 17 | – | – | 17 | – | – | – | 141 |
| Massachusetts | 342 | 1 | – | 374 | 375 | * | – | – | 717 |
| Michigan | 5,539 | 142 | 1,023 | – | 1,165 | 55 | – | – | 6,759 |
| Minnesota | * | 99 | 37 | – | 136 | – | – | – | 136 |
| Mississippi | 1,050 | 166 | – | – | 166 | 3 | – | – | 1,219 |
| Missouri | 20 | 155 | – | – | 155 | * | – | – | 175 |
| New Jersey | – | – | – | 91 | 91 | – | – | – | 91 |
| New York | 1,436 | 46 | – | 12 | 58 | – | – | – | 1,494 |
| North Carolina | 14,014 | 1,226 | – | – | 1,226 | 600 | – | – | 15,840 |
| Ohio | 3,612 | 5,323 | 37 | – | 5,359 | 770 | – | – | 9,741 |
| Oklahoma | – | * | – | – | * | – | – | – | * |
| Oregon | 16 | – | – | – | – | – | – | – | 16 |
| Pennsylvania | 249 | 880 | 11 | – | 891 | 30 | – | – | 1,169 |
| South Carolina | 12,017 | 27 | – | – | 27 | 57 | – | – | 12,100 |
| South Dakota | – | 3 | – | – | 3 | – | – | – | 3 |
| Tennessee | 7,838 | 12,259 | – | – | 12,259 | 1,571 | – | – | 21,668 |
| Texas | – | 38 | – | – | 38 | – | – | – | 38 |
| Virginia | 6,295 | 31 | – | 21 | 52 | 102 | – | – | 6,449 |
| West Virginia | 47 | 77 | – | – | 77 | 126 | – | – | 250 |
| Wisconsin | 270 | 246 | 450 | – | 696 | * | – | – | 966 |
| Unknown State | – | – | – | – | – | – | – | 467 | 467 |
| Foreign | 152 | – | 584 | 6,481 | 7,065 | 3 | – | – | 7,220 |
| **Kentucky, Eastern** | **85,961** | **14,227** | **2,141** | **8,355** | **24,723** | **8,073** | – | **435** | **119,191** |
| Alabama | 514 | 174 | – | – | 174 | 39 | – | – | 727 |
| Connecticut | 39 | – | – | 715 | 715 | – | – | – | 755 |
| Florida | 12,908 | 549 | – | 886 | 1,435 | – | – | – | 14,342 |
| Georgia | 15,773 | 9 | – | – | 9 | 131 | – | – | 15,913 |
| Illinois | 1,987 | 338 | – | – | 338 | 2 | – | – | 2,327 |
| Indiana | 889 | 816 | – | – | 816 | 360 | – | – | 2,065 |
| Iowa | – | 259 | – | – | 259 | – | – | – | 259 |
| Kentucky | 2,076 | 2,237 | – | – | 2,237 | 4,326 | – | – | 8,639 |
| Louisiana | – | 78 | – | – | 78 | – | – | – | 78 |
| Maine | 116 | – | – | 295 | 295 | – | – | – | 412 |

See footnotes at end of table.

## Table 65. Distribution of U.S. Coal by Origin, Destination, and Method of Transportation, 1997 (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 (Continued)** | | | | | | | | | |
| Maryland | 124 | 15 | – | – | 15 | – | – | – | 139 |
| Massachusetts | 342 | 1 | – | 374 | 375 | * | – | – | 717 |
| Michigan | 5,539 | 142 | 1,023 | – | 1,165 | 55 | – | – | 6,759 |
| Minnesota | * | 99 | 37 | – | 136 | – | – | – | 136 |
| Mississippi | 1,050 | 166 | – | – | 166 | 3 | – | – | 1,219 |
| Missouri | 20 | 125 | – | – | 125 | * | – | – | 145 |
| New Jersey | – | – | – | 91 | 91 | – | – | – | 91 |
| New York | 1,436 | 46 | – | 12 | 58 | – | – | – | 1,494 |
| North Carolina | 14,014 | 1,226 | – | – | 1,226 | 600 | – | – | 15,840 |
| Ohio | 3,612 | 5,293 | 37 | – | 5,330 | 770 | – | – | 9,711 |
| Oklahoma | – | * | – | – | * | – | – | – | * |
| Oregon | 16 | – | – | – | – | – | – | – | 16 |
| Pennsylvania | 249 | 880 | 11 | – | 891 | 30 | – | – | 1,169 |
| South Carolina | 12,017 | 27 | – | – | 27 | 57 | – | – | 12,100 |
| South Dakota | – | 3 | – | – | 3 | – | – | – | 3 |
| Tennessee | 6,659 | 1,351 | – | – | 1,351 | 1,470 | – | – | 9,480 |
| Texas | – | 38 | – | – | 38 | – | – | – | 38 |
| Virginia | 6,295 | 31 | – | 21 | 52 | 102 | – | – | 6,449 |
| West Virginia | 47 | 77 | – | – | 77 | 126 | – | – | 250 |
| Wisconsin | 85 | 246 | 450 | – | 696 | * | – | – | 781 |
| Unknown State | – | – | – | – | – | – | – | 435 | 435 |
| Foreign | 152 | – | 584 | 5,961 | 6,545 | 3 | – | – | 6,700 |
| **Kentucky, Western** | **6,780** | **21,573** | **–** | **520** | **22,093** | **4,644** | **–** | **33** | **33,550** |
| Alabama | 481 | 1,318 | – | – | 1,318 | – | – | – | 1,798 |
| Arkansas | – | – | – | – | – | 4 | – | – | 4 |
| Florida | 99 | 3,705 | – | – | 3,705 | – | – | – | 3,804 |
| Illinois | – | 16 | – | – | 16 | 87 | – | – | 103 |
| Indiana | – | 245 | – | – | 245 | 11 | – | – | 257 |
| Iowa | – | 320 | – | – | 320 | – | – | – | 320 |
| Kentucky | 4,837 | 4,891 | – | – | 4,891 | 4,440 | – | – | 14,169 |
| Louisiana | – | 108 | – | – | 108 | – | – | – | 108 |
| Maryland | – | 2 | – | – | 2 | – | – | – | 2 |
| Missouri | – | 30 | – | – | 30 | – | – | – | 30 |
| Ohio | – | 30 | – | – | 30 | – | – | – | 30 |
| Tennessee | 1,179 | 10,908 | – | – | 10,908 | 101 | – | – | 12,188 |
| Virginia | – | – | – | – | – | * | – | – | * |
| Wisconsin | 185 | – | – | – | – | – | – | – | 185 |
| Unknown State | – | – | – | – | – | – | – | 33 | 33 |
| Foreign | – | – | – | 520 | 520 | – | – | – | 520 |
| **Louisiana** | **–** | **–** | **–** | **–** | **–** | **1,011** | **2,534** | **–** | **3,545** |
| Louisiana | – | – | – | – | – | 1,011 | 2,534 | – | 3,545 |
| **Maryland** | **2,745** | **–** | **–** | **236** | **236** | **1,125** | **–** | **10** | **4,116** |
| Maryland | 578 | – | – | – | – | 377 | – | – | 955 |
| Pennsylvania | – | – | – | – | – | 24 | – | – | 24 |
| Virginia | – | – | – | – | – | 163 | – | – | 163 |
| West Virginia | 2,168 | – | – | – | – | 562 | – | – | 2,730 |
| Unknown State | – | – | – | – | – | – | – | 10 | 10 |
| Foreign | – | – | – | 236 | 236 | – | – | – | 236 |
| **Missouri** | **9** | **–** | **–** | **–** | **–** | **389** | **–** | **3** | **401** |
| Arkansas | 9 | – | – | – | – | – | – | – | 9 |
| Kansas | – | – | – | – | – | 40 | – | – | 40 |
| Missouri | – | – | – | – | – | 349 | – | – | 349 |
| Unknown State | – | – | – | – | – | – | – | 3 | 3 |
| **Montana** | **24,673** | **238** | **6,572** | **218** | **7,028** | **524** | **8,708** | **9** | **40,942** |
| Illinois | 1,545 | – | – | – | – | – | – | – | 1,545 |
| Indiana | 1,259 | – | – | – | – | – | – | – | 1,259 |
| Iowa | 105 | – | – | – | – | – | – | – | 105 |
| Kansas | 104 | – | – | – | – | – | – | – | 104 |
| Michigan | 4,643 | – | 6,089 | – | 6,089 | 134 | – | – | 10,866 |
| Minnesota | 8,411 | 238 | 154 | – | 392 | 45 | – | – | 8,847 |
| Mississippi | 3,235 | – | – | – | – | – | – | – | 3,235 |
| Montana | – | – | – | – | – | 310 | 8,708 | – | 9,019 |

See footnotes at end of table.

## Table 65. Distribution of U.S. Coal by Origin, Destination, and Method of Transportation, 1997 (Continued)

(Thousand Short Tons)

| Origin State and Destination State | Railroad | Water | | | | Truck | Tramway, Conveyor, and Slurry Pipeline | Unknown | Total |
|---|---|---|---|---|---|---|---|---|---|
| | | River | Great Lakes | Tidewater | Total | | | | |
| **Montana (Continued)** | | | | | | | | | |
| Nebraska | 47 | – | – | – | – | – | – | – | 47 |
| North Dakota | 402 | – | – | – | – | – | – | – | 402 |
| Ohio | – | – | 42 | – | 42 | – | – | – | 42 |
| South Dakota | 1,867 | – | – | – | – | – | – | – | 1,867 |
| Washington | 333 | – | – | – | – | – | – | – | 333 |
| Wisconsin | 2,477 | – | 162 | – | 162 | 10 | – | – | 2,649 |
| Wyoming | 8 | – | – | – | – | 25 | – | – | 34 |
| Unknown State | – | – | – | – | – | – | – | 9 | 9 |
| Foreign | 236 | – | 125 | 218 | 343 | – | – | – | 579 |
| **New Mexico** | **20,485** | – | – | **25** | **25** | **6,867** | – | * | **27,377** |
| Arizona | 10,492 | – | – | – | – | * | – | – | 10,492 |
| Nebraska | 68 | – | – | – | – | – | – | – | 68 |
| New Mexico | 8,920 | – | – | – | – | 6,866 | – | – | 15,786 |
| Oklahoma | 108 | – | – | – | – | – | – | – | 108 |
| Texas | 375 | – | – | – | – | – | – | – | 375 |
| Wisconsin | 523 | – | – | – | – | – | – | – | 523 |
| Unknown State | – | – | – | – | – | – | – | * | * |
| Foreign | – | – | – | 25 | 25 | – | – | – | 25 |
| **North Dakota** | **350** | – | – | – | – | **4,277** | **24,545** | – | **29,172** |
| North Dakota | 350 | – | – | – | – | 4,277 | 24,545 | – | 29,172 |
| **Ohio** | **1,974** | **8,291** | – | **410** | **8,701** | **10,037** | **8,595** | **126** | **29,434** |
| Alabama | – | 69 | – | – | 69 | – | – | – | 69 |
| Indiana | 68 | 190 | – | – | 190 | 80 | – | – | 337 |
| Kentucky | – | 557 | – | – | 557 | 10 | – | – | 567 |
| Michigan | – | – | – | – | – | 303 | – | – | 303 |
| Minnesota | – | – | – | – | – | 7 | – | – | 7 |
| New York | 18 | – | – | – | – | – | – | – | 18 |
| Ohio | 1,730 | 4,840 | – | – | 4,840 | 9,356 | 8,595 | – | 24,521 |
| Pennsylvania | 158 | 313 | – | – | 313 | 281 | – | – | 752 |
| West Virginia | – | 2,322 | – | – | 2,322 | * | – | – | 2,323 |
| Unknown State | – | – | – | – | – | – | – | 126 | 126 |
| Foreign | – | – | – | 410 | 410 | – | – | – | 410 |
| **Oklahoma** | – | – | – | – | – | **1,678** | – | **10** | **1,688** |
| Arkansas | – | – | – | – | – | 160 | – | – | 160 |
| Kansas | – | – | – | – | – | 110 | – | – | 110 |
| Oklahoma | – | – | – | – | – | 1,260 | – | – | 1,260 |
| Texas | – | – | – | – | – | 148 | – | – | 148 |
| Unknown State | – | – | – | – | – | – | – | 10 | 10 |
| **Pennsylvania** | **25,595** | **13,202** | **4,657** | **6,333** | **24,192** | **20,434** | **3,140** | **364** | **73,725** |
| Alabama | 84 | 14 | – | – | 14 | 1 | – | – | 99 |
| Arizona | 3 | – | – | – | – | * | – | – | 3 |
| Arkansas | – | – | – | – | – | * | – | – | * |
| California | * | – | – | – | – | 1 | – | – | 1 |
| Colorado | 20 | – | – | – | – | * | – | – | 20 |
| Connecticut | * | 1 | – | – | 1 | 7 | – | – | 8 |
| Delaware | 626 | 29 | – | – | 29 | 8 | – | – | 663 |
| District of Columbia | – | – | – | – | – | * | – | – | * |
| Florida | 6 | – | – | – | – | * | – | – | 7 |
| Georgia | * | – | – | – | – | * | – | – | * |
| Illinois | 11 | – | – | – | – | 3 | – | – | 15 |
| Indiana | 28 | 520 | – | – | 520 | 7 | – | – | 555 |
| Iowa | 43 | 178 | – | – | 178 | – | – | – | 221 |
| Kansas | 1 | – | – | – | – | – | – | – | 1 |
| Kentucky | 8 | 344 | – | – | 344 | 10 | – | – | 362 |
| Louisiana | 8 | 11 | – | – | 11 | – | – | – | 18 |
| Maine | 7 | – | – | – | – | 3 | – | – | 10 |
| Maryland | 1,745 | – | – | – | – | 179 | – | – | 1,924 |
| Massachusetts | 489 | – | – | – | – | 22 | – | – | 511 |
| Michigan | 2,519 | 12 | 345 | – | 357 | 1 | – | – | 2,877 |
| Minnesota | 3 | – | – | – | – | * | – | – | 4 |
| Mississippi | * | – | – | – | – | * | – | – | * |
| Missouri | * | – | – | – | – | * | – | – | * |

See footnotes at end of table.

## Table 65. Distribution of U.S. Coal by Origin, Destination, and Method of Transportation, 1997 (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)** | | | | | | | | | |
| Nebraska | 4 | – | – | – | – | – | – | – | 4 |
| New Hampshire | 623 | – | – | 86 | 86 | 6 | – | – | 715 |
| New Jersey | 567 | – | – | – | – | 15 | – | – | 582 |
| New York | 2,858 | 32 | 496 | – | 528 | 629 | – | – | 4,014 |
| North Carolina | * | – | – | – | – | * | – | – | * |
| North Dakota | – | – | – | – | – | * | – | – | * |
| Ohio | 1,582 | 2,782 | 253 | – | 3,035 | 151 | – | – | 4,768 |
| Oklahoma | * | – | – | – | – | * | – | – | * |
| Oregon | 13 | – | – | – | – | * | – | – | 13 |
| Pennsylvania | 12,817 | 5,515 | 134 | – | 5,649 | 19,228 | 3,140 | – | 40,834 |
| Rhode Island | – | – | – | – | – | 3 | – | – | 3 |
| South Carolina | 30 | – | – | – | – | 2 | – | – | 31 |
| Tennessee | 1 | 864 | – | – | 864 | 7 | – | – | 872 |
| Texas | 3 | – | – | – | – | * | – | – | 4 |
| Utah | 201 | – | – | – | – | – | – | – | 201 |
| Vermont | * | – | – | – | – | 2 | – | – | 2 |
| Virginia | 218 | – | – | – | – | 14 | – | – | 232 |
| Washington | – | – | – | – | – | * | – | – | * |
| West Virginia | – | 2,902 | – | – | 2,902 | 121 | – | – | 3,023 |
| Wisconsin | 665 | – | 1,396 | – | 1,396 | 3 | – | – | 2,064 |
| Wyoming | 2 | – | – | – | – | – | – | – | 2 |
| Unknown State | – | – | – | – | – | – | – | 364 | 364 |
| Foreign | 407 | – | 2,034 | 6,247 | 8,281 | 10 | – | – | 8,698 |
| **Pennsylvania Anthracite** | **518** | **2** | **–** | **180** | **181** | **4,331** | **–** | **32** | **5,062** |
| Alabama | 2 | 2 | – | – | 2 | 1 | – | – | 4 |
| Arizona | 3 | – | – | – | – | * | – | – | 3 |
| Arkansas | – | – | – | – | – | * | – | – | * |
| California | * | – | – | – | – | 1 | – | – | 1 |
| Colorado | 20 | – | – | – | – | * | – | – | 20 |
| Connecticut | * | – | – | – | – | 7 | – | – | 7 |
| Delaware | * | – | – | – | – | 8 | – | – | 8 |
| District of Columbia | – | – | – | – | – | * | – | – | * |
| Florida | 6 | – | – | – | – | * | – | – | 7 |
| Georgia | * | – | – | – | – | * | – | – | * |
| Illinois | 11 | – | – | – | – | 3 | – | – | 15 |
| Indiana | * | – | – | – | – | 7 | – | – | 7 |
| Iowa | 43 | – | – | – | – | – | – | – | 43 |
| Kansas | 1 | – | – | – | – | – | – | – | 1 |
| Kentucky | 8 | – | – | – | – | 10 | – | – | 18 |
| Louisiana | 8 | – | – | – | – | – | – | – | 8 |
| Maine | * | – | – | – | – | 3 | – | – | 4 |
| Maryland | * | – | – | – | – | 3 | – | – | 3 |
| Massachusetts | 1 | – | – | – | – | 14 | – | – | 14 |
| Michigan | * | – | – | – | – | 1 | – | – | 1 |
| Minnesota | 3 | – | – | – | – | * | – | – | 4 |
| Mississippi | * | – | – | – | – | * | – | – | * |
| Missouri | * | – | – | – | – | * | – | – | * |
| Nebraska | 4 | – | – | – | – | – | – | – | 4 |
| New Hampshire | * | – | – | – | – | 5 | – | – | 5 |
| New Jersey | * | – | – | – | – | 15 | – | – | 15 |
| New York | 2 | – | – | – | – | 128 | – | – | 130 |
| North Carolina | * | – | – | – | – | * | – | – | * |
| North Dakota | – | – | – | – | – | * | – | – | * |
| Ohio | * | – | – | – | – | 12 | – | – | 13 |
| Oklahoma | * | – | – | – | – | * | – | – | * |
| Oregon | 13 | – | – | – | – | * | – | – | 13 |
| Pennsylvania | 53 | – | – | – | – | 4,038 | – | – | 4,091 |
| Rhode Island | – | – | – | – | – | 3 | – | – | 3 |
| South Carolina | 30 | – | – | – | – | 2 | – | – | 31 |
| Tennessee | 1 | – | – | – | – | 7 | – | – | 9 |
| Texas | 3 | – | – | – | – | * | – | – | 3 |
| Utah | 3 | – | – | – | – | – | – | – | 3 |
| Vermont | * | – | – | – | – | 2 | – | – | 2 |
| Virginia | * | – | – | – | – | 6 | – | – | 6 |
| Washington | – | – | – | – | – | * | – | – | * |
| West Virginia | – | – | – | – | – | 41 | – | – | 41 |

See footnotes at end of table.

## Table 65. Distribution of U.S. Coal by Origin, Destination, and Method of Transportation, 1997 (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)** | | | | | | | | | |
| Wisconsin | 3 | – | – | – | – | 3 | – | – | 6 |
| Wyoming | 2 | – | – | – | – | – | – | – | 2 |
| Unknown State | – | – | – | – | – | – | – | 32 | 32 |
| Foreign | 297 | – | – | 180 | 180 | 10 | – | – | 486 |
| **Pennsylvania Bituminous** | **25,077** | **13,201** | **4,657** | **6,153** | **24,011** | **16,103** | **3,140** | **333** | **68,664** |
| Alabama | 82 | 13 | – | – | 13 | – | – | – | 95 |
| Connecticut | – | 1 | – | – | 1 | * | – | – | 1 |
| Delaware | 626 | 29 | – | – | 29 | * | – | – | 655 |
| Indiana | 28 | 520 | – | – | 520 | – | – | – | 548 |
| Iowa | – | 178 | – | – | 178 | – | – | – | 178 |
| Kentucky | – | 344 | – | – | 344 | * | – | – | 344 |
| Louisiana | – | 11 | – | – | 11 | – | – | – | 11 |
| Maine | 6 | – | – | – | – | * | – | – | 7 |
| Maryland | 1,745 | – | – | – | – | 176 | – | – | 1,921 |
| Massachusetts | 489 | – | – | – | – | 8 | – | – | 497 |
| Michigan | 2,519 | 12 | 345 | – | 357 | – | – | – | 2,876 |
| New Hampshire | 623 | – | – | 86 | 86 | 1 | – | – | 710 |
| New Jersey | 567 | – | – | – | – | – | – | – | 567 |
| New York | 2,856 | 32 | 496 | – | 528 | 501 | – | – | 3,884 |
| Ohio | 1,582 | 2,782 | 253 | – | 3,035 | 139 | – | – | 4,756 |
| Pennsylvania | 12,764 | 5,515 | 134 | – | 5,649 | 15,190 | 3,140 | – | 36,743 |
| Tennessee | – | 864 | – | – | 864 | – | – | – | 864 |
| Texas | 1 | – | – | – | – | * | – | – | 1 |
| Utah | 199 | – | – | – | – | – | – | – | 199 |
| Vermont | – | – | – | – | – | * | – | – | * |
| Virginia | 218 | – | – | – | – | 8 | – | – | 226 |
| West Virginia | – | 2,902 | – | – | 2,902 | 80 | – | – | 2,982 |
| Wisconsin | 662 | – | 1,396 | – | 1,396 | – | – | – | 2,058 |
| Unknown State | – | – | – | – | – | – | – | 333 | 333 |
| Foreign | 110 | – | 2,034 | 6,067 | 8,102 | – | – | – | 8,212 |
| **Tennessee** | **1,481** | **213** | – | – | **213** | **1,071** | – | **2** | **2,767** |
| Alabama | 10 | 176 | – | – | 176 | 557 | – | – | 743 |
| Georgia | 73 | – | – | – | – | 17 | – | – | 90 |
| North Carolina | 45 | – | – | – | – | – | – | – | 45 |
| Ohio | – | – | – | – | – | * | – | – | * |
| South Carolina | – | 37 | – | – | 37 | – | – | – | 37 |
| Tennessee | 1,353 | – | – | – | – | 497 | – | – | 1,850 |
| Unknown State | – | – | – | – | – | – | – | 2 | 2 |
| **Texas** | **23,054** | – | – | – | – | **15,136** | **15,272** | – | **53,463** |
| Texas | 23,054 | – | – | – | – | 15,136 | 15,272 | – | 53,463 |
| **Utah** | **12,053** | **871** | – | **3,436** | **4,307** | **5,821** | **4,078** | **13** | **26,272** |
| Arizona | 72 | – | – | – | – | 7 | – | – | 78 |
| California | 2,716 | – | – | – | – | 2 | – | – | 2,718 |
| Colorado | – | – | – | – | – | 3 | – | – | 3 |
| Hawaii | – | – | – | 21 | 21 | – | – | – | 21 |
| Idaho | * | – | – | – | – | 39 | – | – | 39 |
| Illinois | 1,446 | – | – | – | – | – | – | – | 1,446 |
| Massachusetts | – | – | – | – | – | 90 | – | – | 90 |
| Missouri | 140 | – | – | – | – | – | – | – | 140 |
| Montana | 7 | – | – | – | – | 20 | – | – | 27 |
| Nevada | 2,407 | – | – | – | – | 219 | – | – | 2,626 |
| Oregon | 6 | – | – | – | – | 1 | – | – | 7 |
| Tennessee | 650 | 871 | – | – | 871 | – | – | – | 1,521 |
| Utah | 4,419 | – | – | – | – | 5,439 | 4,078 | – | 13,936 |
| Washington | 118 | – | – | – | – | 2 | – | – | 119 |
| Wisconsin | 72 | – | – | – | – | – | – | – | 72 |
| Unknown State | – | – | – | – | – | – | – | 13 | 13 |
| Foreign | – | – | – | 3,414 | 3,414 | – | – | – | 3,414 |
| **Virginia** | **15,675** | **4,240** | – | **13,134** | **17,375** | **1,336** | **1,011** | **22** | **35,419** |

See footnotes at end of table.

## Table 65. Distribution of U.S. Coal by Origin, Destination, and Method of Transportation, 1997 (Continued)

(Thousand Short Tons)

| Origin State and Destination State | Railroad | Water | | | | Truck | Tramway, Conveyor, and Slurry Pipeline | Unknown | Total |
|---|---|---|---|---|---|---|---|---|---|
| | | River | Great Lakes | Tidewater | Total | | | | |
| **Virginia (Continued)** | | | | | | | | | |
| Alabama | 1,036 | 21 | – | – | 21 | – | – | – | 1,057 |
| California | – | – | – | – | – | * | – | – | * |
| Connecticut | – | – | – | 5 | 5 | – | – | – | 5 |
| Delaware | 179 | – | – | – | – | – | – | – | 179 |
| Florida | 451 | – | – | – | – | – | – | – | 451 |
| Georgia | 1,860 | – | – | – | – | – | – | – | 1,860 |
| Illinois | 62 | 615 | – | – | 615 | – | – | – | 677 |
| Indiana | 706 | 881 | – | – | 881 | – | – | – | 1,587 |
| Kentucky | – | 18 | – | – | 18 | – | – | – | 18 |
| Maryland | – | – | – | – | – | * | – | – | * |
| Michigan | – | – | – | – | – | * | – | – | * |
| Mississippi | 8 | – | – | – | – | – | – | – | 8 |
| New Hampshire | 10 | – | – | – | – | – | – | – | 10 |
| New Jersey | 9 | – | – | 796 | 796 | * | – | – | 805 |
| New York | 13 | – | – | – | – | – | – | – | 13 |
| North Carolina | 780 | – | – | – | – | 60 | – | – | 840 |
| Ohio | 471 | 746 | – | – | 746 | 3 | – | – | 1,220 |
| Pennsylvania | 803 | 1,842 | – | – | 1,842 | 5 | – | – | 2,651 |
| South Carolina | 1,489 | – | – | – | – | 3 | – | – | 1,492 |
| Tennessee | 2,190 | – | – | – | – | 13 | – | – | 2,203 |
| Texas | 14 | – | – | – | – | – | – | – | 14 |
| Utah | 298 | – | – | – | – | * | – | – | 298 |
| Virginia | 4,940 | – | – | – | – | 745 | 1,011 | – | 6,695 |
| West Virginia | 353 | 118 | – | – | 118 | * | – | – | 471 |
| Unknown State | – | – | – | – | – | – | – | 22 | 22 |
| Foreign | * | – | – | 12,333 | 12,333 | 507 | – | – | 12,841 |
| **Washington** | – | – | – | **14** | **14** | **53** | **4,428** | – | **4,495** |
| Oregon | – | – | – | – | – | * | – | – | * |
| Washington | – | – | – | – | – | 53 | 4,428 | – | 4,480 |
| Foreign | – | – | – | 14 | 14 | * | – | – | 14 |
| **West Virginia** | **69,488** | **46,359** | **9,195** | **37,616** | **93,170** | **5,868** | **3,338** | **365** | **172,230** |
| Alabama | 1,829 | 1,684 | – | – | 1,684 | 7 | – | – | 3,520 |
| Connecticut | – | – | – | 823 | 823 | – | – | – | 823 |
| Delaware | 886 | – | – | – | – | 6 | – | – | 892 |
| District of Columbia | 17 | 20 | – | – | 20 | 3 | – | – | 40 |
| Florida | 710 | 647 | – | 1,071 | 1,718 | 77 | – | – | 2,506 |
| Georgia | 4,969 | – | – | – | – | – | – | – | 4,969 |
| Illinois | 682 | 858 | 240 | – | 1,098 | 27 | – | – | 1,807 |
| Indiana | 5,097 | 829 | – | – | 829 | 4 | – | – | 5,930 |
| Iowa | 29 | 90 | – | – | 90 | – | – | – | 119 |
| Kentucky | 2,287 | 4,486 | – | – | 4,486 | 191 | – | – | 6,964 |
| Louisiana | – | 299 | – | – | 299 | * | – | – | 299 |
| Maine | 1 | – | – | – | – | * | – | – | 1 |
| Maryland | 4,650 | – | – | 2,640 | 2,640 | 178 | – | – | 7,469 |
| Massachusetts | 477 | – | – | 1,429 | 1,429 | * | – | – | 1,906 |
| Michigan | 5,154 | 143 | 796 | – | 940 | – | – | – | 6,094 |
| Minnesota | – | 76 | 11 | – | 87 | – | – | – | 87 |
| Mississippi | – | 19 | 1 | – | 20 | – | – | – | 20 |
| Missouri | – | 39 | – | – | 39 | – | – | – | 39 |
| New Hampshire | 272 | – | – | 68 | 68 | – | – | – | 340 |
| New Jersey | 935 | 86 | – | 836 | 922 | * | – | – | 1,857 |
| New York | 6,075 | 169 | – | – | 169 | 24 | – | – | 6,268 |
| North Carolina | 9,740 | – | – | – | – | * | – | – | 9,740 |
| Ohio | 6,476 | 13,192 | 182 | – | 13,373 | 363 | – | – | 20,212 |
| Oklahoma | – | 26 | – | 10 | 36 | 11 | – | – | 47 |
| Oregon | 10 | – | – | – | – | – | – | – | 10 |
| Pennsylvania | 3,041 | 11,998 | 121 | – | 12,119 | 390 | – | – | 15,550 |
| Rhode Island | – | – | – | – | – | * | – | – | * |
| South Carolina | 84 | – | – | – | – | 16 | – | – | 100 |
| Tennessee | 32 | 597 | – | – | 597 | 2 | – | – | 631 |
| Texas | – | – | – | 2 | 2 | – | – | – | 2 |
| Utah | 229 | – | – | – | – | – | – | – | 229 |
| Virginia | 4,046 | – | – | 141 | 141 | 754 | – | – | 4,941 |
| West Virginia | 10,952 | 11,031 | – | – | 11,031 | 3,813 | 3,338 | – | 29,135 |
| Wisconsin | 49 | 39 | 772 | – | 811 | 2 | – | – | 861 |
| Unknown State | – | – | – | – | – | – | – | 365 | 365 |

See footnotes at end of table.

## Table 65. Distribution of U.S. Coal by Origin, Destination, and Method of Transportation, 1997 (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)** | | | | | | | | | |
| Foreign | 759 | 30 | 7,073 | 30,597 | 37,700 | – | – | – | 38,459 |
| **West Virginia, Northern** | **15,297** | **16,144** | **3,032** | **4,575** | **23,752** | **3,862** | **3,338** | **68** | **46,316** |
| Alabama | – | 442 | – | – | 442 | – | – | – | 442 |
| Connecticut | – | – | – | 687 | 687 | – | – | – | 687 |
| Delaware | 436 | – | – | – | – | 6 | – | – | 442 |
| District of Columbia | – | – | – | – | – | 3 | – | – | 3 |
| Florida | 532 | – | – | – | – | 77 | – | – | 610 |
| Indiana | 104 | 53 | – | – | 53 | – | – | – | 157 |
| Kentucky | – | 1,424 | – | – | 1,424 | – | – | – | 1,424 |
| Louisiana | – | 282 | – | – | 282 | – | – | – | 282 |
| Maine | 1 | – | – | – | – | – | – | – | 1 |
| Maryland | 3,963 | – | – | 720 | 720 | 178 | – | – | 4,862 |
| Massachusetts | 51 | – | – | 81 | 81 | – | – | – | 132 |
| Michigan | 526 | – | 153 | – | 153 | – | – | – | 679 |
| New Hampshire | 272 | – | – | 68 | 68 | – | – | – | 340 |
| New Jersey | 838 | 86 | – | 441 | 527 | * | – | – | 1,365 |
| New York | 4,708 | – | – | – | – | – | – | – | 4,708 |
| Ohio | 1,548 | 2,584 | 23 | – | 2,607 | – | – | – | 4,155 |
| Pennsylvania | 1,396 | 7,156 | 121 | – | 7,276 | 227 | – | – | 8,900 |
| Virginia | 42 | – | – | – | – | 593 | – | – | 635 |
| West Virginia | 848 | 4,117 | – | – | 4,117 | 2,778 | 3,338 | – | 11,080 |
| Wisconsin | 30 | – | 492 | – | 492 | – | – | – | 522 |
| Unknown State | – | – | – | – | – | – | – | 68 | 68 |
| Foreign | – | – | 2,244 | 2,578 | 4,822 | – | – | – | 4,822 |
| **West Virginia, Southern** | **54,192** | **30,215** | **6,163** | **33,041** | **69,419** | **2,006** | **–** | **297** | **125,914** |
| Alabama | 1,829 | 1,242 | – | – | 1,242 | 7 | – | – | 3,078 |
| Connecticut | – | – | – | 135 | 135 | – | – | – | 135 |
| Delaware | 450 | – | – | – | – | – | – | – | 450 |
| District of Columbia | 17 | 20 | – | – | 20 | – | – | – | 37 |
| Florida | 178 | 647 | – | 1,071 | 1,718 | – | – | – | 1,896 |
| Georgia | 4,969 | – | – | – | – | – | – | – | 4,969 |
| Illinois | 682 | 858 | 240 | – | 1,098 | 27 | – | – | 1,807 |
| Indiana | 4,993 | 776 | – | – | 776 | 4 | – | – | 5,773 |
| Iowa | 29 | 90 | – | – | 90 | – | – | – | 119 |
| Kentucky | 2,287 | 3,062 | – | – | 3,062 | 191 | – | – | 5,540 |
| Louisiana | – | 18 | – | – | 18 | * | – | – | 18 |
| Maine | – | – | – | – | – | * | – | – | * |
| Maryland | 687 | – | – | 1,920 | 1,920 | – | – | – | 2,607 |
| Massachusetts | 426 | – | – | 1,348 | 1,348 | * | – | – | 1,774 |
| Michigan | 4,628 | 143 | 643 | – | 787 | – | – | – | 5,415 |
| Minnesota | – | 76 | 11 | – | 87 | – | – | – | 87 |
| Mississippi | – | 19 | 1 | – | 20 | – | – | – | 20 |
| Missouri | – | 39 | – | – | 39 | – | – | – | 39 |
| New Jersey | 97 | – | – | 395 | 395 | * | – | – | 492 |
| New York | 1,367 | 169 | – | – | 169 | 24 | – | – | 1,560 |
| North Carolina | 9,740 | – | – | – | – | * | – | – | 9,740 |
| Ohio | 4,928 | 10,607 | 159 | – | 10,766 | 363 | – | – | 16,057 |
| Oklahoma | – | 26 | – | 10 | 36 | 11 | – | – | 47 |
| Oregon | 10 | – | – | – | – | – | – | – | 10 |
| Pennsylvania | 1,645 | 4,843 | – | – | 4,843 | 163 | – | – | 6,651 |
| Rhode Island | – | – | – | – | – | * | – | – | * |
| South Carolina | 84 | – | – | – | – | 16 | – | – | 100 |
| Tennessee | 32 | 597 | – | – | 597 | 2 | – | – | 631 |
| Texas | – | – | – | 2 | 2 | – | – | – | 2 |
| Utah | 229 | – | – | – | – | – | – | – | 229 |
| Virginia | 4,004 | – | – | 141 | 141 | 161 | – | – | 4,306 |
| West Virginia | 10,104 | 6,914 | – | – | 6,914 | 1,036 | – | – | 18,054 |
| Wisconsin | 19 | 39 | 280 | – | 319 | 2 | – | – | 340 |
| Unknown State | – | – | – | – | – | – | – | 297 | 297 |
| Foreign | 759 | 30 | 4,828 | 28,019 | 32,878 | – | – | – | 33,637 |
| **Wyoming** | **248,064** | **14,696** | **1,635** | **1,723** | **18,055** | **2,995** | **11,670** | **12** | **280,795** |

See footnotes at end of table.

## Table 65. Distribution of U.S. Coal by Origin, Destination, and Method of Transportation, 1997 (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)** | | | | | | | | | |
| Alabama | 5,205 | – | – | – | – | – | – | – | 5,205 |
| Arizona | 57 | – | – | – | – | – | – | – | 57 |
| Arkansas | 11,600 | – | – | – | – | – | – | – | 11,600 |
| California | 29 | – | – | – | – | – | – | – | 29 |
| Colorado | 6,651 | – | – | – | – | 41 | – | – | 6,692 |
| Florida | 971 | – | – | – | – | – | – | – | 971 |
| Georgia | 5,688 | – | – | – | – | – | – | – | 5,688 |
| Idaho | 296 | – | – | – | – | 28 | – | – | 324 |
| Illinois | 20,528 | – | – | – | – | – | – | – | 20,528 |
| Indiana | 16,451 | – | – | – | – | – | – | – | 16,451 |
| Iowa | 17,045 | 548 | – | – | 548 | – | – | – | 17,593 |
| Kansas | 11,759 | – | – | – | – | – | – | – | 11,759 |
| Louisiana | 3,877 | 5,750 | – | – | 5,750 | – | – | – | 9,628 |
| Michigan | 9,558 | – | – | – | – | – | – | – | 9,558 |
| Minnesota | 8,460 | – | 725 | – | 725 | 38 | – | – | 9,224 |
| Mississippi | 291 | – | – | – | – | – | – | – | 291 |
| Missouri | 24,916 | 8,384 | – | – | 8,384 | – | – | – | 33,300 |
| Montana | 572 | – | – | – | – | – | – | – | 572 |
| Nebraska | 9,198 | – | – | – | – | – | – | – | 9,198 |
| Nevada | 17 | – | – | – | – | – | – | – | 17 |
| North Carolina | 40 | – | – | – | – | – | – | – | 40 |
| North Dakota | 144 | – | – | – | – | * | – | – | 144 |
| Ohio | 1,426 | – | 54 | – | 54 | – | – | – | 1,481 |
| Oklahoma | 18,462 | – | – | – | – | – | – | – | 18,462 |
| Oregon | 966 | – | – | – | – | – | – | – | 966 |
| South Dakota | – | – | – | – | – | 410 | – | – | 410 |
| Tennessee | 2,330 | – | – | – | – | – | – | – | 2,330 |
| Texas | 41,023 | 14 | – | – | 14 | – | – | – | 41,037 |
| Utah | – | – | – | – | – | * | – | – | * |
| Washington | 1 | – | – | – | – | – | – | – | 1 |
| West Virginia | – | – | – | – | – | 7 | – | – | 7 |
| Wisconsin | 17,886 | – | 40 | – | 40 | – | – | – | 17,925 |
| Wyoming | 12,616 | – | – | – | – | 2,470 | 11,670 | – | 26,756 |
| Unknown State | – | – | – | – | – | – | – | 12 | 12 |
| Foreign | 2 | – | 816 | 1,723 | 2,539 | – | – | – | 2,541 |
| **U.S. Total** | **617,287** | **136,584** | **24,551** | **79,651** | **240,785** | **122,708** | **96,128** | **1,492** | **1,078,401** |
| Alabama | 17,573 | 6,144 | – | – | 6,144 | 4,562 | 3,777 | – | 32,056 |
| Alaska | 544 | – | – | – | – | 200 | – | – | 743 |
| Arizona | 17,338 | – | – | – | – | 13 | – | – | 17,351 |
| Arkansas | 11,737 | – | – | – | – | 183 | – | – | 11,921 |
| California | 2,792 | – | – | – | – | 2 | – | – | 2,794 |
| Colorado | 14,444 | – | – | – | – | 4,578 | – | – | 19,022 |
| Connecticut | 39 | 1 | – | 1,543 | 1,543 | 7 | – | – | 1,590 |
| Delaware | 1,692 | 29 | – | – | 29 | 14 | – | – | 1,734 |
| District of Columbia | 17 | 20 | – | – | 20 | 3 | – | – | 40 |
| Florida | 17,108 | 8,488 | – | 1,956 | 10,444 | 139 | – | – | 27,692 |
| Georgia | 29,440 | 9 | – | – | 9 | 148 | – | – | 29,597 |
| Hawaii | – | – | – | 21 | 21 | – | – | – | 21 |
| Idaho | 296 | – | – | – | – | 67 | – | – | 363 |
| Illinois | 40,356 | 2,742 | 240 | – | 2,982 | 6,284 | 25 | – | 49,647 |
| Indiana | 44,711 | 3,536 | 161 | – | 3,697 | 13,612 | 610 | – | 62,630 |
| Iowa | 18,319 | 1,801 | – | – | 1,801 | 219 | – | – | 20,339 |
| Kansas | 13,257 | – | – | – | – | 504 | – | – | 13,761 |
| Kentucky | 9,557 | 14,170 | – | – | 14,170 | 9,483 | – | – | 33,209 |
| Louisiana | 3,885 | 7,233 | – | – | 7,233 | 1,011 | 2,534 | – | 14,663 |
| Maine | 124 | – | – | 295 | 295 | 3 | – | – | 423 |
| Maryland | 7,097 | 17 | – | 2,640 | 2,658 | 734 | – | – | 10,489 |
| Massachusetts | 1,308 | 1 | – | 1,803 | 1,804 | 113 | – | – | 3,225 |
| Michigan | 27,424 | 298 | 8,415 | – | 8,712 | 493 | – | – | 36,629 |
| Minnesota | 17,038 | 431 | 926 | – | 1,357 | 90 | – | – | 18,485 |
| Mississippi | 5,750 | 308 | 1 | – | 309 | 82 | – | – | 6,141 |
| Missouri | 27,922 | 8,599 | – | – | 8,599 | 1,376 | – | – | 37,897 |
| Montana | 579 | – | – | – | – | 331 | 8,708 | – | 9,617 |
| Nebraska | 9,382 | – | – | – | – | – | – | – | 9,382 |
| Nevada | 2,493 | – | – | – | – | 219 | 4,398 | – | 7,110 |
| New Hampshire | 905 | – | – | 154 | 154 | 6 | – | – | 1,064 |

See footnotes at end of table.

## Table 65. Distribution of U.S. Coal by Origin, Destination, and Method of Transportation, 1997 (Continued)

(Thousand Short Tons)

| Origin State and Destination State | Railroad | Water | | | | Truck | Tramway, Conveyor, and Slurry Pipeline | Unknown | Total |
|---|---|---|---|---|---|---|---|---|---|
| | | River | Great Lakes | Tidewater | Total | | | | |
| **U.S. Total (Continued)** | | | | | | | | | |
| New Jersey | 1,510 | 86 | – | 1,723 | 1,809 | 15 | – | – | 3,334 |
| New Mexico | 8,920 | – | – | – | – | 6,966 | – | – | 15,885 |
| New York | 10,400 | 246 | 496 | 12 | 754 | 653 | – | – | 11,807 |
| North Carolina | 24,619 | 1,226 | – | – | 1,226 | 660 | – | – | 26,505 |
| North Dakota | 895 | – | – | – | – | 4,277 | 24,545 | – | 29,717 |
| Ohio | 15,297 | 26,887 | 568 | – | 27,454 | 10,643 | 8,595 | – | 61,990 |
| Oklahoma | 18,570 | 28 | – | 10 | 38 | 1,271 | – | – | 19,879 |
| Oregon | 1,078 | – | – | – | – | 1 | – | – | 1,079 |
| Pennsylvania | 17,069 | 20,913 | 265 | – | 21,179 | 19,958 | 3,140 | – | 61,345 |
| Rhode Island | – | – | – | – | – | 3 | – | – | 3 |
| South Carolina | 13,620 | 64 | – | – | 64 | 77 | – | – | 13,761 |
| South Dakota | 1,867 | 3 | – | – | 3 | 410 | – | – | 2,281 |
| Tennessee | 18,335 | 15,792 | – | – | 15,792 | 2,944 | – | – | 37,071 |
| Texas | 66,737 | 52 | – | 2 | 53 | 15,290 | 15,272 | – | 97,353 |
| Utah | 7,258 | – | – | – | – | 5,439 | 4,078 | – | 16,775 |
| Vermont | 107 | – | – | – | – | 2 | – | – | 110 |
| Virginia | 15,498 | 31 | – | 162 | 193 | 1,777 | 1,011 | – | 18,479 |
| Washington | 476 | – | – | – | – | 54 | 4,428 | – | 4,958 |
| West Virginia | 13,520 | 16,451 | – | – | 16,451 | 4,630 | 3,338 | – | 37,938 |
| Wisconsin | 23,049 | 949 | 2,847 | – | 3,796 | 15 | – | – | 26,860 |
| Wyoming | 12,626 | – | – | – | – | 2,626 | 11,670 | – | 26,922 |
| Unknown State | – | – | – | – | – | – | – | 1,492 | 1,492 |
| Foreign | 2,708 | 30 | 10,632 | 69,330 | 79,992 | 520 | – | – | 83,220 |

* 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

U.S. coal consumption during 1997 reached a record 1,029.3 million short tons, surpassing by 2.4 percent the previous record of 1,005.6 million short tons consumed during 1996. Compared with 1996, the amount of coal consumed by U.S. electric utilities during 1997 increased 2.9 percent to a record 900.4 million short tons, accounting for 87.5 percent of domestic coal consumption. In contrast, compared with 1996, coal consumption at U.S. coke plants declined 4.7 percent to 30.2 million short tons, while the amount of coal consumed at other industrial plants declined 0.5 percent to 70.6 million short tons.

### *Electric Utility Use*

Forty-six percent of the overall increase in electric utility coal consumption during 1997 was attributable to increases in the amount of coal consumed at electric utility generating plants located in the East North Central and South Atlantic Census Divisions. Collectively, electric utilities in these Divisions consumed 359.8 million short tons of the coal during 1997, representing 40 percent of total 1997 electric utility coal consumption.

In the East North Central Division, electric utiltiy coal consumption increased by 2.7 percent to 204.3 million short tons as electric utilities in Illinois, Wisconsin, and Indiana increased generation from coal-fired generators to offset reduced generation from nuclear generating units. By comparison, in the South Atlantic Division, electric utility coal consumption increased by 4.1 percent to 155.5 million short tons primarily in response to increased electricity demand.

Similarily, rising electricity demand contributed to increased coal consumption by electric utilities in the West South Central Division, where electric utility coal consumption rose 2.6 percent to 144.2 million short tons, and in the East South Central Division, where coal consumption by electric utilities increased by 2.9 percent to 99.6 million short tons.

In the West North Central Division, electric utility coal consumption increased by 1.3 percent to 124.0 million short tons as net generation from coal units increased in response to rising electricity demand coupled with decreased generation from nuclear units in Minnesota and Nebraska.

Compared with 1996, electric utiltiy coal consumption in the Mountain Division increased by 3.6 percent to 105.2 million short tons, primarily as a result of increased generation from coal-fired units in Arizona, Montana, and Utah.

### *Coke Plant Use*

Although coal consumption at coke plants declined throughout the med U.S. in 1997, coke plants in Pennsylvania and Indiana remained the Nation's leading consumers of coking coal, collectively consuming 16.0 million short tons of coal, representing 53.1 percent of the coal consumed at U.S. coke plants during 1997.

### *Other Uses*

Compared with 1996, the amount of coal consumed during 1997 at industrial facilities other than coke plants declined in all Census divisions except the Mountain Division, where coal consumption at these Other Industrial facilities increased 13.6 percent to 4.7 million short tons. Coal consumption in the residential and commercial sectors during 1997 increased 8.0 percent to reach 6.5 million short tons.

### *Coal Stocks*

Stocks of coal held by domestic consumers at the close of 1997 totaled 106.8 million short tons, representing a decline of 13.1 percent compared with the 123.0 million short tons held in stock at the end of 1996. Compared with 1996, year-end coal stocks at electric utility plants declined 13.8 percent to 98.8 million short tons, while coal stocks at coke plants declined 9.4 percent to 2.4 million short tons. By comparison, coal stocks at other industrial plants remained relatively constant at 5.6 million shor tons.

### *Foreign Markets*

U.S. coal exports during 1997 totaled 83.5 million short tons, 7.6 percent less than the 90.5 million short tons exported during 1996. Compared with 1996, exports of metallurgical coal declined 1.5 percent to 52.2 million short tons, while exports of steam coal declined 16.3 percent to 31.4 million short tons.

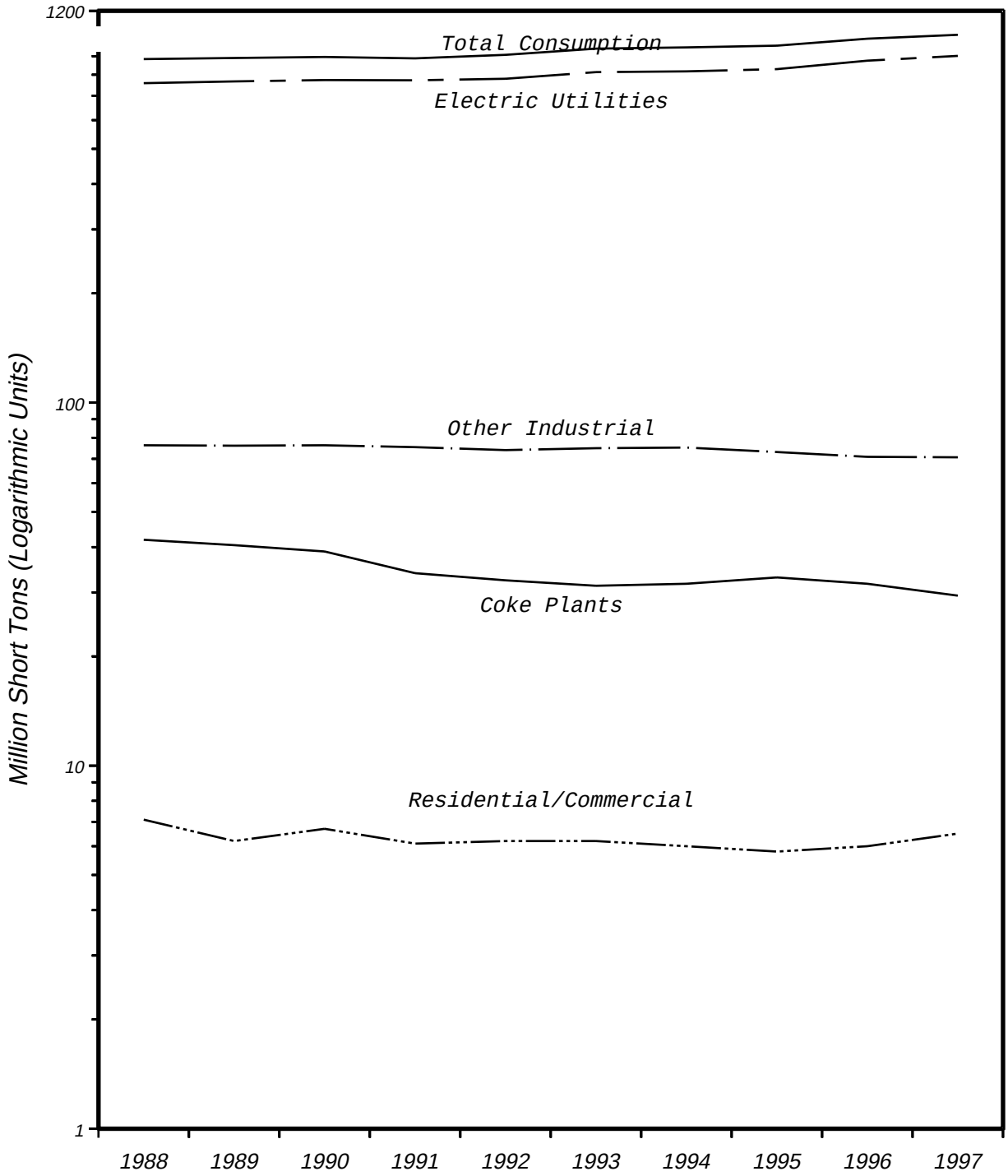
Brazil remained the leading destination for U.S. metallurgical coal exported during 1997, with shipments totaling 7.4 million short tons, representing

14.1 percent of total 1997 metallurgical coal exports. Since 1993, U.S. exports of metallurgical coal to Brazil have increased at an average annual rate of 10 percent.

Exports of U.S. metallurgical coal to Europe during 1997 totaled 28.8 million short tons, an increase of 1.9 percent compared with 1996. Exports of metallurgical coal to Romania increased by 42.1 percent to 2.1 million short tons, while exports to the United Kingdom increased by 17.3 percent to 3.6 million short tons.

Compared with 1996, U.S. steam coal exports to Europe during 1997 declined 33.8 percent reflecting reduced steam coal exports to all major European nations except the United Kingdom. In North America, steam coal exports to Canada increased 68.1 percent to 10.1 million short tons, while steam coal exports to Mexico increased 38.2 percent to 1.4 million short tons.

**Figure 9. U.S. Coal Consumption, 1988-1997**




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, 1997

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

See footnotes at end of table.

## Table 66. Major U.S. Coal Consumers, 1997 (Continued)

| Company Name | Plant Location |
|---|---|
| **Top Ten Manufacturers** | |
| Aluminum Company of America | (IN) (OH) (TN) (TX) |
| Archer Daniels Midland | (IA) (IL) (MN) |
| Basin Electric Power Coop | (ND) |
| Champion International Corp | (AL) (FL) (ME) (MI) (MN) (NC) (NY) (OH) |
| E I Du Pont De Nemours & Co | (DE) (MS) (NC) (SC) (TN) (VA) (WV) |
| Eastman Chemical Company | (AR) (NY) (SC) (TN) (TX) |
| Hoechst AG | (SC) (TX) (VA) |
| Holnam Inc | (AL) (CO) (IA) (MI) (MO) (MS) (SC) (UT) (WA) |
| Inland Steel Industries Inc | (IN) |
| Westvaco Corporation | (MD) (PA) (SD) (VA) |
| **Other Major Manufacturers** | |
| A E Staley Manufacturing Co | (IL) (IN) (TN) |
| American Crystal Sugar Co | (MN) (ND) |
| Applied Energy Services Inc | (PA) |
| Ash Grove Cement Company | (AR) (KS) (MT) (NE) (OR) (TX) (UT) |
| Blue Circle Inc | (AL) (GA) (NY) (OK) (SC) |
| Cargill Incorporated | (GA) (IA) (MI) (MN) (NC) (OH) (TN) (VA) |
| Consolidated Papers Inc | (WI) |
| Dravo Corporation | (AL) (KY) |
| Elkem A/S | (OH) (WV) |
| Florida Crushed Stone | (FL) |
| Fort James Corporation | (GA) (OK) (WI) |
| FMC Corporation | (NC) (WV) (WY) |
| General Chemical Corporation | (WY) |
| General Motors Corporation | (AL) (IL) (IN) (MI) (MO) (OH) (WI) |
| Georgia-Pacific Corp | (AR) (GA) (MI) (VA) |
| International Paper Company | (AL) (LA) (PA) (SC) (WI) |
| Jefferson Smurfit Corp | (AL) (FL) (IL) (IN) (OH) (PA) |
| Kerr-McGee Corporation | (CA) |
| Kimberly Clark Corporation | (AL) (MI) (PA) (WI) |
| Lafarge Corporation | (IA) (IL) (KS) (MI) (MO) (PA) |
| Lone Star Industries, Inc | (FL) (IL) (IN) (MO) (OK) (TX) |
| Mead Corporation | (MI) (OH) (TN) |
| Monsanto Company | (AL) (IA) (ID) (IL) (MA) (WV) |
| P H Glatfelter Co | (NC) (PA) |
| PPG Industries Inc | (WV) |
| Societe Des Ciments Francais | (IN) (MD) (PA) |
| Solvay Minerals, Inc. | (OH) (TN) (WY) |
| Southdown Inc | (CA) (CO) (FL) (OH) (TN) |
| Stone Container Corporation | (AZ) (FL) (MI) (SC) (VA) |
| Union Camp Corporation | (AL) (GA) (SC) (VA) |
| **Top Ten Coke Producers** | |
| AK Steel Corp | (KY) (OH) |
| Bethlehem Steel Corp | (IN) (MD) (NY) (PA) |
| Citizens Gas & Coke Utility | (IN) |
| Drummond Company Inc | (AL) |
| Geneva Steel Company | (UT) |
| LTV Steel Company Inc | (IL) (IN) (OH) (PA) |
| National Steel Corp. | (IL) (MI) |
| Sun Coal Co | (VA) |
| USX Corporation | (IN) (PA) |
| Wheeling Pittsburgh Steel Corp | (WV) |

Note: Major electric utility coal consumers are companies that consumed more than 4.12 million short tons of coal in 1997. 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. Electric utilities are ranked by consumption and manufacturers and coke producers 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, 1988, 1993-1997

(Thousand Short Tons)

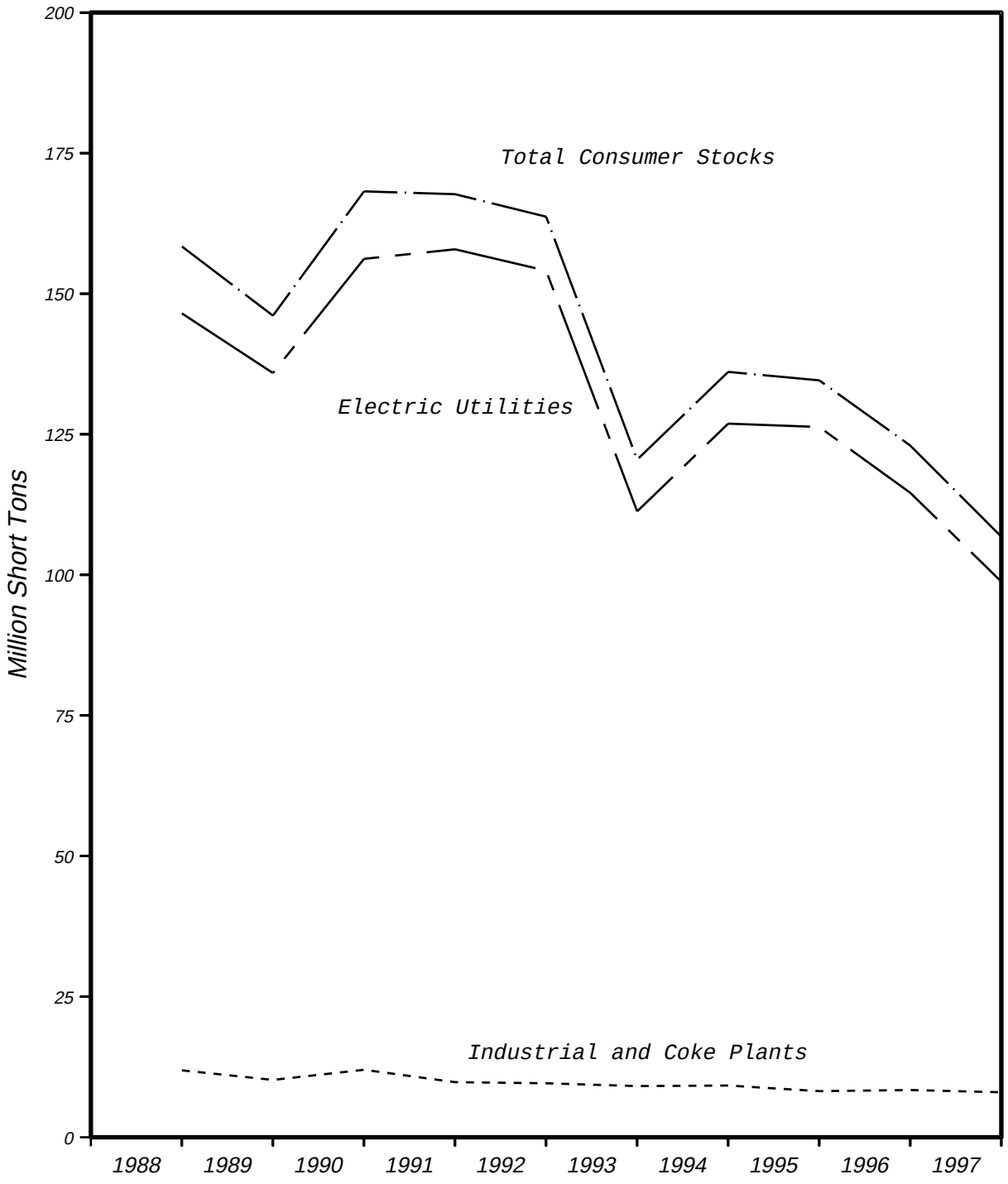
| Census Division and State | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **New England** | **7,860** | **7,024** | **6,662** | **6,553** | **6,485** | **7,035** | **11.9** | **4.9** | **1.2** |
| Connecticut | 1,065 | 931 | 906 | 862 | 788 | 881 | 14.4 | 7.8 | 2.1 |
| Maine | 194 | 234 | 282 | 464 | 449 | 277 | –17.2 | –19.0 | –3.9 |
| Massachusetts | 4,891 | 4,477 | 4,113 | 3,932 | 3,811 | 4,463 | 9.2 | 6.4 | 1.0 |
| New Hampshire | 1,705 | 1,377 | 1,355 | 1,287 | 1,428 | 1,229 | 23.8 | 4.5 | 3.7 |
| Rhode Island | 3 | 3 | 3 | 3 | 3 | 175 | –11.5 | –3.0 | –36.6 |
| Vermont | 2 | 2 | 3 | 5 | 6 | 11 | 46.8 | –18.8 | –14.9 |
| **Middle Atlantic** | **73,177** | **70,965** | **68,462** | **67,536** | **70,389** | **74,653** | **3.1** | **1.0** | **–.2** |
| New Jersey | 2,867 | 2,402 | 2,074 | 1,969 | 2,353 | 3,058 | 19.3 | 5.0 | –.7 |
| New York | 11,719 | 11,337 | 11,062 | 11,474 | 11,878 | 12,956 | 3.4 | –.3 | –1.1 |
| Pennsylvania | 58,591 | 57,226 | 55,326 | 54,094 | 56,158 | 58,639 | 2.4 | 1.1 | * |
| **East North Central** | **233,976** | **229,000** | **217,702** | **213,188** | **210,632** | **206,208** | **2.2** | **2.7** | **1.4** |
| Illinois | 47,621 | 44,431 | 39,623 | 39,077 | 38,135 | 33,912 | 7.2 | 5.7 | 3.8 |
| Indiana | 66,042 | 64,021 | 62,631 | 59,996 | 60,353 | 55,830 | 3.1 | 2.3 | 1.9 |
| Michigan | 35,888 | 36,694 | 35,802 | 35,674 | 32,217 | 35,332 | –2.2 | 2.7 | .2 |
| Ohio | 58,933 | 59,835 | 56,580 | 56,711 | 59,031 | 61,096 | –1.5 | * | –.4 |
| Wisconsin | 25,491 | 24,019 | 23,066 | 21,731 | 20,897 | 20,038 | 6.1 | 5.1 | 2.7 |
| **West North Central** | **138,156** | **136,643** | **131,028** | **125,591** | **120,940** | **113,145** | **1.1** | **3.4** | **2.2** |
| Iowa | 21,720 | 21,171 | 20,636 | 19,341 | 19,188 | 16,114 | 2.6 | 3.1 | 3.4 |
| Kansas | 17,673 | 19,084 | 16,521 | 17,158 | 17,386 | 14,951 | –7.4 | .4 | 1.9 |
| Minnesota | 19,086 | 19,264 | 18,947 | 18,729 | 18,321 | 17,285 | –.9 | 1.0 | 1.1 |
| Missouri | 36,665 | 34,382 | 31,753 | 27,663 | 23,381 | 26,119 | 6.6 | 11.9 | 3.8 |
| Nebraska | 11,211 | 10,379 | 10,396 | 9,300 | 9,666 | 8,057 | 8.0 | 3.8 | 3.7 |
| North Dakota | 29,360 | 30,511 | 30,237 | 30,363 | 30,302 | 28,029 | –3.8 | –.8 | .5 |
| South Dakota | 2,442 | 1,852 | 2,537 | 3,036 | 2,696 | 2,591 | 31.8 | –2.4 | –.6 |
| **South Atlantic** | **170,697** | **165,545** | **155,259** | **151,935** | **150,580** | **150,032** | **3.1** | **3.2** | **1.4** |
| Delaware | 1,866 | 1,956 | 2,011 | 2,226 | 2,446 | 2,686 | –4.6 | –6.5 | –4.0 |
| District of Columbia | 40 | 23 | 6 | 47 | 51 | 31 | 72.1 | –6.0 | 2.8 |
| Florida | 28,719 | 28,443 | 26,526 | 26,082 | 26,430 | 24,595 | 1.0 | 2.1 | 1.7 |
| Georgia | 32,693 | 31,158 | 31,288 | 29,254 | 27,081 | 28,654 | 4.9 | 4.8 | 1.5 |
| Maryland | 11,262 | 11,366 | 11,198 | 10,491 | 10,268 | 11,757 | –.9 | 2.3 | –.5 |
| North Carolina | 29,608 | 27,624 | 24,084 | 23,282 | 25,760 | 20,506 | 7.2 | 3.5 | 4.2 |
| South Carolina | 14,111 | 13,852 | 12,279 | 12,993 | 12,914 | 11,937 | 1.9 | 2.2 | 1.9 |
| Virginia | 15,276 | 14,983 | 13,378 | 12,792 | 13,584 | 13,430 | 1.9 | 3.0 | 1.4 |
| West Virginia | 37,122 | 36,139 | 34,489 | 34,767 | 32,046 | 36,435 | 2.7 | 3.7 | .2 |
| **East South Central** | **113,137** | **110,450** | **105,830** | **99,289** | **104,027** | **91,829** | **2.4** | **2.1** | **2.3** |
| Alabama | 36,433 | 37,052 | 34,309 | 31,473 | 33,047 | 26,365 | –1.7 | 2.5 | 3.6 |
| Kentucky | 42,228 | 40,863 | 39,516 | 38,090 | 39,095 | 35,176 | 3.3 | 1.9 | 2.0 |
| Mississippi | 6,273 | 5,791 | 4,606 | 4,285 | 4,030 | 5,136 | 8.3 | 11.7 | 2.2 |
| Tennessee | 28,203 | 26,744 | 27,399 | 25,440 | 27,854 | 25,152 | 5.4 | .3 | 1.3 |
| **West South Central** | **150,348** | **146,472** | **139,106** | **138,251** | **140,797** | **127,052** | **2.6** | **1.6** | **1.9** |
| Arkansas | 14,069 | 14,816 | 13,540 | 12,596 | 11,447 | 12,555 | –5.0 | 5.3 | 1.3 |
| Louisiana | 13,874 | 12,534 | 13,357 | 14,100 | 13,676 | 12,848 | 10.7 | .3 | .8 |
| Oklahoma | 21,109 | 20,125 | 19,596 | 17,726 | 18,866 | 15,006 | 4.9 | 2.8 | 3.9 |
| Texas | 101,297 | 98,997 | 92,612 | 93,829 | 96,809 | 86,644 | 2.3 | 1.1 | 1.8 |
| **Mountain** | **111,389** | **107,226** | **107,923** | **115,695** | **110,673** | **104,471** | **3.9** | **.2** | **.7** |
| Arizona | 18,205 | 16,792 | 16,682 | 19,580 | 18,991 | 14,525 | 8.4 | –1.0 | 2.5 |
| Colorado | 17,960 | 17,222 | 16,971 | 17,475 | 17,070 | 15,860 | 4.3 | 1.3 | 1.4 |
| Idaho | 361 | 397 | 465 | 534 | 528 | 524 | –9.2 | –9.1 | –4.1 |
| Montana | 9,517 | 8,032 | 10,005 | 11,089 | 9,247 | 10,634 | 18.5 | .7 | –1.2 |
| Nevada | 7,440 | 7,604 | 7,340 | 7,968 | 7,806 | 8,276 | –2.1 | –1.2 | –1.2 |
| New Mexico | 15,887 | 15,297 | 15,221 | 15,374 | 15,012 | 14,715 | 3.8 | 1.4 | .8 |
| Utah | 15,923 | 15,237 | 15,307 | 16,216 | 15,848 | 14,513 | 4.5 | .1 | 1.0 |
| Wyoming | 26,096 | 26,646 | 25,933 | 27,459 | 26,171 | 25,424 | –2.1 | –.1 | .3 |
| **Pacific** | **8,885** | **10,008** | **8,908** | **12,162** | **11,422** | **8,641** | **–11.2** | **–6.1** | **.3** |
| Alaska | 740 | 706 | 815 | 796 | 863 | 276 | 4.9 | –3.8 | 11.6 |
| California | 2,134 | 2,317 | 2,618 | 2,498 | 2,453 | 2,209 | –7.9 | –3.4 | –.4 |
| Hawaii | 145 | 169 | 192 | 86 | 73 | 50 | –14.3 | 18.8 | 12.5 |
| Oregon | 917 | 1,134 | 1,125 | 2,479 | 2,099 | 177 | –19.1 | –18.7 | 20.1 |
| Washington | 4,948 | 5,682 | 4,158 | 6,303 | 5,934 | 5,929 | –12.9 | –4.4 | –2.0 |
| Other Power Producers | 21,603 | 22,239 | 21,158 | 21,260 | 18,137 | – | –2.9 | 4.5 | – |
| **U.S. Total** | **1,029,229** | **1,005,573** | **962,039** | **951,461** | **944,081** | **883,642** | **2.4** | **2.2** | **1.7** |

* Data round to zero.

Notes: Totals may not equal sum of components due to independent rounding. Regional totals for 1988 may not sum to the U.S. total due to distribution to unknown State.

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''; Form EIA-6, ''Coal Distribution Report''; and EIA-867, ''Annual Non-utility Power Producer Report.''

**Figure 10. U.S. Consumer Coal Stocks, 1988-1997**




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, 1988, 1993-1997

(Thousand Short Tons)

| Census Division and State | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **New England Total** | **816** | **1,297** | **969** | **1,117** | **989** | **1,138** | **–37.1** | **–4.7** | **–3.6** |
| 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 | – | – | – | – | – | 28 | – | – | – |
| Vermont | – | – | – | – | – | * | – | – | – |
| **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 | w | w | w | w | w | w | w | w | w |
| Pennsylvania | 8,658 | 8,857 | 10,303 | 12,060 | 12,265 | 12,800 | –2.2 | –8.3 | –4.3 |
| **East North Central Total** | **31,231** | **30,815** | **33,818** | **35,833** | **30,162** | **44,167** | **1.3** | **.9** | **–3.8** |
| Illinois | w | w | w | w | w | w | w | w | w |
| Indiana | 6,643 | 7,955 | 9,298 | 11,707 | 7,798 | 11,488 | –16.5 | –3.9 | –5.9 |
| Michigan | w | w | w | w | w | w | w | w | w |
| Ohio | 6,324 | 5,428 | 5,936 | 7,815 | 7,630 | 7,823 | 16.5 | –4.6 | –2.3 |
| Wisconsin | 4,427 | 4,459 | 3,656 | 3,436 | 3,193 | 4,521 | –.7 | 8.5 | –.2 |
| **West North Central Total** | **14,833** | **18,327** | **18,713** | **17,717** | **14,898** | **21,079** | **–19.1** | **–.1** | **–3.8** |
| Iowa | 2,944 | 4,612 | 4,447 | 4,178 | 3,819 | 5,076 | –36.2 | –6.3 | –5.9 |
| Kansas | 2,298 | 2,984 | 3,860 | 2,623 | 2,024 | 3,334 | –23.0 | 3.2 | –4.0 |
| Minnesota | 1,994 | 1,738 | 1,985 | 2,234 | 1,250 | 2,671 | 14.7 | 12.4 | –3.2 |
| Missouri | 3,851 | 5,317 | 4,779 | 4,570 | 3,704 | 4,744 | –27.6 | 1.0 | –2.3 |
| Nebraska | w | w | w | w | w | w | 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 | 3,508 | 3,438 | 3,268 | 3,914 | 3,541 | 4,924 | 2.0 | –.2 | –3.7 |
| Georgia | 2,407 | 3,848 | 3,786 | 4,843 | 2,926 | 5,539 | –37.4 | –4.8 | –8.8 |
| Maryland | w | w | w | w | w | w | w | w | w |
| North Carolina | 2,024 | 2,671 | 2,855 | 4,318 | 3,059 | 3,990 | –24.2 | –9.8 | –7.3 |
| South Carolina | 2,021 | 2,177 | 2,194 | 2,533 | 1,893 | 1,984 | –7.2 | 1.6 | .2 |
| 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 | 2,971 | 2,858 | 3,648 | 4,132 | 2,797 | 4,898 | 3.9 | 1.5 | –5.4 |
| Kentucky | w | w | w | w | w | w | w | w | w |
| Mississippi | w | w | w | w | w | w | w | w | w |
| Tennessee | 1,826 | 1,500 | 1,884 | 1,764 | 1,877 | 4,177 | 21.7 | –.7 | –8.8 |
| **West South Central Total** | **11,344** | **19,886** | **20,564** | **15,959** | **15,105** | **17,254** | **–42.9** | **–6.9** | **–4.5** |
| Arkansas | 954 | 2,719 | 2,820 | 1,777 | 1,881 | 1,917 | –64.9 | –15.6 | –7.5 |
| Louisiana | 1,258 | 2,480 | 2,669 | 1,922 | 2,000 | 2,849 | –49.3 | –10.9 | –8.7 |
| Oklahoma | 2,592 | 4,210 | 4,246 | 2,467 | 2,052 | 2,823 | –38.4 | 6.0 | –.9 |
| Texas | 6,540 | 10,477 | 10,829 | 9,793 | 9,172 | 9,665 | –37.6 | –8.1 | –4.2 |
| **Mountain Total** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** |
| Arizona | 1,414 | 2,024 | 3,032 | 3,242 | 3,717 | 4,229 | –30.1 | –21.5 | –11.5 |
| Colorado | 2,476 | 3,054 | 3,682 | 3,145 | 3,454 | 3,800 | –18.9 | –8.0 | –4.6 |
| Idaho | 105 | 77 | 118 | 78 | 86 | 126 | 36.3 | 5.1 | –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 | w | w | w | w | w | w | w | w | w |
| Wyoming | 1,555 | 2,267 | 2,936 | 2,553 | 1,841 | 2,879 | –31.4 | –4.1 | –6.6 |
| **Pacific Total** | **1,163** | **1,274** | **2,586** | **877** | **918** | **1,960** | **–8.7** | **6.1** | **–5.6** |
| Alaska | * | 1 | 1 | 2 | 5 | 3 | –56.3 | –48.3 | –20.2 |
| California | 118 | 150 | 133 | 126 | 93 | 155 | –21.3 | 6.2 | –3.0 |
| Hawaii | w | w | w | w | w | w | w | w | w |
| Oregon | w | w | w | w | w | w | w | w | w |
| Washington | 882 | 857 | 1,969 | 569 | 459 | 952 | 2.9 | 17.8 | –.8 |
| **U.S. Total** | **106,837** | **122,979** | **134,639** | **136,139** | **120,458** | **158,413** | **–13.1** | **–2.9** | **–4.3** |

* Data round to zero.

**w** Withheld to avoid disclosure of individual company data.

Notes: Stocks for the 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, 1988, 1993-1997

(Thousand Short Tons)

| Census Division and State | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **New England Total** | **7,583** | **6,701** | **6,272** | **5,945** | **5,736** | **6,330** | **13.2** | **7.2** | **2.0** |
| Connecticut | 1,058 | 925 | 881 | 821 | 745 | 854 | 14.3 | 9.2 | 2.4 |
| Massachusetts | 4,826 | 4,406 | 4,044 | 3,845 | 3,652 | 4,260 | 9.5 | 7.2 | 1.4 |
| New Hampshire | 1,699 | 1,369 | 1,346 | 1,279 | 1,339 | 1,217 | 24.1 | 6.1 | 3.8 |
| **Middle Atlantic Total** | **54,179** | **51,718** | **49,357** | **48,326** | **51,079** | **55,059** | **4.8** | **1.5** | **–.2** |
| New Jersey | 2,851 | 2,387 | 2,054 | 1,887 | 2,123 | 2,773 | 19.4 | 7.6 | .3 |
| New York | 8,726 | 8,254 | 8,051 | 8,395 | 8,699 | 9,120 | 5.7 | .1 | –.5 |
| Pennsylvania | 42,603 | 41,076 | 39,252 | 38,044 | 40,257 | 43,166 | 3.7 | 1.4 | –.1 |
| **East North Central Total** | **204,251** | **198,900** | **187,490** | **183,282** | **179,833** | **163,462** | **2.7** | **3.2** | **2.5** |
| Illinois | 41,017 | 38,090 | 33,463 | 32,599 | 31,744 | 26,681 | 7.7 | 6.6 | 4.9 |
| Indiana | 54,845 | 52,855 | 52,089 | 50,554 | 48,836 | 40,060 | 3.8 | 2.9 | 3.5 |
| Michigan | 31,928 | 32,175 | 31,165 | 31,106 | 28,749 | 29,968 | –.8 | 2.6 | .7 |
| Ohio | 52,893 | 53,543 | 49,785 | 49,326 | 51,456 | 48,893 | –1.2 | .7 | .9 |
| Wisconsin | 23,568 | 22,236 | 20,987 | 19,696 | 19,049 | 17,861 | 6.0 | 5.5 | 3.1 |
| **West North Central Total** | **123,968** | **122,419** | **116,720** | **111,672** | **107,584** | **101,097** | **1.3** | **3.6** | **2.3** |
| Iowa | 18,195 | 17,864 | 17,785 | 16,565 | 16,623 | 13,921 | 1.8 | 2.3 | 3.0 |
| Kansas | 17,534 | 18,853 | 16,345 | 16,989 | 17,226 | 14,742 | –7.0 | .4 | 1.9 |
| Minnesota | 17,490 | 17,459 | 17,282 | 17,046 | 16,844 | 16,259 | .2 | .9 | .8 |
| Missouri | 35,193 | 33,059 | 30,440 | 26,375 | 21,945 | 24,356 | 6.4 | 12.5 | 4.2 |
| Nebraska | 10,796 | 10,091 | 10,048 | 8,879 | 9,297 | 7,744 | 7.0 | 3.8 | 3.8 |
| North Dakota | 22,754 | 23,640 | 22,680 | 23,248 | 23,290 | 21,686 | –3.7 | –.6 | .5 |
| South Dakota | 2,005 | 1,453 | 2,137 | 2,570 | 2,360 | 2,388 | 38.0 | –4.0 | –1.9 |
| **South Atlantic Total** | **155,499** | **149,354** | **138,134** | **133,984** | **132,885** | **128,628** | **4.1** | **4.0** | **2.1** |
| Delaware | 1,686 | 1,787 | 1,816 | 2,007 | 2,223 | 2,420 | –5.7 | –6.7 | –3.9 |
| Florida | 27,372 | 27,172 | 25,200 | 24,758 | 25,108 | 23,528 | .7 | 2.2 | 1.7 |
| Georgia | 30,631 | 29,171 | 29,280 | 27,293 | 25,339 | 26,513 | 5.0 | 4.8 | 1.6 |
| Maryland | 10,417 | 10,540 | 10,141 | 9,717 | 9,521 | 9,020 | –1.2 | 2.3 | 1.6 |
| North Carolina | 27,206 | 25,083 | 21,424 | 20,624 | 23,055 | 17,766 | 8.5 | 4.2 | 4.8 |
| South Carolina | 12,096 | 11,833 | 10,074 | 10,597 | 10,410 | 9,210 | 2.2 | 3.8 | 3.1 |
| Virginia | 11,605 | 10,994 | 9,543 | 8,670 | 9,447 | 8,469 | 5.5 | 5.3 | 3.6 |
| West Virginia | 34,487 | 32,775 | 30,657 | 30,318 | 27,782 | 31,704 | 5.2 | 5.5 | .9 |
| **East South Central Total** | **99,620** | **96,809** | **92,262** | **85,622** | **90,365** | **77,689** | **2.9** | **2.5** | **2.8** |
| Alabama | 30,840 | 31,216 | 28,759 | 25,817 | 27,533 | 20,002 | –1.2 | 2.9 | 4.9 |
| Kentucky | 38,281 | 37,072 | 35,707 | 34,564 | 35,264 | 31,818 | 3.3 | 2.1 | 2.1 |
| Mississippi | 6,035 | 5,558 | 4,319 | 3,989 | 3,767 | 4,859 | 8.6 | 12.5 | 2.4 |
| Tennessee | 24,464 | 22,964 | 23,477 | 21,253 | 23,801 | 21,010 | 6.5 | .7 | 1.7 |
| **West South Central Total** | **144,218** | **140,493** | **132,633** | **131,168** | **134,009** | **121,919** | **2.6** | **1.8** | **1.9** |
| Arkansas | 13,772 | 14,467 | 13,216 | 12,250 | 11,116 | 12,295 | –4.8 | 5.5 | 1.3 |
| Louisiana | 13,807 | 12,450 | 12,930 | 13,479 | 13,089 | 12,301 | 10.9 | 1.3 | 1.3 |
| Oklahoma | 20,101 | 19,386 | 18,130 | 16,961 | 17,668 | 14,435 | 3.7 | 3.3 | 3.7 |
| Texas | 96,537 | 94,189 | 88,358 | 88,479 | 92,135 | 82,889 | 2.5 | 1.2 | 1.7 |
| **Mountain Total** | **105,216** | **101,507** | **101,013** | **108,651** | **104,093** | **98,351** | **3.6** | **.3** | **.8** |
| Arizona | 17,503 | 16,117 | 16,021 | 18,853 | 18,316 | 13,932 | 8.6 | –1.1 | 2.6 |
| Colorado | 17,116 | 16,841 | 16,222 | 16,596 | 16,252 | 15,087 | 1.6 | 1.3 | 1.4 |
| Montana | 9,286 | 7,897 | 9,373 | 10,513 | 8,869 | 10,410 | 17.6 | 1.1 | –1.3 |
| Nevada | 7,261 | 7,424 | 7,084 | 7,772 | 7,608 | 8,153 | –2.2 | –1.2 | –1.3 |
| New Mexico | 15,802 | 15,215 | 15,137 | 15,297 | 14,942 | 14,661 | 3.9 | 1.4 | .8 |
| Utah | 14,252 | 13,584 | 13,325 | 14,269 | 13,995 | 12,544 | 4.9 | .4 | 1.4 |
| Wyoming | 23,997 | 24,430 | 23,850 | 25,350 | 24,111 | 23,563 | –1.8 | –.1 | .2 |
| **Pacific Total** | **5,827** | **6,780** | **5,127** | **8,621** | **7,924** | **5,837** | **–14.0** | **–7.4** | * |
| Alaska | 235 | 229 | 293 | 271 | 298 | 276 | 2.5 | –5.7 | –1.8 |
| Oregon | 821 | 1,044 | 977 | 2,333 | 1,981 | – | –21.3 | –19.8 | – |
| Washington | 4,770 | 5,507 | 3,857 | 6,016 | 5,646 | 5,561 | –13.4 | –4.1 | –1.7 |
| **U.S. Total** | **900,361** | **874,681** | **829,007** | **817,270** | **813,508** | **758,372** | **2.9** | **2.6** | **1.9** |

* 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, 1988, 1993-1997

(Thousand Short Tons)

| Census Division and State | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **New England Total** | **754** | R **1,236** | **908** | **1,079** | **967** | **1,110** | **–39.0** | **–6.0** | **–4.2** |
| Connecticut | 66 | 173 | 164 | 202 | 160 | – | –61.8 | –19.8 | – |
| Massachusetts | 389 | 704 | 425 | 629 | 449 | 737 | –44.7 | –3.5 | –6.8 |
| New Hampshire | 298 | R 359 | 319 | 248 | 358 | 344 | –17.0 | –4.4 | –1.6 |
| Rhode Island | – | – | – | – | – | 28 | – | – | – |
| **Middle Atlantic Total** | **9,175** | R **9,606** | **11,064** | **12,687** | **12,564** | **13,757** | **–4.5** | **–7.5** | **–4.4** |
| New Jersey | 566 | 824 | 804 | 688 | 501 | 528 | –31.3 | 3.1 | .8 |
| New York | 819 | 905 | 1,015 | 999 | 953 | 1,432 | –9.5 | –3.7 | –6.0 |
| Pennsylvania | 7,790 | R 7,878 | 9,244 | 11,000 | 11,110 | 11,798 | –1.1 | –8.5 | –4.5 |
| **East North Central Total** | **28,051** | R **27,618** | **30,505** | **32,088** | **27,296** | **39,549** | **1.6** | **.7** | **–3.7** |
| Illinois | 4,828 | R 4,578 | 5,331 | 4,526 | 4,019 | 9,179 | 5.4 | 4.7 | –6.9 |
| Indiana | 5,822 | R 7,103 | 8,435 | 10,449 | 6,935 | 9,997 | –18.0 | –4.3 | –5.8 |
| Michigan | 7,222 | R 6,530 | 7,708 | 6,505 | 6,206 | 8,991 | 10.6 | 3.9 | –2.4 |
| Ohio | 6,066 | R 5,229 | 5,661 | 7,499 | 7,249 | 7,218 | 16.0 | –4.3 | –1.9 |
| Wisconsin | 4,113 | R 4,178 | 3,371 | 3,109 | 2,887 | 4,165 | –1.5 | 9.3 | –.1 |
| **West North Central Total** | **13,707** | R **17,107** | **17,732** | **16,739** | **14,123** | **19,950** | **–19.9** | **–.7** | **–4.1** |
| Iowa | 2,447 | R 4,042 | 3,923 | 3,642 | 3,401 | 4,456 | –39.5 | –7.9 | –6.4 |
| Kansas | 2,282 | R 2,968 | 3,850 | 2,610 | 2,008 | 3,300 | –23.1 | 3.3 | –4.0 |
| Minnesota | 1,737 | R 1,461 | 1,898 | 2,134 | 1,182 | 2,579 | 18.9 | 10.1 | –4.3 |
| Missouri | 3,670 | R 5,159 | 4,641 | 4,410 | 3,555 | 4,541 | –28.9 | .8 | –2.3 |
| Nebraska | 1,596 | R 1,691 | 1,409 | 1,276 | 1,272 | 1,593 | –5.6 | 5.8 | * |
| North Dakota | 1,755 | 1,642 | 1,858 | 2,406 | 2,417 | 3,166 | 6.8 | –7.7 | –6.3 |
| South Dakota | 219 | 143 | 153 | 259 | 287 | 314 | 53.4 | –6.5 | –3.9 |
| **South Atlantic Total** | **16,141** | R **18,662** | **18,851** | **23,226** | **17,877** | **23,741** | **–13.5** | **–2.5** | **–4.2** |
| Delaware | 319 | 322 | 363 | 470 | 192 | 498 | –1.1 | 13.4 | –4.8 |
| Florida | 3,441 | R 3,349 | 3,204 | 3,813 | 3,451 | 4,804 | 2.7 | –.1 | –3.6 |
| Georgia | 2,279 | 3,727 | 3,657 | 4,699 | 2,825 | 5,288 | –38.9 | –5.2 | –8.9 |
| Maryland | 1,188 | R 1,346 | 1,038 | 1,306 | 1,455 | 1,476 | –11.7 | –4.9 | –2.4 |
| North Carolina | 1,912 | R 2,559 | 2,715 | 4,139 | 2,887 | 3,727 | –25.3 | –9.8 | –7.1 |
| South Carolina | 1,809 | R 1,979 | 2,033 | 2,255 | 1,648 | 1,661 | –8.6 | 2.4 | .9 |
| Virginia | 1,152 | 1,010 | 1,098 | 2,064 | 1,418 | 1,211 | 14.1 | –5.0 | –.5 |
| West Virginia | 4,042 | R 4,370 | 4,744 | 4,479 | 4,001 | 5,077 | –7.5 | .3 | –2.5 |
| **East South Central Total** | **9,329** | R **8,514** | **10,148** | **10,317** | **8,370** | **13,351** | **9.6** | **2.7** | **–3.9** |
| Alabama | 2,609 | R 2,526 | 3,282 | 3,652 | 2,331 | 4,462 | 3.3 | 2.8 | –5.8 |
| Kentucky | 4,475 | R 4,119 | 4,472 | 4,466 | 3,990 | 4,124 | 8.6 | 2.9 | .9 |
| Mississippi | 614 | R 602 | 724 | 690 | 417 | 870 | 1.9 | 10.2 | –3.8 |
| Tennessee | 1,630 | R 1,266 | 1,670 | 1,509 | 1,632 | 3,895 | 28.8 | * | –9.2 |
| **West South Central Total** | **11,050** | R **19,525** | **20,195** | **15,520** | **13,867** | **16,272** | **–43.4** | **–5.5** | **–4.2** |
| Arkansas | 934 | R 2,701 | 2,790 | 1,751 | 1,866 | 1,899 | –65.4 | –15.9 | –7.6 |
| Louisiana | 1,248 | R 2,470 | 2,659 | 1,872 | 1,932 | 2,772 | –49.5 | –10.3 | –8.5 |
| Oklahoma | 2,516 | R 4,067 | 4,118 | 2,319 | 1,944 | 2,678 | –38.1 | 6.6 | –.7 |
| Texas | 6,352 | R 10,287 | 10,628 | 9,578 | 8,125 | 8,922 | –38.2 | –6.0 | –3.7 |
| **Mountain Total** | **9,667** | R **11,304** | **14,562** | **14,559** | **15,529** | **17,079** | **–14.5** | **–11.2** | **–6.1** |
| Arizona | 1,386 | R 1,992 | 2,998 | 3,197 | 3,687 | 4,187 | –30.4 | –21.7 | –11.6 |
| Colorado | 2,458 | R 3,027 | 3,622 | 3,118 | 3,428 | 3,763 | –18.8 | –8.0 | –4.6 |
| Montana | 410 | R 508 | 511 | 517 | 721 | 913 | –19.4 | –13.2 | –8.5 |
| Nevada | 812 | R 1,239 | 1,356 | 1,034 | 1,195 | 1,434 | –34.5 | –9.2 | –6.1 |
| New Mexico | 795 | R 815 | 967 | 1,462 | 1,506 | 1,392 | –2.5 | –14.8 | –6.0 |
| Utah | 2,309 | 1,526 | 2,250 | 2,753 | 3,264 | 2,772 | 51.3 | –8.3 | –2.0 |
| Wyoming | 1,498 | R 2,197 | 2,857 | 2,476 | 1,728 | 2,619 | –31.8 | –3.5 | –6.0 |
| **Pacific Total** | **952** | **1,052** | **2,341** | **683** | **748** | **1,698** | **–9.5** | **6.2** | **–6.2** |
| Alaska | * | 1 | 1 | 2 | 5 | 3 | –56.3 | –48.3 | –20.2 |
| Oregon | 83 | 203 | 399 | 150 | 312 | 786 | –59.0 | –28.1 | –22.1 |
| Washington | 868 | R 848 | 1,941 | 531 | 431 | 910 | 2.3 | 19.1 | –.5 |
| **U.S. Total** | **98,826** | R **114,623** | **126,304** | **126,897** | **111,341** | **146,507** | **–13.8** | **–2.9** | **–4.3** |

* Data round to zero.
R Revised Data.

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, 1988, 1993-1997

(Thousand Short Tons)

| Census Division and State | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **New England Total** | **226** | **268** | **321** | **553** | **647** | **571** | **–15.6** | **–23.1** | **–9.8** |
| 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 | – | – | – |
| Rhode Island | – | – | – | – | w | w | – | – | – |
| Vermont | – | – | – | – | 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 | 1,419 | 1,449 | 1,408 | 1,559 | 1,704 | 1,844 | –2.0 | –4.5 | –2.9 |
| Pennsylvania | 4,410 | 4,466 | 4,027 | 4,044 | 4,311 | 3,942 | –1.3 | .6 | 1.3 |
| **East North Central Total** | **16,989** | **17,113** | **16,566** | **17,098** | **17,699** | **21,646** | **–.7** | **–1.0** | **–2.6** |
| Illinois | 3,863 | 3,740 | 3,653 | 4,187 | 3,970 | 4,364 | 3.3 | –.7 | –1.3 |
| Indiana | 5,086 | 4,987 | 4,373 | 4,244 | 4,587 | 4,784 | 2.0 | 2.6 | .7 |
| Michigan | 2,415 | 2,914 | 2,983 | 2,890 | 3,230 | 4,369 | –17.1 | –7.0 | –6.4 |
| Ohio | 3,863 | 3,794 | 3,609 | 3,794 | 4,100 | 6,030 | 1.8 | –1.5 | –4.8 |
| Wisconsin | 1,761 | 1,678 | 1,949 | 1,984 | 1,811 | 2,099 | 4.9 | –.7 | –1.9 |
| **West North Central Total** | **13,182** | **13,415** | **13,581** | **13,238** | **12,753** | **11,018** | **–1.7** | **.8** | **2.0** |
| Iowa | 3,151 | 3,085 | 2,761 | 2,735 | 2,494 | 1,808 | 2.1 | 6.0 | 6.4 |
| Kansas | 137 | 154 | 138 | 137 | 137 | 208 | –10.9 | * | –4.5 |
| Minnesota | 1,490 | 1,649 | 1,401 | 1,455 | 1,370 | 792 | –9.6 | 2.1 | 7.3 |
| Missouri | 1,206 | 1,118 | 1,102 | 1,070 | 1,177 | 1,539 | 7.8 | .6 | –2.7 |
| Nebraska | w | w | w | w | w | w | w | w | w |
| North Dakota | w | w | w | w | w | w | w | w | w |
| South Dakota | 436 | 398 | 393 | 451 | 335 | 199 | 9.6 | 6.8 | 9.1 |
| **South Atlantic Total** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** |
| Delaware | w | w | w | w | w | w | w | w | w |
| Florida | 1,347 | 1,270 | 1,325 | 1,303 | 1,307 | 1,065 | 6.1 | .8 | 2.6 |
| Georgia | 2,046 | 1,985 | 1,949 | 1,933 | 1,720 | 2,115 | 3.1 | 4.4 | –.4 |
| Maryland | 790 | 785 | 760 | 738 | 731 | 694 | .6 | 2.0 | 1.4 |
| North Carolina | 2,210 | 2,336 | 2,437 | 2,396 | 2,476 | 2,536 | –5.4 | –2.8 | –1.5 |
| South Carolina | 2,014 | 2,000 | 2,188 | 2,334 | 2,395 | 2,602 | .7 | –4.2 | –2.8 |
| Virginia | 2,502 | 2,613 | 2,585 | 2,838 | 2,863 | 3,745 | –4.2 | –3.3 | –4.4 |
| West Virginia | 1,652 | 1,630 | 1,984 | 2,637 | 2,406 | 2,598 | 1.3 | –9.0 | –4.9 |
| **East South Central Total** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** |
| Alabama | 2,565 | 2,545 | 2,286 | 2,394 | 2,268 | 2,843 | .8 | 3.1 | –1.1 |
| Kentucky | 2,251 | 2,322 | 2,250 | 1,994 | 2,392 | 1,702 | –3.1 | –1.5 | 3.1 |
| Mississippi | w | w | w | w | w | w | w | w | w |
| Tennessee | 3,608 | 3,670 | 3,777 | 4,097 | 3,942 | 3,883 | –1.7 | –2.2 | –.8 |
| **West South Central Total** | **5,839** | **5,978** | **6,456** | **7,082** | **6,780** | **5,078** | **–2.3** | **–3.7** | **1.6** |
| Arkansas | 297 | 348 | 325 | 346 | 330 | 260 | –14.8 | –2.6 | 1.5 |
| Louisiana | w | w | w | w | w | w | w | w | w |
| Oklahoma | w | w | w | w | w | w | w | w | w |
| Texas | 4,759 | 4,808 | 4,255 | 5,350 | 4,667 | 3,708 | –1.0 | .5 | 2.8 |
| **Mountain Total** | **4,702** | **4,141** | **5,615** | **5,614** | **5,163** | **4,425** | **13.6** | **–2.3** | **.7** |
| Arizona | 702 | 675 | 657 | 727 | 674 | 593 | 4.0 | 1.0 | 1.9 |
| Colorado | 780 | 367 | 729 | 857 | 780 | 679 | 112.4 | * | 1.6 |
| Idaho | w | w | w | w | w | w | w | w | w |
| 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 | 527 | 512 | 915 | 835 | 727 | 597 | 3.1 | –7.7 | –1.4 |
| Wyoming | 1,959 | 1,835 | 1,937 | 1,867 | 1,873 | 1,722 | 6.8 | 1.1 | 1.4 |
| **Pacific Total** | **2,424** | **2,553** | **3,047** | **2,769** | **2,677** | **2,677** | **–5.0** | **–2.4** | **–1.1** |
| Alaska | w | w | w | w | w | w | w | w | w |
| California | 2,026 | 2,140 | 2,485 | 2,332 | 2,311 | 2,203 | –5.3 | –3.2 | –.9 |
| Hawaii | w | w | w | w | w | w | w | w | w |
| Oregon | w | w | w | w | w | w | w | w | w |
| Washington | 156 | 152 | 223 | 201 | 174 | 252 | 2.9 | –2.6 | –5.2 |
| **U.S. Total** | **70,599** | **70,941** | **73,055** | **75,179** | **74,892** | **76,252** | **–.5** | **–1.5** | **–.8** |

* Data round to zero.

**w** Withheld to avoid disclosure of individual company data.

Note: Totals may not equal sum of components due to independent rounding. Regional totals for 1988 may not sum to the U.S. total due to distribution of coal to unknown State.

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, 1988, 1993-1997

(Thousand Short Tons)

| Census Division and State | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **New England Total** | **62** | **60** | **60** | **38** | **21** | **29** | **2.7** | **30.6** | **9.0** |
| Maine | w | w | w | w | w | w | w | w | w |
| Massachusetts | w | w | w | w | w | w | w | w | w |
| New Hampshire | – | – | – | – | – | w | – | – | – |
| Vermont | – | – | – | – | – | 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 | 255 | 192 | 203 | 250 | 321 | 371 | 32.8 | –5.5 | –4.1 |
| Pennsylvania | 220 | 231 | 218 | 298 | 287 | 370 | –4.9 | –6.4 | –5.6 |
| **East North Central Total** | **1,926** | **1,862** | **2,031** | **2,462** | **2,044** | **2,929** | **3.4** | **–1.5** | **–4.5** |
| Illinois | 237 | 252 | 333 | 426 | 368 | 545 | –6.0 | –10.4 | –8.8 |
| Indiana | 379 | 384 | 451 | 690 | 470 | 682 | –1.2 | –5.2 | –6.3 |
| Michigan | 825 | 827 | 822 | 865 | 702 | 1,080 | –.2 | 4.1 | –2.9 |
| Ohio | 170 | 118 | 138 | 153 | 198 | 265 | 44.6 | –3.7 | –4.8 |
| Wisconsin | 314 | 281 | 286 | 328 | 306 | 356 | 11.8 | .6 | –1.4 |
| **West North Central Total** | **1,126** | **1,220** | **981** | **978** | **775** | **1,129** | **–7.7** | **9.8** | * |
| Iowa | 497 | 570 | 524 | 535 | 418 | 620 | –12.8 | 4.4 | –2.4 |
| Kansas | 16 | 16 | 10 | 13 | 16 | 34 | .1 | .3 | –8.1 |
| Minnesota | 257 | 277 | 87 | 99 | 68 | 92 | –7.3 | 39.7 | 12.1 |
| Missouri | 182 | 158 | 138 | 159 | 148 | 203 | 14.9 | 5.2 | –1.2 |
| Nebraska | w | w | w | w | w | w | w | w | w |
| North Dakota | w | w | w | w | w | w | w | w | w |
| South Dakota | 24 | 17 | 58 | 20 | 12 | 13 | 40.9 | 19.5 | 6.8 |
| **South Atlantic Total** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** |
| Delaware | w | w | w | w | w | w | w | w | w |
| Florida | 67 | 89 | 64 | 101 | 90 | 120 | –24.6 | –7.0 | –6.2 |
| Georgia | 128 | 121 | 129 | 144 | 101 | 251 | 6.0 | 6.3 | –7.2 |
| Maryland | 16 | 30 | 24 | 36 | 41 | 38 | –47.4 | –21.0 | –9.1 |
| North Carolina | 112 | 112 | 140 | 179 | 172 | 264 | –.4 | –10.2 | –9.1 |
| South Carolina | 212 | 198 | 160 | 278 | 245 | 324 | 6.9 | –3.6 | –4.6 |
| Virginia | 149 | 133 | 177 | 217 | 216 | 321 | 11.9 | –8.9 | –8.2 |
| West Virginia | 116 | 136 | 105 | 130 | 167 | 190 | –14.4 | –8.6 | –5.3 |
| **East South Central Total** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** |
| Alabama | 174 | 135 | 133 | 183 | 132 | 144 | 28.7 | 7.0 | 2.1 |
| Kentucky | 86 | 83 | 120 | 112 | 73 | 121 | 3.8 | 4.2 | –3.7 |
| Mississippi | w | w | w | w | w | w | w | w | w |
| Tennessee | 196 | 234 | 215 | 256 | 246 | 281 | –16.3 | –5.5 | –3.9 |
| **West South Central Total** | **294** | **361** | **370** | **439** | **1,218** | **961** | **–18.6** | **–29.9** | **–12.3** |
| Arkansas | 20 | 18 | 29 | 26 | 15 | 18 | 8.6 | 6.8 | .8 |
| Louisiana | w | w | w | w | w | w | w | w | w |
| Oklahoma | w | w | w | w | w | w | w | w | w |
| Texas | 188 | 190 | 201 | 215 | 1,026 | 722 | –1.1 | –34.6 | –13.9 |
| **Mountain Total** | **228** | **231** | **313** | **267** | **332** | **576** | **–1.4** | **–8.9** | **–9.8** |
| Arizona | 28 | 32 | 34 | 45 | 30 | 42 | –12.6 | –1.6 | –4.2 |
| Colorado | 18 | 27 | 59 | 26 | 25 | 37 | –33.8 | –8.0 | –7.6 |
| Idaho | w | w | w | w | w | w | w | w | w |
| 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 | 3 | 5 | 7 | 13 | 20 | 74 | –48.0 | –39.1 | –30.5 |
| Wyoming | 57 | 71 | 79 | 77 | 113 | 260 | –20.0 | –15.9 | –15.6 |
| **Pacific Total** | **212** | **222** | **245** | **194** | **170** | **262** | **–4.7** | **5.6** | **–2.3** |
| California | 118 | 150 | 133 | 126 | 93 | 155 | –21.3 | 6.2 | –3.0 |
| Hawaii | w | w | w | w | w | w | w | w | w |
| Oregon | w | w | w | w | w | w | w | w | w |
| Washington | 14 | 8 | 28 | 38 | 27 | 42 | 61.3 | –15.9 | –11.7 |
| **U.S. Total** | **5,597** | **5,688** | **5,702** | **6,585** | **6,716** | **8,768** | **–1.6** | **–4.4** | **–4.9** |

* Data round to zero.

**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, 1988, 1993-1997

(Thousand Short Tons)

| Census Division and State | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **Middle Atlantic Total** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** |
| New York | w | w | w | w | w | w | w | w | w |
| Pennsylvania | 10,334 | 10,689 | 10,858 | 10,849 | 10,333 | 10,146 | –3.3 | * | 0.2 |
| **East North Central Total** | **11,366** | **11,414** | **12,345** | **11,356** | **11,643** | **19,234** | **–.4** | **–0.6** | **–5.7** |
| Illinois | w | w | w | w | w | w | w | w | w |
| Indiana | 5,715 | 5,823 | 5,883 | 4,841 | 6,591 | 10,355 | –1.8 | –3.5 | –6.4 |
| Michigan | w | w | w | w | w | w | w | w | w |
| Ohio | 1,848 | 1,842 | 2,777 | 3,092 | 2,892 | 5,448 | .3 | –10.6 | –11.3 |
| **South Atlantic Total** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** |
| Maryland | – | – | – | – | – | 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 | 2,956 | 3,247 | 3,257 | 3,253 | 3,206 | 3,383 | –9.0 | –2.0 | –1.5 |
| Kentucky | w | w | w | w | w | w | w | w | w |
| Tennessee | – | – | – | – | – | 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** | **30,203** | **31,706** | **33,011** | **31,740** | **31,323** | **41,888** | **–4.7** | **–.9** | **–3.6** |

* Data round to zero.

**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, 1988, 1993-1997

(Thousand Short Tons)

| Census Division and State | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **Middle Atlantic Total** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** |
| New York | w | w | w | w | w | w | w | w | w |
| Pennsylvania | 648 | 748 | 841 | 762 | 868 | 632 | –13.4 | –7.0 | 0.3 |
| **East North Central Total** | **1,254** | **1,335** | **1,282** | **1,282** | **822** | **1,689** | **–6.1** | **11.1** | **–3.3** |
| Illinois | w | w | w | w | w | w | w | w | w |
| Indiana | 442 | 469 | 412 | 567 | 394 | 809 | –5.7 | 2.9 | –6.5 |
| Michigan | w | w | w | w | w | w | w | w | w |
| Ohio | 87 | 81 | 136 | 163 | 183 | 340 | 7.4 | –16.9 | –14.0 |
| **South Atlantic Total** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** |
| Maryland | – | – | – | – | – | 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 | 188 | 197 | 233 | 297 | 333 | 292 | –4.4 | –13.3 | –4.7 |
| Kentucky | w | w | w | w | w | w | w | w | w |
| Tennessee | – | – | – | – | – | w | – | – | – |
| **West South Central Total** | – | – | – | – | **21** | **21** | – | – | – |
| Texas | – | – | – | – | 21 | 21 | – | – | – |
| **Mountain Total** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** |
| Utah | w | w | w | w | w | w | w | w | w |
| **U.S. Total** | **2,414** | **2,667** | **2,632** | **2,657** | **2,401** | **3,137** | **–9.4** | **.1** | **–2.9** |

**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, 1988, 1993-1997

(Thousand Short Tons)

| Census Division and State | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **New England Total** | **51** | **55** | **69** | **56** | **102** | **134** | **–6.9** | **–15.6** | **–10.1** |
| 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 | w | w | w |
| Vermont | w | w | w | w | w | w | w | w | w |
| **Middle Atlantic Total** | **1,504** | **1,285** | **1,416** | **1,351** | **1,498** | **1,717** | **17.0** | **.1** | **–1.5** |
| New Jersey | w | w | w | w | w | w | w | w | w |
| New York | w | w | w | w | w | w | w | w | w |
| Pennsylvania | 1,244 | 995 | 1,188 | 1,156 | 1,257 | 1,385 | 25.1 | –.3 | –1.2 |
| **East North Central Total** | **1,370** | **1,574** | **1,301** | **1,452** | **1,458** | **1,867** | **–13.0** | **–1.5** | **–3.4** |
| Illinois | w | w | w | w | w | w | w | w | w |
| Indiana | 395 | 356 | 287 | 356 | 339 | 631 | 11.0 | 3.9 | –5.1 |
| Michigan | w | w | w | w | w | w | w | w | w |
| Ohio | 329 | 656 | 409 | 498 | 584 | 726 | –49.9 | –13.4 | –8.4 |
| Wisconsin | w | w | w | w | w | w | w | w | w |
| **West North Central Total** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** |
| Iowa | 374 | 222 | 90 | 40 | 70 | 385 | 68.4 | 51.8 | –.3 |
| Kansas | 2 | 78 | 38 | 32 | 23 | 1 | –97.0 | –43.5 | 17.1 |
| Minnesota | 105 | 156 | 264 | 229 | 107 | 234 | –32.4 | –.5 | –8.5 |
| Missouri | w | w | w | w | w | w | w | w | w |
| Nebraska | w | w | w | w | w | w | 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** | **598** | **803** | **954** | **887** | **904** | **920** | **–25.5** | **–9.8** | **–4.7** |
| Delaware | w | w | w | w | w | w | w | w | w |
| District of Columbia | 40 | 23 | 6 | 47 | 51 | 31 | 72.1 | –6.0 | 2.8 |
| Florida | – | 1 | 1 | 20 | 16 | 3 | – | – | – |
| Georgia | 17 | 3 | 59 | 28 | 22 | 27 | 440.7 | –6.9 | –5.3 |
| Maryland | w | w | w | w | w | w | w | w | w |
| North Carolina | 192 | 206 | 224 | 263 | 229 | 204 | –6.5 | –4.3 | –.6 |
| South Carolina | 1 | 19 | 17 | 61 | 109 | 126 | –95.3 | –70.0 | –42.4 |
| 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** | **557** | **272** | **283** | **386** | **417** | **680** | **105.0** | **7.5** | **–2.2** |
| Alabama | 73 | 44 | 7 | 11 | 40 | 137 | 65.3 | 16.1 | –6.8 |
| Kentucky | w | w | w | w | w | w | w | w | w |
| Mississippi | w | – | – | – | w | w | – | w | w |
| Tennessee | w | w | w | w | w | w | w | w | w |
| **West South Central Total** | **291** | **1** | **17** | **1** | **8** | **56** | **NM** | **144.8** | **20.1** |
| Arkansas | * | – | – | * | 1 | * | – | –58.6 | –17.3 |
| Louisiana | w | – | w | – | w | w | – | w | w |
| Oklahoma | w | w | w | w | w | w | w | w | w |
| Texas | * | – | – | * | 6 | 47 | – | –67.4 | –51.5 |
| **Mountain Total** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** |
| Arizona | * | * | 5 | * | 1 | * | 6.5 | –32.6 | 4.9 |
| Colorado | 65 | 13 | 20 | 23 | 38 | 94 | 384.6 | 14.4 | –4.1 |
| Idaho | 30 | 28 | 39 | 40 | 43 | 76 | 7.2 | –8.4 | –9.8 |
| 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 | 140 | 382 | 146 | 242 | 187 | 139 | –63.2 | –6.9 | .1 |
| **Pacific Total** | **634** | **675** | **734** | **773** | **821** | **128** | **–6.1** | **–6.3** | **19.5** |
| Alaska | 503 | 474 | 523 | 520 | 563 | – | 6.0 | –2.8 | – |
| California | 109 | 177 | 133 | 166 | 142 | 6 | –38.7 | –6.5 | 37.3 |
| Hawaii | w | w | w | w | w | w | w | w | w |
| Oregon | w | w | w | w | w | w | w | w | w |
| Washington | 22 | 23 | 78 | 86 | 114 | 116 | –7.8 | –34.0 | –17.0 |
| **U.S. Total** | **6,463** | **6,006** | **5,807** | **6,013** | **6,221** | **7,130** | **7.6** | **.9** | **–1.1** |

* Data round to zero.

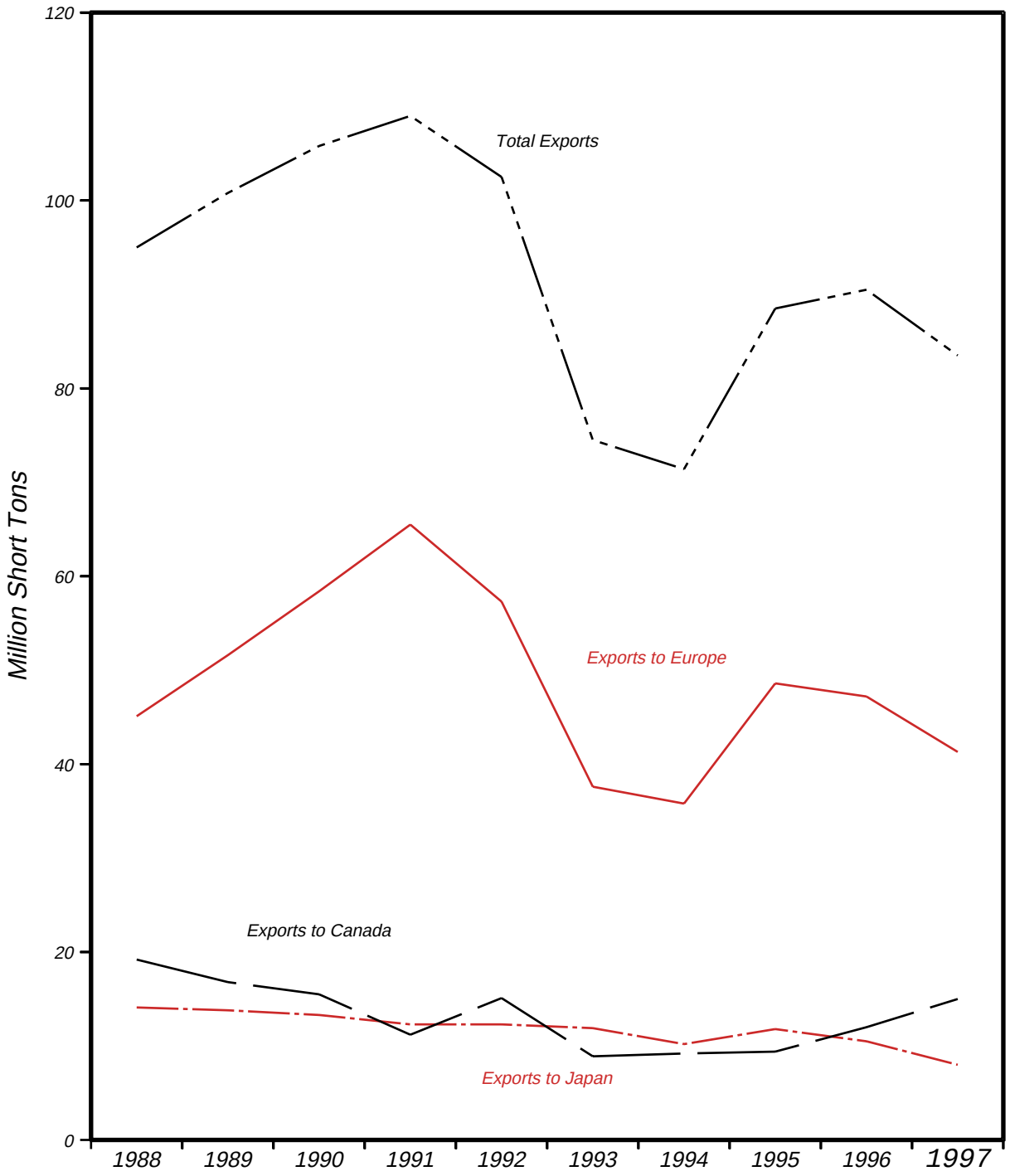
**w** Withheld to avoid disclosure of individual company data.

**NM** Not meaningful as value is greater than 500 percent.

Note: Totals may not equal sum of components due to independent rounding. Regional totals for 1988 may not sum to the U.S. total due to distribution of coal to unknown State.

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

**Figure 11. U.S. Coal Exports, 1988-1997**




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

## Table 76. U.S. Coal Exports by Destination, 1988, 1993-1997

(Thousand Short Tons)

| Continent and Country of Destination | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **North America Total** | **16,947** | **13,609** | **10,411** | **9,505** | **9,219** | **19,672** | **24.5** | **16.4** | **–1.6** |
| Canada[1] | 14,975 | 12,029 | 9,427 | 9,193 | 8,889 | 19,232 | 24.5 | 13.9 | –2.7 |
| Mexico | 1,899 | 1,509 | 871 | 241 | 250 | 304 | 25.9 | 66.1 | 22.6 |
| Other[2] | 73 | 72 | 113 | 71 | 81 | 136 | .3 | –2.6 | –6.7 |
| **South America Total** | **8,214** | **7,505** | **6,968** | **5,946** | **5,750** | **5,959** | **9.4** | **9.3** | **3.6** |
| Argentina | 325 | 304 | 342 | 453 | 524 | 610 | 7.1 | –11.2 | –6.7 |
| Brazil | 7,455 | 6,540 | 6,351 | 5,482 | 5,197 | 5,252 | 14.0 | 9.4 | 4.0 |
| Chile | 146 | 574 | 227 | * | * | 56 | –74.6 | 492.9 | 11.2 |
| Other[2] | 288 | 87 | 49 | 12 | 28 | 40 | 231.7 | 79.1 | 24.4 |
| **Europe Total** | **41,331** | **47,193** | **48,620** | **35,825** | **37,575** | **45,137** | **–12.4** | **2.4** | **–1.0** |
| Belgium & Luxembourg | 4,319 | 4,569 | 4,501 | 4,911 | 5,229 | 6,490 | –5.5 | –4.7 | –4.4 |
| Bulgaria | 1,114 | 1,387 | 1,339 | 1,238 | 906 | – | –19.6 | 5.3 | – |
| Denmark | 350 | 1,316 | 2,100 | 477 | 336 | 2,804 | –73.4 | 1.0 | –20.6 |
| Finland | 662 | 704 | 1,308 | 377 | 252 | 68 | –6.0 | 27.2 | 28.7 |
| France | 3,398 | 3,852 | 3,659 | 2,875 | 3,972 | 4,302 | –11.8 | –3.8 | –2.6 |
| Germany, FR | 870 | 1,055 | 1,953 | 323 | 508 | 702 | –17.5 | 14.4 | 2.4 |
| Greece | * | 292 | * | – | * | * | –99.9 | .2 | –4.8 |
| Iceland | 54 | 62 | 39 | 7 | – | 50 | –13.3 | – | .9 |
| Ireland | 637 | 765 | 914 | 974 | 985 | 1,469 | –16.8 | –10.3 | –8.9 |
| Italy | 7,019 | 9,204 | 9,063 | 7,543 | 6,918 | 11,070 | –23.7 | .4 | –4.9 |
| Netherlands | 4,825 | 7,058 | 7,301 | 4,874 | 5,562 | 5,086 | –31.6 | –3.5 | –.6 |
| Norway | 96 | 85 | 120 | 87 | 101 | 269 | 13.4 | –1.1 | –10.8 |
| Portugal | 1,470 | 1,803 | 1,752 | 1,057 | 1,491 | 883 | –18.4 | –.3 | 5.8 |
| Romania | 2,244 | 1,512 | 1,984 | 1,553 | 720 | 1,512 | 48.4 | 32.9 | 4.5 |
| Spain | 4,134 | 4,093 | 4,653 | 4,132 | 4,064 | 2,542 | 1.0 | .4 | 5.5 |
| Sweden | 834 | 1,070 | 1,117 | 702 | 736 | 718 | –22.0 | 3.1 | 1.7 |
| Turkey | 2,092 | 2,167 | 2,011 | 1,335 | 1,605 | 2,023 | –3.5 | 6.8 | .4 |
| United Kingdom | 7,185 | 6,196 | 4,726 | 3,363 | 4,111 | 3,671 | 16.0 | 15.0 | 7.7 |
| Other[2] | 29 | 4 | 78 | * | 78 | 1,478 | NM | –22.3 | –35.5 |
| **Asia Total** | **14,498** | **17,980** | **19,095** | **17,957** | **19,500** | **23,075** | **–19.4** | **–7.1** | **–5.0** |
| China (Taiwan) | 2,241 | 2,441 | 2,533 | 3,374 | 3,435 | 4,674 | –8.2 | –10.1 | –7.8 |
| Israel | 593 | 1,202 | 760 | 864 | 849 | 243 | –50.6 | –8.6 | 10.4 |
| Japan | 7,974 | 10,529 | 11,787 | 10,158 | 11,878 | 14,122 | –24.3 | –9.5 | –6.1 |
| Korea, Republic of | 3,489 | 3,773 | 4,012 | 3,558 | 3,316 | 3,939 | –7.5 | 1.3 | –1.3 |
| Other[2] | 201 | 36 | 2 | 3 | 22 | 96 | 461.0 | 74.6 | 8.6 |
| **Oceania & Australia Total** | **1** | **1** | ***** | **1** | **1** | **2** | **–10.9** | **–5.8** | **–9.7** |
| Other[2] | 1 | 1 | * | 1 | 1 | 2 | –10.9 | –5.8 | –9.7 |
| **Africa Total** | **2,554** | **4,184** | **3,453** | **2,124** | **2,474** | **1,178** | **–38.9** | **.8** | **9.0** |
| Algeria | 264 | 177 | 220 | 355 | 409 | 708 | 49.6 | –10.3 | –10.4 |
| Egypt | 1,130 | 1,038 | 1,235 | 1,048 | 868 | 431 | 8.9 | 6.8 | 11.3 |
| Morocco | 142 | 1,650 | 1,212 | 83 | 587 | 39 | –91.4 | –29.9 | 15.4 |
| South Africa, Rep of | 987 | 1,320 | 786 | 638 | 567 | – | –25.2 | 14.8 | – |
| Other[2] | 31 | – | – | – | 42 | * | – | –7.3 | 97.3 |
| **Total** | **83,545** | **90,473** | **88,547** | **71,359** | **74,519** | **95,023** | **–7.6** | **2.9** | **–1.4** |

[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 1996.

* Data round to zero.

**NM** Not meaningful as value is greater than 500 percent.

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, 1988, 1993-1997

(Thousand Short Tons)

| Continent and Country of Destination | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **North America Total** | **5,355** | **6,500** | **4,776** | **4,246** | **4,853** | **7,556** | **−17.6** | **2.5** | **−3.8** |
| Canada[1] | 4,891 | 6,030 | 4,452 | 4,032 | 4,663 | 7,278 | −18.9 | 1.2 | −4.3 |
| Mexico | 463 | 470 | 324 | 214 | 190 | 201 | −1.4 | 25.0 | 9.7 |
| Other[2] | – | – | – | – | * | 77 | – | −100.0 | −100.0 |
| **South America Total** | **7,641** | **6,814** | **6,778** | **5,926** | **5,514** | **5,771** | **12.1** | **8.5** | **3.2** |
| Argentina | 277 | 291 | 336 | 449 | 487 | 610 | −4.6 | −13.1 | −8.4 |
| Brazil | 7,364 | 6,445 | 6,336 | 5,477 | 5,027 | 5,105 | 14.3 | 10.0 | 4.1 |
| Chile | – | 78 | 106 | – | – | 56 | −100.0 | – | −100.0 |
| Other[2] | – | * | – | – | – | – | −100.0 | – | – |
| **Europe Total** | **28,802** | **28,253** | **27,282** | **25,245** | **26,791** | **31,771** | **1.9** | **1.8** | **−1.1** |
| Belgium & Luxembourg | 3,372 | 3,445 | 3,468 | 3,706 | 4,030 | 5,594 | −2.1 | −4.3 | −5.5 |
| Bulgaria | 1,114 | 1,214 | 1,339 | 1,184 | 849 | – | −8.2 | 7.0 | – |
| Denmark | – | – | – | – | 106 | 136 | – | −100.0 | −100.0 |
| Finland | 501 | 540 | 724 | 311 | 252 | 68 | −7.1 | 18.8 | 24.8 |
| France | 3,056 | 3,084 | 3,155 | 2,816 | 3,101 | 4,278 | −.9 | −.4 | −3.7 |
| Germany, FR | 650 | 538 | 231 | 288 | 203 | 646 | 20.8 | 33.8 | .1 |
| Iceland | 54 | 54 | 39 | 7 | – | – | −1.1 | – | – |
| Ireland | 121 | – | – | – | – | 27 | – | – | 18.3 |
| Italy | 4,581 | 5,293 | 4,504 | 5,045 | 4,965 | 6,395 | −13.4 | −2.0 | −3.6 |
| Netherlands | 4,114 | 4,142 | 3,978 | 3,231 | 3,743 | 2,727 | −.7 | 2.4 | 4.7 |
| Norway | 90 | 61 | 92 | 73 | 70 | 123 | 46.8 | 6.3 | −3.4 |
| Portugal | 214 | 174 | 30 | – | 149 | 200 | 22.8 | 9.5 | .8 |
| Romania | 2,148 | 1,512 | 1,685 | 663 | 373 | 1,512 | 42.1 | 54.9 | 4.0 |
| Spain | 2,251 | 2,103 | 2,178 | 2,656 | 2,994 | 2,501 | 7.1 | −6.9 | −1.2 |
| Sweden | 834 | 987 | 1,109 | 702 | 736 | 587 | −15.5 | 3.1 | 4.0 |
| Turkey | 2,087 | 2,027 | 1,806 | 1,335 | 1,604 | 2,018 | 3.0 | 6.8 | .4 |
| United Kingdom | 3,615 | 3,081 | 2,932 | 3,228 | 3,573 | 3,543 | 17.3 | .3 | .2 |
| Other[2] | * | – | 13 | – | 43 | 1,418 | – | −80.1 | −66.9 |
| **Asia Total** | **7,978** | **8,814** | **11,014** | **9,877** | **10,608** | **15,713** | **−9.5** | **−6.9** | **−7.3** |
| China (Taiwan) | 555 | 376 | 370 | 296 | 285 | 686 | 47.6 | 18.1 | −2.3 |
| Israel | 137 | 265 | 141 | – | – | – | −48.5 | – | – |
| Japan | 4,791 | 5,552 | 7,929 | 7,195 | 8,028 | 12,116 | −13.7 | −12.1 | −9.8 |
| Korea, Republic of | 2,472 | 2,597 | 2,574 | 2,386 | 2,276 | 2,823 | −4.8 | 2.1 | −1.5 |
| Other[2] | 23 | 24 | – | – | 19 | 88 | −1.0 | 5.3 | −13.8 |
| **Africa Total** | **2,379** | **2,570** | **2,239** | **2,040** | **1,886** | **1,139** | **−7.4** | **6.0** | **8.5** |
| Algeria | 264 | 177 | 220 | 355 | 409 | 708 | 49.6 | −10.3 | −10.4 |
| Egypt | 1,128 | 1,037 | 1,233 | 1,047 | 868 | 431 | 8.8 | 6.8 | 11.3 |
| Morocco | – | 37 | – | – | – | – | −100.0 | – | – |
| South Africa, Rep of | 987 | 1,320 | 786 | 638 | 567 | – | −25.2 | 14.8 | – |
| Other[2] | – | – | – | – | 42 | – | – | −100.0 | – |
| **Total** | **52,154** | **52,950** | **52,089** | **47,334** | **49,652** | **61,950** | **−1.5** | **1.2** | **−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 1996.

* 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, 1988, 1993-1997

(Thousand Short Tons)

| Continent and Country of Destination | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **North America Total** | **11,592** | **7,110** | **5,635** | **5,259** | **4,366** | **12,116** | **63.0** | **27.6** | **–0.5** |
| Canada[1] | 10,084 | 5,999 | 4,975 | 5,161 | 4,225 | 11,954 | 68.1 | 24.3 | –1.9 |
| Mexico | 1,435 | 1,039 | 547 | 26 | 60 | 103 | 38.2 | 121.4 | 33.9 |
| Other[2] | 73 | 72 | 113 | 71 | 81 | 59 | .3 | –2.6 | 2.3 |
| **South America Total** | **573** | **691** | **190** | **20** | **236** | **188** | **–17.1** | **24.8** | **13.2** |
| Argentina | 48 | 13 | 6 | 4 | 38 | * | 263.3 | 6.3 | 76.1 |
| Brazil | 90 | 95 | 15 | 5 | 170 | 147 | –4.8 | –14.6 | –5.2 |
| Chile | 146 | 496 | 121 | * | * | * | –70.6 | 492.9 | 100.1 |
| Other[2] | 288 | 87 | 49 | 12 | 28 | 40 | 232.4 | 79.1 | 24.4 |
| **Europe Total** | **12,530** | **18,940** | **21,338** | **10,580** | **10,784** | **13,366** | **–33.8** | **3.8** | **–.7** |
| Belgium & Luxembourg | 947 | 1,125 | 1,033 | 1,205 | 1,199 | 897 | –15.8 | –5.7 | .6 |
| Bulgaria | – | 173 | – | 54 | 57 | – | –100.0 | –100.0 | – |
| Denmark | 350 | 1,316 | 2,100 | 477 | 230 | 2,668 | –73.4 | 11.0 | –20.2 |
| Finland | 160 | 164 | 584 | 66 | 1 | – | –2.3 | 296.1 | – |
| France | 342 | 769 | 503 | 58 | 870 | 24 | –55.5 | –20.8 | 34.5 |
| Germany, FR | 221 | 517 | 1,722 | 35 | 305 | 56 | –57.3 | –7.8 | 16.5 |
| Greece | * | 292 | * | – | * | * | –99.9 | .2 | –4.8 |
| Iceland | – | 8 | – | – | – | 50 | –100.0 | – | –100.0 |
| Ireland | 516 | 765 | 914 | 974 | 985 | 1,443 | –32.5 | –14.9 | –10.8 |
| Italy | 2,438 | 3,911 | 4,559 | 2,498 | 1,954 | 4,675 | –37.7 | 5.7 | –7.0 |
| Netherlands | 711 | 2,917 | 3,323 | 1,643 | 1,819 | 2,358 | –75.6 | –20.9 | –12.5 |
| Norway | 7 | 24 | 28 | 13 | 31 | 146 | –72.2 | –31.7 | –29.1 |
| Portugal | 1,256 | 1,628 | 1,722 | 1,057 | 1,342 | 684 | –22.8 | –1.6 | 7.0 |
| Romania | 96 | – | 299 | 890 | 347 | – | – | –27.6 | – |
| Spain | 1,883 | 1,990 | 2,475 | 1,476 | 1,070 | 41 | –5.4 | 15.2 | 52.9 |
| Sweden | – | 83 | 9 | – | – | 131 | –100.0 | – | –100.0 |
| Turkey | 5 | 140 | 206 | – | * | 6 | –96.4 | 101.0 | –1.3 |
| United Kingdom | 3,570 | 3,115 | 1,795 | 135 | 538 | 128 | 14.6 | 60.5 | 44.8 |
| Other[2] | 28 | 4 | 65 | * | 35 | 60 | NM | –5.2 | –7.9 |
| **Asia Total** | **6,520** | **9,166** | **8,081** | **8,080** | **8,892** | **7,362** | **–28.9** | **–7.5** | **–1.3** |
| China (Taiwan) | 1,686 | 2,066 | 2,163 | 3,078 | 3,150 | 3,988 | –18.4 | –14.5 | –9.1 |
| Israel | 456 | 936 | 620 | 864 | 849 | 243 | –51.2 | –14.4 | 7.2 |
| Japan | 3,183 | 4,976 | 3,858 | 2,963 | 3,850 | 2,007 | –36.0 | –4.6 | 5.3 |
| Korea, Republic of | 1,017 | 1,175 | 1,438 | 1,172 | 1,040 | 1,116 | –13.5 | –.5 | –1.0 |
| Other[2] | 178 | 12 | 2 | 3 | 3 | 7 | NM | 185.9 | 42.2 |
| **Oceania & Australia Total** | **1** | **1** | ***** | **1** | **1** | **2** | **–10.9** | **–5.8** | **–9.7** |
| Other[2] | 1 | 1 | * | 1 | 1 | 2 | –10.9 | –5.8 | –9.7 |
| **Africa Total** | **175** | **1,615** | **1,214** | **85** | **588** | **39** | **–89.1** | **–26.1** | **18.1** |
| Egypt | 2 | 1 | 2 | 1 | 1 | – | 102.2 | 37.8 | – |
| Morocco | 142 | 1,614 | 1,212 | 83 | 587 | 39 | –91.2 | –29.9 | 15.4 |
| South Africa, Rep of | – | – | * | – | – | – | – | – | – |
| Other[2] | 31 | – | – | – | – | * | – | – | 97.3 |
| **Total** | **31,390** | **37,522** | **36,458** | **24,025** | **24,867** | **33,073** | **–16.3** | **6.0** | **–.6** |

[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 1996.

* Data round to zero.

**NM** Not meaningful as value is greater than 500 percent.

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, 1988, 1993-1997

(Thousand Short Tons)

| Customs District | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **Eastern Total** | **52,806** | **58,161** | **55,374** | **43,474** | **45,138** | **54,829** | **–9.2** | **4.0** | **–0.4** |
| Boston, MA | 22 | – | 33 | – | 33 | – | – | –10.2 | – |
| Baltimore, MD | 6,297 | 11,221 | 11,313 | 7,912 | 7,354 | 7,482 | –43.9 | –3.8 | –1.9 |
| Portland, ME | 1 | * | 57 | 1 | 1 | – | NM | –7.9 | – |
| Buffalo, NY | 3,594 | 2,263 | 1,574 | 166 | 67 | 58 | 58.8 | 170.8 | 58.3 |
| New York City, NY | 3 | 6 | 87 | 1 | 1 | 138 | –46.4 | 33.0 | –33.6 |
| Ogdensburg, NY | 92 | 116 | 163 | 337 | 44 | 13 | –21.1 | 20.0 | 23.9 |
| Philadelphia, PA | 265 | 406 | 339 | 213 | 190 | 2,346 | –34.9 | 8.7 | –21.5 |
| Norfolk, VA | 42,533 | 44,148 | 41,808 | 34,845 | 37,448 | 44,792 | –3.6 | 3.2 | –.6 |
| St. Albans, VT | 1 | 1 | * | * | * | * | 68.3 | 162.3 | 12.2 |
| **Southern Total** | **15,327** | **16,077** | **19,936** | **15,607** | **16,658** | **18,920** | **–4.7** | **–2.1** | **–2.3** |
| Mobile, AL | 5,379 | 5,897 | 8,283 | 4,997 | 6,262 | 8,278 | –8.8 | –3.7 | –4.7 |
| Savannah, GA | 37 | – | 4 | 1 | – | * | – | – | 96.4 |
| Miami, FL | 1 | 2 | 2 | 3 | 2 | * | –31.6 | –11.5 | 49.8 |
| Tampa, FL | * | – | 1 | * | * | – | – | –3.4 | – |
| New Orleans, LA | 7,639 | 8,669 | 10,522 | 9,475 | 9,705 | 9,252 | –11.9 | –5.8 | –2.1 |
| Wilmington, NC | * | * | – | – | – | 376 | 114.3 | – | –62.1 |
| San Juan, PR | 83 | * | * | 26 | * | – | NM | 471.6 | – |
| Charleston, SC | 164 | 154 | 401 | 957 | 475 | 839 | 6.6 | –23.3 | –16.6 |
| El Paso, TX | * | – | * | – | * | * | – | –47.2 | –19.1 |
| Houston-Galveston, TX | 560 | 297 | 179 | 121 | 155 | 110 | 88.6 | 37.9 | 19.9 |
| Laredo, TX | 1,463 | 1,057 | 542 | 26 | 59 | 66 | 38.3 | 123.6 | 41.0 |
| **Western Total** | **4,771** | **6,832** | **5,527** | **3,813** | **4,201** | **2,189** | **–30.2** | **3.2** | **9.0** |
| Anchorage, AK | 740 | 784 | 919 | 719 | 733 | 827 | –5.6 | .3 | –1.2 |
| Nogales, AZ | – | * | – | * | * | – | –100.0 | –100.0 | – |
| Los Angeles, CA | 3,785 | 5,899 | 4,475 | 2,963 | 3,358 | 1,054 | –35.8 | 3.0 | 15.3 |
| San Diego, CA | * | – | * | 1 | 1 | 1 | – | –19.6 | –11.4 |
| San Francisco, CA | 104 | 1 | * | 1 | – | 44 | NM | – | 9.9 |
| Great Falls, MT | 1 | * | * | 1 | * | 2 | 22.7 | 16.1 | –9.8 |
| Portland, OR | 41 | – | – | – | 2 | * | – | 103.9 | 73.5 |
| Seattle, WA | 100 | 147 | 132 | 128 | 106 | 261 | –32.2 | –1.5 | –10.1 |
| **Northern Total** | **10,616** | **9,358** | **7,688** | **8,437** | **8,495** | **19,085** | **13.4** | **5.7** | **–6.3** |
| Chicago, IL | 21 | – | – | 24 | – | 14 | – | – | 4.2 |
| Detroit, MI | 2,283 | 3,804 | 1,845 | 2,600 | 609 | 49 | –40.0 | 39.1 | 53.4 |
| Duluth, MN | 128 | 247 | 210 | 161 | 134 | 196 | –48.0 | –1.1 | –4.6 |
| Pembina, ND | 1 | 1 | 19 | 10 | 1 | 5 | –12.7 | –13.4 | –19.3 |
| Cleveland, OH | 8,183 | 5,306 | 5,614 | 5,642 | 7,751 | 18,821 | 54.2 | 1.4 | –8.8 |
| **Other Ports** | **25** | **45** | **22** | **28** | **26** | **–** | **–43.8** | **–1.2** | **–** |
| **Total** | **83,545** | **90,473** | **88,547** | **71,359** | **74,519** | **95,023** | **–7.6** | **2.9** | **–1.4** |

* Data round to zero.

**NM** Not meaningful as value is greater than 500 percent.

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

## Mine Prices

The average mine price of U.S. coal in 1997 was $18.14 per short ton, a drop of 2 percent from 1996 and the 15th straight year of decline (Table 80). Since 1988 the average mine price of U.S. coal has declined at an average annual rate of 2 percent. During this period, the average mine price of coal east of the Mississippi River decreased at an annual average rate of 1.2 percent, whereas west of the Mississippi River the decline was 2.5 percent. In real dollars, the decline over this period for the United States was 5 percent (Table 81).

Compared with 1996, the average mine price of coal in all regions decreased. The Appalachia had a slight decrease of .9 percent; the Interior, 2.7 percent; and the West, by 5 percent. Wyoming's coal prices declined by 6.3 percent while prices dropped only slightly in Kentucky by .8 percent.

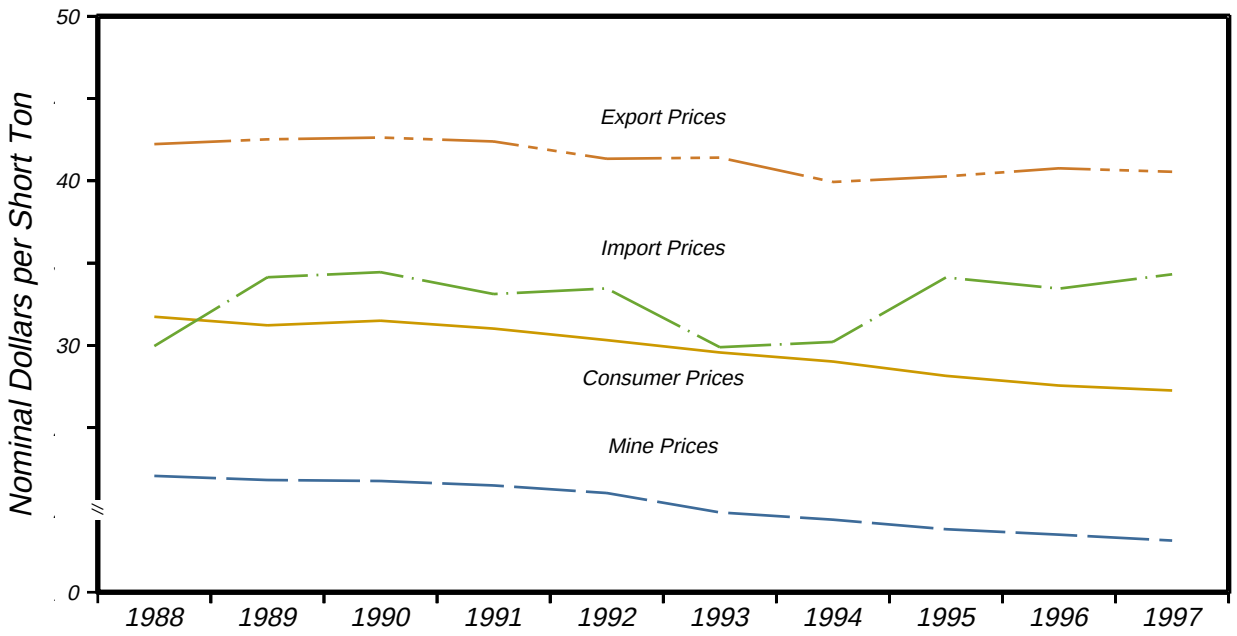
## Consumer Prices

The average price of coal delivered to electric utilities during 1997 was $26.16 per short ton, 1.1 percent less than the average price of $26.45 per short ton reported for 1996 (Table 92). Similarly, compared with 1996, the average price of coal delivered to industrial consumers other than coke plants increased slightly to $32.41 per short ton, while the average price of coal delivered to coke plants increased slightly to $47.61 per short ton (Tables 94 and 96).

The average price of U.S. coal imports in 1997 was $34.32 per short ton, a 2.6 percent increase compared with the 1996 average of $33.45 per short ton.

The average price of U.S. coal exported during 1997 was $40.55 per short ton (Table 99). Compared with 1996, the average price of metallurgical coal exported during 1997 remained about the same at $45.45 per short ton, while the average price of steam coal dropped 4.9 percent to $32.42 per short ton (Tables 101 and 103).

**Figure 12. Coal Prices, 1988-1997**




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 Consumption Report - 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."

## Table 80. Average Mine Price of Coal by State, 1988, 1993-1997

(Nominal Dollars per Short Ton)

| Coal-Producing State and Region | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| Alabama | $38.48 | $39.48 | $38.44 | $40.12 | $42.34 | $41.22 | –2.5 | –2.4 | –0.8 |
| 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 |
| California | – | – | – | – | – | w | – | – | – |
| Colorado | $18.46 | $17.94 | $19.26 | $19.76 | $20.35 | $23.09 | 2.9 | –2.4 | –2.4 |
| Illinois | 21.44 | 22.74 | 23.05 | 23.14 | 25.27 | 28.55 | –5.7 | –4.0 | –3.1 |
| Indiana | 19.62 | 20.24 | 21.71 | 22.28 | 22.89 | 24.29 | –3.1 | –3.8 | –2.3 |
| Iowa | – | – | – | w | w | w | – | – | – |
| Kansas | w | w | w | w | w | w | w | w | w |
| Kentucky Total | $23.72 | $23.91 | $24.79 | $24.88 | $24.77 | $26.20 | –.8 | –1.1 | –1.1 |
| Eastern | 24.65 | 24.98 | 26.00 | 25.25 | 25.50 | 26.97 | –1.3 | –.8 | –1.0 |
| Western | 20.49 | 20.38 | 20.75 | 23.63 | 22.36 | 23.96 | .5 | –2.1 | –1.7 |
| Louisiana | w | w | w | w | w | w | w | w | w |
| Maryland | $23.26 | $24.40 | $24.69 | $26.34 | $25.21 | $25.59 | –4.7 | –2.0 | –1.0 |
| Missouri | 16.87 | 23.31 | 18.91 | 21.78 | w | w | –27.6 | w | w |
| Montana | 9.84 | 9.96 | 9.62 | 10.39 | $11.05 | $10.06 | –1.2 | –2.8 | –.2 |
| New Mexico | 21.83 | 24.66 | 23.80 | 23.29 | 22.96 | 22.78 | –11.5 | –1.3 | –.5 |
| North Dakota | 8.06 | 8.01 | 7.99 | 7.62 | 7.63 | 7.38 | .6 | 1.4 | 1.0 |
| Ohio | 23.66 | 24.85 | 25.97 | 29.13 | 28.04 | 30.50 | –4.8 | –4.2 | –2.8 |
| Oklahoma | 26.32 | 26.54 | 24.13 | 25.57 | 24.91 | 31.06 | –.8 | 1.4 | –1.8 |
| Pennsylvania Total | 25.98 | 25.78 | 26.78 | 26.18 | 26.50 | 29.90 | .8 | –.5 | –1.5 |
| Anthracite | 35.12 | 36.78 | 39.78 | 36.07 | 32.94 | 44.16 | –4.5 | 1.6 | –2.5 |
| Bituminous | 25.41 | 24.98 | 25.77 | 25.45 | 26.03 | 29.24 | 1.7 | –.6 | –1.5 |
| Tennessee | 27.03 | 27.79 | 26.94 | 27.17 | 27.23 | 26.78 | –2.7 | –.2 | .1 |
| Texas | 12.15 | 12.17 | 12.16 | 12.38 | 12.87 | 11.34 | –.1 | –1.4 | .8 |
| Utah | 17.61 | 21.63 | 19.10 | 19.27 | 20.81 | 22.42 | –18.6 | –4.1 | –2.6 |
| Virginia | 28.24 | 28.45 | 28.47 | 26.84 | 26.80 | 26.49 | –.7 | 1.3 | .7 |
| Washington | w | w | w | w | w | w | w | w | w |
| West Virginia Total | $26.64 | $26.58 | $27.18 | $27.42 | $27.58 | $28.22 | .2 | –.8 | –.6 |
| Northern | 25.86 | 24.86 | 24.91 | 26.77 | 28.09 | 28.08 | 4.0 | –2.0 | –.9 |
| Southern | 26.90 | 27.21 | 28.07 | 27.71 | 27.40 | 28.30 | –1.1 | –.5 | –.6 |
| Wyoming | 6.00 | 6.41 | 6.58 | 6.83 | 7.32 | 9.16 | –6.3 | –4.8 | –4.6 |
| **Appalachian Total**[1] | **26.55** | **26.78** | **27.45** | **27.36** | **27.64** | **28.88** | **–.9** | **–1.0** | **–.9** |
| **Interior Total**[1] | **17.91** | **18.41** | **18.81** | **19.87** | **20.03** | **22.03** | **–2.7** | **–2.7** | **–2.3** |
| **Western Total**[1] | **9.52** | **10.03** | **10.15** | **10.57** | **11.14** | **12.23** | **–5.0** | **–3.8** | **–2.7** |
| **East of Miss. River** | **25.39** | **25.70** | **26.35** | **26.44** | **26.81** | **28.26** | **–1.2** | **–1.3** | **–1.2** |
| **West of Miss. River** | **9.92** | **10.40** | **10.48** | **10.91** | **11.50** | **12.46** | **–4.6** | **–3.6** | **–2.5** |
| **U.S. Total** | **18.14** | **18.50** | **18.83** | **19.41** | **19.85** | **22.07** | **–1.9** | **–2.2** | **–2.1** |

[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. 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, 1988, 1993-1997

(Real Dollars per Short Ton)

| Coal-Producing State and Region | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| Alabama | $34.23 | $35.83 | $35.66 | $38.17 | $41.27 | $47.87 | –4.4 | –4.6 | –3.6 |
| 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 |
| California | – | – | – | – | – | w | – | – | – |
| Colorado | $16.43 | $16.28 | $17.86 | $18.80 | $19.84 | $26.81 | .9 | –4.6 | –5.3 |
| Illinois | 19.07 | 20.64 | 21.39 | 22.01 | 24.63 | 33.16 | –7.6 | –6.2 | –5.9 |
| Indiana | 17.45 | 18.37 | 20.14 | 21.20 | 22.31 | 28.22 | –5.0 | –5.9 | –5.2 |
| Iowa | – | – | – | w | w | w | – | – | – |
| Kansas | w | w | w | w | w | w | w | w | w |
| Kentucky Total | $21.10 | $21.70 | $23.00 | $23.67 | $24.15 | $30.43 | –2.7 | –3.3 | –4.0 |
| Eastern | 21.93 | 22.67 | 24.12 | 24.03 | 24.86 | 31.33 | –3.3 | –3.1 | –3.9 |
| Western | 18.23 | 18.50 | 19.25 | 22.49 | 21.79 | 27.83 | –1.4 | –4.4 | –4.6 |
| Louisiana | w | w | w | w | w | w | w | w | w |
| Maryland | $20.69 | $22.14 | $22.90 | $25.06 | $24.57 | $29.72 | –6.5 | –4.2 | –3.9 |
| Missouri | 15.01 | 21.15 | 17.54 | 20.72 | w | w | –29.0 | w | w |
| Montana | 8.76 | 9.04 | 8.93 | 9.89 | $10.77 | $11.69 | –3.1 | –5.0 | –3.1 |
| New Mexico | 19.42 | 22.37 | 22.08 | 22.16 | 22.38 | 26.46 | –13.2 | –3.5 | –3.4 |
| North Dakota | 7.17 | 7.27 | 7.42 | 7.25 | 7.44 | 8.57 | –1.3 | –.9 | –1.9 |
| Ohio | 21.05 | 22.55 | 24.09 | 27.71 | 27.33 | 35.42 | –6.6 | –6.3 | –5.6 |
| Oklahoma | 23.42 | 24.08 | 22.39 | 24.33 | 24.28 | 36.07 | –2.7 | –.9 | –4.7 |
| Pennsylvania Total | 23.11 | 23.39 | 24.84 | 24.91 | 25.83 | 34.73 | –1.2 | –2.7 | –4.4 |
| Anthracite | 31.24 | 33.38 | 36.90 | 34.32 | 32.11 | 51.29 | –6.4 | –.7 | –5.3 |
| Bituminous | 22.60 | 22.67 | 23.91 | 24.21 | 25.37 | 33.96 | –.3 | –2.8 | –4.4 |
| Tennessee | 24.05 | 25.22 | 24.99 | 25.85 | 26.54 | 31.11 | –4.6 | –2.4 | –2.8 |
| Texas | 10.81 | 11.04 | 11.28 | 11.78 | 12.54 | 13.18 | –2.1 | –3.6 | –2.2 |
| Utah | 15.66 | 19.63 | 17.72 | 18.34 | 20.28 | 26.04 | –20.2 | –6.3 | –5.5 |
| Virginia | 25.13 | 25.82 | 26.41 | 25.54 | 26.13 | 30.77 | –2.7 | –1.0 | –2.2 |
| Washington | w | w | w | w | w | w | w | w | w |
| West Virginia Total | $23.70 | $24.12 | $25.21 | $26.09 | $26.88 | $32.77 | –1.7 | –3.1 | –3.5 |
| Northern | 23.01 | 22.56 | 23.11 | 25.47 | 27.38 | 32.62 | 2.0 | –4.3 | –3.8 |
| Southern | 23.93 | 24.69 | 26.04 | 26.36 | 26.70 | 32.86 | –3.1 | –2.7 | –3.5 |
| Wyoming | 5.34 | 5.81 | 6.10 | 6.50 | 7.13 | 10.63 | –8.1 | –7.0 | –7.4 |
| **Appalachian Total**[1] | **23.62** | **24.30** | **25.46** | **26.04** | **26.94** | **33.55** | **–2.8** | **–3.2** | **–3.8** |
| **Interior Total**[1] | **15.94** | **16.70** | **17.45** | **18.90** | **19.52** | **25.59** | **–4.6** | **–4.9** | **–5.1** |
| **Western Total**[1] | **8.47** | **9.10** | **9.41** | **10.06** | **10.86** | **14.20** | **–6.9** | **–6.0** | **–5.6** |
| **East of Miss. River** | **22.59** | **23.32** | **24.44** | **25.16** | **26.13** | **32.82** | **–3.1** | **–3.6** | **–4.1** |
| **West of Miss. River** | **8.83** | **9.44** | **9.72** | **10.38** | **11.21** | **14.47** | **–6.5** | **–5.8** | **–5.3** |
| **U.S. Total** | **16.14** | **16.78** | **17.47** | **18.47** | **19.35** | **25.63** | **–3.8** | **–4.4** | **–5.0** |

[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 1992 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, 1997

(Dollars per Short Ton)

| Coal-Producing State and Region | Underground | | Surface | | Total | |
|---|---|---|---|---|---|---|
| | Nominal | Real[1] | Nominal | Real[1] | Nominal | Real[1] |
| Alabama | $39.54 | $35.18 | $35.15 | $31.27 | $38.48 | $34.23 |
| Alaska | – | – | w | w | w | w |
| Arizona | – | – | w | w | w | w |
| Arkansas | – | – | w | w | w | w |
| Colorado | 18.50 | 16.46 | $18.40 | $16.37 | $18.46 | $16.43 |
| Illinois | 22.22 | 19.77 | 17.12 | 15.24 | 21.44 | 19.07 |
| Indiana | w | w | w | w | 19.62 | 17.45 |
| Kansas | – | – | w | w | w | w |
| Kentucky Total | $24.73 | $22.00 | $22.08 | $19.65 | $23.72 | $21.10 |
| Eastern | 26.26 | 23.36 | 22.45 | 19.97 | 24.65 | 21.93 |
| Western | 20.67 | 18.39 | 19.92 | 17.72 | 20.49 | 18.23 |
| Louisiana | – | – | w | w | w | w |
| Maryland | w | w | w | w | $23.26 | $20.69 |
| Missouri | – | – | $16.87 | $15.01 | 16.87 | 15.01 |
| Montana | – | – | 9.84 | 8.76 | 9.84 | 8.76 |
| New Mexico | – | – | 21.83 | 19.42 | 21.83 | 19.42 |
| North Dakota | – | – | 8.06 | 7.17 | 8.06 | 7.17 |
| Ohio | $25.16 | $22.38 | 21.57 | 19.19 | 23.66 | 21.05 |
| Oklahoma | w | w | w | w | 26.32 | 23.42 |
| Pennsylvania Total | $26.30 | $23.40 | $25.13 | $22.36 | 25.98 | 23.11 |
| Anthracite | 43.63 | 38.81 | 34.39 | 30.60 | 35.12 | 31.24 |
| Bituminous | 26.19 | 23.30 | 22.87 | 20.35 | 25.41 | 22.60 |
| Tennessee | w | w | w | w | 27.03 | 24.05 |
| Texas | – | – | $12.15 | $10.81 | 12.15 | 10.81 |
| Utah | $17.61 | $15.66 | – | – | 17.61 | 15.66 |
| Virginia | 29.07 | 25.86 | 25.74 | 22.90 | 28.24 | 25.13 |
| Washington | – | – | w | w | w | w |
| West Virginia Total | 27.64 | 24.59 | $24.60 | $21.89 | $26.64 | $23.70 |
| Northern | 26.41 | 23.49 | 22.31 | 19.85 | 25.86 | 23.01 |
| Southern | 28.22 | 25.10 | 24.86 | 22.12 | 26.90 | 23.93 |
| Wyoming | w | w | w | w | 6.00 | 5.34 |
| **Appalachian Total[2]** | **27.74** | **24.68** | **24.24** | **21.57** | **26.55** | **23.62** |
| **Interior Total[2]** | **21.62** | **19.24** | **15.64** | **13.92** | **17.91** | **15.94** |
| **Western Total[2]** | **17.90** | **15.92** | **8.54** | **7.60** | **9.52** | **8.47** |
| **East of Miss. River** | **26.67** | **23.73** | **23.08** | **20.53** | **25.39** | **22.59** |
| **West of Miss. River** | **17.95** | **15.97** | **9.10** | **8.09** | **9.92** | **8.83** |
| **U.S. Total** | **25.68** | **22.85** | **13.39** | **11.92** | **18.14** | **16.14** |

1 Real prices are in 1992 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, 1997

(Nominal Dollars per Short Ton)

| Coal-Producing State and Region | Continuous[1] | Conventional[2] | Longwall[3] | Other[4] | Total |
|---|---|---|---|---|---|
| Alabama | w | – | $40.62 | w | $39.54 |
| Colorado | w | – | w | – | 18.50 |
| Illinois | w | w | $24.11 | – | 22.22 |
| Indiana | w | – | – | – | w |
| Kentucky Total | $24.85 | $24.76 | 23.62 | $34.01 | $24.73 |
| Eastern | w | w | 26.87 | 34.01 | 26.26 |
| Western | w | w | 21.41 | – | 20.67 |
| Maryland | w | – | w | – | w |
| Ohio | $20.94 | – | $25.79 | – | $25.16 |
| Oklahoma | w | – | – | – | w |
| Pennsylvania Total | $28.64 | w | 25.65 | w | $26.30 |
| Anthracite | w | w | – | w | 43.63 |
| Bituminous | w | w | 25.65 | – | 26.19 |
| Tennessee | $25.58 | w | – | – | w |
| Utah | w | w | 17.41 | – | $17.61 |
| Virginia | w | w | 31.50 | – | 29.07 |
| West Virginia Total | $27.67 | $26.81 | 27.69 | $27.56 | 27.64 |
| Northern | 23.50 | 25.51 | 27.16 | 27.56 | 26.41 |
| Southern | 28.20 | 27.26 | 28.46 | – | 28.22 |
| Wyoming | w | – | w | – | w |
| **Appalachian Total**[5] | **27.16** | **26.57** | **28.42** | **32.62** | **27.74** |
| **Interior Total**[5] | **20.99** | **20.71** | **23.07** | – | **21.62** |
| **Western Total**[5] | **18.68** | **13.28** | **17.82** | – | **17.90** |
| **East of Miss. River** | **25.76** | **26.26** | **27.73** | **32.62** | **26.67** |
| **West of Miss. River** | **19.00** | **13.28** | **17.82** | – | **17.95** |
| **U.S. Total** | **25.51** | **25.92** | **25.72** | **32.62** | **25.68** |

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.
**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, 1997

(Thousand Short Tons, Nominal Dollars per Short Ton)

| Coal-Producing State and County | Number of Mines | Production | Average Mine Price |
|---|---|---|---|
| **Alabama** | **51** | **24,468** | **38.48** |
| Bibb | 1 | 21 | w |
| Blount | 1 | 6 | – |
| Cullman | 2 | 74 | w |
| Fayette | 1 | 1,992 | w |
| Jackson | 1 | 45 | w |
| Jefferson | 8 | 10,370 | $42.03 |
| Marion | 2 | 130 | w |
| Shelby | 1 | 853 | w |
| Tuscaloosa | 6 | 6,656 | w |
| Walker | 26 | 4,078 | $35.80 |
| Winston | 2 | 243 | w |
| **Alaska** | **1** | **1,450** | **w** |
| Yukon River | 1 | 1,450 | w |
| **Arizona** | **2** | **11,723** | **w** |
| Navajo | 2 | 11,723 | w |
| **Arkansas** | **3** | **18** | **w** |
| Johnson | 2 | 14 | w |
| Sebastian | 1 | 5 | w |
| **Colorado** | **14** | **27,449** | **18.46** |
| Delta | 2 | 804 | w |
| Fremont | 1 | 227 | w |
| Garfield | 1 | 49 | w |
| Gunnison | 2 | 7,322 | w |
| La Plata | 1 | 222 | w |
| Mesa | 1 | 430 | w |
| Moffat | 2 | 7,557 | w |
| Montrose | 1 | 386 | w |
| Rio Blanco | 1 | 1,514 | w |
| Routt | 2 | 8,937 | w |
| **Illinois** | **28** | **41,159** | **21.44** |
| Gallatin | 1 | 1,563 | w |
| Jackson | 1 | 139 | w |
| Jefferson | 2 | 4,337 | w |
| Logan | 1 | 2,059 | w |
| Macoupin | 3 | 6,478 | w |
| McDonough | 1 | 596 | w |
| Perry | 3 | 6,104 | w |
| Randolph | 3 | 3,024 | w |
| Saline | 5 | 8,305 | $22.43 |
| Schuyler | 2 | 480 | w |
| Vermilion | 1 | 635 | w |
| Wabash | 1 | 1,406 | w |
| Washington | 1 | 3,977 | w |
| White | 1 | 2,009 | w |
| Williamson | 2 | 46 | w |
| **Indiana** | **39** | **35,497** | **19.62** |
| Clay | 4 | 1,604 | $19.44 |
| Daviess | 5 | 3,936 | 18.13 |
| Dubois | 1 | 373 | w |
| Gibson | 4 | 2,876 | w |
| Greene | 2 | 2,145 | w |
| Knox | 6 | 5,205 | $20.67 |
| Owen | 2 | 969 | w |
| Pike | 6 | 4,465 | $16.48 |
| Sullivan | 2 | 4,830 | w |
| Vigo | 2 | 3,652 | w |
| Warrick | 5 | 5,442 | w |
| **Kansas** | **3** | **360** | **w** |
| Crawford | 1 | 91 | w |
| Linn | 2 | 268 | w |
| **Kentucky** | **529** | **155,853** | **23.72** |
| Bell | 29 | 4,963 | $25.35 |
| Breathitt | 6 | 4,312 | 21.92 |
| Butler | 2 | 117 | w |
| Clay | 8 | 330 | $21.00 |
| Daviess | 2 | 731 | w |
| Floyd | 44 | 6,358 | $20.64 |
| Harlan | 40 | 10,604 | 26.97 |
| Henderson | 3 | 2,032 | w |
| Hopkins | 14 | 7,515 | $19.75 |

See footnotes at end of table.

## Table 84. Coal Production, Number of Mines, and Average Mine Price, by State and County, 1997 (Continued)

(Thousand Short Tons, Nominal Dollars per Short Ton)

| Coal-Producing State and County | Number of Mines | Production | Average Mine Price |
|---|---|---|---|
| **Kentucky (Continued)** | | | |
| Jackson | 1 | * | – |
| Johnson | 7 | 1,635 | $24.02 |
| Knott | 42 | 12,124 | 22.83 |
| Knox | 17 | 560 | 40.33 |
| Lawrence | 3 | 235 | w |
| Leslie | 18 | 9,935 | $25.18 |
| Letcher | 45 | 9,032 | 25.56 |
| Magoffin | 2 | 1,331 | w |
| Martin | 32 | 12,530 | $22.78 |
| McLean | 4 | 1,344 | w |
| Morgan | 1 | 1 | – |
| Muhlenberg | 5 | 3,248 | $17.63 |
| Ohio | 7 | 1,476 | 18.05 |
| Owsley | 4 | 113 | 21.18 |
| Perry | 33 | 11,480 | $23.75 |
| Pike | 142 | 34,953 | 26.00 |
| Union | 3 | 7,864 | w |
| Webster | 7 | 10,610 | $20.82 |
| Whitley | 8 | 422 | 25.78 |
| **Louisiana** | **2** | **3,545** | **w** |
| De Soto | 1 | 2,534 | w |
| Red River | 1 | 1,011 | w |
| **Maryland** | **18** | **4,160** | **23.26** |
| Allegany | 9 | 561 | w |
| Garrett | 9 | 3,598 | w |
| **Missouri** | **4** | **401** | **16.87** |
| Barton | 1 | 73 | w |
| Bates | 2 | 297 | w |
| Vernon | 1 | 30 | w |
| **Montana** | **8** | **41,005** | **9.84** |
| Big Horn | 4 | 27,275 | $10.39 |
| Musselshell | 1 | 8 | w |
| Richland | 1 | 242 | w |
| Rosebud | 2 | 13,480 | w |
| **New Mexico** | **6** | **27,025** | **21.83** |
| Colfax | 1 | 1,244 | w |
| McKinley | 2 | 11,464 | w |
| San Juan | 3 | 14,318 | w |
| **North Dakota** | **6** | **29,580** | **8.06** |
| Bowman | 1 | 1 | – |
| McLean | 1 | 7,164 | w |
| Mercer | 2 | 17,080 | w |
| Oliver | 2 | 5,334 | w |
| **Ohio** | **81** | **29,154** | **23.66** |
| Belmont | 7 | 6,737 | w |
| Carroll | 4 | 58 | $19.62 |
| Columbiana | 7 | 779 | 15.58 |
| Coshocton | 6 | 368 | w |
| Gallia | 1 | 333 | w |
| Guernsey | 5 | 481 | $25.23 |
| Harrison | 8 | 2,090 | 21.76 |
| Holmes | 1 | 122 | w |
| Jackson | 3 | 1,147 | w |
| Jefferson | 8 | 907 | $20.96 |
| Lawrence | 1 | 6 | – |
| Meigs | 2 | 6,405 | w |
| Monroe | 1 | 3,243 | w |
| Muskingum | 3 | 701 | w |
| Noble | 4 | 870 | w |
| Perry | 5 | 1,234 | $22.14 |
| Stark | 4 | 546 | 16.16 |
| Tuscarawas | 8 | 1,317 | 17.81 |
| Vinton | 3 | 1,809 | w |
| **Oklahoma** | **11** | **1,621** | **26.32** |
| Craig | 1 | 190 | w |
| Haskell | 1 | 201 | w |
| Latimer | 1 | 274 | w |
| Le Flore | 6 | 761 | $28.57 |
| Nowata | 1 | 189 | w |
| Okmulgee | 1 | 6 | – |

See footnotes at end of table.

## Table 84. Coal Production, Number of Mines, and Average Mine Price, by State and County, 1997 (Continued)

(Thousand Short Tons, Nominal Dollars per Short Ton)

| Coal-Producing State and County | Number of Mines | Production | Average Mine Price |
|---|---|---|---|
| **Pennsylvania** | **403** | **76,198** | **25.98** |
| Allegheny | 3 | 41 | w |
| Armstrong | 29 | 5,949 | $25.38 |
| Beaver | 1 | 89 | w |
| Blair | 1 | 36 | w |
| Butler | 7 | 112 | w |
| Cambria | 15 | 1,429 | $26.13 |
| Centre | 3 | 388 | w |
| Clarion | 9 | 683 | w |
| Clearfield | 46 | 4,602 | $26.19 |
| Columbia | 7 | 923 | w |
| Dauphin | 2 | 10 | w |
| Elk | 5 | 643 | $23.67 |
| Fayette | 17 | 388 | 23.43 |
| Greene | 14 | 35,362 | 25.33 |
| Indiana | 30 | 4,820 | 31.38 |
| Jefferson | 26 | 1,543 | 25.48 |
| Lackawanna | 5 | 83 | w |
| Lawrence | 1 | 17 | w |
| Luzerne | 18 | 897 | $29.43 |
| Lycoming | 1 | 407 | w |
| Mercer | 1 | 4 | – |
| Northumberland | 18 | 318 | w |
| Schuylkill | 79 | 2,430 | $39.84 |
| Snyder | 1 | * | – |
| Somerset | 41 | 5,605 | 19.82 |
| Sullivan | 1 | 17 | w |
| Venango | 1 | 68 | w |
| Washington | 9 | 8,464 | $26.19 |
| Westmoreland | 12 | 872 | 22.92 |
| **Tennessee** | **27** | **3,300** | **27.03** |
| Anderson | 4 | 434 | w |
| Campbell | 9 | 876 | $31.35 |
| Claiborne | 7 | 672 | w |
| Fentress | 1 | 288 | w |
| Marion | 1 | 53 | w |
| Morgan | 1 | 56 | w |
| Scott | 2 | 108 | w |
| Sequatchie | 2 | 814 | w |
| **Texas** | **12** | **53,328** | **12.15** |
| Atascosa | 1 | 3,487 | w |
| Freestone | 1 | 5,127 | w |
| Harrison | 2 | 4,422 | w |
| Hopkins | 1 | 2,219 | w |
| Leon | 1 | 8,799 | w |
| Milam | 1 | 6,370 | w |
| Panola | 1 | 7,248 | w |
| Robertson | 1 | 1,715 | w |
| Rusk | 1 | 5,808 | w |
| Titus | 1 | 7,779 | w |
| Webb | 1 | 353 | w |
| **Utah** | **12** | **26,683** | **17.61** |
| Carbon | 7 | 10,104 | $20.96 |
| Emery | 4 | 11,640 | w |
| Sevier | 1 | 4,939 | w |
| **Virginia** | **191** | **35,837** | **28.24** |
| Buchanan | 74 | 14,420 | $28.91 |
| Dickenson | 23 | 3,058 | 31.14 |
| Lee | 9 | 1,471 | 28.23 |
| Russell | 10 | 1,133 | 31.41 |
| Tazewell | 17 | 1,705 | 33.24 |
| Wise | 58 | 14,049 | 26.08 |
| **Washington** | **3** | **4,495** | **w** |
| King | 1 | 67 | w |
| Lewis | 1 | 3,211 | w |
| Thurston | 1 | 1,217 | w |
| **West Virginia** | **349** | **173,743** | **26.64** |
| Barbour | 7 | 1,371 | w |
| Boone | 42 | 30,602 | $27.48 |
| Braxton | 1 | 413 | w |
| Brooke | 1 | 1,539 | w |

See footnotes at end of table.

## Table 84. Coal Production, Number of Mines, and Average Mine Price, by State and County, 1997 (Continued)

(Thousand Short Tons, Nominal Dollars per Short Ton)

| Coal-Producing State and County | Number of Mines | Production | Average Mine Price |
|---|---|---|---|
| **West Virginia (Continued)** | | | |
| Clay | 4 | 6,902 | w |
| Fayette | 7 | 3,706 | $26.46 |
| Gilmer | 1 | 15 | w |
| Grant | 4 | 1,917 | w |
| Greenbrier | 4 | 528 | $30.52 |
| Harrison | 12 | 5,292 | w |
| Kanawha | 13 | 8,897 | $23.04 |
| Lincoln | 1 | 47 | w |
| Logan | 29 | 20,467 | $22.45 |
| Marion | 4 | 4,897 | w |
| Marshall | 2 | 10,131 | w |
| McDowell | 74 | 6,673 | $26.22 |
| Mineral | 2 | 122 | w |
| Mingo | 37 | 22,424 | $28.55 |
| Monongalia | 12 | 7,635 | w |
| Nicholas | 9 | 2,605 | $31.48 |
| Preston | 12 | 1,743 | 24.20 |
| Raleigh | 22 | 13,882 | 29.85 |
| Randolph | 4 | 626 | 28.03 |
| Tucker | 1 | 193 | w |
| Upshur | 10 | 1,585 | $20.74 |
| Wayne | 6 | 4,394 | w |
| Webster | 7 | 5,324 | $23.82 |
| Wyoming | 21 | 9,814 | 29.53 |
| **Wyoming** | **25** | **281,881** | **6.00** |
| Campbell | 15 | 246,281 | $5.10 |
| Carbon | 3 | 5,398 | w |
| Converse | 2 | 17,701 | w |
| Lincoln | 2 | 4,607 | w |
| Sheridan | 1 | 44 | w |
| Sweetwater | 2 | 7,849 | w |
| **U.S. Total** | **1,828** | **1,089,932** | **18.14** |

* 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, 1997

(Nominal Dollars per Short Ton)

| Coal-Producing State and Region | Bituminous | Subbituminous | Lignite | Anthracite | Total |
|---|---|---|---|---|---|
| Alabama | $38.48 | – | – | – | $38.48 |
| Alaska | – | w | – | – | w |
| Arizona | w | – | – | – | w |
| Arkansas | – | – | – | w | w |
| Colorado | $18.46 | $18.47 | – | – | $18.46 |
| Illinois | 21.44 | – | – | – | 21.44 |
| Indiana | 19.62 | – | – | – | 19.62 |
| Kansas | 21.88 | – | – | – | 21.88 |
| Kentucky Total | 23.72 | – | – | – | 23.72 |
| Eastern | 24.65 | – | – | – | 24.65 |
| Western | 20.49 | – | – | – | 20.49 |
| Louisiana | – | – | w | – | w |
| Maryland | 23.26 | – | – | – | $23.26 |
| Missouri | 16.87 | – | – | – | 16.87 |
| Montana | – | w | w | – | 9.84 |
| New Mexico | w | w | – | – | 21.83 |
| North Dakota | – | – | $8.06 | – | 8.06 |
| Ohio | $23.66 | – | – | – | 23.66 |
| Oklahoma | 26.32 | – | – | – | 26.32 |
| Pennsylvania Total | 25.41 | – | – | $35.12 | 25.98 |
| Anthracite | – | – | – | 35.12 | 35.12 |
| Bituminous | 25.41 | – | – | – | 25.41 |
| Tennessee | 27.03 | – | – | – | 27.03 |
| Texas | w | – | w | – | 12.15 |
| Utah | $17.61 | – | – | – | 17.61 |
| Virginia | 28.24 | – | – | – | 28.24 |
| Washington | w | w | – | – | w |
| West Virginia Total | $26.64 | – | – | – | $26.64 |
| Northern | 25.86 | – | – | – | 25.86 |
| Southern | 26.90 | – | – | – | 26.90 |
| Wyoming | w | w | – | – | 6.00 |
| **Appalachian Total**[1] | **26.47** | – | – | **35.12** | **26.55** |
| **Interior Total**[1] | **20.64** | **w** | **12.40** | **w** | **17.91** |
| **Western Total**[1] | **19.57** | **w** | **8.09** | – | **9.52** |
| **East of Miss. River** | **25.32** | – | – | **35.12** | **25.39** |
| **West of Miss. River** | **19.73** | **7.42** | **10.91** | **w** | **9.92** |
| **U.S. Total** | **24.64** | **7.42** | **10.91** | [2] **35.12** | **18.14** |

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, 1997
(Nominal Dollars per Short Ton)

| Mine Production Range (thousand short tons) | Underground | Surface | Total |
|---|---|---|---|
| Over 1,000 | $25.40 | $11.07 | $15.93 |
| 500 to 1,000 | 26.97 | 22.95 | 25.06 |
| 200 to 500 | 25.94 | 23.96 | 25.02 |
| 100 to 200 | 25.45 | 24.20 | 24.91 |
| 50 to 100 | 25.18 | 23.77 | 24.53 |
| 10 to 50 | 26.28 | 22.53 | 24.13 |
| **U.S. Total** | **25.68** | **13.39** | **18.14** |

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, 1997
(Nominal Dollars per Short Ton)

| Coalbed Thickness (inches) | Underground | Surface | Total |
|---|---|---|---|
| < 7 | – | $28.17 | $28.17 |
| 7-12 | – | 25.97 | 25.97 |
| 13-18 | – | 22.75 | 22.75 |
| 19-24 | $42.74 | 20.35 | 20.86 |
| 25-30 | 26.34 | 22.53 | 23.28 |
| 31-36 | 26.36 | 23.25 | 24.91 |
| 37-42 | 27.27 | 23.07 | 25.55 |
| 43-48 | 27.96 | 21.23 | 25.03 |
| 49-54 | 26.31 | 23.28 | 25.08 |
| 55-60 | 28.36 | 20.75 | 26.65 |
| 61-66 | 25.73 | 23.97 | 25.23 |
| 67-72 | 26.65 | 19.00 | 24.48 |
| 73-78 | 25.75 | 20.99 | 24.89 |
| 79-84 | 25.12 | 22.36 | 24.54 |
| 85-90 | 28.08 | 17.15 | 24.24 |
| 91-96 | 23.26 | 19.81 | 22.51 |
| 97-102 | 22.58 | 15.96 | 16.50 |
| 103-108 | 25.54 | 15.67 | 18.05 |
| 109-114 | 18.35 | 24.63 | 20.59 |
| 115-120 | 24.87 | 24.00 | 24.42 |
| > 120 | 16.89 | 8.08 | 8.62 |
| **U.S. Total** | **25.68** | **13.39** | **18.14** |

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, 1997

(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 | $39.54 | $35.63 | $38.48 |
| Alaska | – | – | w | – | – | w |
| Arizona | – | – | w | – | – | w |
| Arkansas | – | – | – | – | w | w |
| Colorado | – | $16.87 | $23.31 | w | w | $18.46 |
| Illinois | – | w | 21.93 | $22.67 | w | 21.44 |
| Indiana | – | w | 18.92 | 23.84 | w | 19.62 |
| Kansas | – | – | w | – | w | w |
| Kentucky Total | $22.50 | $22.61 | $23.66 | 23.94 | $27.02 | $23.72 |
| Eastern | 22.50 | w | 24.58 | 24.88 | w | 24.65 |
| Western | – | w | 20.42 | 20.57 | w | 20.49 |
| Louisiana | – | w | – | – | – | w |
| Maryland | – | – | w | 20.31 | $20.60 | w |
| Missouri | – | – | w | – | w | $16.87 |
| Montana | w | w | – | – | – | 9.84 |
| New Mexico | – | w | w | – | – | 21.83 |
| North Dakota | w | w | – | – | – | 8.06 |
| Ohio | w | w | $22.78 | 26.53 | $17.73 | 23.66 |
| Oklahoma | – | – | w | 26.55 | w | 26.32 |
| Pennsylvania Total | $24.74 | $24.87 | $24.32 | 26.73 | $40.63 | 25.98 |
| Anthracite | 25.45 | 30.03 | 26.81 | 23.05 | 56.03 | 35.12 |
| Bituminous | 20.74 | 24.70 | 24.26 | 26.79 | 33.70 | 25.41 |
| Tennessee | w | – | w | 25.27 | 25.59 | w |
| Texas | w | 12.14 | w | w | – | $12.15 |
| Utah | – | w | $20.19 | w | w | 17.61 |
| Virginia | – | w | w | $28.63 | $26.97 | 28.24 |
| Washington | – | – | – | w | w | w |
| West Virginia Total | w | w | $26.78 | $28.49 | $32.10 | $26.64 |
| Northern | – | w | 25.92 | 29.29 | w | 25.86 |
| Southern | w | $23.90 | 27.09 | 28.27 | w | 26.90 |
| Wyoming | $5.09 | 15.27 | w | – | w | 6.00 |
| **Appalachian Total**[1] | **24.20** | **23.71** | **25.55** | **28.64** | **32.76** | **26.55** |
| **Interior Total**[1] | **9.70** | **13.46** | **20.08** | **22.21** | **26.67** | **17.91** |
| **Western Total**[1] | **5.91** | **17.22** | **21.89** | **23.56** | **17.13** | **9.52** |
| **East of Miss. River** | **24.20** | **22.73** | **24.41** | **27.51** | **32.72** | **25.39** |
| **West of Miss. River** | **5.95** | **15.32** | **21.38** | **24.03** | **19.41** | **9.92** |
| **U.S. Total** | **6.14** | **17.49** | **24.07** | **27.34** | **31.61** | **18.14** |

[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, 1997

(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 | – | – | – | $40.42 | $35.93 | $39.54 |
| Colorado | – | w | $25.36 | w | w | 18.50 |
| Illinois | – | – | 21.79 | $22.98 | w | 22.22 |
| Indiana | – | – | w | w | – | w |
| Kentucky Total | w | $26.27 | $24.49 | $24.76 | $27.80 | $24.73 |
| Eastern | w | 26.27 | 26.31 | 26.07 | 27.80 | 26.26 |
| Western | – | – | 20.59 | w | – | 20.67 |
| Maryland | – | – | w | w | – | w |
| Ohio | – | – | w | w | – | $25.16 |
| Oklahoma | – | – | – | w | – | w |
| Pennsylvania Total | – | w | w | $27.61 | 40.02 | $26.30 |
| Anthracite | – | – | – | – | 43.63 | 43.63 |
| Bituminous | – | w | w | 27.61 | 39.13 | 26.19 |
| Tennessee | – | – | – | w | w | w |
| Utah | – | w | $20.19 | w | w | $17.61 |
| Virginia | – | – | 30.54 | $28.87 | $27.32 | 29.07 |
| West Virginia Total | w | w | 27.47 | 29.11 | 30.96 | 27.64 |
| Northern | – | w | 25.93 | 30.05 | w | 26.41 |
| Southern | w | $25.03 | 28.41 | 28.87 | w | 28.22 |
| Wyoming | – | w | – | – | – | w |
| **Appalachian Total**[1] | **22.80** | **25.10** | **26.51** | **29.75** | **32.09** | **27.74** |
| **Interior Total**[1] | – | – | **21.19** | **22.37** | **21.80** | **21.62** |
| **Western Total**[1] | – | **15.75** | **21.68** | **18.41** | **16.46** | **17.90** |
| **East of Miss. River** | **22.80** | **25.10** | **25.47** | **28.38** | **32.07** | **26.67** |
| **West of Miss. River** | – | **15.75** | **21.68** | **19.34** | **16.46** | **17.95** |
| **U.S. Total** | **22.80** | **19.78** | **25.20** | **28.20** | **30.81** | **25.68** |

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, 1997

(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 | $28.81 | $36.73 | $31.97 | $35.15 |
| Alaska | – | – | w | – | – | w |
| Arizona | – | – | w | – | – | w |
| Arkansas | – | – | – | – | w | w |
| Colorado | – | w | w | – | – | $18.40 |
| Illinois | – | w | $23.72 | w | – | 17.12 |
| Indiana | – | w | 18.92 | $21.64 | w | w |
| Kansas | – | – | w | – | w | w |
| Kentucky Total | w | $21.32 | $22.45 | 21.45 | $24.85 | $22.08 |
| Eastern | w | 21.85 | 22.71 | 21.79 | 24.85 | 22.45 |
| Western | – | 20.61 | 19.39 | 19.11 | w | 19.92 |
| Louisiana | – | w | – | – | – | w |
| Maryland | – | – | w | 23.50 | $20.60 | w |
| Missouri | – | – | w | – | w | $16.87 |
| Montana | w | w | – | – | – | 9.84 |
| New Mexico | – | w | w | – | – | 21.83 |
| North Dakota | w | w | – | – | – | 8.06 |
| Ohio | $23.47 | $17.13 | $22.65 | 19.44 | $17.73 | 21.57 |
| Oklahoma | – | – | w | 25.89 | w | 25.80 |
| Pennsylvania Total | 24.74 | 24.29 | $21.10 | 24.78 | $41.05 | 25.13 |
| Anthracite | 25.45 | 30.03 | 26.81 | 23.05 | 60.35 | 34.39 |
| Bituminous | 20.74 | 21.94 | 20.45 | 24.87 | 28.83 | 22.87 |
| Tennessee | w | – | 29.40 | 24.41 | w | w |
| Texas | w | 12.14 | w | w | – | $12.15 |
| Virginia | – | w | w | $27.00 | $20.31 | 25.74 |
| Washington | – | – | – | w | w | w |
| West Virginia Total | w | w | $25.35 | $24.07 | $42.43 | $24.60 |
| Northern | – | w | 25.60 | 25.72 | w | 22.31 |
| Southern | w | $23.16 | 25.34 | 23.32 | w | 24.86 |
| Wyoming | $5.09 | w | w | – | w | w |
| **Appalachian Total**[1] | **24.70** | **22.34** | **23.91** | **25.01** | **34.69** | **24.24** |
| **Interior Total**[1] | **9.70** | **13.46** | **18.83** | **21.52** | **26.90** | **15.64** |
| **Western Total**[1] | **5.91** | **18.08** | **22.03** | **26.33** | **24.00** | **8.54** |
| **East of Miss. River** | **24.70** | **21.13** | **22.73** | **24.45** | **34.53** | **23.08** |
| **West of Miss. River** | **5.95** | **15.20** | **21.22** | **26.12** | **27.00** | **9.10** |
| **U.S. Total** | **6.09** | **16.63** | **22.46** | **24.68** | **33.87** | **13.39** |

[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, 1997

(Nominal Dollars per Short Ton)

| Coal-Producing State and Region | Open Market[1] | Captive[2] | Total |
|---|---|---|---|
| Alabama | w | w | 38.48 |
| Alaska | w | w | w |
| Arizona | w | – | w |
| Arkansas | w | – | w |
| Colorado | w | w | 18.46 |
| Illinois | w | w | 21.44 |
| Indiana | 19.62 | 19.27 | 19.62 |
| Kansas | w | – | w |
| Kentucky Total | 23.65 | 28.91 | 23.72 |
| Eastern | 24.58 | 28.99 | 24.65 |
| Western | 20.49 | 18.47 | 20.49 |
| Louisiana | w | – | w |
| Maryland | w | w | 23.26 |
| Missouri | 16.87 | – | 16.87 |
| Montana | w | w | 9.84 |
| New Mexico | 21.83 | – | 21.83 |
| North Dakota | w | w | 8.06 |
| Ohio | 20.42 | 34.16 | 23.66 |
| Oklahoma | w | w | 26.32 |
| Pennsylvania Total | 26.03 | 23.30 | 25.98 |
| Anthracite | 38.95 | 22.91 | 35.12 |
| Bituminous | 25.41 | 24.46 | 25.41 |
| Tennessee | w | w | 27.03 |
| Texas | 12.50 | 12.02 | 12.15 |
| Utah | 18.61 | 15.54 | 17.61 |
| Virginia | 28.39 | 22.07 | 28.24 |
| Washington | w | w | w |
| West Virginia Total | 26.39 | 32.49 | 26.64 |
| Northern | 24.93 | 45.82 | 25.86 |
| Southern | 26.87 | 27.63 | 26.90 |
| Wyoming | 5.66 | 12.35 | 6.00 |
| **Appalachian Total[3]** | **26.32** | **32.01** | **26.55** |
| **Interior Total[3]** | **19.62** | **12.14** | **17.91** |
| **Western Total[3]** | **9.00** | **16.18** | **9.52** |
| **East of Miss. River** | **25.17** | **31.71** | **25.39** |
| **West of Miss. River** | **9.26** | **13.96** | **9.92** |
| **U.S. Total** | **18.18** | **17.62** | **18.14** |

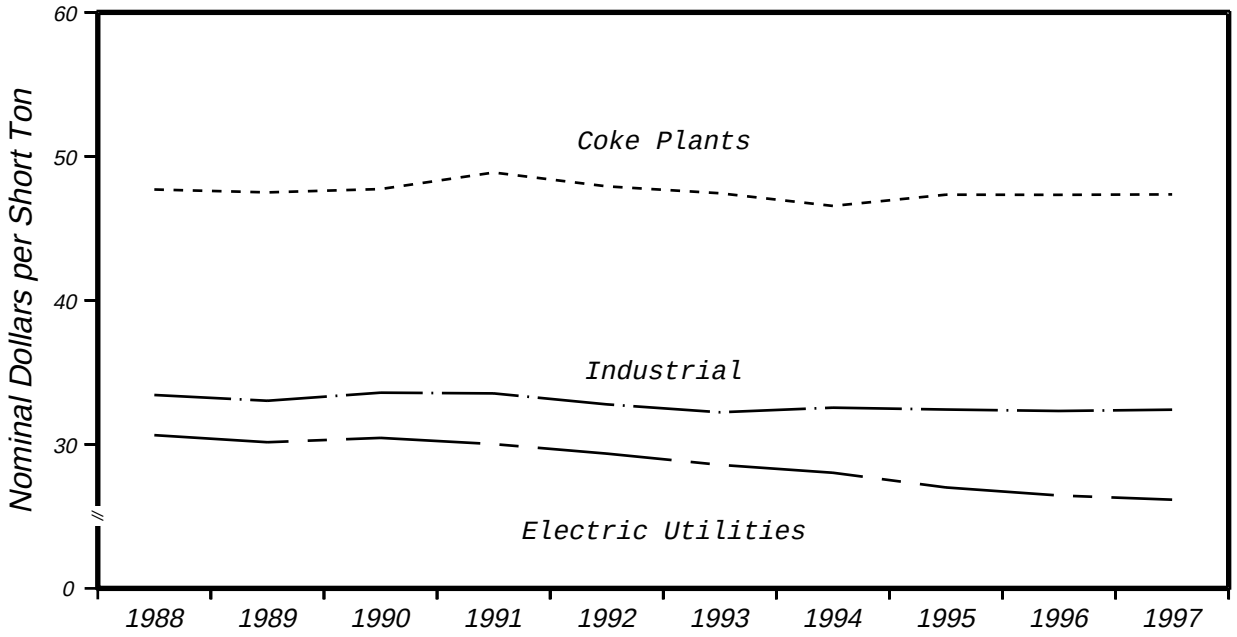
1 Open Market includes all coal sold on the open market to other coal companies or consumers.
2 Captive includes all coal used by the producing company or sold to affiliated or parent companies.
3 For a definition of coal-producing regions, see Appendix C.
**w** Withheld to avoid disclosure of individual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

**Figure 13. U.S. Coal Prices by Sector, 1988-1997**




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, 1988, 1993-1997

(Nominal Dollars per Short Ton)

| Census Division and State | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **New England Total** | **$43.67** | **$43.55** | **$43.34** | **$42.81** | **$43.34** | **$45.59** | **0.3** | **0.2** | **–0.5** |
| Connecticut | 50.02 | 50.05 | 49.33 | 46.45 | 44.80 | 60.07 | * | 2.8 | –2.0 |
| Massachusetts | 42.72 | 42.64 | 42.63 | 43.00 | 43.39 | 42.25 | .2 | –.4 | .1 |
| New Hampshire | 42.62 | 42.23 | 41.67 | 39.66 | 42.39 | 47.38 | .9 | .1 | –1.2 |
| **Middle Atlantic Total** | **34.39** | **35.08** | **34.63** | **36.33** | **36.66** | **36.92** | **–2.0** | **–1.6** | **–.8** |
| New Jersey | 45.94 | 45.53 | 47.17 | 48.49 | 47.50 | 45.75 | .9 | –.8 | * |
| New York | 37.32 | 37.15 | 36.86 | 37.63 | 38.63 | 40.52 | .4 | –.9 | –.9 |
| Pennsylvania | 33.28 | 34.06 | 33.48 | 35.39 | 35.73 | 35.62 | –2.3 | –1.8 | –.8 |
| **East North Central Total** | **27.68** | **28.29** | **29.67** | **30.56** | **30.98** | **35.70** | **–2.1** | **–2.8** | **–2.8** |
| Illinois | 30.41 | 32.14 | 32.58 | 32.69 | 35.30 | 40.53 | –5.4 | –3.7 | –3.1 |
| Indiana | 24.35 | 24.67 | 25.94 | 26.79 | 26.73 | 31.03 | –1.3 | –2.3 | –2.6 |
| Michigan | 28.93 | 29.34 | 30.95 | 32.90 | 33.17 | 40.80 | –1.4 | –3.4 | –3.7 |
| Ohio | 31.41 | 32.31 | 34.44 | 34.70 | 34.05 | 36.22 | –2.8 | –2.0 | –1.6 |
| Wisconsin | 20.43 | 19.55 | 21.23 | 23.13 | 22.96 | 28.39 | 4.5 | –2.9 | –3.6 |
| **West North Central Total** | **15.39** | **15.53** | **16.10** | **16.76** | **16.88** | **20.11** | **–.9** | **–2.3** | **–2.9** |
| Iowa | 16.23 | 16.30 | 17.13 | 17.39 | 17.53 | 22.74 | –.4 | –1.9 | –3.7 |
| Kansas | 17.91 | 17.51 | 17.83 | 17.85 | 17.69 | 22.25 | 2.3 | .3 | –2.4 |
| Minnesota | 19.47 | 18.99 | 20.12 | 20.09 | 20.07 | 20.91 | 2.5 | –.7 | –.8 |
| Missouri | 16.80 | 17.31 | 18.14 | 21.39 | 24.40 | 28.75 | –2.9 | –8.9 | –5.8 |
| Nebraska | 10.06 | 12.37 | 12.86 | 13.11 | 12.92 | 14.49 | –18.7 | –6.1 | –4.0 |
| North Dakota | 10.21 | 9.72 | 9.65 | 9.28 | 9.38 | 9.26 | 5.0 | 2.1 | 1.1 |
| South Dakota | 15.99 | 16.94 | 14.35 | 13.10 | 13.30 | 15.39 | –5.6 | 4.7 | .4 |
| **South Atlantic Total** | **36.34** | **36.68** | **38.25** | **39.53** | **40.80** | **41.54** | **–.9** | **–2.8** | **–1.5** |
| Delaware | 41.05 | 41.51 | 42.27 | 41.98 | 44.02 | 46.60 | –1.1 | –1.7 | –1.4 |
| Florida | 41.82 | 42.40 | 43.93 | 43.71 | 43.58 | 44.16 | –1.4 | –1.0 | –.6 |
| Georgia | 37.28 | 36.54 | 38.62 | 39.82 | 43.29 | 42.53 | 2.0 | –3.7 | –1.4 |
| Maryland | 38.75 | 38.49 | 39.00 | 39.84 | 40.78 | 40.12 | .7 | –1.3 | –.4 |
| North Carolina | 35.35 | 36.87 | 40.57 | 41.77 | 42.36 | 44.65 | –4.1 | –4.4 | –2.6 |
| South Carolina | 37.21 | 37.54 | 38.86 | 39.84 | 40.17 | 44.63 | –.9 | –1.9 | –2.0 |
| Virginia | 34.98 | 35.73 | 36.90 | 37.05 | 37.57 | 39.72 | –2.1 | –1.8 | –1.4 |
| West Virginia | 30.68 | 30.93 | 31.61 | 34.70 | 35.42 | 35.95 | –.8 | –3.5 | –1.7 |
| **East South Central Total** | **28.70** | **29.35** | **30.08** | **32.43** | **33.30** | **35.36** | **–2.2** | **–3.6** | **–2.3** |
| Alabama | 35.58 | 36.39 | 37.00 | 40.42 | 42.56 | 47.37 | –2.2 | –4.4 | –3.1 |
| Kentucky | 24.20 | 24.43 | 25.71 | 27.16 | 27.29 | 27.61 | –.9 | –2.9 | –1.4 |
| Mississippi | 32.44 | 33.31 | 34.40 | 35.54 | 40.51 | 45.88 | –2.6 | –5.4 | –3.8 |
| Tennessee | 26.67 | 27.64 | 27.94 | 30.61 | 30.94 | 32.17 | –3.5 | –3.6 | –2.1 |
| **West South Central Total** | **19.69** | **20.13** | **20.66** | **20.79** | **22.14** | **23.08** | **–2.2** | **–2.9** | **–1.8** |
| Arkansas | 28.56 | 26.15 | 27.99 | 27.91 | 29.50 | 27.47 | 9.2 | –.8 | .4 |
| Louisiana | 23.97 | 24.74 | 25.13 | 25.04 | 25.65 | 25.48 | –3.1 | –1.7 | –.7 |
| Oklahoma | 15.87 | 16.79 | 17.00 | 17.50 | 21.32 | 26.42 | –5.5 | –7.1 | –5.5 |
| Texas | 18.69 | 19.26 | 19.65 | 19.84 | 20.91 | 21.50 | –3.0 | –2.8 | –1.5 |
| **Mountain Total** | **21.52** | **21.82** | **21.51** | **21.83** | **22.11** | **21.32** | **–1.4** | **–.7** | **.1** |
| Arizona | 28.95 | 29.55 | 28.65 | 28.26 | 27.78 | 29.92 | –2.0 | 1.0 | –.4 |
| Colorado | 19.93 | 20.24 | 20.73 | 21.01 | 21.59 | 20.84 | –1.5 | –2.0 | –.5 |
| Montana | 11.52 | 11.90 | 11.47 | 11.79 | 11.78 | 9.29 | –3.2 | –.6 | 2.4 |
| Nevada | 31.10 | 30.44 | 29.02 | 32.37 | 32.34 | 30.21 | 2.1 | –1.0 | .3 |
| New Mexico | 24.23 | 26.04 | 25.59 | 25.48 | 24.61 | 21.24 | –6.9 | –.4 | 1.5 |
| Utah | 25.22 | 24.66 | 25.27 | 26.10 | 27.34 | 29.07 | 2.3 | –2.0 | –1.6 |
| Wyoming | 14.16 | 14.30 | 14.29 | 14.09 | 14.03 | 14.71 | –1.0 | .2 | –.4 |
| **Pacific Total** | **25.19** | **23.96** | **22.83** | **21.93** | **21.55** | **25.41** | **5.1** | **4.0** | **–.1** |
| Oregon | 19.95 | 18.81 | 18.79 | 19.18 | 19.75 | 23.70 | 6.1 | .3 | –1.9 |
| Washington | 26.15 | 24.91 | 23.74 | 22.93 | 22.09 | 25.48 | 5.0 | 4.3 | .3 |
| **U.S. Total** | **26.16** | **26.45** | **27.01** | **28.03** | **28.58** | **30.64** | **–1.1** | **–2.2** | **–1.7** |

* 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, 1988, 1993-1997

(Real Dollars per Short Ton)

| Census Division and State | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **New England Total** | **$38.85** | **$39.52** | **$40.21** | **$40.73** | **$42.24** | **$52.95** | **–1.7** | **–2.1** | **–3.4** |
| Connecticut | 44.51 | 45.42 | 45.76 | 44.20 | 43.66 | 69.77 | –2.0 | .5 | –4.9 |
| Massachusetts | 38.01 | 38.69 | 39.55 | 40.92 | 42.29 | 49.08 | –1.8 | –2.6 | –2.8 |
| New Hampshire | 37.92 | 38.32 | 38.65 | 37.74 | 41.32 | 55.03 | –1.0 | –2.1 | –4.0 |
| **Middle Atlantic Total** | **30.59** | **31.84** | **32.12** | **34.56** | **35.73** | **42.88** | **–3.9** | **–3.8** | **–3.7** |
| New Jersey | 40.88 | 41.31 | 43.76 | 46.14 | 46.30 | 53.14 | –1.0 | –3.1 | –2.9 |
| New York | 33.20 | 33.71 | 34.19 | 35.81 | 37.65 | 47.06 | –1.5 | –3.1 | –3.8 |
| Pennsylvania | 29.61 | 30.91 | 31.06 | 33.67 | 34.82 | 41.37 | –4.2 | –4.0 | –3.6 |
| **East North Central Total** | **24.63** | **25.67** | **27.52** | **29.08** | **30.20** | **41.46** | **–4.0** | **–5.0** | **–5.6** |
| Illinois | 27.05 | 29.17 | 30.22 | 31.11 | 34.41 | 47.08 | –7.2 | –5.8 | –6.0 |
| Indiana | 21.66 | 22.39 | 24.06 | 25.49 | 26.06 | 36.04 | –3.2 | –4.5 | –5.5 |
| Michigan | 25.74 | 26.62 | 28.71 | 31.30 | 32.33 | 47.38 | –3.3 | –5.5 | –6.5 |
| Ohio | 27.94 | 29.32 | 31.95 | 33.01 | 33.19 | 42.07 | –4.7 | –4.2 | –4.4 |
| Wisconsin | 18.17 | 17.74 | 19.69 | 22.01 | 22.38 | 32.97 | 2.5 | –5.1 | –6.4 |
| **West North Central Total** | **13.69** | **14.09** | **14.94** | **15.94** | **16.45** | **23.36** | **–2.8** | **–4.5** | **–5.8** |
| Iowa | 14.44 | 14.79 | 15.89 | 16.55 | 17.08 | 26.42 | –2.4 | –4.1 | –6.5 |
| Kansas | 15.93 | 15.89 | 16.54 | 16.98 | 17.24 | 25.84 | .3 | –1.9 | –5.2 |
| Minnesota | 17.33 | 17.24 | 18.67 | 19.11 | 19.56 | 24.28 | .5 | –3.0 | –3.7 |
| Missouri | 14.95 | 15.71 | 16.83 | 20.35 | 23.78 | 33.40 | –4.8 | –11.0 | –8.5 |
| Nebraska | 8.95 | 11.23 | 11.93 | 12.48 | 12.59 | 16.83 | –20.3 | –8.2 | –6.8 |
| North Dakota | 9.08 | 8.82 | 8.95 | 8.83 | 9.14 | 10.76 | 3.0 | –.2 | –1.9 |
| South Dakota | 14.22 | 15.37 | 13.31 | 12.46 | 12.96 | 17.87 | –7.4 | 2.3 | –2.5 |
| **South Atlantic Total** | **32.33** | **33.28** | **35.48** | **37.61** | **39.77** | **48.25** | **–2.9** | **–5.0** | **–4.3** |
| Delaware | 36.52 | 37.67 | 39.21 | 39.94 | 42.91 | 54.13 | –3.0 | –3.9 | –4.3 |
| Florida | 37.21 | 38.48 | 40.75 | 41.59 | 42.48 | 51.28 | –3.3 | –3.3 | –3.5 |
| Georgia | 33.17 | 33.16 | 35.82 | 37.89 | 42.19 | 49.40 | * | –5.8 | –4.3 |
| Maryland | 34.47 | 34.93 | 36.18 | 37.91 | 39.74 | 46.59 | –1.3 | –3.5 | –3.3 |
| North Carolina | 31.45 | 33.46 | 37.63 | 39.74 | 41.28 | 51.86 | –6.0 | –6.6 | –5.4 |
| South Carolina | 33.11 | 34.07 | 36.04 | 37.91 | 39.15 | 51.83 | –2.8 | –4.1 | –4.8 |
| Virginia | 31.12 | 32.42 | 34.23 | 35.25 | 36.62 | 46.13 | –4.0 | –4.0 | –4.3 |
| West Virginia | 27.29 | 28.07 | 29.32 | 33.02 | 34.53 | 41.75 | –2.7 | –5.7 | –4.6 |
| **East South Central Total** | **25.54** | **26.63** | **27.91** | **30.86** | **32.46** | **41.06** | **–4.1** | **–5.8** | **–5.1** |
| Alabama | 31.66 | 33.02 | 34.32 | 38.46 | 41.48 | 55.01 | –4.1 | –6.5 | –5.9 |
| Kentucky | 21.53 | 22.17 | 23.85 | 25.84 | 26.60 | 32.07 | –2.8 | –5.1 | –4.3 |
| Mississippi | 28.86 | 30.22 | 31.91 | 33.81 | 39.48 | 53.29 | –4.5 | –7.5 | –6.6 |
| Tennessee | 23.73 | 25.08 | 25.92 | 29.13 | 30.16 | 37.36 | –5.4 | –5.8 | –4.9 |
| **West South Central Total** | **17.51** | **18.26** | **19.17** | **19.78** | **21.58** | **26.81** | **–4.1** | **–5.1** | **–4.6** |
| Arkansas | 25.41 | 23.73 | 25.96 | 26.55 | 28.75 | 31.91 | 7.0 | –3.0 | –2.5 |
| Louisiana | 21.33 | 22.45 | 23.31 | 23.83 | 25.00 | 29.59 | –5.0 | –3.9 | –3.6 |
| Oklahoma | 14.12 | 15.24 | 15.77 | 16.65 | 20.78 | 30.69 | –7.3 | –9.2 | –8.3 |
| Texas | 16.63 | 17.48 | 18.23 | 18.87 | 20.38 | 24.98 | –4.9 | –4.9 | –4.4 |
| **Mountain Total** | **19.14** | **19.80** | **19.95** | **20.77** | **21.55** | **24.77** | **–3.3** | **–2.9** | **–2.8** |
| Arizona | 25.75 | 26.81 | 26.58 | 26.89 | 27.08 | 34.76 | –3.9 | –1.2 | –3.3 |
| Colorado | 17.73 | 18.36 | 19.23 | 19.99 | 21.04 | 24.20 | –3.4 | –4.2 | –3.4 |
| Montana | 10.25 | 10.80 | 10.64 | 11.21 | 11.48 | 10.80 | –5.1 | –2.8 | –.6 |
| Nevada | 27.67 | 27.62 | 26.92 | 30.80 | 31.52 | 35.09 | .1 | –3.2 | –2.6 |
| New Mexico | 21.56 | 23.63 | 23.74 | 24.24 | 23.98 | 24.67 | –8.8 | –2.6 | –1.5 |
| Utah | 22.43 | 22.38 | 23.44 | 24.83 | 26.64 | 33.77 | .3 | –4.2 | –4.4 |
| Wyoming | 12.60 | 12.98 | 13.25 | 13.40 | 13.68 | 17.08 | –2.9 | –2.0 | –3.3 |
| **Pacific Total** | **22.41** | **21.75** | **21.18** | **20.87** | **21.00** | **29.51** | **3.1** | **1.6** | **–3.0** |
| Oregon | 17.75 | 17.06 | 17.43 | 18.25 | 19.25 | 27.53 | 4.0 | –2.0 | –4.8 |
| Washington | 23.26 | 22.60 | 22.02 | 21.81 | 21.53 | 29.59 | 2.9 | 1.9 | –2.6 |
| **U.S. Total** | **23.27** | **24.00** | **25.06** | **26.67** | **27.86** | **35.59** | **–3.0** | **–4.4** | **–4.6** |

* Data round to zero.

Notes: Real prices are in 1992 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, 1988, 1993-1997

(Nominal Dollars per Short Ton)

| Census Division and State | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **New England Total** | **$63.46** | **$57.36** | **$56.90** | **$55.73** | **$57.83** | **$63.13** | **10.6** | **2.3** | ***** |
| Connecticut | – | – | – | – | – | w | – | – | – |
| Maine | w | w | w | w | w | w | w | w | w |
| Massachusetts | w | w | w | w | w | w | w | w | w |
| New Hampshire | – | – | – | – | – | w | – | – | – |
| Vermont | – | – | – | – | – | 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 | $41.52 | $40.11 | $41.91 | $42.20 | $42.15 | $42.83 | 3.5 | –.4 | –0.3 |
| Pennsylvania | 34.20 | 33.84 | 34.07 | 33.66 | 34.04 | 36.17 | 1.1 | .1 | –.6 |
| **East North Central Total** | **33.53** | **34.44** | **34.89** | **34.72** | **34.54** | **35.94** | **–2.6** | **–.7** | **–.8** |
| Illinois | 29.76 | 29.69 | 29.03 | 29.13 | 29.42 | 31.18 | .2 | .3 | –.5 |
| Indiana | 29.75 | 31.76 | 33.14 | 31.35 | 30.91 | 33.19 | –6.3 | –.9 | –1.2 |
| Michigan | 41.94 | 41.28 | 41.18 | 41.20 | 41.46 | 43.03 | 1.6 | .3 | –.3 |
| Ohio | 34.05 | 35.28 | 35.18 | 35.75 | 34.82 | 34.09 | –3.5 | –.6 | * |
| Wisconsin | 40.03 | 40.02 | 40.21 | 41.23 | 40.85 | 42.79 | * | –.5 | –.7 |
| **West North Central Total** | **19.02** | **19.05** | **18.92** | **18.61** | **18.00** | **17.26** | **–.1** | **1.4** | **1.1** |
| Iowa | 28.92 | 29.32 | 29.24 | 28.52 | 28.01 | 32.84 | –1.4 | .8 | –1.4 |
| Kansas | 31.93 | 32.46 | 32.42 | 32.25 | 33.06 | 31.14 | –1.6 | –.9 | .3 |
| Minnesota | 31.03 | 28.85 | 34.40 | 35.66 | 35.81 | 35.24 | 7.6 | –3.5 | –1.4 |
| Missouri | 30.06 | 31.37 | 32.81 | 32.87 | 32.12 | 29.40 | –4.2 | –1.6 | .2 |
| Nebraska | w | w | w | w | w | w | w | w | w |
| North Dakota | w | w | w | w | w | w | w | w | w |
| South Dakota | $23.36 | $24.90 | $22.21 | $21.78 | $15.57 | $14.54 | –6.2 | 10.7 | 5.4 |
| **South Atlantic Total** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** |
| Delaware | w | w | w | w | w | w | w | w | w |
| Florida | $45.13 | $45.69 | $46.63 | $46.60 | $48.28 | $46.15 | –1.2 | –1.7 | –.2 |
| Georgia | 44.84 | 44.21 | 44.64 | 45.71 | 45.20 | 43.76 | 1.4 | –.2 | .3 |
| Maryland | 32.62 | 32.52 | 31.66 | 32.18 | 32.18 | 32.83 | .3 | .3 | –.1 |
| North Carolina | 43.14 | 43.36 | 43.29 | 43.62 | 43.44 | 43.56 | –.5 | –.2 | –.1 |
| South Carolina | 44.23 | 44.08 | 43.16 | 43.84 | 43.35 | 41.82 | .3 | .5 | .6 |
| Virginia | 43.85 | 43.51 | 42.50 | 41.56 | 41.27 | 38.36 | .8 | 1.5 | 1.5 |
| West Virginia | 35.31 | 33.37 | 33.61 | 32.73 | 32.91 | 30.98 | 5.8 | 1.8 | 1.5 |
| **East South Central Total** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** |
| Alabama | $40.20 | $40.15 | $39.53 | $38.74 | $39.01 | $39.36 | .1 | .8 | .2 |
| Kentucky | 44.71 | 44.02 | 44.09 | 43.22 | 42.30 | 43.83 | 1.6 | 1.4 | .2 |
| Mississippi | w | w | w | w | w | w | w | w | w |
| Tennessee | $36.33 | $35.21 | $35.68 | $35.34 | $35.41 | $34.63 | 3.2 | .6 | .5 |
| **West South Central Total** | **22.42** | **21.79** | **22.04** | **22.95** | **21.38** | **23.98** | **2.9** | **1.2** | **–.7** |
| Arkansas | 42.38 | 43.24 | 43.52 | 44.28 | 44.06 | 45.23 | –2.0 | –1.0 | –.7 |
| Louisiana | w | w | w | w | w | w | w | w | w |
| Oklahoma | w | w | w | w | w | w | w | w | w |
| Texas | $20.13 | $18.99 | $18.76 | $19.54 | $17.58 | $18.42 | 6.0 | 3.4 | 1.0 |
| **Mountain Total** | **27.14** | **26.70** | **27.06** | **28.78** | **28.51** | **28.48** | **1.6** | **–1.2** | **–.5** |
| Arizona | 38.81 | 39.27 | 40.46 | 41.35 | 40.51 | 38.19 | –1.2 | –1.1 | .2 |
| Colorado | 25.13 | 23.17 | 26.11 | 28.96 | 28.63 | 28.88 | 8.5 | –3.2 | –1.5 |
| Idaho | 34.57 | 36.39 | 34.11 | 33.35 | 32.78 | 32.55 | –5.0 | 1.3 | .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 | $19.28 | $19.10 | $19.74 | $26.57 | $26.51 | $25.48 | .9 | –7.6 | –3.0 |
| Wyoming | 23.68 | 22.32 | 22.72 | 22.87 | 23.43 | 24.93 | 6.1 | .3 | –.6 |
| **Pacific Total** | **43.24** | **42.45** | **43.68** | **44.92** | **43.83** | **44.72** | **1.9** | **–.3** | **–.4** |
| California | 40.14 | 39.54 | 41.11 | 43.39 | 42.86 | 44.64 | 1.5 | –1.6 | –1.2 |
| Hawaii | w | w | w | w | w | w | w | w | w |
| Oregon | w | w | w | w | w | w | w | w | w |
| Washington | $59.80 | $58.81 | $59.15 | $58.86 | $53.11 | $48.79 | 1.7 | 3.0 | 2.3 |
| **U.S. Total** | **32.41** | **32.32** | **32.42** | **32.55** | **32.23** | **33.43** | **.3** | **.1** | **–.3** |

* 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, 1988, 1993-1997

(Real Dollars per Short Ton)

| Census Division and State | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **New England Total** | **$56.46** | **$52.05** | **$52.78** | **$53.03** | **$56.37** | **$73.32** | **8.5** | ***** | **–2.9** |
| Connecticut | – | – | – | – | – | w | – | – | – |
| Maine | w | w | w | w | w | w | w | w | w |
| Massachusetts | w | w | w | w | w | w | w | w | w |
| New Hampshire | – | – | – | – | – | w | – | – | – |
| Vermont | – | – | – | – | – | 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 | $36.94 | $36.40 | $38.87 | $40.15 | $41.09 | $49.75 | 1.5 | –2.6 | –3.3 |
| Pennsylvania | 30.42 | 30.71 | 31.60 | 32.03 | 33.18 | 42.01 | –.9 | –2.1 | –3.5 |
| **East North Central Total** | **29.83** | **31.25** | **32.36** | **33.03** | **33.66** | **41.75** | **–4.5** | **–3.0** | **–3.7** |
| Illinois | 26.47 | 26.94 | 26.93 | 27.71 | 28.67 | 36.21 | –1.7 | –2.0 | –3.4 |
| Indiana | 26.47 | 28.82 | 30.74 | 29.83 | 30.13 | 38.55 | –8.1 | –3.2 | –4.1 |
| Michigan | 37.31 | 37.46 | 38.20 | 39.20 | 40.41 | 49.98 | –.4 | –2.0 | –3.2 |
| Ohio | 30.29 | 32.01 | 32.64 | 34.01 | 33.94 | 39.59 | –5.4 | –2.8 | –2.9 |
| Wisconsin | 35.61 | 36.32 | 37.30 | 39.23 | 39.81 | 49.70 | –1.9 | –2.7 | –3.6 |
| **West North Central Total** | **16.93** | **17.28** | **17.55** | **17.71** | **17.54** | **20.04** | **–2.1** | **–.9** | **–1.9** |
| Iowa | 25.73 | 26.61 | 27.12 | 27.13 | 27.30 | 38.15 | –3.3 | –1.5 | –4.3 |
| Kansas | 28.41 | 29.45 | 30.07 | 30.68 | 32.22 | 36.17 | –3.5 | –3.1 | –2.6 |
| Minnesota | 27.61 | 26.18 | 31.91 | 33.93 | 34.90 | 40.93 | 5.5 | –5.7 | –4.3 |
| Missouri | 26.75 | 28.47 | 30.44 | 31.28 | 31.30 | 34.15 | –6.0 | –3.8 | –2.7 |
| Nebraska | w | w | w | w | w | w | w | w | w |
| North Dakota | w | w | w | w | w | w | w | w | w |
| South Dakota | $20.78 | $22.59 | $20.60 | $20.72 | $15.17 | $16.88 | –8.0 | 8.2 | 2.3 |
| **South Atlantic Total** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** |
| Delaware | w | w | w | w | w | w | w | w | w |
| Florida | $40.15 | $41.46 | $43.26 | $44.34 | $47.06 | $53.60 | –3.1 | –3.9 | –3.1 |
| Georgia | 39.89 | 40.12 | 41.41 | 43.49 | 44.05 | 50.83 | –.6 | –2.4 | –2.6 |
| Maryland | 29.02 | 29.51 | 29.37 | 30.61 | 31.36 | 38.12 | –1.7 | –1.9 | –3.0 |
| North Carolina | 38.38 | 39.35 | 40.16 | 41.50 | 42.34 | 50.59 | –2.5 | –2.4 | –3.0 |
| South Carolina | 39.35 | 40.00 | 40.04 | 41.71 | 42.25 | 48.57 | –1.6 | –1.8 | –2.3 |
| Virginia | 39.01 | 39.48 | 39.42 | 39.55 | 40.23 | 44.56 | –1.2 | –.8 | –1.5 |
| West Virginia | 31.41 | 30.28 | 31.18 | 31.14 | 32.08 | 35.98 | 3.7 | –.5 | –1.5 |
| **East South Central Total** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** |
| Alabama | $35.77 | $36.43 | $36.67 | $36.86 | $38.02 | $45.71 | –1.8 | –1.5 | –2.7 |
| Kentucky | 39.78 | 39.94 | 40.90 | 41.12 | 41.23 | 50.91 | –.4 | –.9 | –2.7 |
| Mississippi | w | w | w | w | w | w | w | w | w |
| Tennessee | $32.32 | $31.95 | $33.10 | $33.63 | $34.52 | $40.22 | 1.2 | –1.6 | –2.4 |
| **West South Central Total** | **19.94** | **19.77** | **20.44** | **21.83** | **20.84** | **27.85** | **.9** | **–1.1** | **–3.6** |
| Arkansas | 37.70 | 39.24 | 40.37 | 42.13 | 42.95 | 52.53 | –3.9 | –3.2 | –3.6 |
| Louisiana | w | w | w | w | w | w | w | w | w |
| Oklahoma | w | w | w | w | w | w | w | w | w |
| Texas | $17.91 | $17.23 | $17.40 | $18.59 | $17.13 | $21.39 | 3.9 | 1.1 | –1.9 |
| **Mountain Total** | **24.14** | **24.23** | **25.10** | **27.39** | **27.79** | **33.08** | **–.4** | **–3.4** | **–3.4** |
| Arizona | 34.53 | 35.64 | 37.53 | 39.34 | 39.48 | 44.35 | –3.1 | –3.3 | –2.7 |
| Colorado | 22.36 | 21.03 | 24.22 | 27.55 | 27.90 | 33.54 | 6.3 | –5.4 | –4.4 |
| Idaho | 30.75 | 33.02 | 31.64 | 31.73 | 31.95 | 37.81 | –6.8 | –.9 | –2.3 |
| 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 | $17.15 | $17.33 | $18.31 | $25.28 | $25.84 | $29.59 | –1.1 | –9.7 | –5.9 |
| Wyoming | 21.07 | 20.26 | 21.08 | 21.76 | 22.84 | 28.95 | 4.0 | –2.0 | –3.5 |
| **Pacific Total** | **38.47** | **38.52** | **40.52** | **42.74** | **42.72** | **51.94** | **–.1** | **–2.6** | **–3.3** |
| California | 35.71 | 35.88 | 38.14 | 41.29 | 41.78 | 51.85 | –.4 | –3.8 | –4.0 |
| Hawaii | w | w | w | w | w | w | w | w | w |
| Oregon | w | w | w | w | w | w | w | w | w |
| Washington | $53.20 | $53.37 | $54.87 | $56.01 | $51.76 | $56.66 | –.3 | .7 | –.7 |
| **U.S. Total** | **28.83** | **29.33** | **30.08** | **30.97** | **31.41** | **38.83** | **–1.7** | **–2.1** | **–3.3** |

* Data round to zero.

**w** Withheld to avoid disclosure of individual company data.

Notes: Price data are for manufacturing plants only. Real prices are in 1992 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, 1988, 1993-1997

(Nominal Dollars per Short Ton)

| Census Division and State | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **Middle Atlantic Total** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** |
| New York | w | w | w | w | w | w | w | w | w |
| Pennsylvania | $46.20 | $45.16 | $46.11 | $46.25 | $46.41 | $43.11 | 2.3 | –0.1 | 0.8 |
| **East North Central Total** | **49.12** | **49.54** | **49.09** | **47.23** | **49.52** | **51.22** | **–.8** | **–.2** | **–.5** |
| Illinois | w | w | w | w | w | w | w | w | w |
| Indiana | $50.75 | $51.93 | $52.74 | $50.90 | $52.29 | $54.26 | –2.3 | –.7 | –.7 |
| Michigan | w | w | w | w | w | w | w | w | w |
| Ohio | $46.89 | $44.98 | $42.18 | $42.02 | $45.07 | $46.32 | 4.2 | 1.0 | .1 |
| **South Atlantic Total** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** |
| Maryland | – | – | – | – | – | 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 | $50.04 | $49.37 | $48.42 | $47.45 | $47.50 | $45.53 | 1.3 | 1.3 | 1.0 |
| Kentucky | w | w | w | w | w | w | w | w | w |
| Tennessee | – | – | – | – | – | 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** | **$47.61** | **$47.33** | **$47.34** | **$46.56** | **$47.44** | **$47.70** | **.6** | **.1** | ***** |

* 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, 1988, 1993-1997

(Real Dollars per Short Ton)

| Census Division and State | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **Middle Atlantic Total** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** |
| New York | w | w | w | w | w | w | w | w | w |
| Pennsylvania | $41.10 | $40.98 | $42.77 | $44.00 | $45.24 | $50.07 | 0.3 | –2.4 | –2.2 |
| **East North Central Total** | **43.70** | **44.96** | **45.54** | **44.94** | **48.26** | **59.49** | **–2.8** | **–2.4** | **–3.4** |
| Illinois | w | w | w | w | w | w | w | w | w |
| Indiana | $45.15 | $47.13 | $48.92 | $48.43 | $50.97 | $63.02 | –4.2 | –3.0 | –3.6 |
| Michigan | w | w | w | w | w | w | w | w | w |
| Ohio | $41.72 | $40.82 | $39.13 | $39.98 | $43.92 | $53.80 | 2.2 | –1.3 | –2.8 |
| **South Atlantic Total** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** |
| Maryland | – | – | – | – | – | 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 | $44.52 | $44.80 | $44.92 | $45.15 | $46.30 | $52.88 | –.6 | –1.0 | –1.9 |
| Kentucky | w | w | w | w | w | w | w | w | w |
| Tennessee | – | – | – | – | – | 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** | **$42.36** | **$42.95** | **$43.91** | **$44.30** | **$46.24** | **$55.40** | **–1.4** | **–2.2** | **–2.9** |

**w** Withheld to avoid disclosure of individual company data.

Notes: Real prices are in 1992 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.''

## Table 98. Average Price of U.S. Coal Imports by Continent and Country of Origin, 1988, 1993-1997

(Nominal Dollars per Short Ton)

| Continent and Country of Origin | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **North America Total** | **$38.11** | **$34.89** | **$35.12** | **$30.81** | **$29.60** | **$26.86** | **9.2** | **6.5** | **4.0** |
| Canada | 38.11 | 34.90 | 35.12 | 30.81 | 29.62 | 26.71 | 9.2 | 6.5 | 4.0 |
| Mexico | – | 33.43 | – | – | 21.19 | 28.54 | –100.0 | –100.0 | –100.0 |
| **South America Total** | **32.49** | **31.24** | **32.76** | **29.00** | **27.64** | **27.28** | **4.0** | **4.1** | **1.9** |
| Colombia | 32.11 | 31.40 | 31.15 | 27.46 | 27.26 | 27.49 | 2.3 | 4.2 | 1.7 |
| Venezuela | 33.26 | 30.97 | 35.14 | 32.41 | 28.87 | 26.09 | 7.4 | 3.6 | 2.7 |
| **Europe Total** | **49.22** | – | **25.70** | – | **32.08** | **36.28** | – | **11.3** | **3.4** |
| Denmark | – | – | – | – | 32.08 | 36.28 | – | –100.0 | –100.0 |
| Norway | 49.45 | – | – | – | – | – | – | – | – |
| Switzerland | 41.20 | – | – | – | – | – | – | – | – |
| United Kingdom | – | – | 25.70 | – | – | – | – | – | – |
| **Asia Total** | **33.05** | **32.45** | **35.13** | **34.09** | **42.70** | – | **1.8** | **–6.2** | – |
| Indonesia | 32.82 | 32.45 | 35.13 | 33.80 | 42.70 | – | 1.1 | –6.4 | – |
| Vietnam | 49.09 | – | – | 48.08 | – | – | – | – | – |
| **Oceania & Australia Total** | **33.47** | **33.41** | **33.57** | **31.16** | **31.56** | **29.14** | **.2** | **1.5** | **1.5** |
| Australia | 33.47 | 33.41 | 30.99 | 30.02 | 31.56 | 29.14 | .2 | 1.5 | 1.5 |
| New Zealand | – | – | 46.42 | 44.15 | – | – | – | – | – |
| **Africa Total** | – | – | – | **25.33** | **27.81** | – | – | **–100.0** | – |
| South Africa, Rep of | – | – | – | 25.33 | – | – | – | – | – |
| Swaziland | – | – | – | – | 27.81 | – | – | –100.0 | – |
| **Total**[1] | **33.50** | **32.17** | **33.54** | **30.01** | **29.44** | **27.23** | **4.1** | **3.3** | **2.3** |
| **U.S. Total**[2] | **34.32** | **33.45** | **34.13** | **30.21** | **29.89** | **29.96** | **2.6** | **3.5** | **1.5** |

[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 $55 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.''

## Table 99. Average Price of U.S. Coal Exports by Destination, 1988, 1993-1997

(Nominal Dollars per Short Ton)

| Continent and Country of Destination | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **North America Total** | **$30.57** | **$33.09** | **$34.05** | **$32.42** | **$34.05** | **$41.51** | **–7.6** | **–2.6** | **–3.3** |
| Canada[1] | 29.16 | 32.23 | 33.49 | 32.08 | 33.76 | 41.57 | –9.5 | –3.6 | –3.9 |
| Mexico | 41.31 | 39.70 | 39.96 | 44.28 | 44.04 | 41.06 | 4.0 | –1.6 | .1 |
| Other[2] | 38.08 | 38.03 | 34.29 | 35.58 | 33.78 | 34.11 | .1 | 3.0 | 1.2 |
| **South America Total** | **43.94** | **43.81** | **43.46** | **42.28** | **43.77** | **44.39** | **.3** | **.1** | **–.1** |
| Argentina | 47.69 | 46.36 | 43.40 | 42.48 | 43.21 | 43.71 | 2.9 | 2.5 | 1.0 |
| Brazil | 44.12 | 44.67 | 43.88 | 42.26 | 43.84 | 44.49 | –1.2 | .2 | –.1 |
| Chile | 32.24 | 32.37 | 31.70 | 34.47 | 46.78 | 46.99 | –.4 | –8.9 | –4.1 |
| Other[2] | 40.81 | 39.19 | 43.42 | 40.88 | 39.46 | 26.28 | 4.1 | .8 | 5.0 |
| **Europe Total** | **43.02** | **42.10** | **40.92** | **41.86** | **43.05** | **42.01** | **2.2** | ***** | **.3** |
| Belgium & Luxembourg | 45.71 | 45.73 | 43.47 | 42.23 | 43.23 | 42.33 | * | 1.4 | .8 |
| Bulgaria | 46.42 | 44.26 | 44.04 | 42.09 | 41.96 | – | 4.9 | 2.5 | – |
| Denmark | 31.72 | 29.30 | 29.37 | 29.23 | 34.95 | 30.09 | 8.3 | –2.4 | .6 |
| Finland | 41.63 | 42.11 | 39.47 | 41.14 | 39.61 | 41.73 | –1.1 | 1.3 | * |
| France | 45.96 | 44.94 | 43.71 | 44.23 | 42.24 | 43.83 | 2.3 | 2.1 | .5 |
| Germany, FR | 44.59 | 41.08 | 34.99 | 45.33 | 38.98 | 44.47 | 8.6 | 3.4 | * |
| Greece | 40.73 | 33.94 | 40.69 | – | 40.67 | 39.95 | 20.0 | * | .2 |
| Iceland | 59.33 | 57.49 | 56.04 | 38.00 | – | 53.24 | 3.2 | – | 1.2 |
| Ireland | 37.99 | 37.35 | 36.07 | 33.82 | 35.84 | 41.12 | 1.7 | 1.5 | –.9 |
| Italy | 45.54 | 45.05 | 44.14 | 43.00 | 44.33 | 42.71 | 1.1 | .7 | .7 |
| Netherlands | 44.97 | 41.36 | 41.97 | 41.93 | 44.22 | 40.37 | 8.7 | .4 | 1.2 |
| Norway | 58.38 | 57.05 | 56.42 | 54.57 | 53.48 | 43.65 | 2.3 | 2.2 | 3.3 |
| Portugal | 36.76 | 36.53 | 36.46 | 36.25 | 37.70 | 38.98 | .6 | –.6 | –.6 |
| Romania | 44.58 | 46.95 | 42.43 | 38.10 | 38.54 | 43.56 | –5.0 | 3.7 | .3 |
| Spain | 37.01 | 37.56 | 34.75 | 40.12 | 42.66 | 45.17 | –1.5 | –3.5 | –2.2 |
| Sweden | 48.19 | 47.50 | 48.21 | 45.56 | 45.96 | 44.46 | 1.4 | 1.2 | .9 |
| Turkey | 46.07 | 44.33 | 42.61 | 41.28 | 42.58 | 43.27 | 3.9 | 2.0 | .7 |
| United Kingdom | 39.30 | 38.90 | 40.92 | 45.06 | 45.94 | 44.57 | 1.0 | –3.8 | –1.4 |
| Other[2] | 34.47 | 35.07 | 38.06 | 40.92 | 39.60 | 42.87 | –1.7 | –3.4 | –2.4 |
| **Asia Total** | **39.73** | **39.57** | **39.10** | **38.63** | **40.49** | **41.92** | **.4** | **–.5** | **–.6** |
| China (Taiwan) | 36.75 | 36.86 | 36.95 | 38.65 | 39.49 | 40.21 | –.3 | –1.8 | –1.0 |
| Israel | 36.81 | 36.40 | 35.79 | 33.23 | 34.79 | 36.91 | 1.1 | 1.4 | * |
| Japan | 39.00 | 39.41 | 39.14 | 38.52 | 40.72 | 42.32 | –1.0 | –1.1 | –.9 |
| Korea, Republic of | 43.98 | 42.72 | 40.97 | 40.24 | 42.12 | 42.57 | 2.9 | 1.1 | .4 |
| Other[2] | 36.33 | 48.89 | 30.41 | 37.24 | 44.23 | 53.66 | –25.7 | –4.8 | –4.2 |
| **Oceania & Australia Total** | **40.79** | **40.71** | **39.87** | **39.99** | **34.46** | **38.30** | **.2** | **4.3** | **.7** |
| Other[2] | 40.79 | 40.71 | 39.87 | 39.99 | 34.46 | 38.30 | .2 | 4.3 | .7 |
| **Africa Total** | **48.50** | **44.36** | **43.07** | **43.59** | **42.55** | **43.88** | **9.3** | **3.3** | **1.1** |
| Algeria | 46.64 | 50.23 | 47.80 | 43.24 | 44.32 | 44.31 | –7.1 | 1.3 | .6 |
| Egypt | 51.29 | 53.37 | 49.36 | 43.14 | 44.86 | 44.13 | –3.9 | 3.4 | 1.7 |
| Morocco | 30.67 | 33.93 | 33.00 | 35.03 | 33.86 | 33.34 | –9.6 | –2.4 | –.9 |
| South Africa, Rep of | 48.66 | 49.55 | 47.38 | 45.67 | 46.87 | – | –1.8 | .9 | – |
| Other[2] | 39.27 | – | – | – | 40.53 | 40.17 | – | –.8 | –.3 |
| **Total**[3] | **40.24** | **40.53** | **40.03** | **39.90** | **41.33** | **42.06** | **–.7** | **–.7** | **–.5** |
| **U.S. Total**[4] | **40.55** | **40.76** | **40.27** | **39.93** | **41.41** | **42.23** | **–.5** | **–.5** | **–.4** |

[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 1996.

[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 $20 to $60 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, 1988, 1993-1997

(Real Dollars per Short Ton)

| Continent and Country of Destination | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **North America Total** | **$27.20** | **$30.03** | **$31.58** | **$30.84** | **$33.19** | **$48.21** | **–9.4** | **–4.8** | **–6.2** |
| Canada[1] | 25.95 | 29.25 | 31.07 | 30.52 | 32.91 | 48.28 | –11.3 | –5.8 | –6.7 |
| Mexico | 36.75 | 36.03 | 37.07 | 42.13 | 42.93 | 47.69 | 2.0 | –3.8 | –2.8 |
| Other[2] | 33.88 | 34.51 | 31.81 | 33.86 | 32.92 | 39.61 | –1.8 | .7 | –1.7 |
| **South America Total** | **39.10** | **39.75** | **40.31** | **40.23** | **42.66** | **51.55** | **–1.6** | **–2.1** | **–3.0** |
| Argentina | 42.43 | 42.07 | 40.26 | 40.42 | 42.12 | 50.76 | .8 | .2 | –2.0 |
| Brazil | 39.26 | 40.54 | 40.71 | 40.21 | 42.73 | 51.67 | –3.2 | –2.1 | –3.0 |
| Chile | 28.69 | 29.38 | 29.40 | 32.80 | 45.59 | 54.58 | –2.3 | –10.9 | –6.9 |
| Other[2] | 36.31 | 35.56 | 40.28 | 38.89 | 38.46 | 30.52 | 2.1 | –1.4 | 1.9 |
| **Europe Total** | **38.28** | **38.20** | **37.95** | **39.83** | **41.96** | **48.79** | **.2** | **–2.3** | **–2.7** |
| Belgium & Luxembourg | 40.66 | 41.50 | 40.32 | 40.18 | 42.13 | 49.17 | –2.0 | –.9 | –2.1 |
| Bulgaria | 41.30 | 40.16 | 40.85 | 40.05 | 40.90 | – | 2.8 | .2 | – |
| Denmark | 28.23 | 26.59 | 27.24 | 27.81 | 34.07 | 34.95 | 6.2 | –4.6 | –2.3 |
| Finland | 37.04 | 38.22 | 36.61 | 39.14 | 38.61 | 48.47 | –3.1 | –1.0 | –2.9 |
| France | 40.89 | 40.78 | 40.55 | 42.09 | 41.17 | 50.91 | .3 | –.2 | –2.4 |
| Germany, FR | 39.67 | 37.27 | 32.46 | 43.13 | 37.99 | 51.64 | 6.4 | 1.1 | –2.9 |
| Greece | 36.24 | 30.80 | 37.75 | – | 39.64 | 46.40 | 17.6 | –2.2 | –2.7 |
| Iceland | 52.78 | 52.17 | 51.99 | 36.16 | – | 61.84 | 1.2 | – | –1.7 |
| Ireland | 33.80 | 33.89 | 33.46 | 32.18 | 34.93 | 47.76 | –.3 | –.8 | –3.8 |
| Italy | 40.51 | 40.88 | 40.95 | 40.91 | 43.20 | 49.61 | –.9 | –1.6 | –2.2 |
| Netherlands | 40.01 | 37.53 | 38.93 | 39.89 | 43.10 | 46.89 | 6.6 | –1.8 | –1.7 |
| Norway | 51.94 | 51.77 | 52.34 | 51.92 | 52.12 | 50.70 | .3 | –.1 | .3 |
| Portugal | 32.71 | 33.14 | 33.82 | 34.49 | 36.74 | 45.28 | –1.3 | –2.9 | –3.5 |
| Romania | 39.66 | 42.61 | 39.36 | 36.25 | 37.56 | 50.59 | –6.9 | 1.4 | –2.7 |
| Spain | 32.92 | 34.09 | 32.23 | 38.18 | 41.58 | 52.46 | –3.4 | –5.7 | –5.0 |
| Sweden | 42.88 | 43.10 | 44.72 | 43.35 | 44.80 | 51.64 | –.5 | –1.1 | –2.0 |
| Turkey | 40.99 | 40.22 | 39.53 | 39.28 | 41.50 | 50.26 | 1.9 | –.3 | –2.2 |
| United Kingdom | 34.97 | 35.30 | 37.96 | 42.87 | 44.77 | 51.76 | –.9 | –6.0 | –4.3 |
| Other[2] | 30.67 | 31.82 | 35.30 | 38.94 | 38.59 | 49.79 | –3.6 | –5.6 | –5.2 |
| **Asia Total** | **35.34** | **35.91** | **36.27** | **36.76** | **39.46** | **48.69** | **–1.6** | **–2.7** | **–3.5** |
| China (Taiwan) | 32.70 | 33.45 | 34.28 | 36.77 | 38.49 | 46.70 | –2.2 | –4.0 | –3.9 |
| Israel | 32.75 | 33.03 | 33.20 | 31.62 | 33.91 | 42.87 | –.8 | –.9 | –2.9 |
| Japan | 34.70 | 35.76 | 36.31 | 36.66 | 39.68 | 49.15 | –3.0 | –3.3 | –3.8 |
| Korea, Republic of | 39.13 | 38.77 | 38.01 | 38.29 | 41.05 | 49.45 | .9 | –1.2 | –2.6 |
| Other[2] | 32.32 | 44.37 | 28.21 | 35.43 | 43.11 | 62.32 | –27.1 | –6.9 | –7.0 |
| **Oceania & Australia Total** | **36.29** | **36.94** | **36.98** | **38.05** | **33.59** | **44.48** | **–1.8** | **1.9** | **–2.2** |
| Other[2] | 36.29 | 36.94 | 36.98 | 38.05 | 33.59 | 44.48 | –1.8 | 1.9 | –2.2 |
| **Africa Total** | **43.15** | **40.26** | **39.95** | **41.48** | **41.47** | **50.97** | **7.2** | **1.0** | **–1.8** |
| Algeria | 41.50 | 45.58 | 44.34 | 41.14 | 43.20 | 51.47 | –9.0 | –1.0 | –2.4 |
| Egypt | 45.63 | 48.43 | 45.79 | 41.04 | 43.72 | 51.26 | –5.8 | 1.1 | –1.3 |
| Morocco | 27.29 | 30.79 | 30.61 | 33.33 | 33.00 | 38.72 | –11.4 | –4.6 | –3.8 |
| South Africa, Rep of | 43.30 | 44.96 | 43.95 | 43.45 | 45.69 | – | –3.7 | –1.3 | – |
| Other[2] | 34.94 | – | – | – | 39.51 | 46.66 | – | –3.0 | –3.2 |
| **Total**[3] | **35.80** | **36.78** | **37.13** | **37.96** | **40.28** | **48.85** | **–2.6** | **–2.9** | **–3.4** |
| **U.S. Total**[4] | **36.08** | **36.99** | **37.36** | **37.99** | **40.36** | **49.05** | **–2.4** | **–2.8** | **–3.3** |

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 1996.

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 $20 to $60 (nominal) per short ton, inclusively.

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

Notes: Real prices are in 1992 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, 1988, 1993-1997

(Nominal Dollars per Short Ton)

| Continent and Country of Destination | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **North America Total** | **$35.39** | **$36.79** | **$37.25** | **$35.08** | **$36.03** | **$45.67** | **–3.8** | **–0.4** | **–2.8** |
| Canada[1] | 34.10 | 35.99 | 36.55 | 34.58 | 35.66 | 45.86 | –5.3 | –1.1 | –3.2 |
| Mexico | 49.86 | 47.36 | 46.90 | 44.54 | 45.17 | 41.85 | 5.3 | 2.5 | 2.0 |
| Other[2] | – | – | – | – | – | 37.75 | – | – | –100.0 |
| **South America Total** | **44.32** | **44.61** | **43.66** | **42.29** | **43.91** | **44.39** | **–.6** | **.2** | ***** |
| Argentina | 48.88 | 46.87 | 43.54 | 42.56 | 43.63 | 43.71 | 4.3 | 2.9 | 1.3 |
| Brazil | 44.15 | 44.73 | 43.89 | 42.26 | 43.94 | 44.44 | –1.3 | .1 | –.1 |
| Chile | – | 30.26 | 30.26 | – | – | 47.05 | –100.0 | – | –100.0 |
| Other[2] | – | 50.76 | – | – | – | – | –100.0 | – | – |
| **Europe Total** | **47.60** | **47.68** | **46.02** | **44.56** | **45.62** | **43.94** | **–.1** | **1.1** | **.9** |
| Belgium & Luxembourg | 48.34 | 48.68 | 45.97 | 45.07 | 45.95 | 43.78 | –.7 | 1.3 | 1.1 |
| Bulgaria | 46.42 | 43.36 | 44.04 | 42.13 | 41.99 | – | 7.0 | 2.5 | – |
| Denmark | – | – | – | – | 36.29 | 26.99 | – | –100.0 | –100.0 |
| Finland | 43.37 | 44.21 | 42.65 | 42.34 | 39.61 | 41.73 | –1.9 | 2.3 | .4 |
| France | 47.20 | 47.13 | 45.08 | 44.36 | 45.17 | 43.88 | .1 | 1.1 | .8 |
| Germany, FR | 47.84 | 49.87 | 47.52 | 45.88 | 46.17 | 44.16 | –4.1 | .9 | .9 |
| Iceland | 59.33 | 57.43 | 56.04 | 38.00 | – | – | 3.3 | – | – |
| Ireland | 37.42 | – | – | – | – | 42.31 | – | – | –1.3 |
| Italy | 48.85 | 47.90 | 46.61 | 45.32 | 45.93 | 44.65 | 2.0 | 1.5 | 1.0 |
| Netherlands | 47.10 | 47.29 | 46.56 | 44.96 | 46.17 | 42.39 | –.4 | .5 | 1.2 |
| Norway | 58.38 | 57.05 | 56.42 | 54.57 | 53.48 | 44.88 | 2.3 | 2.2 | 3.0 |
| Portugal | 44.31 | 45.20 | 46.45 | – | 38.43 | 42.09 | –2.0 | 3.6 | .6 |
| Romania | 45.31 | 46.95 | 43.02 | 34.71 | 40.64 | 43.56 | –3.5 | 2.8 | .4 |
| Spain | 49.23 | 50.92 | 49.02 | 46.36 | 47.47 | 44.96 | –3.3 | .9 | 1.0 |
| Sweden | 48.19 | 48.20 | 48.20 | 45.56 | 45.96 | 46.20 | * | 1.2 | .5 |
| Turkey | 46.08 | 44.54 | 43.28 | 41.28 | 42.58 | 43.28 | 3.4 | 2.0 | .7 |
| United Kingdom | 48.49 | 49.08 | 47.22 | 45.15 | 46.64 | 44.83 | –1.2 | 1.0 | .9 |
| Other[2] | – | – | – | – | 48.31 | 42.88 | – | –100.0 | –100.0 |
| **Asia Total** | **43.64** | **43.45** | **42.38** | **41.45** | **43.81** | **43.73** | **.4** | **–.1** | ***** |
| China (Taiwan) | 42.95 | 45.24 | 44.48 | 42.48 | 44.86 | 44.02 | –5.0 | –1.1 | –.3 |
| Israel | 39.79 | 40.91 | 40.91 | – | – | – | –2.7 | – | – |
| Japan | 41.68 | 42.19 | 41.14 | 40.57 | 43.24 | 43.32 | –1.2 | –.9 | –.4 |
| Korea, Republic of | 47.68 | 46.08 | 45.98 | 44.00 | 45.67 | 45.05 | 3.5 | 1.1 | .6 |
| Other[2] | 57.41 | 59.36 | – | – | 45.13 | 55.00 | –3.3 | 6.2 | .5 |
| **Africa Total** | **49.69** | **50.87** | **48.52** | **43.95** | **45.25** | **44.24** | **–2.3** | **2.4** | **1.3** |
| Algeria | 46.64 | 50.23 | 47.80 | 43.24 | 44.32 | 44.31 | –7.1 | 1.3 | .6 |
| Egypt | 51.31 | 53.38 | 49.38 | 43.14 | 44.86 | 44.13 | –3.9 | 3.4 | 1.7 |
| Morocco | – | 30.30 | – | – | – | – | –100.0 | – | – |
| South Africa, Rep of | 48.66 | 49.55 | 47.38 | 45.67 | 46.87 | – | –1.8 | .9 | – |
| Other[2] | – | – | – | – | 40.53 | – | – | –100.0 | – |
| **Total**[3] | **45.36** | **45.40** | **44.24** | **42.75** | **44.09** | **44.15** | **–.1** | **.7** | **.3** |
| **U.S. Total**[4] | **45.45** | **45.49** | **44.30** | **42.77** | **44.11** | **44.17** | **–.1** | **.8** | **.3** |

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 1996.

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 $20 to $60 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, 1988, 1993-1997

(Real Dollars per Short Ton)

| Continent and Country of Destination | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **North America Total** | **$31.48** | **$33.38** | **$34.56** | **$33.38** | **$35.12** | **$53.05** | **–5.7** | **–2.7** | **–5.6** |
| Canada[1] | 30.34 | 32.66 | 33.91 | 32.90 | 34.76 | 53.26 | –7.1 | –3.3 | –6.1 |
| Mexico | 44.36 | 42.97 | 43.51 | 42.38 | 44.03 | 48.61 | 3.2 | .2 | –1.0 |
| Other[2] | – | – | – | – | – | 43.84 | – | – | –100.0 |
| **South America Total** | **39.43** | **40.48** | **40.50** | **40.23** | **42.80** | **51.56** | **–2.6** | **–2.0** | **–2.9** |
| Argentina | 43.49 | 42.53 | 40.39 | 40.49 | 42.52 | 50.77 | 2.3 | .6 | –1.7 |
| Brazil | 39.28 | 40.59 | 40.72 | 40.21 | 42.83 | 51.62 | –3.2 | –2.1 | –3.0 |
| Chile | – | 27.46 | 28.07 | – | – | 54.65 | –100.0 | – | –100.0 |
| Other[2] | – | 46.06 | – | – | – | – | –100.0 | – | – |
| **Europe Total** | **42.35** | **43.26** | **42.69** | **42.40** | **44.47** | **51.03** | **–2.1** | **–1.2** | **–2.0** |
| Belgium & Luxembourg | 43.00 | 44.17 | 42.65 | 42.89 | 44.78 | 50.84 | –2.6 | –1.0 | –1.8 |
| Bulgaria | 41.30 | 39.35 | 40.85 | 40.08 | 40.93 | – | 4.9 | .2 | – |
| Denmark | – | – | – | – | 35.37 | 31.35 | – | –100.0 | –100.0 |
| Finland | 38.59 | 40.12 | 39.56 | 40.29 | 38.60 | 48.47 | –3.8 | * | –2.5 |
| France | 42.00 | 42.77 | 41.82 | 42.21 | 44.02 | 50.96 | –1.8 | –1.2 | –2.1 |
| Germany, FR | 42.56 | 45.26 | 44.08 | 43.66 | 45.00 | 51.29 | –5.9 | –1.4 | –2.0 |
| Iceland | 52.78 | 52.12 | 51.99 | 36.16 | – | – | 1.3 | – | – |
| Ireland | 33.29 | – | – | – | – | 49.14 | – | – | –4.2 |
| Italy | 43.47 | 43.46 | 43.24 | 43.13 | 44.76 | 51.86 | * | –.7 | –1.9 |
| Netherlands | 41.91 | 42.91 | 43.19 | 42.78 | 45.00 | 49.23 | –2.3 | –1.8 | –1.8 |
| Norway | 51.94 | 51.77 | 52.34 | 51.92 | 52.12 | 52.13 | .3 | –.1 | * |
| Portugal | 39.42 | 41.02 | 43.09 | – | 37.46 | 48.89 | –3.9 | 1.3 | –2.4 |
| Romania | 40.31 | 42.61 | 39.91 | 33.02 | 39.61 | 50.59 | –5.4 | .4 | –2.5 |
| Spain | 43.80 | 46.21 | 45.47 | 44.11 | 46.27 | 52.22 | –5.2 | –1.4 | –1.9 |
| Sweden | 42.88 | 43.73 | 44.72 | 43.35 | 44.80 | 53.65 | –2.0 | –1.1 | –2.5 |
| Turkey | 41.00 | 40.42 | 40.15 | 39.28 | 41.51 | 50.26 | 1.4 | –.3 | –2.2 |
| United Kingdom | 43.14 | 44.54 | 43.80 | 42.96 | 45.46 | 52.07 | –3.1 | –1.3 | –2.1 |
| Other[2] | – | – | – | – | 47.08 | 49.80 | – | –100.0 | –100.0 |
| **Asia Total** | **38.82** | **39.43** | **39.31** | **39.44** | **42.70** | **50.79** | **–1.5** | **–2.3** | **–2.9** |
| China (Taiwan) | 38.21 | 41.05 | 41.26 | 40.42 | 43.73 | 51.12 | –6.9 | –3.3 | –3.2 |
| Israel | 35.40 | 37.13 | 37.95 | – | – | – | –4.6 | – | – |
| Japan | 37.08 | 38.29 | 38.16 | 38.60 | 42.15 | 50.32 | –3.1 | –3.1 | –3.3 |
| Korea, Republic of | 42.42 | 41.81 | 42.66 | 41.86 | 44.52 | 52.32 | 1.5 | –1.2 | –2.3 |
| Other[2] | 51.07 | 53.86 | – | – | 43.99 | 63.88 | –5.2 | 3.8 | –2.4 |
| **Africa Total** | **44.21** | **46.16** | **45.01** | **41.81** | **44.11** | **51.39** | **–4.2** | ***** | **–1.6** |
| Algeria | 41.50 | 45.58 | 44.34 | 41.14 | 43.20 | 51.47 | –9.0 | –1.0 | –2.4 |
| Egypt | 45.65 | 48.44 | 45.80 | 41.05 | 43.73 | 51.26 | –5.8 | 1.1 | –1.3 |
| Morocco | – | 27.50 | – | – | – | – | –100.0 | – | – |
| South Africa, Rep of | 43.30 | 44.96 | 43.96 | 43.45 | 45.69 | – | –3.7 | –1.3 | – |
| Other[2] | – | – | – | – | 39.51 | – | – | –100.0 | – |
| **Total**[3] | **40.35** | **41.20** | **41.04** | **40.68** | **42.98** | **51.27** | **–2.0** | **–1.6** | **–2.6** |
| **U.S. Total**[4] | **40.43** | **41.28** | **41.09** | **40.69** | **42.99** | **51.30** | **–2.0** | **–1.5** | **–2.6** |

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 1996.

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 $20 to $60 (nominal) per short ton, inclusively.

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

* Data round to zero.

Notes: Real prices are in 1992 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, 1988, 1993-1997

(Nominal Dollars per Short Ton)

| Continent and Country of Destination | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **North America Total** | **$28.26** | **$29.41** | **$31.06** | **$30.09** | **$31.68** | **$38.77** | **–3.9** | **–2.8** | **–3.4** |
| Canada[1] | 26.64 | 28.06 | 30.46 | 29.97 | 31.50 | 38.82 | –5.0 | –4.1 | –4.1 |
| Mexico | 38.67 | 36.21 | 35.60 | 41.42 | 40.40 | 38.78 | 6.8 | –1.1 | * |
| Other[2] | 38.08 | 38.03 | 34.29 | 35.58 | 33.78 | 29.37 | .1 | 3.0 | 2.9 |
| **South America Total** | **38.78** | **34.94** | **35.66** | **36.52** | **40.05** | **44.26** | **11.0** | **–.8** | **–1.4** |
| Argentina | 40.79 | 40.53 | 36.09 | 33.11 | 37.81 | 40.00 | .6 | 1.9 | .2 |
| Brazil | 42.12 | 40.57 | 34.81 | – | 40.61 | 46.27 | 3.8 | .9 | –1.0 |
| Chile | 32.24 | 32.76 | 32.96 | 34.47 | 46.78 | 34.98 | –1.6 | –8.9 | –.9 |
| Other[2] | 40.81 | 39.16 | 43.42 | 40.88 | 39.46 | 26.28 | 4.2 | .8 | 5.0 |
| **Europe Total** | **32.52** | **33.71** | **34.33** | **35.01** | **36.50** | **37.37** | **–3.5** | **–2.8** | **–1.5** |
| Belgium & Luxembourg | 36.34 | 36.69 | 35.07 | 33.49 | 34.09 | 33.32 | –.9 | 1.6 | 1.0 |
| Bulgaria | – | 50.55 | – | 41.40 | 41.51 | – | –100.0 | –100.0 | – |
| Denmark | 31.72 | 29.30 | 29.37 | 29.23 | 34.34 | 30.25 | 8.3 | –2.0 | .5 |
| Finland | 36.20 | 35.23 | 35.53 | 35.47 | 40.85 | – | 2.8 | –3.0 | – |
| France | 34.84 | 36.14 | 35.13 | 38.11 | 31.83 | 34.88 | –3.6 | 2.3 | * |
| Germany, FR | 35.04 | 31.92 | 33.31 | 40.67 | 34.19 | 48.01 | 9.7 | .6 | –3.4 |
| Greece | 40.73 | 33.94 | 40.69 | – | 40.67 | 39.95 | 20.0 | * | .2 |
| Iceland | – | 57.93 | – | – | – | 53.24 | –100.0 | – | –100.0 |
| Ireland | 38.13 | 37.35 | 36.07 | 33.82 | 35.84 | 41.10 | 2.1 | 1.5 | –.8 |
| Italy | 39.30 | 41.20 | 41.70 | 38.30 | 40.26 | 40.07 | –4.6 | –.6 | –.2 |
| Netherlands | 32.52 | 32.94 | 36.45 | 35.95 | 40.21 | 38.04 | –1.3 | –5.2 | –1.7 |
| Norway | – | – | – | – | – | 43.25 | – | – | –100.0 |
| Portugal | 35.48 | 35.60 | 36.28 | 36.25 | 37.62 | 38.07 | –.3 | –1.4 | –.8 |
| Romania | 29.17 | – | 39.08 | 40.63 | 36.29 | – | – | –5.3 | – |
| Spain | 22.38 | 22.14 | 21.37 | 21.19 | 25.21 | 57.81 | 1.1 | –2.9 | –10.0 |
| Sweden | – | 39.21 | 48.54 | – | – | 36.71 | –100.0 | – | –100.0 |
| Turkey | 42.02 | 41.28 | 30.98 | – | 40.84 | 38.27 | 1.8 | .7 | 1.0 |
| United Kingdom | 29.99 | 28.82 | 30.63 | 42.71 | 41.26 | 37.26 | 4.1 | –7.7 | –2.4 |
| Other[2] | 34.47 | 35.07 | 38.06 | 40.92 | 29.03 | 39.59 | –1.7 | 4.4 | –1.5 |
| **Asia Total** | **34.94** | **35.84** | **34.63** | **35.18** | **36.52** | **38.07** | **–2.5** | **–1.1** | **–.9** |
| China (Taiwan) | 34.71 | 35.33 | 35.66 | 38.28 | 39.01 | 39.56 | –1.8 | –2.9 | –1.4 |
| Israel | 35.92 | 35.12 | 34.63 | 33.23 | 34.79 | 36.91 | 2.3 | .8 | –.3 |
| Japan | 34.97 | 36.31 | 35.03 | 33.57 | 35.45 | 36.22 | –3.7 | –.3 | –.4 |
| Korea, Republic of | 35.01 | 35.32 | 32.01 | 32.56 | 34.34 | 36.31 | –.9 | .5 | –.4 |
| Other[2] | 33.56 | 38.26 | 30.41 | 37.24 | 37.31 | 37.39 | –12.3 | –2.6 | –1.2 |
| **Oceania & Australia Total** | **40.79** | **40.71** | **39.87** | **39.99** | **34.46** | **38.30** | **.2** | **4.3** | **.7** |
| Other[2] | 40.79 | 40.71 | 39.87 | 39.99 | 34.46 | 38.30 | .2 | 4.3 | .7 |
| **Africa Total** | **32.31** | **34.02** | **33.01** | **35.12** | **33.86** | **33.35** | **–5.0** | **–1.2** | **–.3** |
| Egypt | 40.73 | 40.78 | 40.81 | 40.89 | 40.88 | – | –.1 | –.1 | – |
| Morocco | 30.67 | 34.01 | 33.00 | 35.03 | 33.86 | 33.34 | –9.8 | –2.4 | –.9 |
| South Africa, Rep of | – | – | 39.80 | – | – | – | – | – | – |
| Other[2] | 39.27 | – | – | – | – | 40.17 | – | – | –.3 |
| **Total[3]** | **31.61** | **33.51** | **33.89** | **34.03** | **35.67** | **38.05** | **–5.7** | **–3.0** | **–2.0** |
| **U.S. Total[4]** | **32.42** | **34.09** | **34.51** | **34.34** | **36.03** | **38.59** | **–4.9** | **–2.6** | **–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 1996.

[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 $20 to $60 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, 1988, 1993-1997

(Real Dollars per Short Ton)

| Continent and Country of Destination | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **North America Total** | **$25.14** | **$26.69** | **$28.82** | **$28.63** | **$30.87** | **$45.03** | **–5.8** | **–5.0** | **–6.3** |
| Canada[1] | 23.70 | 25.46 | 28.26 | 28.51 | 30.70 | 45.09 | –6.9 | –6.3 | –6.9 |
| Mexico | 34.41 | 32.85 | 33.03 | 39.41 | 39.37 | 45.04 | 4.7 | –3.3 | –2.9 |
| Other[2] | 33.88 | 34.51 | 31.81 | 33.86 | 32.92 | 34.12 | –1.8 | .7 | –.1 |
| **South America Total** | **34.50** | **31.71** | **33.08** | **34.75** | **39.04** | **51.40** | **8.8** | **–3.0** | **–4.3** |
| Argentina | 36.29 | 36.78 | 33.48 | 31.50 | 36.85 | 46.46 | –1.3 | –.4 | –2.7 |
| Brazil | 37.47 | 36.82 | 32.30 | – | 39.58 | 53.74 | 1.8 | –1.4 | –3.9 |
| Chile | 28.69 | 29.73 | 30.58 | 32.80 | 45.59 | 40.63 | –3.5 | –10.9 | –3.8 |
| Other[2] | 36.31 | 35.53 | 40.28 | 38.89 | 38.46 | 30.52 | 2.2 | –1.4 | 1.9 |
| **Europe Total** | **28.94** | **30.59** | **31.84** | **33.31** | **35.57** | **43.40** | **–5.4** | **–5.0** | **–4.4** |
| Belgium & Luxembourg | 32.33 | 33.30 | 32.53 | 31.86 | 33.23 | 38.70 | –2.9 | –.7 | –2.0 |
| Bulgaria | – | 45.87 | – | 39.39 | 40.46 | – | –100.0 | –100.0 | – |
| Denmark | 28.23 | 26.59 | 27.24 | 27.81 | 33.47 | 35.13 | 6.2 | –4.2 | –2.4 |
| Finland | 32.20 | 31.97 | 32.96 | 33.75 | 39.81 | – | .7 | –5.2 | – |
| France | 31.00 | 32.79 | 32.59 | 36.26 | 31.02 | 40.51 | –5.5 | * | –2.9 |
| Germany, FR | 31.17 | 28.97 | 30.90 | 38.70 | 33.33 | 55.76 | 7.6 | –1.6 | –6.3 |
| Greece | 36.24 | 30.80 | 37.75 | – | 39.64 | 46.40 | 17.6 | –2.2 | –2.7 |
| Iceland | – | 52.57 | – | – | – | 61.84 | –100.0 | – | –100.0 |
| Ireland | 33.92 | 33.89 | 33.46 | 32.18 | 34.93 | 47.73 | .1 | –.7 | –3.7 |
| Italy | 34.96 | 37.38 | 38.68 | 36.44 | 39.24 | 46.54 | –6.5 | –2.8 | –3.1 |
| Netherlands | 28.94 | 29.89 | 33.81 | 34.21 | 39.19 | 44.18 | –3.2 | –7.3 | –4.6 |
| Norway | – | – | – | – | – | 50.23 | – | – | –100.0 |
| Portugal | 31.56 | 32.30 | 33.65 | 34.49 | 36.67 | 44.22 | –2.3 | –3.7 | –3.7 |
| Romania | 25.95 | – | 36.25 | 38.66 | 35.37 | – | – | –7.4 | – |
| Spain | 19.91 | 20.09 | 19.83 | 20.16 | 24.57 | 67.15 | –.9 | –5.1 | –12.6 |
| Sweden | – | 35.58 | 45.03 | – | – | 42.64 | –100.0 | – | –100.0 |
| Turkey | 37.38 | 37.46 | 28.74 | – | 39.80 | 44.44 | –.2 | –1.5 | –1.9 |
| United Kingdom | 26.68 | 26.15 | 28.41 | 40.63 | 40.22 | 43.27 | 2.0 | –9.7 | –5.2 |
| Other[2] | 30.67 | 31.82 | 35.30 | 38.94 | 28.29 | 45.98 | –3.6 | 2.0 | –4.4 |
| **Asia Total** | **31.08** | **32.52** | **32.12** | **33.48** | **35.59** | **44.21** | **–4.4** | **–3.3** | **–3.8** |
| China (Taiwan) | 30.88 | 32.06 | 33.08 | 36.42 | 38.02 | 45.94 | –3.7 | –5.1 | –4.3 |
| Israel | 31.96 | 31.87 | 32.12 | 31.62 | 33.91 | 42.87 | .3 | –1.5 | –3.2 |
| Japan | 31.11 | 32.95 | 32.49 | 31.94 | 34.55 | 42.07 | –5.6 | –2.6 | –3.3 |
| Korea, Republic of | 31.14 | 32.05 | 29.69 | 30.98 | 33.47 | 42.17 | –2.8 | –1.8 | –3.3 |
| Other[2] | 29.86 | 34.71 | 28.21 | 35.43 | 36.37 | 43.42 | –14.0 | –4.8 | –4.1 |
| **Oceania & Australia Total** | **36.29** | **36.94** | **36.98** | **38.05** | **33.59** | **44.48** | **–1.8** | **1.9** | **–2.2** |
| Other[2] | 36.29 | 36.94 | 36.98 | 38.05 | 33.59 | 44.48 | –1.8 | 1.9 | –2.2 |
| **Africa Total** | **28.75** | **30.87** | **30.62** | **33.41** | **33.01** | **38.74** | **–6.9** | **–3.4** | **–3.3** |
| Egypt | 36.23 | 37.00 | 37.86 | 38.91 | 39.85 | – | –2.1 | –2.3 | – |
| Morocco | 27.29 | 30.87 | 30.61 | 33.33 | 33.00 | 38.72 | –11.6 | –4.6 | –3.8 |
| South Africa, Rep of | – | – | 36.92 | – | – | – | – | – | – |
| Other[2] | 34.94 | – | – | – | – | 46.66 | – | – | –3.2 |
| **Total[3]** | **28.13** | **30.41** | **31.44** | **32.38** | **34.76** | **44.20** | **–7.5** | **–5.1** | **–4.9** |
| **U.S. Total[4]** | **28.85** | **30.94** | **32.02** | **32.68** | **35.12** | **44.82** | **–6.8** | **–4.8** | **–4.8** |

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 1996.

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 $20 to $60 (nominal) per short ton, inclusively.

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

* Data round to zero.

Notes: Real prices are in 1992 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.''

# Coal Quality

As of January 1, 1996, recoverable U.S. coal reserves were estimated at 274 billion short tons (Table 105). Reserves of low sulfur coal (defined as coal containing from 0 to 0.60 pounds of sulfur per million Btu) are estimated to represent 37 percent of all reserves, with medium sulfur coal (containing 0.61 to 1.67 pounds sulfur per million Btu) and high sulfur coal (containing more than 1.67 pounds sulfur per million Btu) each accounting for 32 percent of total reserves.

The average sulfur and ash content of coal delivered to the Nation's electric utilities during 1997 increased slightly to 1.11 and 9.36 percent by weight, respectively (Table 106). The average heat content of electric utility coal totaled 10,275 Btu per pound.

By comparison, the average heat content of coal delivered to manufacturing and coke plants during 1997 remained relatively unchanged at 11,407 Btu per pound, while the average ash content and average sulfur content of industrial coal was 7.62 percent and 1.18 percent, respectively.

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

(Million Short Tons Remaining as of January 1, 1996)

| 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** | – | **413** | **374** | **2,036** | **194** | – | **3,018** |
| Surface | – | 255 | 269 | 1,670 | 137 | – | 2,332 |
| Underground | – | 158 | 105 | 366 | 57 | – | 686 |
| **Alaska, Southern** | **2,453** | **94** | – | – | – | – | **2,548** |
| Surface | 386 | 41 | – | – | – | – | 427 |
| Underground | 2,067 | 53 | – | – | – | – | 2,120 |
| **Alaska, Northern** | – | – | – | – | – | – | – |
| Surface | – | – | – | – | – | – | – |
| Underground | – | – | – | – | – | – | – |
| **Arizona** | – | **121** | – | – | – | – | **121** |
| Surface | – | 69 | – | – | – | – | 69 |
| Underground | – | 51 | – | – | – | – | 51 |
| **Arkansas**[1] | – | **8** | **163** | **44** | **6** | **7** | **228** |
| Surface | – | 2 | 73 | 24 | 1 | 1 | 101 |
| Underground | – | 7 | 90 | 20 | 5 | 6 | 127 |
| **Colorado**[1] | **3,674** | **2,316** | **3,684** | **326** | **96** | – | **10,096** |
| Surface | 273 | 120 | 3,325 | 41 | 14 | – | 3,772 |
| Underground | 3,400 | 2,196 | 359 | 285 | 82 | – | 6,323 |
| **Georgia** | **1** | **1** | * | * | * | * | **2** |
| Surface | * | * | * | * | * | * | 1 |
| Underground | * | * | * | * | * | * | 1 |
| **Idaho** | * | **1** | **1** | **1** | – | – | **2** |
| Surface | – | – | – | – | – | – | – |
| Underground | * | 1 | 1 | 1 | – | – | 2 |
| **Illinois** | **5** | **113** | **350** | **1,456** | **1,567** | **30,477** | **33,969** |
| Surface | – | – | 1 | 43 | 291 | 9,031 | 9,366 |
| Underground | 5 | 113 | 349 | 1,413 | 1,276 | 21,445 | 24,603 |
| **Indiana** | – | **312** | **185** | **674** | **1,125** | **2,033** | **4,329** |
| Surface | – | 63 | 27 | 107 | 149 | 307 | 654 |
| Underground | – | 248 | 158 | 567 | 976 | 1,727 | 3,675 |
| **Iowa** | – | – | – | – | **407** | **720** | **1,127** |
| Surface | – | – | – | – | 320 | – | 320 |
| Underground | – | – | – | – | 87 | 720 | 807 |
| **Kansas** | – | – | – | – | **226** | **457** | **683** |
| Surface | – | – | – | – | 226 | 457 | 683 |
| Underground | – | – | – | – | – | – | – |
| **Kentucky, Eastern** | **175** | **2,077** | **1,434** | **1,769** | **860** | **657** | **6,973** |
| Surface | 140 | 1,657 | 1,144 | 1,412 | 686 | 525 | 5,563 |
| Underground | 35 | 420 | 290 | 358 | 174 | 133 | 1,410 |
| **Kentucky, Western** | – | – | – | **156** | **2,723** | **6,406** | **9,285** |
| Surface | – | – | – | 125 | 926 | 1,276 | 2,327 |
| Underground | – | – | – | 32 | 1,798 | 5,130 | 6,959 |
| **Louisiana** | – | – | – | **349** | – | – | **349** |
| Surface | – | – | – | 349 | – | – | 349 |
| Underground | – | – | – | – | – | – | – |
| **Maryland** | – | **31** | **58** | **118** | **205** | – | **412** |
| Surface | – | 3 | 8 | 13 | 32 | – | 56 |
| Underground | – | 28 | 50 | 105 | 173 | – | 356 |
| **Michigan** | – | – | **8** | **23** | **16** | **11** | **59** |
| Surface | – | – | 1 | 2 | 1 | * | 3 |
| Underground | – | – | 8 | 21 | 16 | 11 | 55 |
| **Missouri** | – | – | – | – | **170** | **3,681** | **3,851** |
| Surface | – | – | – | – | 150 | 3,012 | 3,162 |
| Underground | – | – | – | – | 20 | 670 | 689 |
| **Montana** | **33,577** | **16,828** | **16,776** | **4,815** | **2,022** | **1,371** | **75,389** |
| Surface | 18,014 | 6,995 | 9,499 | 2,444 | 1,610 | 906 | 39,466 |
| Underground | 15,563 | 9,833 | 7,277 | 2,371 | 413 | 466 | 35,923 |
| **New Mexico**[1] | **62** | **2,638** | **1,890** | **3,625** | – | – | **8,215** |
| Surface | 37 | 1,229 | 1,348 | 2,587 | – | – | 5,202 |
| Underground | 25 | 1,409 | 542 | 1,038 | – | – | 3,013 |
| **North Carolina** | – | – | * | **2** | **2** | **1** | **5** |
| Surface | – | – | – | – | – | – | – |
| Underground | – | – | * | 2 | 2 | 1 | 5 |
| **North Dakota** | **436** | **750** | **1,375** | **3,438** | **857** | **369** | **7,224** |
| Surface | 436 | 750 | 1,375 | 3,438 | 857 | 369 | 7,224 |
| Underground | – | – | – | – | – | – | – |
| **Ohio** | **82** | **169** | **335** | **1,049** | **2,636** | **7,447** | **11,718** |
| Surface | 20 | 96 | 168 | 416 | 863 | 2,304 | 3,867 |
| Underground | 62 | 73 | 168 | 634 | 1,773 | 5,143 | 7,852 |

See footnotes at end of table.

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

(Million Short Tons Remaining as of January 1, 1996)

| 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** | – | **220** | **123** | **178** | **114** | **181** | **816** |
| Surface | – | 66 | 25 | 34 | 33 | 82 | 240 |
| 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** | **180** | **468** | **96** | **17** | **2** | ***** | **763** |
| Surface | 85 | 263 | 62 | 11 | 1 | * | 422 |
| Underground | 95 | 205 | 35 | 6 | 1 | – | 341 |
| **Pennsylvania, Bituminous** | – | **283** | **807** | **5,001** | **4,151** | **1,517** | **11,757** |
| Surface | – | 22 | 64 | 307 | 227 | 135 | 756 |
| Underground | – | 260 | 742 | 4,694 | 3,923 | 1,381 | 11,001 |
| **South Dakota** | – | – | **104** | **1** | **172** | – | **277** |
| Surface | – | – | 104 | 1 | 172 | – | 277 |
| Underground | – | – | – | – | – | – | – |
| **Tennessee** | – | **106** | **62** | **224** | **99** | – | **491** |
| Surface | – | 39 | 23 | 93 | 40 | – | 195 |
| Underground | – | 67 | 38 | 131 | 59 | – | 295 |
| **Texas** | – | – | **590** | **5,681** | **3,409** | **376** | **10,057** |
| Surface | – | – | 590 | 5,681 | 3,409 | 376 | 10,057 |
| Underground | – | – | – | – | – | – | – |
| **Utah** | **378** | **678** | **554** | **864** | **225** | **301** | **3,001** |
| Surface | 8 | 32 | 19 | 85 | 35 | 34 | 212 |
| Underground | 370 | 646 | 535 | 780 | 190 | 267 | 2,788 |
| **Virginia**[1] | **195** | **632** | **403** | **133** | – | – | **1,362** |
| Surface | 43 | 197 | 161 | 46 | – | – | 447 |
| Underground | 152 | 435 | 241 | 87 | – | – | 915 |
| **Washington** | **63** | **92** | **86** | **489** | – | – | **729** |
| Surface | – | – | – | 54 | – | – | 54 |
| Underground | 63 | 92 | 86 | 434 | – | – | 675 |
| **West Virginia** | **653** | **6,497** | **2,736** | **4,036** | **2,516** | **3,211** | **19,649** |
| Surface | 116 | 1,464 | 568 | 447 | 180 | 107 | 2,881 |
| Underground | 537 | 5,034 | 2,168 | 3,589 | 2,337 | 3,104 | 16,769 |
| **Wyoming** | **6,786** | **17,586** | **10,186** | **7,438** | **1,168** | **2,241** | **45,403** |
| Surface | 4,434 | 8,822 | 4,134 | 2,314 | 527 | 2,208 | 22,439 |
| Underground | 2,352 | 8,764 | 6,052 | 5,123 | 641 | 33 | 22,964 |
| **U.S. Total** | **48,723** | **52,434** | **42,380** | **43,943** | **24,968** | **61,466** | **273,913** |
| Surface | 23,993 | 22,185 | 22,987 | 21,742 | 10,888 | 21,130 | 122,925 |
| Underground | 24,730 | 30,249 | 19,393 | 22,201 | 14,080 | 40,336 | 150,988 |

[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: A Review and Update* (DOE/EIA-0529(95)), August, 1996.

## Table 106. Average Quality of Coal Received at Electric Utilities by Census Division and State, 1988, 1993-1997

| Census Division and State and Quality[1] | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **New England** | | | | | | | | | |
| Btu | 12,756 | 12,793 | 12,848 | 12,897 | 13,033 | 13,157 | * | –1 | * |
| Sulfur | .86 | .85 | .84 | .98 | 1.11 | 1.33 | 0.8 | –6.3 | –4.8 |
| Ash | 7.79 | 7.75 | 7.48 | 7.49 | 7.62 | 7.76 | .6 | .6 | * |
| Connecticut | | | | | | | | | |
| Btu | 13,132 | 13,100 | 13,110 | 13,094 | 13,144 | 13,139 | * | * | * |
| Sulfur | .54 | .54 | .56 | .54 | .55 | .52 | –1.5 | –.8 | .4 |
| Ash | 7.20 | 7.14 | 7.05 | 7.38 | 6.95 | 6.29 | .7 | .9 | 1.5 |
| Massachusetts | | | | | | | | | |
| Btu | 12,571 | 12,633 | 12,698 | 12,814 | 12,951 | 13,109 | * | –1 | * |
| Sulfur | .72 | .71 | .71 | .91 | 1.03 | 1.21 | 1.6 | –8.6 | –5.5 |
| Ash | 8.24 | 8.07 | 7.83 | 7.85 | 8.10 | 8.24 | 2.1 | .4 | * |
| New Hampshire | | | | | | | | | |
| Btu | 13,054 | 13,146 | 13,111 | 13,032 | 13,179 | 13,333 | –1 | * | * |
| Sulfur | 1.42 | 1.56 | 1.38 | 1.52 | 1.62 | 2.29 | –8.9 | –3.2 | –5.1 |
| Ash | 6.88 | 7.02 | 6.74 | 6.40 | 6.75 | 7.10 | –2.0 | .5 | –.3 |
| **Middle Atlantic** | | | | | | | | | |
| Btu | 12,436 | 12,460 | 12,474 | 12,509 | 12,556 | 12,403 | * | * | * |
| Sulfur | 2.05 | 2.01 | 2.03 | 2.01 | 1.96 | 2.02 | 1.8 | 1.1 | .1 |
| Ash | 12.03 | 11.80 | 11.93 | 11.52 | 11.29 | 12.66 | 2.0 | 1.6 | –.6 |
| New Jersey | | | | | | | | | |
| Btu | 13,084 | 12,993 | 13,282 | 13,341 | 13,397 | 13,324 | 1 | –1 | * |
| Sulfur | 1.24 | 1.36 | 1.21 | 1.29 | 1.29 | 1.28 | –8.2 | –.9 | –.3 |
| Ash | 8.54 | 9.02 | 7.51 | 7.44 | 7.21 | 7.67 | –5.4 | 4.3 | 1.2 |
| New York | | | | | | | | | |
| Btu | 13,105 | 13,013 | 13,051 | 12,959 | 12,914 | 12,814 | 1 | * | * |
| Sulfur | 1.80 | 1.80 | 1.79 | 1.71 | 1.55 | 1.72 | .2 | 3.8 | .5 |
| Ash | 7.63 | 7.91 | 7.90 | 7.98 | 8.15 | 9.62 | –3.6 | –1.7 | –2.5 |
| Pennsylvania | | | | | | | | | |
| Btu | 12,279 | 12,321 | 12,315 | 12,368 | 12,443 | 12,260 | * | * | * |
| Sulfur | 2.13 | 2.09 | 2.12 | 2.11 | 2.07 | 2.13 | 1.9 | .7 | * |
| Ash | 13.03 | 12.72 | 12.97 | 12.49 | 12.11 | 13.61 | 2.5 | 1.8 | –.5 |
| **East North Central** | | | | | | | | | |
| Btu | 10,588 | 10,611 | 10,676 | 10,837 | 10,885 | 11,127 | * | –1 | –1 |
| Sulfur | 1.35 | 1.36 | 1.28 | 1.55 | 1.61 | 1.83 | –.5 | –4.3 | –3.3 |
| Ash | 8.22 | 8.07 | 8.00 | 8.34 | 8.41 | 8.96 | 1.9 | –.6 | –.9 |
| Illinois | | | | | | | | | |
| Btu | 9,781 | 9,878 | 9,970 | 10,181 | 10,362 | 10,636 | –1 | –1 | –1 |
| Sulfur | 1.17 | 1.16 | 1.14 | 1.46 | 1.63 | 1.90 | .9 | –7.9 | –5.2 |
| Ash | 7.04 | 6.98 | 7.01 | 7.44 | 7.51 | 8.46 | .8 | –1.6 | –2.0 |
| Indiana | | | | | | | | | |
| Btu | 10,461 | 10,357 | 10,338 | 10,535 | 10,539 | 10,834 | 1 | * | * |
| Sulfur | 1.61 | 1.59 | 1.57 | 1.76 | 1.78 | 2.28 | 1.1 | –2.4 | –3.8 |
| Ash | 7.90 | 7.76 | 7.65 | 8.09 | 8.23 | 9.00 | 1.8 | –1.0 | –1.4 |
| Michigan | | | | | | | | | |
| Btu | 10,566 | 10,504 | 10,677 | 10,925 | 10,853 | 11,612 | 1 | –1 | –1 |
| Sulfur | .67 | .63 | .63 | .68 | .68 | .72 | 6.5 | –.1 | –.7 |
| Ash | 6.65 | 6.59 | 6.66 | 6.97 | 6.61 | 6.95 | .8 | .1 | –.5 |
| Ohio | | | | | | | | | |
| Btu | 11,891 | 12,056 | 12,122 | 12,052 | 12,049 | 11,895 | –1 | * | * |
| Sulfur | 2.01 | 2.08 | 1.89 | 2.34 | 2.39 | 2.47 | –3.1 | –4.2 | –2.2 |
| Ash | 11.53 | 11.01 | 10.84 | 10.91 | 11.01 | 11.39 | 4.7 | 1.1 | .1 |
| Wisconsin | | | | | | | | | |
| Btu | 9,375 | 9,222 | 9,351 | 9,565 | 9,490 | 9,693 | 2 | * | * |
| Sulfur | .50 | .46 | .46 | .51 | .49 | .90 | 10.2 | .5 | –6.2 |
| Ash | 5.74 | 5.74 | 6.03 | 6.27 | 6.11 | 6.54 | –.1 | –1.6 | –1.4 |
| **West North Central** | | | | | | | | | |
| Btu | 8,394 | 8,430 | 8,418 | 8,480 | 8,366 | 8,710 | * | * | * |
| Sulfur | .51 | .53 | .54 | .68 | .63 | 1.01 | –4.3 | –5.1 | –7.3 |
| Ash | 6.31 | 6.38 | 6.41 | 6.82 | 6.74 | 7.55 | –1.1 | –1.6 | –2.0 |
| Iowa | | | | | | | | | |
| Btu | 8,662 | 8,658 | 8,678 | 8,783 | 8,660 | 9,211 | * | * | –1 |
| Sulfur | .45 | .45 | .49 | .57 | .52 | .80 | .6 | –3.5 | –6.3 |
| Ash | 5.53 | 5.61 | 5.60 | 5.59 | 5.47 | 5.96 | –1.5 | .3 | –.8 |

See footnotes at end of table.

## Table 106. Average Quality of Coal Received at Electric Utilities by Census Division and State, 1988, 1993-1997 (Continued)

| Census Division and State and Quality[1] | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| Kansas | | | | | | | | | |
| Btu | 8,766 | 8,827 | 8,730 | 8,708 | 8,654 | 8,978 | –1 | * | * |
| Sulfur | .48 | .49 | .43 | .49 | .43 | .69 | –2.5 | 2.9 | –3.9 |
| Ash | 5.52 | 5.52 | 5.46 | 5.63 | 5.19 | 6.07 | .1 | 1.6 | –1.0 |
| Minnesota | | | | | | | | | |
| Btu | 8,895 | 8,914 | 8,828 | 8,821 | 8,844 | 8,739 | * | * | * |
| Sulfur | .45 | .45 | .47 | .46 | .44 | .60 | * | .8 | –3.1 |
| Ash | 6.32 | 6.32 | 6.71 | 6.64 | 6.40 | 7.56 | * | –.3 | –2.0 |
| Missouri | | | | | | | | | |
| Btu | 8,994 | 9,063 | 9,216 | 9,718 | 9,860 | 10,404 | –1 | –2 | –2 |
| Sulfur | .47 | .58 | .57 | 1.03 | 1.02 | 2.11 | –18.5 | –17.6 | –15.4 |
| Ash | 5.32 | 5.62 | 5.69 | 6.65 | 6.54 | 8.84 | –5.3 | –5.0 | –5.5 |
| Nebraska | | | | | | | | | |
| Btu | 8,595 | 8,599 | 8,594 | 8,571 | 8,561 | 8,619 | * | * | * |
| Sulfur | .32 | .34 | .33 | .35 | .35 | .36 | –7.1 | –2.8 | –1.5 |
| Ash | 4.79 | 5.11 | 5.16 | 5.17 | 5.11 | 4.99 | –6.2 | –1.6 | –.5 |
| North Dakota | | | | | | | | | |
| Btu | 6,559 | 6,597 | 6,585 | 6,593 | 6,570 | 6,584 | –1 | * | * |
| Sulfur | .77 | .72 | .74 | .75 | .74 | .70 | 6.5 | 1.0 | 1.1 |
| Ash | 9.38 | 9.32 | 9.29 | 9.39 | 9.47 | 9.00 | .7 | –.2 | .5 |
| South Dakota | | | | | | | | | |
| Btu | 8,687 | 9,034 | 6,972 | 6,049 | 6,057 | 6,338 | –4 | 9 | 4 |
| Sulfur | .63 | .52 | .87 | .91 | .90 | .90 | 21.5 | –8.8 | –3.9 |
| Ash | 8.88 | 6.66 | 4.96 | 8.81 | 8.82 | 8.02 | 33.3 | .1 | 1.1 |
| **South Atlantic** | | | | | | | | | |
| Btu | 12,311 | 12,285 | 12,324 | 12,362 | 12,465 | 12,478 | * | * | * |
| Sulfur | 1.29 | 1.27 | 1.27 | 1.33 | 1.39 | 1.51 | 1.3 | –2.0 | –1.7 |
| Ash | 10.05 | 9.75 | 9.71 | 9.72 | 9.81 | 10.05 | 3.1 | .6 | * |
| Delaware | | | | | | | | | |
| Btu | 13,062 | 13,020 | 13,085 | 12,954 | 13,027 | 12,901 | * | * | * |
| Sulfur | .99 | 1.01 | 1.00 | .92 | .94 | 1.08 | –1.4 | 1.5 | –.9 |
| Ash | 8.65 | 8.72 | 8.56 | 9.09 | 9.08 | 9.14 | –.8 | –1.2 | –.6 |
| Florida | | | | | | | | | |
| Btu | 12,122 | 12,193 | 12,296 | 12,293 | 12,332 | 12,424 | –1 | * | * |
| Sulfur | 1.59 | 1.55 | 1.47 | 1.60 | 1.57 | 1.75 | 2.5 | .4 | –1.0 |
| Ash | 8.40 | 7.96 | 8.09 | 8.19 | 8.04 | 8.51 | 5.6 | 1.1 | –.1 |
| Georgia | | | | | | | | | |
| Btu | 11,755 | 11,581 | 11,576 | 11,774 | 12,148 | 12,173 | 2 | –1 | * |
| Sulfur | .84 | .83 | .81 | 1.05 | 1.37 | 1.70 | .9 | –11.7 | –7.6 |
| Ash | 9.42 | 8.84 | 8.87 | 8.99 | 9.94 | 10.10 | 6.5 | –1.3 | –.8 |
| Maryland | | | | | | | | | |
| Btu | 12,913 | 12,879 | 12,965 | 12,824 | 12,752 | 12,725 | * | * | * |
| Sulfur | 1.14 | 1.11 | 1.06 | 1.16 | 1.31 | 1.44 | 2.3 | –3.4 | –2.6 |
| Ash | 9.42 | 9.49 | 9.32 | 9.91 | 10.02 | 10.78 | –.7 | –1.5 | –1.5 |
| North Carolina | | | | | | | | | |
| Btu | 12,368 | 12,422 | 12,461 | 12,416 | 12,465 | 12,575 | * | * | * |
| Sulfur | .90 | .89 | .86 | .95 | .96 | .92 | 1.0 | –1.6 | –.3 |
| Ash | 10.50 | 10.16 | 10.20 | 10.27 | 10.12 | 10.01 | 3.4 | .9 | .5 |
| South Carolina | | | | | | | | | |
| Btu | 12,855 | 12,757 | 12,852 | 12,771 | 12,802 | 12,675 | 1 | * | * |
| Sulfur | 1.20 | 1.21 | 1.19 | 1.21 | 1.17 | 1.17 | –1.2 | .6 | .2 |
| Ash | 8.70 | 8.90 | 8.53 | 8.87 | 8.92 | 9.45 | –2.2 | –.6 | –.9 |
| Virginia | | | | | | | | | |
| Btu | 12,554 | 12,597 | 12,743 | 12,778 | 12,817 | 12,800 | * | –1 | * |
| Sulfur | 1.01 | .99 | 1.03 | .99 | 1.00 | .91 | 2.0 | .3 | 1.1 |
| Ash | 11.58 | 11.02 | 10.21 | 9.91 | 9.60 | 9.32 | 5.0 | 4.8 | 2.4 |
| West Virginia | | | | | | | | | |
| Btu | 12,398 | 12,378 | 12,418 | 12,468 | 12,489 | 12,473 | * | * | * |
| Sulfur | 1.95 | 1.93 | 1.98 | 1.87 | 1.94 | 1.80 | 1.1 | .2 | .9 |
| Ash | 11.88 | 11.78 | 11.88 | 11.50 | 11.61 | 11.62 | .8 | .6 | .2 |
| **East South Central** | | | | | | | | | |
| Btu | 11,584 | 11,714 | 11,808 | 11,909 | 11,988 | 11,912 | –1 | –1 | * |
| Sulfur | 1.83 | 1.86 | 1.87 | 1.88 | 1.91 | 2.07 | –1.7 | –1.1 | –1.3 |
| Ash | 10.65 | 10.60 | 10.58 | 10.66 | 10.92 | 11.07 | .5 | –.6 | –.4 |
| Alabama | | | | | | | | | |
| Btu | 11,584 | 11,794 | 11,861 | 12,088 | 12,092 | 12,164 | –2 | –1 | –1 |
| Sulfur | 1.13 | 1.24 | 1.20 | 1.30 | 1.33 | 1.49 | –8.9 | –4.0 | –3.1 |
| Ash | 10.49 | 10.71 | 10.74 | 11.54 | 11.79 | 11.77 | –2.1 | –2.9 | –1.3 |

See footnotes at end of table.

## Table 106. Average Quality of Coal Received at Electric Utilities by Census Division and State, 1988, 1993-1997 (Continued)

| Census Division and State and Quality[1] | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| Kentucky | | | | | | | | | |
| Btu | 11,571 | 11,536 | 11,625 | 11,683 | 11,697 | 11,528 | * | * | * |
| Sulfur | 2.50 | 2.47 | 2.42 | 2.34 | 2.39 | 2.55 | 1.1 | 1.1 | –0.3 |
| Ash | 12.46 | 12.15 | 11.91 | 11.35 | 11.64 | 12.24 | 2.5 | 1.7 | .2 |
| Mississippi | | | | | | | | | |
| Btu | 10,486 | 11,023 | 11,221 | 11,312 | 12,338 | 12,664 | –5 | –4 | –2 |
| Sulfur | .68 | .93 | 1.04 | 1.02 | 1.41 | 1.40 | –26.5 | –16.6 | –7.7 |
| Ash | 6.13 | 6.44 | 7.81 | 7.88 | 8.52 | 7.66 | –4.9 | –7.9 | –2.4 |
| Tennessee | | | | | | | | | |
| Btu | 11,855 | 12,062 | 12,130 | 12,186 | 12,268 | 12,045 | –2 | –1 | * |
| Sulfur | 1.90 | 1.87 | 1.97 | 2.00 | 1.92 | 2.08 | 1.7 | –.2 | –1.0 |
| Ash | 9.17 | 8.89 | 8.83 | 8.94 | 9.14 | 9.47 | 3.2 | .1 | –.3 |
| **West South Central** | | | | | | | | | |
| Btu | 7,766 | 7,798 | 7,733 | 7,709 | 7,646 | 7,717 | * | * | * |
| Sulfur | .64 | .60 | .64 | .62 | .64 | .60 | 5.7 | –.2 | .7 |
| Ash | 9.35 | 9.19 | 9.53 | 9.50 | 10.06 | 10.07 | 1.7 | –1.8 | –.8 |
| Arkansas | | | | | | | | | |
| Btu | 8,707 | 8,703 | 8,687 | 8,707 | 8,665 | 8,664 | * | * | * |
| Sulfur | .33 | .33 | .33 | .32 | .32 | .35 | –.2 | .1 | –.7 |
| Ash | 5.12 | 5.20 | 5.10 | 4.92 | 5.06 | 5.56 | –1.4 | .3 | –.9 |
| Louisiana | | | | | | | | | |
| Btu | 8,102 | 8,171 | 8,110 | 8,136 | 8,092 | 8,192 | –1 | * | * |
| Sulfur | .64 | .57 | .58 | .51 | .52 | .51 | 11.5 | 5.2 | 2.5 |
| Ash | 7.22 | 7.13 | 7.42 | 7.16 | 7.13 | 7.36 | 1.3 | .3 | –.2 |
| Oklahoma | | | | | | | | | |
| Btu | 8,641 | 8,600 | 8,557 | 8,573 | 8,621 | 8,912 | * | * | * |
| Sulfur | .30 | .33 | .36 | .35 | .37 | .44 | –8.4 | –5.1 | –4.1 |
| Ash | 4.85 | 4.93 | 5.20 | 5.07 | 5.21 | 5.38 | –1.5 | –1.7 | –1.1 |
| Texas | | | | | | | | | |
| Btu | 7,423 | 7,440 | 7,346 | 7,346 | 7,284 | 7,304 | * | * | * |
| Sulfur | .75 | .71 | .77 | .73 | .75 | .68 | 5.2 | * | 1.1 |
| Ash | 11.09 | 10.98 | 11.50 | 11.31 | 11.95 | 11.94 | 1.0 | –1.8 | –.8 |
| **Mountain** | | | | | | | | | |
| Btu | 9,723 | 9,741 | 9,736 | 9,755 | 9,751 | 9,737 | * | * | * |
| Sulfur | .56 | .55 | .54 | .55 | .54 | .54 | 1.9 | 1.0 | .3 |
| Ash | 11.40 | 11.37 | 11.16 | 11.11 | 11.19 | 10.83 | .3 | .5 | .6 |
| Arizona | | | | | | | | | |
| Btu | 10,159 | 10,232 | 10,274 | 10,281 | 10,271 | 10,650 | –1 | * | –1 |
| Sulfur | .54 | .55 | .53 | .51 | .49 | .50 | –1.3 | 2.4 | .9 |
| Ash | 12.73 | 12.41 | 12.13 | 11.97 | 12.08 | 10.98 | 2.6 | 1.3 | 1.6 |
| Colorado | | | | | | | | | |
| Btu | 9,872 | 9,858 | 9,895 | 9,946 | 9,888 | 9,772 | * | * | * |
| Sulfur | .38 | .39 | .39 | .40 | .38 | .37 | –2.7 | –.3 | .1 |
| Ash | 6.92 | 6.94 | 7.16 | 7.12 | 6.97 | 7.00 | –.3 | –.2 | –.1 |
| Montana | | | | | | | | | |
| Btu | 8,426 | 8,439 | 8,520 | 8,500 | 8,496 | 8,520 | * | * | * |
| Sulfur | .72 | .68 | .68 | .66 | .65 | .67 | 6.1 | 2.6 | .9 |
| Ash | 9.32 | 9.00 | 9.15 | 9.05 | 8.99 | 9.44 | 3.5 | .9 | –.1 |
| Nevada | | | | | | | | | |
| Btu | 11,169 | 11,140 | 11,075 | 11,291 | 11,012 | 11,080 | * | * | * |
| Sulfur | .50 | .49 | .48 | .49 | .49 | .50 | 3.1 | .8 | .1 |
| Ash | 9.80 | 9.71 | 9.70 | 9.57 | 9.73 | 9.55 | 1.0 | .2 | .3 |
| New Mexico | | | | | | | | | |
| Btu | 9,069 | 9,116 | 9,033 | 9,043 | 8,992 | 9,036 | –1 | * | * |
| Sulfur | .81 | .80 | .80 | .82 | .81 | .77 | 2.1 | .1 | .7 |
| Ash | 22.71 | 22.78 | 22.51 | 22.44 | 22.77 | 21.33 | –.3 | –.1 | .7 |
| Utah | | | | | | | | | |
| Btu | 11,330 | 11,513 | 11,550 | 11,491 | 11,489 | 11,491 | –2 | * | * |
| Sulfur | .48 | .47 | .47 | .47 | .48 | .49 | 1.7 | * | –.2 |
| Ash | 10.90 | 10.90 | 10.27 | 10.25 | 10.47 | 10.61 | * | 1.0 | .3 |
| Wyoming | | | | | | | | | |
| Btu | 8,787 | 8,716 | 8,738 | 8,766 | 8,779 | 8,756 | 1 | * | * |
| Sulfur | .54 | .52 | .50 | .52 | .51 | .52 | 2.3 | 1.2 | .3 |
| Ash | 7.61 | 8.12 | 8.06 | 8.00 | 7.78 | 7.78 | –6.2 | –.5 | –.2 |

See footnotes at end of table.

## Table 106. Average Quality of Coal Received at Electric Utilities by Census Division and State, 1988, 1993-1997 (Continued)

| Census Division and State and Quality[1] | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **Pacific** | | | | | | | | | |
| Btu | 8,153 | 8,066 | 8,380 | 8,543 | 8,283 | 8,219 | 1 | * | * |
| Sulfur | .58 | .64 | .62 | .57 | .63 | .64 | –9.2 | –2.3 | –1.2 |
| Ash | 12.43 | 13.62 | 11.79 | 11.14 | 12.58 | 13.49 | –8.8 | –.3 | –.9 |
| Oregon | | | | | | | | | |
| Btu | 8,757 | 8,782 | 8,882 | 8,937 | 8,801 | 8,528 | * | * | * |
| Sulfur | .33 | .26 | .30 | .37 | .38 | .33 | 27.5 | –3.1 | .2 |
| Ash | 5.41 | 4.79 | 5.52 | 5.89 | 4.98 | 4.73 | 12.9 | 2.1 | 1.5 |
| Washington | | | | | | | | | |
| Btu | 8,043 | 7,936 | 8,267 | 8,400 | 8,125 | 8,206 | 1 | * | * |
| Sulfur | .62 | .71 | .69 | .65 | .71 | .66 | –11.7 | –3.3 | –.6 |
| Ash | 13.71 | 15.24 | 13.20 | 13.04 | 14.90 | 13.86 | –10.0 | –2.0 | –.1 |
| **U.S. Total** | | | | | | | | | |
| Btu | 10,275 | 10,263 | 10,248 | 10,338 | 10,315 | 10,451 | * | * | * |
| Sulfur | 1.11 | 1.10 | 1.08 | 1.17 | 1.18 | 1.32 | 1.3 | –1.4 | –1.9 |
| Ash | 9.36 | 9.22 | 9.23 | 9.36 | 9.55 | 9.88 | 1.6 | –.5 | –.6 |

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, 1993-1997

| Census Division and State and Quality[1] | 1997 | 1996 | 1995 | 1994 | 1993 | Percent Change 1996-1997 |
|---|---|---|---|---|---|---|
| **New England** | | | | | | |
| Btu | 13,326 | 13,028 | 13,410 | 13,383 | 13,232 | 2.3 |
| Sulfur | .85 | 1.03 | 1.32 | .72 | 1.20 | –18.2 |
| Ash | 7.33 | 7.35 | 6.99 | 5.86 | 6.87 | –.3 |
| Maine | | | | | | |
| Btu | 13,218 | 12,935 | 13,392 | 13,162 | 13,062 | 2.2 |
| Sulfur | .87 | 1.08 | 1.39 | .71 | 1.29 | –19.3 |
| Ash | 7.34 | 7.31 | 6.93 | 5.30 | 7.18 | .4 |
| Massachusetts | | | | | | |
| Btu | 13,746 | 13,697 | 13,556 | 13,939 | 13,992 | .4 |
| Sulfur | .76 | .74 | .75 | .73 | .78 | 2.5 |
| Ash | 7.29 | 7.65 | 7.55 | 7.26 | 5.48 | –4.7 |
| **Middle Atlantic** | | | | | | |
| Btu | 12,797 | 12,780 | 12,559 | 12,549 | 12,367 | .1 |
| Sulfur | 1.18 | 1.20 | 1.15 | 1.14 | 1.06 | –1.9 |
| Ash | 6.92 | 7.12 | 7.11 | 6.95 | 7.37 | –2.8 |
| New Jersey | | | | | | |
| Btu | 12,497 | 12,474 | 12,575 | 12,515 | 11,685 | .2 |
| Sulfur | .64 | 1.36 | .96 | .93 | .83 | –53.0 |
| Ash | 11.56 | 10.98 | 11.34 | 12.40 | 10.71 | 5.3 |
| New York[2] | | | | | | |
| Btu | 13,262 | 13,168 | 13,122 | 13,203 | 13,044 | .7 |
| Sulfur | 1.36 | 1.41 | 1.29 | 1.34 | 1.69 | –3.9 |
| Ash | 7.05 | 6.84 | 7.20 | 6.69 | 7.73 | 3.1 |
| Pennsylvania[2] | | | | | | |
| Btu | 12,640 | 12,658 | 12,366 | 12,326 | 12,117 | –.1 |
| Sulfur | 1.15 | 1.16 | 1.12 | 1.10 | .99 | –1.3 |
| Ash | 6.89 | 7.17 | 7.09 | 7.00 | 7.30 | –3.8 |
| **East North Central** | | | | | | |
| Btu | 12,013 | 11,990 | 12,022 | 11,947 | 11,956 | .2 |
| Sulfur | 1.57 | 1.52 | 1.46 | 1.52 | 2.40 | 3.2 |
| Ash | 7.52 | 7.34 | 7.59 | 7.61 | 6.98 | 2.4 |
| Illinois[2] | | | | | | |
| Btu | 11,351 | 11,332 | 11,290 | 11,387 | 11,372 | .2 |
| Sulfur | 1.95 | 1.89 | 1.82 | 1.94 | 4.83 | 2.7 |
| Ash | 7.45 | 7.41 | 7.49 | 7.66 | 7.03 | .6 |
| Indiana[2] | | | | | | |
| Btu | 11,867 | 11,826 | 11,894 | 11,641 | 11,591 | .3 |
| Sulfur | 1.35 | 1.32 | 1.20 | 1.45 | 1.28 | 2.3 |
| Ash | 7.07 | 7.02 | 7.38 | 7.50 | 6.77 | .7 |
| Michigan[2] | | | | | | |
| Btu | 12,506 | 12,440 | 12,386 | 12,470 | 12,547 | .5 |
| Sulfur | 1.04 | .96 | .96 | 1.02 | 1.05 | 8.3 |
| Ash | 7.45 | 6.80 | 7.60 | 7.82 | 6.98 | 9.7 |
| Ohio[2] | | | | | | |
| Btu | 12,348 | 12,415 | 12,424 | 12,429 | 12,476 | –.5 |
| Sulfur | 1.90 | 1.82 | 1.69 | 1.60 | 1.40 | 3.9 |
| Ash | 8.52 | 8.27 | 7.79 | 7.66 | 7.10 | 2.9 |
| Wisconsin | | | | | | |
| Btu | 12,453 | 12,330 | 12,450 | 11,873 | 11,745 | 1.0 |
| Sulfur | 1.68 | 2.05 | 2.14 | 1.52 | 1.83 | –18.2 |
| Ash | 7.45 | 7.72 | 8.40 | 7.30 | 7.25 | –3.5 |
| **West North Central** | | | | | | |
| Btu | 8,716 | 8,702 | 8,669 | 8,710 | 8,589 | .1 |
| Sulfur | .87 | .87 | .89 | .88 | .90 | –.3 |
| Ash | 6.44 | 6.40 | 6.54 | 6.56 | 6.46 | .6 |
| Iowa | | | | | | |
| Btu | 10,261 | 10,373 | 10,332 | 10,480 | 10,344 | –1.1 |
| Sulfur | .95 | 1.04 | .96 | .98 | 1.13 | –8.8 |
| Ash | 6.25 | 6.40 | 6.44 | 6.38 | 6.41 | –2.3 |
| Kansas | | | | | | |
| Btu | 12,287 | 12,243 | 12,197 | 12,249 | 12,479 | .4 |
| Sulfur | 3.12 | 3.07 | 3.41 | 3.11 | 3.14 | 1.7 |
| Ash | 10.75 | 10.36 | 11.48 | 11.04 | 11.78 | 3.8 |

See footnotes at end of table.

## Table 107. Average Quality of Coal Received at Manufacturing and Coke Plants by Census Division and State, 1993-1997 (Continued)

| Census Division and State and Quality[1] | 1997 | 1996 | 1995 | 1994 | 1993 | Percent Change 1996-1997 |
|---|---|---|---|---|---|---|
| Minnesota | | | | | | |
| Btu | 9,910 | 10,051 | 10,280 | 10,112 | 10,003 | –1.4 |
| Sulfur | .46 | .61 | .56 | .54 | .51 | –25.2 |
| Ash | 5.24 | 5.08 | 4.95 | 5.15 | 4.56 | 3.1 |
| Missouri[2] | | | | | | |
| Btu | 11,470 | 11,541 | 11,644 | 11,510 | 11,527 | –.6 |
| Sulfur | 2.23 | 2.02 | 1.91 | 1.92 | 2.01 | 10.3 |
| Ash | 8.39 | 8.31 | 9.92 | 10.10 | 10.11 | .9 |
| Nebraska | | | | | | |
| Btu | 10,201 | 10,622 | 10,096 | 9,931 | 9,979 | –4.0 |
| Sulfur | .32 | .36 | .42 | .40 | .37 | –11.8 |
| Ash | 8.12 | 8.92 | 5.73 | 5.95 | 5.20 | –8.9 |
| North Dakota | | | | | | |
| Btu | 7,135 | 7,136 | 7,171 | 7,142 | 7,172 | * |
| Sulfur | .62 | .61 | .71 | .71 | .70 | 1.1 |
| Ash | 6.10 | 5.97 | 6.08 | 6.14 | 6.16 | 2.2 |
| South Dakota | | | | | | |
| Btu | 9,786 | 9,849 | 9,504 | 9,418 | 8,159 | –.6 |
| Sulfur | .81 | .83 | .86 | .77 | .39 | –3.0 |
| Ash | 7.38 | 7.55 | 7.72 | 7.15 | 5.42 | –2.2 |
| **South Atlantic** | | | | | | |
| Btu | 12,988 | 12,972 | 12,992 | 13,043 | 12,973 | .1 |
| Sulfur | 1.10 | 1.09 | 1.10 | 1.15 | 1.12 | 1.8 |
| Ash | 8.39 | 8.11 | 8.07 | 7.96 | 7.62 | 3.5 |
| Delaware | | | | | | |
| Btu | 13,450 | 13,381 | 13,483 | 13,300 | 13,087 | .5 |
| Sulfur | 1.73 | 1.75 | 1.87 | 1.89 | 2.00 | –1.4 |
| Ash | 7.01 | 7.01 | 7.01 | 7.73 | 9.26 | –.1 |
| Florida | | | | | | |
| Btu | 12,834 | 12,903 | 12,865 | 12,933 | 12,742 | –.5 |
| Sulfur | .91 | .87 | .91 | .93 | .97 | 4.2 |
| Ash | 8.38 | 8.07 | 8.14 | 8.93 | 9.46 | 3.8 |
| Georgia | | | | | | |
| Btu | 12,756 | 12,873 | 12,895 | 13,267 | 12,870 | –.9 |
| Sulfur | 1.11 | 1.11 | 1.23 | 1.29 | 1.30 | –.2 |
| Ash | 8.80 | 8.79 | 8.78 | 8.90 | 7.73 | .2 |
| Maryland[2] | | | | | | |
| Btu | 12,653 | 12,411 | 12,598 | 12,330 | 12,422 | 1.9 |
| Sulfur | 1.96 | 1.92 | 1.92 | 1.89 | 1.93 | 2.2 |
| Ash | 14.06 | 14.19 | 14.52 | 10.90 | 13.32 | –.9 |
| North Carolina | | | | | | |
| Btu | 13,234 | 13,243 | 13,250 | 13,188 | 13,321 | –.1 |
| Sulfur | .98 | .93 | .97 | .91 | .92 | 5.6 |
| Ash | 7.53 | 7.10 | 6.99 | 7.20 | 6.89 | 6.1 |
| South Carolina | | | | | | |
| Btu | 13,179 | 13,076 | 13,051 | 12,994 | 12,955 | .8 |
| Sulfur | 1.00 | 1.02 | 1.08 | 1.12 | 1.22 | –1.6 |
| Ash | 8.24 | 8.09 | 8.24 | 7.95 | 8.67 | 1.9 |
| Virginia[2] | | | | | | |
| Btu | 13,081 | 12,982 | 13,067 | 13,215 | 13,193 | .8 |
| Sulfur | 1.05 | 1.04 | 1.05 | 1.05 | .99 | 1.3 |
| Ash | 8.06 | 7.97 | 7.75 | 7.44 | 7.20 | 1.1 |
| West Virginia[2] | | | | | | |
| Btu | 12,782 | 12,809 | 12,765 | 12,780 | 12,721 | –.2 |
| Sulfur | 1.18 | 1.14 | 1.06 | 1.24 | 1.06 | 3.4 |
| Ash | 7.78 | 7.24 | 7.28 | 7.54 | 6.32 | 7.4 |
| **East South Central** | | | | | | |
| Btu | 12,750 | 12,916 | 12,941 | 12,869 | 12,838 | –1.3 |
| Sulfur | 1.04 | 1.06 | 1.09 | 1.09 | .74 | –1.6 |
| Ash | 7.54 | 7.20 | 7.32 | 7.51 | 4.54 | 4.8 |
| Alabama[2] | | | | | | |
| Btu | 12,539 | 12,632 | 12,612 | 12,694 | 12,628 | –.7 |
| Sulfur | .99 | .98 | .94 | .98 | .71 | 1.0 |
| Ash | 7.32 | 6.90 | 7.07 | 7.27 | 4.25 | 6.1 |
| Kentucky[2] | | | | | | |
| Btu | 12,831 | 13,072 | 13,086 | 13,150 | 12,686 | –1.8 |
| Sulfur | 1.05 | 1.05 | 1.03 | .99 | .90 | –.8 |
| Ash | 6.93 | 6.59 | 6.61 | 6.59 | 6.04 | 5.2 |

See footnotes at end of table.

## Table 107. Average Quality of Coal Received at Manufacturing and Coke Plants by Census Division and State, 1993-1997 (Continued)

| Census Division and State and Quality[1] | 1997 | 1996 | 1995 | 1994 | 1993 | Percent Change 1996-1997 |
|---|---|---|---|---|---|---|
| Mississippi | | | | | | |
| Btu | 11,977 | 11,911 | 11,897 | 11,786 | 12,013 | 0.6 |
| Sulfur | 1.55 | 1.41 | 1.41 | 1.44 | 2.52 | 10.2 |
| Ash | 9.60 | 9.73 | 10.66 | 9.98 | 10.33 | –1.3 |
| Tennessee[2] | | | | | | |
| Btu | 12,910 | 13,103 | 13,160 | 12,958 | 13,059 | –1.5 |
| Sulfur | 1.07 | 1.14 | 1.35 | 1.32 | 1.08 | –6.6 |
| Ash | 8.01 | 7.94 | 8.04 | 8.47 | 8.38 | .8 |
| **West South Central** | | | | | | |
| Btu | 9,155 | 9,176 | 9,116 | 8,925 | 9,143 | –.2 |
| Sulfur | 1.07 | 1.06 | 1.00 | 1.00 | 1.05 | .8 |
| Ash | 11.39 | 11.36 | 10.78 | 11.18 | 11.55 | .2 |
| Arkansas | | | | | | |
| Btu | 12,369 | 12,474 | 12,573 | 12,646 | 12,850 | –.8 |
| Sulfur | 1.98 | 2.03 | 2.02 | 2.10 | 1.97 | –2.9 |
| Ash | 10.25 | 10.27 | 9.96 | 10.11 | 9.78 | –.2 |
| Louisiana | | | | | | |
| Btu | 12,395 | 12,627 | 9,292 | 9,051 | 9,255 | –1.8 |
| Sulfur | 1.33 | 1.27 | .39 | .35 | .39 | 5.0 |
| Ash | 10.25 | 10.23 | 5.29 | 5.09 | 5.83 | .2 |
| Oklahoma | | | | | | |
| Btu | 9,974 | 9,835 | 9,995 | 10,118 | 11,263 | 1.4 |
| Sulfur | .93 | .89 | .72 | .73 | .89 | 4.3 |
| Ash | 6.18 | 5.97 | 5.60 | 6.18 | 6.86 | 3.5 |
| Texas[2] | | | | | | |
| Btu | 8,789 | 8,757 | 8,690 | 8,447 | 8,585 | .4 |
| Sulfur | 1.02 | 1.01 | 1.02 | 1.04 | 1.09 | 1.2 |
| Ash | 12.15 | 12.37 | 12.20 | 12.72 | 12.98 | –1.7 |
| **Mountain** | | | | | | |
| Btu | 10,851 | 10,699 | 10,698 | 10,601 | 10,443 | 1.4 |
| Sulfur | .72 | .67 | .71 | .68 | .56 | 6.3 |
| Ash | 7.09 | 7.79 | 7.28 | 7.05 | 6.75 | –9.0 |
| Arizona | | | | | | |
| Btu | 12,250 | 10,603 | 10,969 | 11,072 | 10,690 | 15.5 |
| Sulfur | .76 | .53 | .54 | .48 | .46 | 44.2 |
| Ash | 10.48 | 13.15 | 12.23 | 11.09 | 11.17 | –20.3 |
| Colorado | | | | | | |
| Btu | 11,293 | 11,308 | 11,262 | 10,785 | 10,564 | –.1 |
| Sulfur | .55 | .54 | .61 | .58 | .54 | 3.0 |
| Ash | 8.03 | 7.79 | 7.24 | 7.00 | 6.52 | 3.1 |
| Idaho | | | | | | |
| Btu | 10,131 | 10,148 | 10,232 | 9,988 | 10,089 | –.2 |
| Sulfur | .72 | .72 | .78 | .79 | .71 | .1 |
| Ash | 6.46 | 6.40 | 6.22 | 5.72 | 6.03 | 1.0 |
| Montana | | | | | | |
| Btu | 8,689 | 8,695 | 8,368 | 8,496 | 8,065 | –.1 |
| Sulfur | .44 | .44 | .59 | .57 | .46 | –.4 |
| Ash | 5.27 | 5.31 | 7.93 | 7.65 | 9.31 | –.8 |
| Nevada | | | | | | |
| Btu | 11,576 | 11,533 | 11,698 | 11,907 | 12,042 | .4 |
| Sulfur | .50 | .51 | .48 | .26 | .28 | –1.4 |
| Ash | 8.76 | 8.80 | 7.13 | 4.01 | 4.63 | –.4 |
| New Mexico | | | | | | |
| Btu | 12,507 | 12,302 | 12,518 | 12,688 | 12,776 | 1.7 |
| Sulfur | .74 | .82 | .79 | .94 | .74 | –9.8 |
| Ash | 10.36 | 11.67 | 10.26 | 9.87 | 9.95 | –11.2 |
| Utah[2] | | | | | | |
| Btu | 11,552 | 11,589 | 11,671 | 11,679 | 11,530 | –.3 |
| Sulfur | .79 | .82 | .84 | .82 | .44 | –3.1 |
| Ash | 8.10 | 8.01 | 8.08 | 7.68 | 7.12 | 1.1 |
| Wyoming | | | | | | |
| Btu | 10,119 | 10,365 | 10,170 | 10,098 | 10,074 | –2.4 |
| Sulfur | .73 | .70 | .71 | .70 | .72 | 4.0 |
| Ash | 4.66 | 4.68 | 4.84 | 5.27 | 5.12 | –.4 |

See footnotes at end of table.

## Table 107. Average Quality of Coal Received at Manufacturing and Coke Plants by Census Division and State, 1993-1997 (Continued)

| Census Division and State and Quality[1] | 1997 | 1996 | 1995 | 1994 | 1993 | Percent Change 1996-1997 |
|---|---|---|---|---|---|---|
| **Pacific** | | | | | | |
| Btu | 11,513 | 11,677 | 11,551 | 11,749 | 12,218 | −1.4 |
| Sulfur | .57 | .56 | .53 | .52 | .49 | 1.9 |
| Ash | 8.96 | 9.15 | 9.17 | 8.98 | 8.65 | −2.1 |
| California | | | | | | |
| Btu | 11,759 | 11,899 | 11,912 | 11,950 | 12,441 | −1.2 |
| Sulfur | .57 | .55 | .52 | .52 | .49 | 3.4 |
| Ash | 8.72 | 8.72 | 8.62 | 8.93 | 8.35 | −.1 |
| Hawaii | | | | | | |
| Btu | 8,704 | 9,157 | 9,275 | 9,576 | 9,776 | −4.9 |
| Sulfur | .52 | .53 | .53 | .51 | .52 | −1.6 |
| Ash | 13.22 | 14.99 | 15.37 | 16.72 | 15.96 | −11.8 |
| Oregon | | | | | | |
| Btu | 10,989 | 11,159 | 10,188 | 10,704 | 10,216 | −1.5 |
| Sulfur | .65 | .65 | .54 | .53 | .51 | .3 |
| Ash | 6.96 | 7.03 | 5.98 | 6.48 | 5.94 | −1.0 |
| Washington | | | | | | |
| Btu | 11,818 | 11,622 | 11,846 | 11,818 | 12,151 | 1.7 |
| Sulfur | .58 | .65 | .57 | .58 | .56 | −10.4 |
| Ash | 8.70 | 10.00 | 9.62 | 5.63 | 9.47 | −13.0 |
| **U.S. Total** | | | | | | |
| Btu | 11,407 | 11,405 | 11,367 | 11,316 | 11,303 | * |
| Sulfur | 1.18 | 1.17 | 1.15 | 1.16 | 1.23 | 1.1 |
| Ash | 7.62 | 7.58 | 7.61 | 7.63 | 6.34 | .5 |

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.
* Data round to zero.

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.''

# Appendix A

# Major Coal Producing States

### Table A1. Alabama Coal Statistics, 1988, 1993-1997

| Category | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **Supply (thousand short tons)** | | | | | | | | | |
| Recoverable Reserves | 374,421 | 451,760 | 510,406 | 457,144 | 426,635 | 510,585 | –17.1 | –3.2 | –3.4 |
| Productive Capacity[1] | 29,081 | 32,159 | 32,546 | 33,049 | 27,916 | 30,373 | –9.6 | 1.0 | –.5 |
| Production Total | 24,468 | 24,637 | 24,640 | 23,266 | 24,768 | 26,518 | –.7 | –.3 | –.9 |
| Underground | 18,505 | 18,217 | 17,605 | 14,471 | 15,557 | 14,833 | 1.6 | 4.4 | 2.5 |
| Surface | 5,963 | 6,420 | 7,036 | 8,795 | 9,211 | 11,685 | –7.1 | –10.3 | –7.2 |
| Capacity Utilization[2] | 84.05 | 76.57 | 75.52 | 70.19 | 88.46 | 87.03 | 9.8 | –1.3 | –.4 |
| Ratio of Recoverable Reserves to Production | 15.3 | 18.3 | 20.7 | 19.6 | 17.2 | 19.3 | –16.5 | –2.9 | –2.5 |
| Number of Miners | 4,928 | 5,031 | 5,567 | 5,418 | 5,399 | 6,858 | –2.0 | –2.3 | –3.6 |
| Productivity Total[2] | 2.39 | 2.20 | 2.24 | 2.25 | 2.35 | 2.03 | 8.4 | .3 | 1.8 |
| Underground | 2.21 | 1.95 | 2.02 | 1.94 | 2.09 | 1.76 | 13.3 | 1.4 | 2.5 |
| Surface | 3.21 | 3.50 | 3.07 | 3.07 | 3.01 | 2.52 | –8.5 | 1.6 | 2.7 |
| Producer/Distributor Stocks | 1,289 | 1,031 | 1,358 | 1,204 | 1,698 | – | 25.0 | –6.7 | – |
| Imports[3] | 214 | 161 | 162 | 178 | 88 | – | 33.3 | 24.9 | – |
| **Distribution (thousand short tons)** | | | | | | | | | |
| Distribution Total | 23,921 | 24,636 | 25,159 | 23,750 | 25,556 | NA | –2.9 | –1.6 | NA |
| Domestic Distribution Total | 18,108 | 19,772 | 19,127 | 19,220 | 19,668 | NA | –8.4 | –2.0 | NA |
| Within State | 17,489 | 18,503 | 18,024 | 18,351 | 18,716 | NA | –5.5 | –1.7 | NA |
| To Other States | 619 | 1,269 | 1,103 | 870 | 952 | NA | –51.2 | –10.2 | NA |
| Foreign Distribution Total | 5,813 | 4,864 | 6,032 | 4,529 | 5,888 | NA | 19.5 | –.3 | NA |
| Metallurgical | 5,699 | 4,523 | 5,330 | 4,359 | 5,846 | NA | 26.0 | –.6 | NA |
| Steam | 114 | 341 | 702 | 170 | 43 | NA | –66.6 | 27.7 | NA |
| Overseas Total[4] | 5,813 | 4,864 | 6,032 | 4,529 | 5,888 | NA | 19.5 | –.3 | NA |
| Metallurgical | 5,699 | 4,523 | 5,330 | 4,359 | 5,846 | NA | 26.0 | –.6 | NA |
| Steam | 114 | 341 | 702 | 170 | 43 | NA | –66.6 | 27.7 | NA |
| **Demand (thousand short tons)** | | | | | | | | | |
| Consumption Total | 36,433 | 37,052 | 34,309 | 31,473 | 33,047 | 26,365 | –1.7 | 2.5 | 3.6 |
| Electric Utility | 30,840 | 31,216 | 28,759 | 25,817 | 27,533 | 20,002 | –1.2 | 2.9 | 4.9 |
| Industrial | 2,565 | 2,545 | 2,286 | 2,394 | 2,268 | 2,843 | .8 | 3.1 | –1.1 |
| Coke | 2,956 | 3,247 | 3,257 | 3,253 | 3,206 | 3,383 | –9.0 | –2.0 | –1.5 |
| Residential/Commercial | 73 | 44 | 7 | 11 | 40 | 137 | 65.3 | 16.1 | –6.8 |
| Consumer Stocks Total | 2,971 | 2,858 | 3,648 | 4,132 | 2,797 | 4,898 | 3.9 | 1.5 | –5.4 |
| Electric Utility | 2,609 | 2,526 | 3,282 | 3,652 | 2,331 | 4,462 | 3.3 | 2.8 | –5.8 |
| All Other | 362 | 332 | 366 | 480 | 466 | 436 | 9.0 | –6.1 | –2.0 |
| **Coal Prices (nominal dollars per short ton)** | | | | | | | | | |
| Mine Total | $38.48 | $39.48 | $38.44 | $40.12 | $42.34 | $41.22 | –2.5 | –2.4 | –.8 |
| Underground | 39.54 | 40.75 | 39.26 | 39.92 | 42.00 | 39.89 | –3.0 | –1.5 | –.1 |
| Surface | 35.15 | 35.87 | 36.38 | 40.45 | 42.91 | 42.91 | –2.0 | –4.9 | –2.2 |
| Consumer | | | | | | | | | |
| Electric Utility | 35.58 | 36.39 | 37.00 | 40.42 | 42.56 | 47.37 | –2.2 | –4.4 | –3.1 |
| Industrial | 40.20 | 40.15 | 39.53 | 38.74 | 39.01 | 39.36 | .1 | .8 | .2 |
| Coke | 50.04 | 49.37 | 48.42 | 47.45 | 47.50 | 45.53 | 1.3 | 1.3 | 1.0 |

1 For 1988, the Form EIA-7A solicited data on ''Daily Productive Capacity.'' To obtain annual productive capacity for a mine in 1988, 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 1993 through 1997 include imports to electric utilities, manufacturing plants and coke plants. Imports for 1988 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''; and Form EIA-759, ''Monthly Power Plant Report.''

## Table A2. Arizona Coal Statistics, 1988, 1993-1997

| Category | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **Supply (thousand short tons)** | | | | | | | | | |
| Recoverable Reserves | w | w | w | w | w | w | w | w | w |
| Productive Capacity[1] | w | w | w | w | w | w | w | w | w |
| Production Total | 11,723 | 10,442 | 11,947 | 13,056 | 12,173 | 12,398 | 12.3 | –0.9 | –0.6 |
| Surface | 11,723 | 10,442 | 11,947 | 13,056 | 12,173 | 12,398 | 12.3 | –.9 | –.6 |
| Capacity Utilization[2] | w | w | w | w | w | w | w | w | w |
| Ratio of Recoverable Reserves to Production | w | w | w | w | w | w | w | w | w |
| Number of Miners | 676 | 651 | 831 | 864 | 876 | 984 | 3.8 | –6.3 | –4.1 |
| Productivity Total[2] | 6.79 | 6.30 | 6.34 | 6.71 | 6.21 | 6.45 | 7.7 | 2.3 | .6 |
| Surface | 6.79 | 6.30 | 6.34 | 6.71 | 6.21 | 6.45 | 7.7 | 2.3 | .6 |
| Producer/Distributor Stocks | 2,911 | 2,232 | 2,760 | 2,634 | 1,590 | – | 30.4 | 16.3 | – |
| **Distribution (thousand short tons)** | | | | | | | | | |
| Distribution Total | 11,044 | 10,970 | 11,783 | 12,011 | 12,138 | NA | .7 | –2.3 | NA |
| Domestic Distribution Total | 11,044 | 10,970 | 11,783 | 12,011 | 12,138 | NA | .7 | –2.3 | NA |
| Within State | 6,646 | 6,499 | 6,956 | 7,580 | 7,566 | NA | 2.3 | –3.2 | NA |
| To Other States | 4,398 | 4,470 | 4,827 | 4,431 | 4,572 | NA | –1.6 | –1.0 | NA |
| **Demand (thousand short tons)** | | | | | | | | | |
| Consumption Total | 18,205 | 16,792 | 16,682 | 19,580 | 18,991 | 14,525 | 8.4 | –1.0 | 2.5 |
| Electric Utility | 17,503 | 16,117 | 16,021 | 18,853 | 18,316 | 13,932 | 8.6 | –1.1 | 2.6 |
| Industrial | 702 | 675 | 657 | 727 | 674 | w | 4.0 | 1.0 | w |
| Residential/Commercial | * | * | 5 | * | 1 | w | 6.5 | –32.6 | w |
| Consumer Stocks Total | 1,414 | 2,024 | 3,032 | 3,242 | 3,717 | w | –30.1 | –21.5 | w |
| Electric Utility | 1,386 | 1,992 | 2,998 | 3,197 | 3,687 | 4,187 | –30.4 | –21.7 | –11.6 |
| All Other | 28 | 32 | 34 | 45 | 30 | w | –12.6 | –1.6 | 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 | $28.95 | $29.55 | $28.65 | $28.26 | $27.78 | $29.92 | –2.0 | 1.0 | –.4 |
| Industrial | 38.81 | 39.27 | 40.46 | 41.35 | 40.51 | w | –1.2 | –1.1 | w |

1 For 1988, the Form EIA-7A solicited data on ''Daily Productive Capacity.'' To obtain annual productive capacity for a mine in 1988, 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''; and Form EIA-759, ''Monthly Power Plant Report.''

## Table A3. Colorado Coal Statistics, 1988, 1993-1997

| Category | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **Supply (thousand short tons)** | | | | | | | | | |
| Recoverable Reserves | 567,538 | 641,615 | 692,030 | 676,272 | 608,815 | 652,143 | –11.5 | –1.7 | –1.5 |
| Productive Capacity[1] | 35,466 | 29,330 | 32,435 | 31,075 | 30,040 | 20,989 | 20.9 | 4.2 | 6.0 |
| Production Total | 27,449 | 24,886 | 25,710 | 25,304 | 21,886 | 15,913 | 10.3 | 5.8 | 6.2 |
| Underground | 17,820 | 15,581 | 17,187 | 16,332 | 12,843 | 6,870 | 14.4 | 8.5 | 11.2 |
| Surface | 9,628 | 9,305 | 8,523 | 8,972 | 9,043 | 9,042 | 3.5 | 1.6 | .7 |
| Capacity Utilization[2] | 77.39 | 84.85 | 79.27 | 81.41 | 72.84 | 75.74 | –8.8 | 1.5 | .2 |
| Ratio of Recoverable Reserves to Production | 20.7 | 25.8 | 26.9 | 26.7 | 27.8 | 41.0 | –19.8 | –7.1 | –7.3 |
| Number of Miners | 1,362 | 1,332 | 1,777 | 1,905 | 1,775 | 2,103 | 2.3 | –6.4 | –4.7 |
| Productivity Total[2] | 7.68 | 7.32 | 6.14 | 6.20 | 5.85 | 3.94 | 4.9 | 7.1 | 7.7 |
| Underground | 7.44 | 6.67 | 5.86 | 5.81 | 5.21 | 2.59 | 11.6 | 9.3 | 12.4 |
| Surface | 8.17 | 8.76 | 6.79 | 7.06 | 7.07 | 6.51 | –6.7 | 3.7 | 2.6 |
| Producer/Distributor Stocks | 1,364 | 494 | 1,063 | 1,575 | 1,155 | – | 176.0 | 4.2 | – |
| **Distribution (thousand short tons)** | | | | | | | | | |
| Distribution Total | 26,956 | 25,405 | 25,635 | 24,810 | 21,465 | NA | 6.1 | 5.9 | NA |
| Domestic Distribution Total | 25,445 | 23,990 | 24,734 | 24,059 | 20,338 | NA | 6.1 | 5.8 | NA |
| Within State | 12,307 | 10,704 | 11,820 | 12,035 | 11,181 | NA | 15.0 | 2.4 | NA |
| To Other States | 13,138 | 13,286 | 12,915 | 12,024 | 9,157 | NA | –1.1 | 9.4 | NA |
| Foreign Distribution Total | 1,512 | 1,415 | 900 | 752 | 1,128 | NA | 6.8 | 7.6 | NA |
| Metallurgical | – | 30 | – | – | – | NA | –100.0 | – | NA |
| Steam | 1,512 | 1,385 | 900 | 752 | 1,128 | NA | 9.1 | 7.6 | NA |
| Overseas Total[3] | 1,512 | 1,415 | 900 | 752 | 1,128 | NA | 6.8 | 7.6 | NA |
| Metallurgical | – | 30 | – | – | – | NA | –100.0 | – | NA |
| Steam | 1,512 | 1,385 | 900 | 752 | 1,128 | NA | 9.1 | 7.6 | NA |
| **Demand (thousand short tons)** | | | | | | | | | |
| Consumption Total | 17,960 | 17,222 | 16,971 | 17,475 | 17,070 | 15,860 | 4.3 | 1.3 | 1.4 |
| Electric Utility | 17,116 | 16,841 | 16,222 | 16,596 | 16,252 | 15,087 | 1.6 | 1.3 | 1.4 |
| Industrial | 780 | 367 | 729 | 857 | 780 | 679 | 112.4 | * | 1.6 |
| Residential/Commercial | 65 | 13 | 20 | 23 | 38 | w | 384.6 | 14.4 | w |
| Consumer Stocks Total | 2,476 | 3,054 | 3,682 | 3,145 | 3,454 | w | –18.9 | –8.0 | w |
| Electric Utility | 2,458 | 3,027 | 3,622 | 3,118 | 3,428 | 3,763 | –18.8 | –8.0 | –4.6 |
| All Other | 18 | 27 | 59 | 26 | 25 | w | –33.8 | –8.0 | w |
| **Coal Prices (nominal dollars per short ton)** | | | | | | | | | |
| Mine Total | $18.46 | $17.94 | $19.26 | $19.76 | $20.35 | $23.09 | 2.9 | –2.4 | –2.4 |
| Underground | 18.50 | 17.73 | 18.58 | 19.05 | 20.53 | 26.39 | 4.3 | –2.6 | –3.9 |
| Surface | 18.40 | 18.28 | 20.63 | 21.05 | 20.10 | 20.59 | .7 | –2.2 | –1.2 |
| Consumer | | | | | | | | | |
| Electric Utility | 19.93 | 20.24 | 20.73 | 21.01 | 21.59 | 20.84 | –1.5 | –2.0 | –.5 |
| Industrial | 25.13 | 23.17 | 26.11 | 28.96 | 28.63 | 28.88 | 8.5 | –3.2 | –1.5 |

[1] For 1988, the Form EIA-7A solicited data on ''Daily Productive Capacity.'' To obtain annual productive capacity for a mine in 1988, 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''; and Form EIA-759, ''Monthly Power Plant Report.''

## Table A4. Illinois Coal Statistics, 1988, 1993-1997

| Category | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **Supply (thousand short tons)** | | | | | | | | | |
| Recoverable Reserves | 744,512 | 891,109 | 882,323 | 963,470 | 1,063,832 | 1,350,499 | –16.4 | –8.5 | –6.4 |
| Productive Capacity[1] | 51,523 | 61,727 | 56,627 | 69,414 | 69,320 | 71,529 | –16.5 | –7.1 | –3.6 |
| Production Total | 41,159 | 46,656 | 48,180 | 52,797 | 41,098 | 58,594 | –11.8 | * | –3.8 |
| Underground | 34,824 | 38,948 | 41,118 | 43,281 | 33,096 | 38,522 | –10.6 | 1.3 | –1.1 |
| Surface | 6,334 | 7,707 | 7,062 | 9,516 | 8,002 | 20,072 | –17.8 | –5.7 | –12.0 |
| Capacity Utilization[2] | 79.87 | 75.58 | 85.08 | 76.06 | 59.28 | 81.91 | 5.7 | 7.7 | –.3 |
| Ratio of Recoverable Reserves to Production | 18.1 | 19.1 | 18.3 | 18.3 | 25.9 | 23.0 | –5.3 | –8.6 | –2.6 |
| Number of Miners | 4,612 | 5,174 | 5,652 | 6,591 | 7,303 | 10,022 | –10.9 | –10.8 | –8.3 |
| Productivity Total[2] | 4.20 | 4.18 | 3.87 | 3.59 | 3.23 | 2.67 | .3 | 6.8 | 5.1 |
| Underground | 4.07 | 4.10 | 3.86 | 3.49 | 3.11 | 2.43 | –.8 | 6.9 | 5.9 |
| Surface | 5.11 | 4.67 | 3.89 | 4.12 | 3.86 | 3.32 | 9.3 | 7.2 | 4.9 |
| Producer/Distributor Stocks | 1,358 | 1,190 | 2,069 | 1,651 | 713 | – | 14.1 | 17.5 | – |
| Imports[3] | 148 | 216 | 223 | 346 | 51 | – | –31.5 | 30.5 | – |
| **Distribution (thousand short tons)** | | | | | | | | | |
| Distribution Total | 41,220 | 47,076 | 47,869 | 51,973 | 42,000 | NA | –12.4 | –.5 | NA |
| Domestic Distribution Total | 40,447 | 45,190 | 45,170 | 51,737 | 41,330 | NA | –10.5 | –.5 | NA |
| Within State | 18,085 | 16,052 | 15,587 | 17,517 | 15,206 | NA | 12.7 | 4.4 | NA |
| To Other States | 22,362 | 29,137 | 29,582 | 34,220 | 26,124 | NA | –23.3 | –3.8 | NA |
| Foreign Distribution Total | 773 | 1,886 | 2,699 | 236 | 670 | NA | –59.0 | 3.6 | NA |
| Metallurgical | – | – | 49 | 236 | 109 | NA | – | –100.0 | NA |
| Steam | 773 | 1,886 | 2,650 | – | 561 | NA | –59.0 | 8.4 | NA |
| Overseas Total[4] | 773 | 1,886 | 2,699 | 236 | 670 | NA | –59.0 | 3.6 | NA |
| Metallurgical | – | – | 49 | 236 | 109 | NA | – | – | NA |
| Steam | 773 | 1,886 | 2,650 | – | 561 | NA | –59.0 | 8.4 | NA |
| **Demand (thousand short tons)** | | | | | | | | | |
| Consumption Total | 47,621 | 44,431 | 39,623 | 39,077 | 38,135 | 33,912 | 7.2 | 5.7 | 3.8 |
| Electric Utility | 41,017 | 38,090 | 33,463 | 32,599 | 31,744 | 26,681 | 7.7 | 6.6 | 4.9 |
| Industrial | 3,863 | 3,740 | 3,653 | 4,187 | 3,970 | 4,364 | 3.3 | –.7 | –1.3 |
| Coke | w | w | w | w | w | 2,610 | w | w | w |
| Residential/Commercial | w | w | w | w | w | 256 | w | w | w |
| Consumer Stocks Total | w | w | w | w | w | 9,959 | w | w | w |
| Electric Utility | 4,828 | 4,578 | 5,331 | 4,526 | 4,019 | 9,179 | 5.4 | 4.7 | –6.9 |
| All Other | w | w | w | w | w | 780 | w | w | w |
| **Coal Prices (nominal dollars per short ton)** | | | | | | | | | |
| Mine Total | $21.44 | $22.74 | $23.05 | $23.14 | $25.27 | $28.55 | –5.7 | –4.0 | –3.1 |
| Underground | 22.22 | 23.12 | 22.88 | 23.18 | 25.54 | 29.62 | –3.9 | –3.4 | –3.1 |
| Surface | 17.12 | 20.86 | 24.04 | 22.92 | 24.18 | 26.50 | –17.9 | –8.3 | –4.7 |
| Consumer | | | | | | | | | |
| Electric Utility | 30.41 | 32.14 | 32.58 | 32.69 | 35.30 | 40.53 | –5.4 | –3.7 | –3.1 |
| Industrial | 29.76 | 29.69 | 29.03 | 29.13 | 29.42 | 31.18 | .2 | .3 | –.5 |
| Coke | w | w | w | w | w | 44.24 | w | w | w |

[1] For 1988, the Form EIA-7A solicited data on ''Daily Productive Capacity.'' To obtain annual productive capacity for a mine in 1988, 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 1993 through 1997 include imports to electric utilities, manufacturing plants and coke plants. Imports for 1988 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''; and Form EIA-759, ''Monthly Power Plant Report.''

## Table A5. Indiana Coal Statistics, 1988, 1993-1997

| Category | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **Supply (thousand short tons)** | | | | | | | | | |
| Recoverable Reserves | 393,357 | 386,063 | 323,667 | 304,225 | 379,294 | 455,303 | 1.9 | 0.9 | –1.6 |
| Productive Capacity[1] | 36,999 | 35,564 | 35,256 | 38,931 | 43,955 | 41,800 | 4.0 | –4.2 | –1.3 |
| Production Total | 35,497 | 29,670 | 26,007 | 30,927 | 29,295 | 31,271 | 19.6 | 4.9 | 1.4 |
| Underground | 3,530 | 2,963 | 3,540 | 3,324 | 2,583 | 2,409 | 19.1 | 8.1 | 4.3 |
| Surface | 31,967 | 26,707 | 22,467 | 27,603 | 26,713 | 28,862 | 19.7 | 4.6 | 1.1 |
| Capacity Utilization[2] | 95.94 | 83.42 | 73.70 | 79.37 | 66.60 | 74.71 | 15.0 | 9.5 | 2.8 |
| Ratio of Recoverable Reserves to Production | 11.1 | 13.0 | 12.4 | 9.8 | 12.9 | 14.6 | –14.8 | –3.8 | –3.0 |
| Number of Miners | 2,712 | 2,579 | 2,571 | 3,206 | 3,331 | 4,108 | 5.1 | –5.0 | –4.5 |
| Productivity Total[2] | 5.33 | 4.98 | 4.68 | 4.28 | 4.46 | 3.52 | 7.0 | 4.6 | 4.7 |
| Underground | 3.74 | 3.09 | 3.22 | 2.82 | 2.49 | 2.28 | 21.2 | 10.7 | 5.7 |
| Surface | 5.59 | 5.34 | 5.04 | 4.56 | 4.82 | 3.68 | 4.6 | 3.8 | 4.7 |
| Producer/Distributor Stocks | 698 | 574 | 611 | 803 | 527 | – | 21.6 | 7.3 | – |
| Imports[3] | 474 | 735 | 761 | 593 | 594 | – | –35.5 | –5.4 | – |
| **Distribution (thousand short tons)** | | | | | | | | | |
| Distribution Total | 34,810 | 29,674 | 25,695 | 30,684 | 29,664 | NA | 17.3 | 4.1 | NA |
| Domestic Distribution Total | 34,805 | 29,664 | 25,625 | 30,477 | 29,475 | NA | 17.3 | 4.2 | NA |
| Within State | 29,916 | 24,309 | 21,185 | 24,733 | 23,913 | NA | 23.1 | 5.8 | NA |
| To Other States | 4,889 | 5,354 | 4,439 | 5,744 | 5,562 | NA | –8.7 | –3.2 | NA |
| Foreign Distribution Total | 5 | 11 | 70 | 206 | 188 | NA | –56.0 | –60.3 | NA |
| Steam | 5 | 11 | 70 | 206 | 188 | NA | –56.0 | –60.3 | NA |
| Canada Total | – | – | * | – | – | NA | – | – | NA |
| Steam | – | – | * | – | – | NA | – | – | NA |
| Overseas Total[4] | 5 | 11 | 69 | 206 | 188 | NA | –56.0 | –60.3 | NA |
| Steam | 5 | 11 | 69 | 206 | 188 | NA | –56.0 | –60.3 | NA |
| **Demand (thousand short tons)** | | | | | | | | | |
| Consumption Total | 66,042 | 64,021 | 62,631 | 59,996 | 60,353 | 55,830 | 3.1 | 2.3 | 1.9 |
| Electric Utility | 54,845 | 52,855 | 52,089 | 50,554 | 48,836 | 40,060 | 3.8 | 2.9 | 3.5 |
| Industrial | 5,086 | 4,987 | 4,373 | 4,244 | 4,587 | 4,784 | 2.0 | 2.6 | .7 |
| Coke | 5,715 | 5,823 | 5,883 | 4,841 | 6,591 | 10,355 | –1.8 | –3.5 | –6.4 |
| Residential/Commercial | 395 | 356 | 287 | 356 | 339 | 631 | 11.0 | 3.9 | –5.1 |
| Consumer Stocks Total | 6,643 | 7,955 | 9,298 | 11,707 | 7,798 | 11,488 | –16.5 | –3.9 | –5.9 |
| Electric Utility | 5,822 | 7,103 | 8,435 | 10,449 | 6,935 | 9,997 | –18.0 | –4.3 | –5.8 |
| All Other | 821 | 853 | 863 | 1,258 | 863 | 1,492 | –3.7 | –1.2 | –6.4 |
| **Coal Prices (nominal dollars per short ton)** | | | | | | | | | |
| Mine Total | $19.62 | $20.24 | $21.71 | $22.28 | $22.89 | $24.29 | –3.1 | –3.8 | –2.3 |
| Underground | w | w | w | w | w | w | w | w | w |
| Surface | w | w | w | w | w | w | w | w | w |
| Consumer | | | | | | | | | |
| Electric Utility | $24.35 | $24.67 | $25.94 | $26.79 | $26.73 | $31.03 | –1.3 | –2.3 | –2.6 |
| Industrial | 29.75 | 31.76 | 33.14 | 31.35 | 30.91 | 33.19 | –6.3 | –.9 | –1.2 |
| Coke | 50.75 | 51.93 | 52.74 | 50.90 | 52.29 | 54.26 | –2.3 | –.7 | –.7 |

[1] For 1988, the Form EIA-7A solicited data on ''Daily Productive Capacity.'' To obtain annual productive capacity for a mine in 1988, 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 1993 through 1997 include imports to electric utilities, manufacturing plants and coke plants. Imports for 1988 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''; and Form EIA-759, ''Monthly Power Plant Report.''

## Table A6. Kentucky Coal Statistics, 1988, 1993-1997

| Category | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **Supply (thousand short tons)** | | | | | | | | | |
| Recoverable Reserves | 1,330,702 | 1,255,351 | 1,279,011 | 1,365,188 | 1,828,072 | 1,729,001 | 6.0 | –7.6 | –2.9 |
| Productive Capacity[1] | 195,453 | 189,225 | 203,173 | 213,427 | 204,805 | 170,725 | 3.3 | –1.2 | 1.5 |
| Production Total | 155,853 | 152,425 | 153,739 | 161,642 | 156,299 | 157,852 | 2.2 | –.1 | –.1 |
| Underground | 96,302 | 94,306 | 94,207 | 95,414 | 92,207 | 94,720 | 2.1 | 1.1 | .2 |
| Surface | 59,551 | 58,119 | 59,532 | 66,227 | 64,092 | 63,131 | 2.5 | –1.8 | –.6 |
| Capacity Utilization[2] | 79.62 | 80.38 | 75.49 | 75.54 | 76.11 | 91.76 | –.9 | 1.1 | –1.6 |
| Ratio of Recoverable Reserves to Production | 8.5 | 8.2 | 8.3 | 8.4 | 11.7 | 10.9 | 3.7 | –7.6 | –2.7 |
| Number of Miners | 18,937 | 18,826 | 21,125 | 23,368 | 24,063 | 30,559 | .6 | –5.8 | –5.2 |
| Productivity Total[2] | 3.94 | 3.80 | 3.57 | 3.25 | 3.25 | 2.74 | 3.6 | 5.0 | 4.1 |
| Underground | 3.64 | 3.53 | 3.25 | 2.89 | 2.93 | 2.53 | 3.0 | 5.5 | 4.1 |
| Surface | 4.57 | 4.35 | 4.23 | 3.96 | 3.84 | 3.14 | 4.8 | 4.4 | 4.3 |
| Producer/Distributor Stocks | 5,376 | 4,460 | 4,777 | 5,025 | 3,216 | – | 20.5 | 13.7 | – |
| **Distribution (thousand short tons)** | | | | | | | | | |
| Distribution Total | 152,741 | 152,891 | 151,466 | 159,130 | 160,395 | NA | –.1 | –1.2 | NA |
| Domestic Distribution Total | 145,521 | 143,748 | 141,771 | 151,963 | 150,874 | NA | 1.2 | –.9 | NA |
| Within State | 22,808 | 25,700 | 27,140 | 26,719 | 28,136 | NA | –11.3 | –5.1 | NA |
| To Other States | 122,713 | 118,047 | 114,631 | 125,244 | 122,738 | NA | 3.9 | * | NA |
| Foreign Distribution Total | 7,220 | 9,143 | 9,695 | 7,167 | 9,521 | NA | –21.0 | –6.7 | NA |
| Metallurgical | 4,762 | 5,303 | 3,640 | 3,120 | 4,415 | NA | –10.2 | 1.9 | NA |
| Steam | 2,458 | 3,841 | 6,055 | 4,047 | 5,106 | NA | –36.0 | –16.7 | NA |
| Canada Total | 739 | 1,178 | 777 | 1,099 | 1,416 | NA | –37.3 | –15.0 | NA |
| Metallurgical | 739 | 1,178 | 777 | 1,073 | 1,356 | NA | –37.3 | –14.1 | NA |
| Steam | – | – | – | 26 | 60 | NA | – | – | NA |
| Overseas Total[3] | 6,481 | 7,966 | 8,918 | 6,067 | 8,106 | NA | –18.6 | –5.4 | NA |
| Metallurgical | 4,023 | 4,125 | 2,863 | 2,047 | 3,059 | NA | –2.5 | 7.1 | NA |
| Steam | 2,458 | 3,841 | 6,055 | 4,021 | 5,047 | NA | –36.0 | –16.5 | NA |
| **Demand (thousand short tons)** | | | | | | | | | |
| Consumption Total | 42,228 | 40,863 | 39,516 | 38,090 | 39,095 | 35,176 | 3.3 | 1.9 | 2.0 |
| Electric Utility | 38,281 | 37,072 | 35,707 | 34,564 | 35,264 | 31,818 | 3.3 | 2.1 | 2.1 |
| Industrial | 2,251 | 2,322 | 2,250 | 1,994 | 2,392 | 1,702 | –3.1 | –1.5 | 3.1 |
| Coke | w | w | w | w | w | 1,306 | w | w | w |
| Residential/Commercial | w | w | w | w | w | 350 | w | w | w |
| Consumer Stocks Total | w | w | w | w | w | 4,314 | w | w | w |
| Electric Utility | 4,475 | 4,119 | 4,472 | 4,466 | 3,990 | 4,124 | 8.6 | 2.9 | .9 |
| All Other | w | w | w | w | w | 191 | w | w | w |
| **Coal Prices (nominal dollars per short ton)** | | | | | | | | | |
| Mine Total | $23.72 | $23.91 | $24.79 | $24.88 | $24.77 | $26.20 | –.8 | –1.1 | –1.1 |
| Underground | 24.73 | 24.66 | 25.18 | 26.14 | 25.07 | 26.94 | .3 | –.3 | –.9 |
| Surface | 22.08 | 22.68 | 24.19 | 23.07 | 24.35 | 25.09 | –2.6 | –2.4 | –1.4 |
| Consumer | | | | | | | | | |
| Electric Utility | 24.20 | 24.43 | 25.71 | 27.16 | 27.29 | 27.61 | –.9 | –2.9 | –1.4 |
| Industrial | 44.71 | 44.02 | 44.09 | 43.22 | 42.30 | 43.83 | 1.6 | 1.4 | .2 |
| Coke | w | w | w | w | w | w | w | w | w |

[1] For 1988, the Form EIA-7A solicited data on ''Daily Productive Capacity.'' To obtain annual productive capacity for a mine in 1988, 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''; and Form EIA-759, ''Monthly Power Plant Report.''

## Table A7. Montana Coal Statistics, 1988, 1993-1997

| Category | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **Supply (thousand short tons)** | | | | | | | | | |
| Recoverable Reserves | 1,167,892 | 1,308,793 | 1,250,866 | 1,282,525 | 1,284,806 | 1,572,899 | –10.8 | –2.3 | –3.3 |
| Productive Capacity[1] | 56,140 | 56,175 | 51,597 | 51,104 | 50,849 | 50,259 | –.1 | 2.5 | 1.2 |
| Production Total | 41,005 | 37,891 | 39,451 | 41,640 | 35,917 | 38,881 | 8.2 | 3.4 | .6 |
| Underground | 8 | 147 | 10 | 3 | 10 | – | –94.8 | –7.4 | – |
| Surface | 40,997 | 37,744 | 39,441 | 41,636 | 35,907 | 38,881 | 8.6 | 3.4 | .6 |
| Capacity Utilization[2] | 73.03 | 67.45 | 76.44 | 81.47 | 70.64 | 77.36 | 8.3 | .8 | –.6 |
| Ratio of Recoverable Reserves to Production | 28.5 | 34.5 | 31.7 | 30.8 | 35.8 | 40.4 | –17.5 | –5.5 | –3.8 |
| Number of Miners | 708 | 705 | 722 | 705 | 660 | 872 | .4 | 1.8 | –2.3 |
| Productivity Total[2] | 23.56 | 21.88 | 21.06 | 21.92 | 19.49 | 19.56 | 7.6 | 4.8 | 2.1 |
| Underground | – | 3.50 | – | – | 1.06 | – | –100.0 | – | – |
| Surface | 23.56 | 22.34 | 21.06 | 21.92 | 19.59 | 19.56 | 5.4 | 4.7 | 2.1 |
| Producer/Distributor Stocks | 682 | 580 | 718 | 635 | 876 | – | 17.6 | –6.0 | – |
| **Distribution (thousand short tons)** | | | | | | | | | |
| Distribution Total | 40,942 | 38,288 | 39,620 | 41,916 | 35,916 | NA | 6.9 | 3.3 | NA |
| Domestic Distribution Total | 40,363 | 37,770 | 39,362 | 41,672 | 35,795 | NA | 6.9 | 3.0 | NA |
| Within State | 9,019 | 7,844 | 9,477 | 10,581 | 9,115 | NA | 15.0 | –.3 | NA |
| To Other States | 31,345 | 29,926 | 29,885 | 31,092 | 26,680 | NA | 4.7 | 4.1 | NA |
| Foreign Distribution Total | 579 | 518 | 259 | 243 | 121 | NA | 11.8 | 47.9 | NA |
| Steam | 579 | 518 | 259 | 243 | 121 | NA | 11.8 | 47.9 | NA |
| Canada Total | 438 | 316 | 259 | 90 | 54 | NA | 38.8 | 68.8 | NA |
| Steam | 438 | 316 | 259 | 90 | 54 | NA | 38.8 | 68.8 | NA |
| Overseas Total[3] | 141 | 202 | – | 153 | 67 | NA | –30.4 | 20.3 | NA |
| Steam | 141 | 202 | – | 153 | 67 | NA | –30.4 | 20.3 | NA |
| **Demand (thousand short tons)** | | | | | | | | | |
| Consumption Total | 9,517 | 8,032 | 10,005 | 11,089 | 9,247 | 10,634 | 18.5 | .7 | –1.2 |
| Electric Utility | 9,286 | 7,897 | 9,373 | 10,513 | 8,869 | 10,410 | 17.6 | 1.1 | –1.3 |
| Industrial | 149 | 130 | 621 | 572 | 367 | 215 | 13.9 | –20.2 | –4.0 |
| 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 | 410 | 508 | 511 | 517 | 721 | 913 | –19.4 | –13.2 | –8.5 |
| All Other | w | w | w | w | w | w | w | w | w |
| **Coal Prices (nominal dollars per short ton)** | | | | | | | | | |
| Mine Total | $9.84 | $9.96 | $9.62 | $10.39 | $11.05 | $10.06 | –1.2 | –2.8 | –.2 |
| Underground | – | w | – | – | w | – | w | – | – |
| Surface | 9.84 | w | 9.62 | 10.39 | w | 10.06 | w | –2.8 | –.2 |
| Consumer | | | | | | | | | |
| Electric Utility | 11.52 | $11.90 | 11.47 | 11.79 | $11.78 | 9.29 | –3.2 | –.6 | 2.4 |
| Industrial | w | w | w | w | w | w | w | w | w |

[1] For 1988, the Form EIA-7A solicited data on ''Daily Productive Capacity.'' To obtain annual productive capacity for a mine in 1988, 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''; and Form EIA-759, ''Monthly Power Plant Report.''

## Table A8. New Mexico Coal Statistics, 1988, 1993-1997

| Category | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **Supply (thousand short tons)** | | | | | | | | | |
| Recoverable Reserves | 1,415,028 | 1,436,359 | 1,479,956 | 1,457,523 | 1,472,927 | 1,590,227 | –1.5 | –1.0 | –1.3 |
| Productive Capacity[1] | 31,604 | 32,695 | 32,760 | 32,807 | 33,360 | 32,782 | –3.3 | –1.3 | –.4 |
| Production Total | 27,025 | 24,067 | 26,813 | 28,041 | 28,268 | 21,803 | 12.3 | –1.1 | 2.4 |
| Underground | – | – | 640 | 950 | 719 | 224 | – | – | – |
| Surface | 27,025 | 24,067 | 26,173 | 27,091 | 27,549 | 21,579 | 12.3 | –.5 | 2.5 |
| Capacity Utilization[2] | 85.51 | 73.61 | 81.85 | 85.47 | 84.74 | 66.51 | 16.2 | .2 | 2.8 |
| Ratio of Recoverable Reserves to Production | 52.4 | 59.7 | 55.2 | 52.0 | 52.1 | 72.9 | –12.3 | .1 | –3.6 |
| Number of Miners | 1,339 | 1,347 | 1,747 | 1,786 | 1,762 | 1,584 | –.6 | –6.6 | –1.8 |
| Productivity Total[2] | 9.37 | 8.45 | 6.92 | 6.77 | 6.68 | 6.47 | 11.0 | 8.8 | 4.2 |
| Underground | – | – | 2.68 | 2.57 | 1.63 | 2.14 | – | – | – |
| Surface | 9.37 | 8.45 | 7.19 | 7.18 | 7.26 | 6.61 | 11.0 | 6.6 | 3.9 |
| Producer/Distributor Stocks | 1,023 | 1,890 | 2,015 | 1,467 | 2,343 | – | –45.8 | –18.7 | – |
| **Distribution (thousand short tons)** | | | | | | | | | |
| Distribution Total | 27,377 | 25,043 | 26,154 | 28,570 | 27,942 | NA | 9.3 | –.5 | NA |
| Domestic Distribution Total | 27,352 | 25,035 | 25,640 | 28,540 | 27,942 | NA | 9.3 | –.5 | NA |
| Within State | 15,786 | 15,009 | 14,630 | 15,464 | 14,938 | NA | 5.2 | 1.4 | NA |
| To Other States | 11,566 | 10,026 | 11,010 | 13,076 | 13,004 | NA | 15.4 | –2.9 | NA |
| Foreign Distribution Total | 25 | 9 | 514 | 30 | – | NA | 190.1 | – | NA |
| Steam | 25 | 9 | 514 | 30 | – | NA | 190.1 | – | NA |
| Overseas Total[3] | 25 | 9 | 514 | 30 | – | NA | 190.1 | – | NA |
| Steam | 25 | 9 | 514 | 30 | – | NA | 190.1 | – | NA |
| **Demand (thousand short tons)** | | | | | | | | | |
| Consumption Total | 15,887 | 15,297 | 15,221 | 15,374 | 15,012 | 14,715 | 3.8 | 1.4 | .8 |
| Electric Utility | 15,802 | 15,215 | 15,137 | 15,297 | 14,942 | 14,661 | 3.9 | 1.4 | .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 | 795 | 815 | 967 | 1,462 | 1,506 | 1,392 | –2.5 | –14.8 | –6.0 |
| All Other | w | w | w | w | w | w | w | w | w |
| **Coal Prices (nominal dollars per short ton)** | | | | | | | | | |
| Mine Total | $21.83 | $24.66 | $23.80 | $23.29 | $22.96 | $22.78 | –11.5 | –1.3 | –.5 |
| Underground | – | – | w | w | w | w | – | – | – |
| Surface | 21.83 | 24.66 | w | w | w | w | –11.5 | w | w |
| Consumer | | | | | | | | | |
| Electric Utility | 24.23 | 26.04 | $25.59 | $25.48 | $24.61 | $21.24 | –6.9 | –.4 | 1.5 |
| Industrial | w | w | w | w | w | w | w | w | w |

[1] For 1988, the Form EIA-7A solicited data on ''Daily Productive Capacity.'' To obtain annual productive capacity for a mine in 1988, 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''; and Form EIA-759, ''Monthly Power Plant Report.''

## Table A9. North Dakota Coal Statistics, 1988, 1993-1997

| Category | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **Supply (thousand short tons)** | | | | | | | | | |
| Recoverable Reserves | 1,210,828 | 1,301,400 | 1,667,596 | 1,694,548 | 1,411,026 | 1,393,056 | –6.9 | –3.8 | –1.5 |
| Productive Capacity[1] | 32,568 | 32,184 | 34,464 | 35,920 | 36,371 | 39,978 | 1.2 | –2.7 | –2.3 |
| Production Total | 29,580 | 29,861 | 30,112 | 32,286 | 31,973 | 29,731 | –.9 | –1.9 | * |
| Surface | 29,580 | 29,861 | 30,112 | 32,286 | 31,973 | 29,731 | –.9 | –1.9 | * |
| Capacity Utilization[2] | 90.82 | 92.78 | 87.37 | 89.88 | 87.89 | 74.34 | –2.1 | .8 | 2.2 |
| Ratio of Recoverable Reserves to Production | 40.9 | 43.6 | 55.4 | 52.5 | 44.1 | 46.9 | –6.1 | –1.9 | –1.5 |
| Number of Miners | 657 | 640 | 716 | 645 | 782 | 977 | 2.6 | –4.3 | –4.3 |
| Productivity Total[2] | 17.82 | 17.20 | 16.80 | 18.84 | 17.66 | 15.63 | 3.6 | .2 | 1.5 |
| Surface | 17.82 | 17.20 | 16.80 | 18.84 | 17.66 | 15.63 | 3.6 | .2 | 1.5 |
| Producer/Distributor Stocks | 1,965 | 1,574 | 1,797 | 1,812 | 1,607 | – | 24.8 | 5.2 | – |
| **Distribution (thousand short tons)** | | | | | | | | | |
| Distribution Total | 29,172 | 30,025 | 30,118 | 32,056 | 32,372 | NA | –2.8 | –2.6 | NA |
| Domestic Distribution Total | 29,172 | 30,025 | 30,118 | 32,056 | 32,372 | NA | –2.8 | –2.6 | NA |
| Within State | 29,172 | 30,025 | 28,838 | 29,731 | 30,215 | NA | –2.8 | –.9 | NA |
| To Other States | – | – | 1,281 | 2,325 | 2,157 | NA | – | – | NA |
| **Demand (thousand short tons)** | | | | | | | | | |
| Consumption Total | 29,360 | 30,511 | 30,237 | 30,363 | 30,302 | 28,029 | –3.8 | –.8 | .5 |
| Electric Utility | 22,754 | 23,640 | 22,680 | 23,248 | 23,290 | 21,686 | –3.7 | –.6 | .5 |
| 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 | 1,755 | 1,642 | 1,858 | 2,406 | 2,417 | 3,166 | 6.8 | –7.7 | –6.3 |
| All Other | w | w | w | w | w | w | w | w | w |
| **Coal Prices (nominal dollars per short ton)** | | | | | | | | | |
| Mine Total | $8.06 | $8.01 | $7.99 | $7.62 | $7.63 | $7.38 | .6 | 1.4 | 1.0 |
| Surface | 8.06 | 8.01 | 7.99 | 7.62 | 7.63 | 7.38 | .6 | 1.4 | 1.0 |
| Consumer | | | | | | | | | |
| Electric Utility | 10.21 | 9.72 | 9.65 | 9.28 | 9.38 | 9.26 | 5.0 | 2.1 | 1.1 |
| Industrial | w | w | w | w | w | w | w | w | w |

1 For 1988, the Form EIA-7A solicited data on ''Daily Productive Capacity.'' To obtain annual productive capacity for a mine in 1988, 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''; and Form EIA-759, ''Monthly Power Plant Report.''

## Table A10. Ohio Coal Statistics, 1988, 1993-1997

| Category | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **Supply (thousand short tons)** | | | | | | | | | |
| Recoverable Reserves | 318,428 | 414,759 | 467,984 | 479,235 | 519,768 | 813,166 | –23.2 | –11.5 | –9.9 |
| Productive Capacity[1] | 33,443 | 37,584 | 34,011 | 43,925 | 42,236 | 49,999 | –11.0 | –5.7 | –4.4 |
| Production Total | 29,154 | 28,572 | 26,118 | 29,897 | 28,816 | 34,043 | 2.0 | .3 | –1.7 |
| Underground | 16,949 | 15,912 | 13,077 | 13,607 | 10,437 | 11,264 | 6.5 | 12.9 | 4.6 |
| Surface | 12,205 | 12,660 | 13,041 | 16,290 | 18,379 | 22,779 | –3.6 | –9.7 | –6.7 |
| Capacity Utilization[2] | 87.07 | 75.88 | 76.55 | 67.87 | 67.94 | 67.68 | 14.8 | 6.4 | 2.8 |
| Ratio of Recoverable Reserves to Production | 10.9 | 14.5 | 17.9 | 16.0 | 18.0 | 23.9 | –24.8 | –11.8 | –8.3 |
| Number of Miners | 3,124 | 3,232 | 3,386 | 3,983 | 3,866 | 7,106 | –3.3 | –5.2 | –8.7 |
| Productivity Total[2] | 4.02 | 3.95 | 3.62 | 3.42 | 3.46 | 2.39 | 1.6 | 3.8 | 5.9 |
| Underground | 4.18 | 4.19 | 3.81 | 3.51 | 3.27 | 1.95 | –.1 | 6.3 | 8.8 |
| Surface | 3.81 | 3.69 | 3.46 | 3.34 | 3.58 | 2.70 | 3.2 | 1.5 | 3.9 |
| Producer/Distributor Stocks | 774 | 532 | 1,374 | 833 | 550 | – | 45.5 | 8.9 | – |
| Imports[3] | 1 | 1 | 1 | 2 | 2 | – | –55.1 | –24.4 | – |
| **Distribution (thousand short tons)** | | | | | | | | | |
| Distribution Total | 29,434 | 28,881 | 24,345 | 28,749 | 28,315 | NA | 1.9 | 1.0 | NA |
| Domestic Distribution Total | 29,024 | 28,609 | 24,318 | 28,688 | 28,315 | NA | 1.4 | .6 | NA |
| Within State | 24,521 | 24,478 | 20,228 | 23,907 | 24,370 | NA | .2 | .1 | NA |
| To Other States | 4,502 | 4,131 | 4,090 | 4,782 | 3,944 | NA | 9.0 | 3.4 | NA |
| Foreign Distribution Total | 410 | 271 | 28 | 61 | – | NA | 51.2 | – | NA |
| Steam | 410 | 271 | 28 | 61 | – | NA | 51.2 | – | NA |
| Canada Total | – | 3 | 13 | – | – | NA | –100.0 | – | NA |
| Steam | – | 3 | 13 | – | – | NA | –100.0 | – | NA |
| Overseas Total[4] | 410 | 269 | 15 | 61 | – | NA | 52.7 | – | NA |
| Steam | 410 | 269 | 15 | 61 | – | NA | 52.7 | – | NA |
| **Demand (thousand short tons)** | | | | | | | | | |
| Consumption Total | 58,933 | 59,835 | 56,580 | 56,711 | 59,031 | 61,096 | –1.5 | * | –.4 |
| Electric Utility | 52,893 | 53,543 | 49,785 | 49,326 | 51,456 | 48,893 | –1.2 | .7 | .9 |
| Industrial | 3,863 | 3,794 | 3,609 | 3,794 | 4,100 | 6,030 | 1.8 | –1.5 | –4.8 |
| Coke | 1,848 | 1,842 | 2,777 | 3,092 | 2,892 | 5,448 | .3 | –10.6 | –11.3 |
| Residential/Commercial | 329 | 656 | 409 | 498 | 584 | 726 | –49.9 | –13.4 | –8.4 |
| Consumer Stocks Total | 6,324 | 5,428 | 5,936 | 7,815 | 7,630 | 7,823 | 16.5 | –4.6 | –2.3 |
| Electric Utility | 6,066 | 5,229 | 5,661 | 7,499 | 7,249 | 7,218 | 16.0 | –4.3 | –1.9 |
| All Other | 257 | 199 | 275 | 316 | 381 | 605 | 29.4 | –9.3 | –9.1 |
| **Coal Prices (nominal dollars per short ton)** | | | | | | | | | |
| Mine Total | $23.66 | $24.85 | $25.97 | $29.13 | $28.04 | $30.50 | –4.8 | –4.2 | –2.8 |
| Underground | 25.16 | 25.98 | 28.98 | 31.61 | 30.73 | 36.64 | –3.1 | –4.9 | –4.1 |
| Surface | 21.57 | 23.43 | 22.92 | 27.04 | 26.51 | 27.44 | –7.9 | –5.0 | –2.6 |
| Consumer | | | | | | | | | |
| Electric Utility | 31.41 | 32.31 | 34.44 | 34.70 | 34.05 | 36.22 | –2.8 | –2.0 | –1.6 |
| Industrial | 34.05 | 35.28 | 35.18 | 35.75 | 34.82 | 34.09 | –3.5 | –.6 | * |
| Coke | 46.89 | 44.98 | 42.18 | 42.02 | 45.07 | 46.32 | 4.2 | 1.0 | .1 |

1 For 1988, the Form EIA-7A solicited data on ''Daily Productive Capacity.'' To obtain annual productive capacity for a mine in 1988, 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 1993 through 1997 include imports to electric utilities, manufacturing plants and coke plants. Imports for 1988 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''; and Form EIA-759, ''Monthly Power Plant Report.''

## Table A11. Pennsylvania Coal Statistics, 1988, 1993-1997

| Category | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **Supply (thousand short tons)** | | | | | | | | | |
| Recoverable Reserves | 905,320 | 796,035 | 736,601 | 912,870 | 939,706 | 1,280,779 | 13.7 | –0.9 | –3.8 |
| Productive Capacity[1] | 87,527 | 81,684 | 77,187 | 80,975 | 82,148 | 86,521 | 7.1 | 1.6 | .1 |
| Production Total | 76,198 | 67,942 | 61,576 | 62,237 | 59,700 | 70,645 | 12.1 | 6.3 | .8 |
| Underground | 54,829 | 47,247 | 41,409 | 39,974 | 36,934 | 39,407 | 16.0 | 10.4 | 3.7 |
| Surface | 21,369 | 20,694 | 20,167 | 22,263 | 22,766 | 31,238 | 3.3 | –1.6 | –4.1 |
| Capacity Utilization[2] | 86.46 | 82.53 | 78.81 | 75.89 | 71.79 | 80.44 | 4.8 | 4.8 | .8 |
| Ratio of Recoverable Reserves to Production | 11.9 | 11.7 | 12.0 | 14.7 | 15.7 | 18.1 | 1.4 | –6.8 | –4.6 |
| Number of Miners | 9,575 | 9,021 | 8,968 | 9,975 | 10,940 | 16,573 | 6.1 | –3.3 | –5.9 |
| Productivity Total[2] | 3.63 | 3.36 | 3.23 | 2.98 | 2.80 | 2.11 | 7.9 | 6.7 | 6.2 |
| Underground | 4.05 | 3.74 | 3.49 | 3.18 | 2.91 | 1.97 | 8.2 | 8.6 | 8.3 |
| Surface | 2.86 | 2.72 | 2.79 | 2.67 | 2.63 | 2.32 | 5.0 | 2.0 | 2.3 |
| Producer/Distributor Stocks | 2,507 | 3,113 | 2,487 | 2,787 | 1,826 | – | –19.5 | 8.3 | – |
| Imports[3] | 72 | 80 | 87 | – | – | – | –10.0 | – | – |
| **Distribution (thousand short tons)** | | | | | | | | | |
| Distribution Total | 73,725 | 69,128 | 62,240 | 61,508 | 58,990 | NA | 6.6 | 5.7 | NA |
| Domestic Distribution Total | 65,027 | 59,882 | 53,961 | 55,207 | 53,482 | NA | 8.6 | 5.0 | NA |
| Within State | 40,834 | 39,222 | 36,147 | 35,189 | 33,456 | NA | 4.1 | 5.1 | NA |
| To Other States | 24,193 | 20,660 | 17,814 | 20,018 | 20,026 | NA | 17.1 | 4.8 | NA |
| Foreign Distribution Total | 8,698 | 9,246 | 8,279 | 6,301 | 5,508 | NA | –5.9 | 12.1 | NA |
| Metallurgical | 2,105 | 1,642 | 1,467 | 1,624 | 1,919 | NA | 28.3 | 2.3 | NA |
| Steam | 6,593 | 7,604 | 6,812 | 4,677 | 3,589 | NA | –13.3 | 16.4 | NA |
| Canada Total | 2,612 | 1,050 | 713 | 844 | 597 | NA | 148.7 | 44.6 | NA |
| Metallurgical | – | – | 4 | – | 10 | NA | – | – | NA |
| Steam | 2,612 | 1,050 | 708 | 844 | 587 | NA | 148.7 | 45.2 | NA |
| Overseas Total[4] | 6,087 | 8,196 | 7,566 | 5,457 | 4,911 | NA | –25.7 | 5.5 | NA |
| Metallurgical | 2,105 | 1,642 | 1,463 | 1,624 | 1,909 | NA | 28.3 | 2.5 | NA |
| Steam | 3,981 | 6,554 | 6,103 | 3,833 | 3,002 | NA | –39.3 | 7.3 | NA |
| **Demand (thousand short tons)** | | | | | | | | | |
| Consumption Total | 58,591 | 57,226 | 55,326 | 54,094 | 56,158 | 58,639 | 2.4 | 1.1 | * |
| Electric Utility | 42,603 | 41,076 | 39,252 | 38,044 | 40,257 | 43,166 | 3.7 | 1.4 | –.1 |
| Industrial | 4,410 | 4,466 | 4,027 | 4,044 | 4,311 | 3,942 | –1.3 | .6 | 1.3 |
| Coke | 10,334 | 10,689 | 10,858 | 10,849 | 10,333 | 10,146 | –3.3 | * | .2 |
| Residential/Commercial | 1,244 | 995 | 1,188 | 1,156 | 1,257 | 1,385 | 25.1 | –.3 | –1.2 |
| Consumer Stocks Total | 8,658 | 8,857 | 10,303 | 12,060 | 12,265 | 12,800 | –2.2 | –8.3 | –4.3 |
| Electric Utility | 7,790 | 7,878 | 9,244 | 11,000 | 11,110 | 11,798 | –1.1 | –8.5 | –4.5 |
| All Other | 868 | 980 | 1,059 | 1,060 | 1,155 | 1,003 | –11.4 | –6.9 | –1.6 |
| **Coal Prices (nominal dollars per short ton)** | | | | | | | | | |
| Mine Total | $25.98 | $25.78 | $26.78 | $26.18 | $26.50 | $29.90 | .8 | –.5 | –1.5 |
| Underground | 26.30 | 25.79 | 27.09 | 26.59 | 27.35 | 32.71 | 2.0 | –1.0 | –2.4 |
| Surface | 25.13 | 25.76 | 26.14 | 25.43 | 25.09 | 26.31 | –2.4 | * | –.5 |
| Consumer | | | | | | | | | |
| Electric Utility | 33.28 | 34.06 | 33.48 | 35.39 | 35.73 | 35.62 | –2.3 | –1.8 | –.8 |
| Industrial | 34.20 | 33.84 | 34.07 | 33.66 | 34.04 | 36.17 | 1.1 | .1 | –.6 |
| Coke | 46.20 | 45.16 | 46.11 | 46.25 | 46.41 | 43.11 | 2.3 | –.1 | .8 |

1 For 1988, the Form EIA-7A solicited data on ''Daily Productive Capacity.'' To obtain annual productive capacity for a mine in 1988, 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 1993 through 1997 include imports to electric utilities, manufacturing plants and coke plants. Imports for 1988 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''; and Form EIA-759, ''Monthly Power Plant Report.''

## Table A12. Texas Coal Statistics, 1988, 1993-1997

| Category | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **Supply (thousand short tons)** | | | | | | | | | |
| Recoverable Reserves | 921,939 | 878,486 | 939,901 | 1,026,309 | 1,104,864 | 1,167,192 | 4.9 | –4.4 | –2.6 |
| Productive Capacity[1] | 54,614 | 59,604 | 54,758 | 55,856 | 57,115 | 69,181 | –8.4 | –1.1 | –2.6 |
| Production Total | 53,328 | 55,164 | 52,684 | 52,346 | 54,567 | 52,281 | –3.3 | –.6 | .2 |
| Surface | 53,328 | 55,164 | 52,684 | 52,346 | 54,567 | 52,281 | –3.3 | –.6 | .2 |
| Capacity Utilization[2] | 97.64 | 92.55 | 96.21 | 93.72 | 95.54 | 75.57 | 5.5 | .5 | 2.9 |
| Ratio of Recoverable Reserves to Production | 17.3 | 15.9 | 17.8 | 19.6 | 20.3 | 22.3 | 8.5 | –3.9 | –2.8 |
| Number of Miners | 1,363 | 1,550 | 1,590 | 1,733 | 1,841 | 3,057 | –12.1 | –7.2 | –8.6 |
| Productivity Total[2] | 10.24 | 10.13 | 9.10 | 8.82 | 8.42 | 6.52 | 1.1 | 5.0 | 5.1 |
| Surface | 10.24 | 10.13 | 9.10 | 8.82 | 8.42 | 6.52 | 1.1 | 5.0 | 5.1 |
| Producer/Distributor Stocks | 1,506 | 1,254 | 864 | 1,430 | 1,237 | – | 20.1 | 5.0 | – |
| Imports[3] | 99 | 16 | – | 153 | 156 | – | NM | –10.7 | – |
| **Distribution (thousand short tons)** | | | | | | | | | |
| Distribution Total | 53,463 | 49,655 | 52,832 | 52,256 | 54,224 | NA | 7.7 | –.3 | NA |
| Domestic Distribution Total | 53,463 | 49,538 | 52,812 | 52,256 | 54,224 | NA | 7.9 | –.3 | NA |
| Within State | 53,463 | 49,538 | 52,812 | 52,256 | 54,224 | NA | 7.9 | –.3 | NA |
| Foreign Distribution Total | – | 117 | 20 | – | – | NA | –100.0 | – | NA |
| Steam | – | 117 | 20 | – | – | NA | –100.0 | – | NA |
| Overseas Total[4] | – | 117 | 20 | – | – | NA | –100.0 | – | NA |
| Steam | – | 117 | 20 | – | – | NA | –100.0 | – | NA |
| **Demand (thousand short tons)** | | | | | | | | | |
| Consumption Total | 101,297 | 98,997 | 92,612 | 93,829 | 96,809 | 86,644 | 2.3 | 1.1 | 1.8 |
| Electric Utility | 96,537 | 94,189 | 88,358 | 88,479 | 92,135 | 82,889 | 2.5 | 1.2 | 1.7 |
| Industrial | 4,759 | 4,808 | 4,255 | 5,350 | 4,667 | 3,708 | –1.0 | .5 | 2.8 |
| Residential/Commercial | * | – | – | * | 6 | w | – | –67.4 | w |
| Consumer Stocks Total | 6,540 | 10,477 | 10,829 | 9,793 | 9,172 | w | –37.6 | –8.1 | w |
| Electric Utility | 6,352 | 10,287 | 10,628 | 9,578 | 8,125 | 8,922 | –38.2 | –6.0 | –3.7 |
| All Other | 188 | 190 | 201 | 215 | 1,047 | w | –1.1 | –34.9 | w |
| **Coal Prices (nominal dollars per short ton)** | | | | | | | | | |
| Mine Total | $12.15 | $12.17 | $12.16 | $12.38 | $12.87 | $11.34 | –.1 | –1.4 | .8 |
| Surface | 12.15 | 12.17 | 12.16 | 12.38 | 12.87 | 11.34 | –.1 | –1.4 | .8 |
| Consumer | | | | | | | | | |
| Electric Utility | 18.69 | 19.26 | 19.65 | 19.84 | 20.91 | 21.50 | –3.0 | –2.8 | –1.5 |
| Industrial | 20.13 | 18.99 | 18.76 | 19.54 | 17.58 | 18.42 | 6.0 | 3.4 | 1.0 |

1 For 1988, the Form EIA-7A solicited data on ''Daily Productive Capacity.'' To obtain annual productive capacity for a mine in 1988, 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 1993 through 1997 include imports to electric utilities, manufacturing plants and coke plants. Imports for 1988 include only imports to electric utilities.

4 Includes Mexico.

* Data round to zero.

**w** Withheld to avoid disclosure of individual company data.

**NM** Not meaningful as value is greater than 500 percent.

**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''; and Form EIA-759, ''Monthly Power Plant Report.''

## Table A13. Utah Coal Statistics, 1988, 1993-1997

| Category | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **Supply (thousand short tons)** | | | | | | | | | |
| Recoverable Reserves | 432,777 | 284,433 | 374,750 | 423,349 | 446,729 | 537,366 | 52.1 | –0.8 | –2.4 |
| Productive Capacity[1] | 30,281 | 30,230 | 30,888 | 27,640 | 25,933 | 29,610 | .2 | 3.9 | .2 |
| Production Total | 26,683 | 27,507 | 25,167 | 24,399 | 21,847 | 18,163 | –3.0 | 5.1 | 4.4 |
| Underground | 26,683 | 27,507 | 25,167 | 24,399 | 21,847 | 18,163 | –3.0 | 5.1 | 4.4 |
| Capacity Utilization[2] | 88.09 | 90.97 | 81.48 | 88.27 | 84.22 | 61.34 | –3.2 | 1.1 | 4.1 |
| Ratio of Recoverable Reserves to Production | 16.2 | 10.3 | 14.9 | 17.3 | 20.4 | 29.6 | 56.8 | –5.6 | –6.5 |
| Number of Miners | 1,922 | 1,804 | 1,893 | 1,675 | 1,769 | 2,375 | 6.5 | 2.1 | –2.3 |
| Productivity Total[2] | 6.34 | 7.23 | 7.02 | 6.59 | 5.96 | 4.16 | –12.3 | 1.5 | 4.8 |
| Underground | 6.34 | 7.24 | 7.02 | 6.59 | 5.96 | 4.16 | –12.4 | 1.5 | 4.8 |
| Producer/Distributor Stocks | 2,112 | 1,337 | 1,946 | 1,301 | 1,203 | – | 57.9 | 15.1 | – |
| **Distribution (thousand short tons)** | | | | | | | | | |
| Distribution Total | 26,272 | 23,868 | 25,521 | 23,225 | 22,243 | NA | 10.1 | 4.3 | NA |
| Domestic Distribution Total | 22,857 | 18,563 | 21,591 | 20,527 | 19,283 | NA | 23.1 | 4.3 | NA |
| Within State | 13,936 | 9,389 | 12,755 | 13,586 | 13,418 | NA | 48.4 | .9 | NA |
| To Other States | 8,922 | 9,174 | 8,836 | 6,941 | 5,866 | NA | –2.8 | 11.0 | NA |
| Foreign Distribution Total | 3,414 | 5,305 | 3,930 | 2,698 | 2,959 | NA | –35.6 | 3.6 | NA |
| Metallurgical | 97 | 187 | – | – | – | NA | –47.9 | – | NA |
| Steam | 3,317 | 5,118 | 3,930 | 2,698 | 2,959 | NA | –35.2 | 2.9 | NA |
| Canada Total | – | – | – | – | 346 | NA | – | – | NA |
| Steam | – | – | – | – | 346 | NA | – | – | NA |
| Overseas Total[3] | 3,414 | 5,305 | 3,930 | 2,698 | 2,613 | NA | –35.6 | 6.9 | NA |
| Metallurgical | 97 | 187 | – | – | – | NA | –47.9 | – | NA |
| Steam | 3,317 | 5,118 | 3,930 | 2,698 | 2,613 | NA | –35.2 | 6.1 | NA |
| **Demand (thousand short tons)** | | | | | | | | | |
| Consumption Total | 15,923 | 15,237 | 15,307 | 16,216 | 15,848 | 14,513 | 4.5 | .1 | 1.0 |
| Electric Utility | 14,252 | 13,584 | 13,325 | 14,269 | 13,995 | 12,544 | 4.9 | .4 | 1.4 |
| Industrial | 527 | 512 | 915 | 835 | 727 | 597 | 3.1 | –7.7 | –1.4 |
| 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 | 2,309 | 1,526 | 2,250 | 2,753 | 3,264 | 2,772 | 51.3 | –8.3 | –2.0 |
| All Other | w | w | w | w | w | w | w | w | w |
| **Coal Prices (nominal dollars per short ton)** | | | | | | | | | |
| Mine Total | $17.61 | $21.63 | $19.10 | $19.27 | $20.81 | $22.42 | –18.6 | –4.1 | –2.6 |
| Underground | 17.61 | 21.63 | 19.10 | 19.27 | 20.81 | 22.42 | –18.6 | –4.1 | –2.6 |
| Consumer | | | | | | | | | |
| Electric Utility | 25.22 | 24.66 | 25.27 | 26.10 | 27.34 | 29.07 | 2.3 | –2.0 | –1.6 |
| Industrial | 19.28 | 19.10 | 19.74 | 26.57 | 26.51 | 25.48 | .9 | –7.6 | –3.0 |
| Coke | w | w | w | w | w | w | w | w | w |

[1] For 1988, the Form EIA-7A solicited data on ''Daily Productive Capacity.'' To obtain annual productive capacity for a mine in 1988, 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''; and Form EIA-759, ''Monthly Power Plant Report.''

## Table A14. Virginia Coal Statistics, 1988, 1993-1997

| Category | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **Supply (thousand short tons)** | | | | | | | | | |
| Recoverable Reserves | 207,765 | 188,344 | 203,159 | 236,773 | 335,883 | 411,346 | 10.3 | −11.3 | −7.3 |
| Productive Capacity[1] | 43,023 | 41,593 | 43,037 | 46,462 | 50,879 | 49,082 | 3.4 | −4.1 | −1.4 |
| Production Total | 35,837 | 35,590 | 34,099 | 37,129 | 39,317 | 45,886 | .7 | −2.3 | −2.7 |
| Underground | 26,929 | 25,568 | 25,372 | 28,054 | 30,166 | 37,809 | 5.3 | −2.8 | −3.7 |
| Surface | 8,907 | 10,022 | 8,727 | 9,075 | 9,151 | 8,076 | −11.1 | −.7 | 1.1 |
| Capacity Utilization[2] | 83.09 | 85.34 | 79.07 | 79.61 | 77.07 | 92.79 | −2.6 | 1.9 | −1.2 |
| Ratio of Recoverable Reserves to Production | 5.8 | 5.3 | 6.0 | 6.4 | 8.5 | 9.0 | 9.5 | −9.2 | −4.7 |
| Number of Miners | 6,235 | 6,241 | 6,919 | 8,121 | 8,339 | 10,696 | −.1 | −7.0 | −5.8 |
| Productivity Total[2] | 2.77 | 2.72 | 2.50 | 2.51 | 2.41 | 2.31 | 2.0 | 3.6 | 2.0 |
| Underground | 2.56 | 2.44 | 2.25 | 2.27 | 2.19 | 2.28 | 4.8 | 3.9 | 1.3 |
| Surface | 3.69 | 3.79 | 3.73 | 3.73 | 3.55 | 2.49 | −2.6 | 1.0 | 4.5 |
| Producer/Distributor Stocks | 2,328 | 1,644 | 1,649 | 1,180 | 1,389 | – | 41.5 | 13.8 | – |
| **Distribution (thousand short tons)** | | | | | | | | | |
| Distribution Total | 35,419 | 36,208 | 34,024 | 38,548 | 41,639 | NA | −2.2 | −4.0 | NA |
| Domestic Distribution Total | 22,578 | 22,776 | 24,283 | 26,866 | 27,388 | NA | −.9 | −4.7 | NA |
| Within State | 6,695 | 7,231 | 5,657 | 6,867 | 6,076 | NA | −7.4 | 2.5 | NA |
| To Other States | 15,882 | 15,545 | 18,625 | 19,999 | 21,312 | NA | 2.2 | −7.1 | NA |
| Foreign Distribution Total | 12,841 | 13,432 | 9,742 | 11,683 | 14,251 | NA | −4.4 | −2.6 | NA |
| Metallurgical | 12,288 | 12,760 | 8,921 | 11,155 | 13,747 | NA | −3.7 | −2.8 | NA |
| Steam | 553 | 671 | 821 | 527 | 503 | NA | −17.6 | 2.4 | NA |
| Canada Total | 508 | 387 | 445 | 786 | 1,229 | NA | 31.0 | −19.8 | NA |
| Metallurgical | 508 | 387 | 445 | 786 | 1,229 | NA | 31.0 | −19.8 | NA |
| Overseas Total[3] | 12,333 | 13,044 | 9,297 | 10,897 | 13,021 | NA | −5.4 | −1.3 | NA |
| Metallurgical | 11,780 | 12,373 | 8,475 | 10,370 | 12,518 | NA | −4.8 | −1.5 | NA |
| Steam | 553 | 671 | 821 | 527 | 503 | NA | −17.6 | 2.4 | NA |
| **Demand (thousand short tons)** | | | | | | | | | |
| Consumption Total | 15,276 | 14,983 | 13,378 | 12,792 | 13,584 | 13,430 | 1.9 | 3.0 | 1.4 |
| Electric Utility | 11,605 | 10,994 | 9,543 | 8,670 | 9,447 | 8,469 | 5.5 | 5.3 | 3.6 |
| Industrial | 2,502 | 2,613 | 2,585 | 2,838 | 2,863 | 3,745 | −4.2 | −3.3 | −4.4 |
| 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 | 1,152 | 1,010 | 1,098 | 2,064 | 1,418 | 1,211 | 14.1 | −5.0 | −.5 |
| All Other | w | w | w | w | w | w | w | w | w |
| **Coal Prices (nominal dollars per short ton)** | | | | | | | | | |
| Mine Total | $28.24 | $28.45 | $28.47 | $26.84 | $26.80 | $26.49 | −.7 | 1.3 | .7 |
| Underground | 29.07 | 29.46 | 29.20 | 27.33 | 27.26 | 26.89 | −1.3 | 1.6 | .9 |
| Surface | 25.74 | 25.88 | 26.34 | 25.33 | 25.29 | 24.60 | −.5 | .4 | .5 |
| Consumer | | | | | | | | | |
| Electric Utility | 34.98 | 35.73 | 36.90 | 37.05 | 37.57 | 39.72 | −2.1 | −1.8 | −1.4 |
| Industrial | 43.85 | 43.51 | 42.50 | 41.56 | 41.27 | 38.36 | .8 | 1.5 | 1.5 |
| Coke | w | w | w | w | w | w | w | w | w |

[1] For 1988, the Form EIA-7A solicited data on ''Daily Productive Capacity.'' To obtain annual productive capacity for a mine in 1988, 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''; and Form EIA-759, ''Monthly Power Plant Report.''

## Table A15. West Virginia Coal Statistics, 1988, 1993-1997

| Category | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **Supply (thousand short tons)** | | | | | | | | | |
| Recoverable Reserves | 1,736,836 | 1,731,154 | 1,731,400 | 1,829,630 | 1,930,903 | 2,367,782 | 0.3 | –2.6 | –3.4 |
| Productive Capacity[1] | 203,006 | 217,409 | 204,837 | 201,684 | 191,706 | 162,195 | –6.6 | 1.4 | 2.5 |
| Production Total | 173,743 | 170,433 | 162,997 | 161,776 | 130,525 | 145,005 | 1.9 | 7.4 | 2.0 |
| Underground | 116,523 | 115,585 | 110,029 | 111,679 | 87,997 | 110,076 | .8 | 7.3 | .6 |
| Surface | 57,220 | 54,848 | 52,968 | 50,097 | 42,528 | 34,929 | 4.3 | 7.7 | 5.6 |
| Capacity Utilization[2] | 85.50 | 78.32 | 79.50 | 80.07 | 67.91 | 89.02 | 9.2 | 5.9 | –.4 |
| Ratio of Recoverable Reserves to Production | 10.0 | 10.2 | 10.6 | 11.3 | 14.8 | 16.3 | –1.6 | –9.3 | –5.3 |
| Number of Miners | 18,245 | 20,121 | 21,334 | 21,861 | 22,979 | 28,972 | –9.3 | –5.6 | –5.0 |
| Productivity Total[2] | 4.46 | 3.91 | 3.74 | 3.69 | 3.27 | 2.68 | 14.1 | 8.0 | 5.8 |
| Underground | 4.03 | 3.50 | 3.40 | 3.38 | 2.92 | 2.49 | 15.1 | 8.3 | 5.5 |
| Surface | 5.71 | 5.18 | 4.74 | 4.62 | 4.35 | 3.53 | 10.2 | 7.1 | 5.5 |
| Producer/Distributor Stocks | 5,504 | 4,947 | 6,176 | 6,692 | 4,059 | – | 11.3 | 7.9 | – |
| **Distribution (thousand short tons)** | | | | | | | | | |
| Distribution Total | 172,230 | 169,200 | 165,187 | 158,985 | 135,818 | NA | 1.8 | 6.1 | NA |
| Domestic Distribution Total | 133,771 | 127,156 | 120,866 | 122,779 | 102,659 | NA | 5.2 | 6.8 | NA |
| Within State | 29,135 | 29,220 | 29,018 | 30,891 | 22,887 | NA | –.3 | 6.2 | NA |
| To Other States | 104,636 | 97,936 | 91,848 | 91,888 | 79,772 | NA | 6.8 | 7.0 | NA |
| Foreign Distribution Total | 38,459 | 42,044 | 44,321 | 36,205 | 33,159 | NA | –8.5 | 3.8 | NA |
| Metallurgical | 30,327 | 31,717 | 34,633 | 31,603 | 26,504 | NA | –4.4 | 3.4 | NA |
| Steam | 8,132 | 10,327 | 9,688 | 4,602 | 6,655 | NA | –21.3 | 5.1 | NA |
| Canada Total | 8,291 | 7,222 | 5,784 | 5,644 | 4,108 | NA | 14.8 | 19.2 | NA |
| Metallurgical | 6,956 | 6,907 | 5,759 | 5,605 | 4,071 | NA | .7 | 14.3 | NA |
| Steam | 1,335 | 315 | 25 | 40 | 37 | NA | 323.3 | 145.3 | NA |
| Overseas Total[3] | 30,168 | 34,822 | 38,537 | 30,561 | 29,052 | NA | –13.4 | .9 | NA |
| Metallurgical | 23,370 | 24,810 | 28,874 | 25,998 | 22,433 | NA | –5.8 | 1.0 | NA |
| Steam | 6,798 | 10,012 | 9,663 | 4,563 | 6,618 | NA | –32.1 | .7 | NA |
| **Demand (thousand short tons)** | | | | | | | | | |
| Consumption Total | 37,122 | 36,139 | 34,489 | 34,767 | 32,046 | 36,435 | 2.7 | 3.7 | .2 |
| Electric Utility | 34,487 | 32,775 | 30,657 | 30,318 | 27,782 | 31,704 | 5.2 | 5.5 | .9 |
| Industrial | 1,652 | 1,630 | 1,984 | 2,637 | 2,406 | 2,598 | 1.3 | –9.0 | –4.9 |
| 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 | 4,042 | 4,370 | 4,744 | 4,479 | 4,001 | 5,077 | –7.5 | .3 | –2.5 |
| All Other | w | w | w | w | w | w | w | w | w |
| **Coal Prices (nominal dollars per short ton)** | | | | | | | | | |
| Mine Total | $26.64 | $26.58 | $27.18 | $27.42 | $27.58 | $28.22 | .2 | –.8 | –.6 |
| Underground | 27.64 | 27.31 | 27.77 | 27.93 | 28.54 | 29.03 | 1.2 | –.8 | –.5 |
| Surface | 24.60 | 25.04 | 25.95 | 26.29 | 25.57 | 25.63 | –1.7 | –1.0 | –.4 |
| Consumer Electric Utility | 30.68 | 30.93 | 31.61 | 34.70 | 35.42 | 35.95 | –.8 | –3.5 | –1.7 |
| Industrial | 35.31 | 33.37 | 33.61 | 32.73 | 32.91 | 30.98 | 5.8 | 1.8 | 1.5 |
| Coke | w | w | w | w | w | w | w | w | w |

1 For 1988, the Form EIA-7A solicited data on ''Daily Productive Capacity.'' To obtain annual productive capacity for a mine in 1988, 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''; and Form EIA-759, ''Monthly Power Plant Report.''

## Table A16. Wyoming Coal Statistics, 1988, 1993-1997

| Category | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **Supply (thousand short tons)** | | | | | | | | | |
| Recoverable Reserves | 6,464,670 | 6,591,293 | 6,723,963 | 6,999,460 | 6,830,720 | 6,445,928 | –1.9 | –1.4 | * |
| Productive Capacity[1] | 366,680 | 350,908 | 337,184 | 321,046 | 277,875 | 257,683 | 4.5 | 7.2 | 4.0 |
| Production Total | 281,881 | 278,440 | 263,822 | 237,092 | 210,129 | 164,014 | 1.2 | 7.6 | 6.2 |
| Underground | 2,846 | 2,641 | 2,008 | 2,735 | 2,136 | 1,138 | 7.8 | 7.4 | 10.7 |
| Surface | 279,035 | 275,799 | 261,814 | 234,357 | 207,993 | 162,876 | 1.2 | 7.6 | 6.2 |
| Capacity Utilization[2] | 76.87 | 79.35 | 78.24 | 73.85 | 75.62 | 63.65 | –3.1 | .4 | 2.1 |
| Ratio of Recoverable Reserves to Production | 22.9 | 23.7 | 25.5 | 29.5 | 32.5 | 39.3 | –3.1 | –8.3 | –5.8 |
| Number of Miners | 2,777 | 2,814 | 3,142 | 3,291 | 3,159 | 3,167 | –1.3 | –3.2 | –1.4 |
| Productivity Total[2] | 34.55 | 32.06 | 30.06 | 26.05 | 24.46 | 18.80 | 7.8 | 9.0 | 7.0 |
| Underground | 10.13 | 9.18 | 5.97 | 5.07 | 3.56 | 3.72 | 10.4 | 29.8 | 11.8 |
| Surface | 35.42 | 32.84 | 31.02 | 27.37 | 26.03 | 19.34 | 7.8 | 8.0 | 6.9 |
| Producer/Distributor Stocks | 2,036 | 1,504 | 1,997 | 1,592 | 998 | – | 35.4 | 19.5 | – |
| **Distribution (thousand short tons)** | | | | | | | | | |
| Distribution Total | 280,795 | 279,117 | 263,601 | 235,540 | 211,713 | NA | .6 | 7.3 | NA |
| Domestic Distribution Total | 278,255 | 276,723 | 261,333 | 234,016 | 210,739 | NA | .5 | 7.2 | NA |
| Within State | 26,756 | 26,253 | 26,521 | 28,334 | 25,519 | NA | 1.9 | 1.2 | NA |
| To Other States | 251,499 | 250,470 | 234,812 | 205,682 | 185,220 | NA | .4 | 7.9 | NA |
| Foreign Distribution Total | 2,541 | 2,395 | 2,269 | 1,524 | 974 | NA | 6.1 | 27.1 | NA |
| Steam | 2,541 | 2,395 | 2,269 | 1,524 | 974 | NA | 6.1 | 27.1 | NA |
| Canada Total | 818 | 443 | 32 | – | – | NA | 84.5 | – | NA |
| Steam | 818 | 443 | 32 | – | – | NA | 84.5 | – | NA |
| Overseas Total[3] | 1,723 | 1,952 | 2,237 | 1,524 | 974 | NA | –11.7 | 15.3 | NA |
| Steam | 1,723 | 1,952 | 2,237 | 1,524 | 974 | NA | –11.7 | 15.3 | NA |
| **Demand (thousand short tons)** | | | | | | | | | |
| Consumption Total | 26,096 | 26,646 | 25,933 | 27,459 | 26,171 | 25,424 | –2.1 | –.1 | .3 |
| Electric Utility | 23,997 | 24,430 | 23,850 | 25,350 | 24,111 | 23,563 | –1.8 | –.1 | .2 |
| Industrial | 1,959 | 1,835 | 1,937 | 1,867 | 1,873 | w | 6.8 | 1.1 | w |
| Residential/Commercial | 140 | 382 | 146 | 242 | 187 | w | –63.2 | –6.9 | w |
| Consumer Stocks Total | 1,555 | 2,267 | 2,936 | 2,553 | 1,841 | w | –31.4 | –4.1 | w |
| Electric Utility | 1,498 | 2,197 | 2,857 | 2,476 | 1,728 | 2,619 | –31.8 | –3.5 | –6.0 |
| All Other | 57 | 71 | 79 | 77 | 113 | w | –20.0 | –15.9 | w |
| **Coal Prices (nominal dollars per short ton)** | | | | | | | | | |
| Mine Total | $6.00 | $6.41 | $6.58 | $6.83 | $7.32 | $9.16 | –6.3 | –4.8 | –4.6 |
| Underground | w | w | w | w | w | w | w | w | w |
| Surface | w | w | w | w | w | w | w | w | w |
| Consumer Electric Utility | $14.16 | $14.30 | $14.29 | $14.09 | $14.03 | $14.71 | –1.0 | .2 | –.4 |
| Industrial | 23.68 | 22.32 | 22.72 | 22.87 | 23.43 | w | 6.1 | .3 | w |

1 For 1988, the Form EIA-7A solicited data on ''Daily Productive Capacity.'' To obtain annual productive capacity for a mine in 1988, 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''; and Form EIA-759, ''Monthly Power Plant Report.''

## Table A17. All Other States Coal Statistics, 1988, 1993-1997

| Category | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **Supply (thousand short tons)** | | | | | | | | | |
| Recoverable Reserves | 416,535 | 427,163 | 420,998 | 476,538 | 506,419 | 797,425 | –2.5 | –4.8 | –7.0 |
| Productive Capacity[1] | 24,996 | 23,441 | 24,495 | 23,451 | 23,567 | 36,412 | 6.6 | 1.5 | –4.1 |
| Production Total | 19,349 | 19,674 | 19,911 | 19,672 | 18,848 | 27,269 | –1.6 | .6 | –3.7 |
| Underground | 4,909 | 5,227 | 4,880 | 4,880 | 4,523 | 6,721 | –6.1 | 2.1 | –3.4 |
| Surface | 14,440 | 14,447 | 15,031 | 14,792 | 14,325 | 20,548 | * | .2 | –3.8 |
| Capacity Utilization[2] | 77.22 | 83.55 | 81.02 | 83.52 | 79.48 | 74.48 | –7.6 | –.7 | .4 |
| Ratio of Recoverable Reserves to Production | 21.5 | 21.7 | 21.1 | 24.2 | 26.9 | 29.2 | –.8 | –5.4 | –3.3 |
| Number of Miners | 2,344 | 2,394 | 2,312 | 2,373 | 2,478 | 5,353 | –2.1 | –1.4 | –8.8 |
| Productivity Total[2] | 3.78 | 3.73 | 3.96 | 3.82 | 3.59 | 2.63 | 1.3 | 1.3 | 4.1 |
| Underground | 3.29 | 2.94 | 3.03 | 2.86 | 3.05 | 1.76 | 12.1 | 2.0 | 7.2 |
| Surface | 3.98 | 4.13 | 4.41 | 4.30 | 3.80 | 3.13 | –3.8 | 1.1 | 2.7 |
| Producer/Distributor Stocks | 539 | 292 | 784 | 598 | 297 | – | 84.8 | 16.1 | – |
| Imports[3] | 5,163 | 5,267 | 5,084 | 5,327 | 4,605 | 970 | –2.0 | 2.9 | 20.4 |
| **Distribution (thousand short tons)** | | | | | | | | | |
| Distribution Total | 18,878 | 19,828 | 19,080 | 18,813 | 19,056 | NA | –4.8 | –.2 | NA |
| Domestic Distribution Total | 17,948 | 18,285 | 17,930 | 17,767 | 17,914 | NA | –1.8 | * | NA |
| Within State | 24 | 28 | 26 | 25 | 100 | NA | –12.5 | –29.8 | NA |
| To Other States | 17,923 | 18,257 | 17,904 | 17,743 | 17,814 | NA | –1.8 | .1 | NA |
| Foreign Distribution Total | 931 | 1,544 | 1,150 | 1,046 | 1,142 | NA | –39.7 | –5.0 | NA |
| Metallurgical | 48 | – | 38 | 109 | 51 | NA | – | –1.4 | NA |
| Steam | 882 | 1,544 | 1,112 | 937 | 1,091 | NA | –42.8 | –5.2 | NA |
| Canada Total | * | * | 1 | 3 | 1 | NA | –25.9 | –44.3 | NA |
| Steam | * | * | 1 | 3 | 1 | NA | –25.9 | –44.3 | NA |
| Overseas Total[4] | 931 | 1,544 | 1,149 | 1,042 | 1,142 | NA | –39.7 | –5.0 | NA |
| Metallurgical | 48 | – | 38 | 109 | 51 | NA | – | –1.4 | NA |
| Steam | 882 | 1,544 | 1,112 | 934 | 1,091 | NA | –42.8 | –5.2 | NA |
| **Demand (thousand short tons)** | | | | | | | | | |
| Consumption Total | 411,134 | 400,049 | 382,060 | 371,817 | 365,045 | 351,839 | 2.8 | 3.0 | 1.7 |
| Electric Utility | 376,543 | 365,146 | 344,785 | 334,773 | 329,279 | 312,807 | 3.1 | 3.4 | 2.1 |
| Industrial | 28,989 | 29,720 | 31,653 | 31,795 | 31,970 | 31,980 | –2.4 | –2.4 | –1.1 |
| Coke | 2,677 | 2,686 | 2,784 | 2,723 | 1,243 | 4,502 | –.3 | 21.1 | –5.6 |
| Residential/Commercial | 2,925 | 2,497 | 2,838 | 2,526 | 2,552 | 2,550 | 17.1 | 3.5 | 1.5 |
| Consumer Stocks Total | 49,227 | 60,121 | 62,368 | 57,506 | 48,850 | 71,082 | –18.1 | .2 | –4.0 |
| Electric Utility | 45,078 | 55,817 | 58,348 | 53,253 | 45,411 | 65,708 | –19.2 | –.2 | –4.1 |
| All Other | 4,148 | 4,304 | 4,021 | 4,252 | 3,439 | 5,374 | –3.6 | 4.8 | –2.8 |
| **Coal Prices (nominal dollars per short ton)** | | | | | | | | | |
| Mine Total | $23.50 | $24.06 | $22.80 | $23.19 | $23.14 | $25.05 | –2.3 | .4 | –.7 |
| Underground | 24.26 | 25.78 | 26.25 | 26.97 | 26.72 | 27.43 | –5.9 | –2.4 | –1.3 |
| Surface | 23.24 | 23.44 | 21.67 | 21.94 | 22.02 | 24.28 | –.8 | 1.3 | –.5 |
| Consumer | | | | | | | | | |
| Electric Utility | 27.39 | 27.46 | 28.22 | 29.70 | 30.68 | 33.62 | –.2 | –2.8 | –2.2 |
| Industrial | 38.47 | 38.22 | 38.51 | 38.72 | 38.95 | 39.83 | .7 | –.3 | –.4 |
| Coke | 49.16 | 51.21 | 51.67 | 50.89 | 58.19 | 53.60 | –4.0 | –4.1 | –.9 |

1 For 1988, the Form EIA-7A solicited data on ''Daily Productive Capacity.'' To obtain annual productive capacity for a mine in 1988, 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 1993 through 1997 include imports to electric utilities, manufacturing plants and coke plants. Imports for 1988 include only imports to electric utilities.

4 Includes Mexico.

* Data round to zero.

**NA** Not available.

Notes: Other States include Alaska, Arkansas, California, 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''; and Form EIA-759, ''Monthly Power Plant Report.''

## Table A18. Total U.S. Coal Statistics, 1988, 1993-1997

| Category | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **Supply (thousand short tons)** | | | | | | | | | |
| Recoverable Reserves | 19,164,398 | 19,427,980 | 20,105,197 | 21,016,526 | 21,535,283 | 23,580,557 | –1.3 | –2.9 | –2.3 |
| Productive Capacity[1] | 1,325,604 | 1,324,712 | 1,299,054 | 1,320,656 | 1,261,873 | 1,211,516 | .1 | 1.2 | 1.0 |
| Production Total | 1,089,932 | 1,063,856 | 1,032,974 | 1,033,504 | 945,424 | 950,265 | 2.4 | 3.6 | 1.5 |
| Underground | 420,657 | 409,849 | 396,249 | 399,103 | 351,053 | 382,156 | 2.6 | 4.6 | 1.1 |
| Surface | 669,274 | 654,007 | 636,725 | 634,401 | 594,371 | 568,109 | 2.3 | 3.0 | 1.8 |
| Capacity Utilization[2] | 82.13 | 80.21 | 79.40 | 78.11 | 74.77 | 78.13 | 2.4 | 2.4 | .5 |
| Ratio of Recoverable Reserves to Production | 17.6 | 18.3 | 19.5 | 20.3 | 22.8 | 24.8 | –3.7 | –6.3 | –3.8 |
| Number of Miners | 81,516 | 83,462 | 90,252 | 97,500 | 101,322 | 135,366 | –2.3 | –5.3 | –5.5 |
| Productivity Total[2] | 6.04 | 5.69 | 5.38 | 4.98 | 4.70 | 3.55 | 6.1 | 6.5 | 6.1 |
| Underground | 3.83 | 3.57 | 3.39 | 3.19 | 2.95 | 2.38 | 7.2 | 6.7 | 5.4 |
| Surface | 9.46 | 9.05 | 8.48 | 7.67 | 7.23 | 5.32 | 4.5 | 6.9 | 6.6 |
| Producer/Distributor Stocks | 33,973 | 28,648 | 34,444 | 33,219 | 25,284 | 34,090 | 18.6 | 7.7 | * |
| Imports[3] | 6,171 | 6,476 | 6,317 | 6,599 | 5,496 | 970 | –4.7 | 2.9 | 22.8 |
| **Distribution (thousand short tons)** | | | | | | | | | |
| Distribution Total | 1,078,401 | 1,059,892 | 1,030,330 | 1,022,523 | 959,445 | NA | 1.8 | 3.0 | NA |
| Domestic Distribution Total | 995,181 | 967,693 | 940,423 | 949,843 | 883,934 | NA | 2.8 | 3.0 | NA |
| Within State | 356,593 | 340,005 | 336,821 | 353,765 | 339,034 | NA | 4.9 | 1.3 | NA |
| To Other States | 638,588 | 627,688 | 603,602 | 596,078 | 544,900 | NA | 1.7 | 4.0 | NA |
| Foreign Distribution Total | 83,220 | 92,199 | 89,907 | 72,680 | 75,510 | NA | –9.7 | 2.5 | NA |
| Metallurgical | 55,278 | 56,162 | 54,077 | 52,206 | 52,592 | NA | –1.5 | 1.3 | NA |
| Steam | 27,942 | 36,037 | 35,830 | 20,474 | 22,919 | NA | –22.6 | 5.0 | NA |
| Canada Total | 13,405 | 10,599 | 8,023 | 8,467 | 7,751 | NA | 26.5 | 14.7 | NA |
| Metallurgical | 8,203 | 8,472 | 6,986 | 7,464 | 6,666 | NA | –3.2 | 5.3 | NA |
| Steam | 5,202 | 2,127 | 1,037 | 1,003 | 1,085 | NA | 144.6 | 48.0 | NA |
| Overseas Total[4] | 69,815 | 81,600 | 81,884 | 64,214 | 67,759 | NA | –14.4 | .8 | NA |
| Metallurgical | 47,075 | 47,690 | 47,091 | 44,743 | 45,926 | NA | –1.2 | .6 | NA |
| Steam | 22,740 | 33,910 | 34,793 | 19,471 | 21,834 | NA | –33.1 | 1.0 | NA |
| **Demand (thousand short tons)** | | | | | | | | | |
| Consumption Total | 1,029,229 | 1,005,573 | 962,039 | 951,461 | 944,081 | 883,642 | 2.5 | 2.1 | 1.5 |
| Electric Utility | 900,361 | 874,681 | 829,007 | 817,270 | 813,508 | 758,372 | 2.9 | 2.6 | 1.9 |
| Industrial | 70,599 | 70,941 | 73,055 | 75,179 | 74,892 | 76,252 | –.5 | –1.5 | –.8 |
| Coke | 30,203 | 31,706 | 33,011 | 31,740 | 31,323 | 41,888 | –4.7 | –.9 | –3.6 |
| Residential/Commercial | 6,463 | 6,006 | 5,807 | 6,013 | 6,221 | 7,130 | 7.6 | .9 | –1.1 |
| Other Power Producers | 21,603 | 22,239 | 21,158 | 21,260 | 18,137 | – | –2.9 | 4.5 | – |
| Consumer Stocks Total | 106,837 | 122,979 | 134,639 | 136,139 | 120,458 | 158,413 | –13.1 | –2.9 | –4.3 |
| Electric Utility | 98,826 | 114,623 | 126,304 | 126,897 | 111,341 | 146,507 | –13.8 | –2.9 | –4.3 |
| All Other | 8,012 | 8,355 | 8,334 | 9,243 | 9,117 | 11,906 | –4.1 | –3.2 | –4.3 |
| **Coal Prices (nominal dollars per short ton)** | | | | | | | | | |
| Mine Total | $18.14 | $18.50 | $18.83 | $19.41 | $19.85 | $22.07 | –1.9 | –2.2 | –2.1 |
| Underground | 25.68 | 25.96 | 26.18 | 26.39 | 26.92 | 28.97 | –1.0 | –1.2 | –1.3 |
| Surface | 13.39 | 13.82 | 14.25 | 15.02 | 15.67 | 17.43 | –3.1 | –3.8 | –2.9 |
| Consumer | | | | | | | | | |
| Electric Utility | 26.16 | 26.45 | 27.01 | 28.03 | 28.58 | 30.64 | –1.1 | –2.2 | –1.7 |
| Industrial | 32.41 | 32.32 | 32.42 | 32.55 | 32.23 | 33.43 | .3 | .1 | –.3 |
| Coke | 47.61 | 47.33 | 47.34 | 46.56 | 47.44 | 47.70 | .6 | .1 | * |

1 For 1988, the Form EIA-7A solicited data on ''Daily Productive Capacity.'' To obtain annual productive capacity for a mine in 1988, 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 1993 through 1997 include imports to electric utilities, manufacturing plants and coke plants. Imports for 1988 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''; and Form EIA-759, ''Monthly Power Plant Report.''

# 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, 16, 25, 35, 48, 67, 68, 76, 80, 92, 94, 96, 98, and 99.

**Table B1. Trends in U.S. Coal Production, Imports, Consumption, Exports, and Stocks, 1988, 1993-1997**
(Million Metric Tons)

| Activity | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| Production | 989 | 965 | 937 | 938 | 858 | 862 | 2.4 | 3.6 | 1.5 |
| Imports | 7 | 6 | 7 | 7 | 7 | 2 | 5.1 | .6 | 15.0 |
| Producer and Distributor Stocks[1] | 31 | 26 | 31 | 30 | 23 | 31 | 18.6 | 7.7 | * |
| Consumption | 914 | 892 | 854 | 844 | 840 | 802 | 2.5 | 2.1 | 1.5 |
| Exports | 76 | 82 | 80 | 65 | 68 | 86 | –7.6 | 2.9 | –1.4 |
| Consumer Stocks[1] | 97 | 112 | 122 | 124 | 109 | 144 | –13.1 | –2.9 | –4.3 |

[1] Reported as of the last day of the quarter.
* Data round to zero.
Note: Consumption does not include coal consumed by other power producers.
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, 1988, 1993-1997

(Thousand Metric Tons)

| Coal-Producing State and Region | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| Alabama | 22,197 | 22,351 | 22,353 | 21,106 | 22,469 | 24,057 | –0.7 | –0.3 | –0.9 |
| Alaska | 1,315 | 1,343 | 1,540 | 1,422 | 1,452 | 1,583 | –2.1 | –2.4 | –2.0 |
| Arizona | 10,635 | 9,473 | 10,838 | 11,844 | 11,043 | 11,247 | 12.3 | –.9 | –.6 |
| Arkansas | 17 | 19 | 26 | 46 | 40 | 250 | –12.3 | –19.8 | –26.0 |
| California | – | – | – | – | – | 49 | – | – | – |
| Colorado | 24,901 | 22,576 | 23,324 | 22,955 | 19,854 | 14,436 | 10.3 | 5.8 | 6.2 |
| Illinois | 37,338 | 42,325 | 43,708 | 47,896 | 37,283 | 53,155 | –11.8 | * | –3.8 |
| Indiana | 32,203 | 26,916 | 23,593 | 28,057 | 26,576 | 28,369 | 19.6 | 4.9 | 1.4 |
| Iowa | – | – | – | 42 | 159 | 310 | – | – | – |
| Kansas | 326 | 211 | 258 | 258 | 310 | 669 | 54.8 | 1.3 | –7.7 |
| Kentucky Total | 141,388 | 138,278 | 139,470 | 146,639 | 141,792 | 143,201 | 2.2 | –.1 | –.1 |
| Eastern | 109,695 | 106,096 | 107,539 | 112,897 | 109,036 | 106,616 | 3.4 | .1 | .3 |
| Western | 31,693 | 32,182 | 31,931 | 33,742 | 32,756 | 36,585 | –1.5 | –.8 | –1.6 |
| Louisiana | 3,216 | 2,922 | 3,374 | 3,141 | 2,843 | 2,621 | 10.1 | 3.1 | 2.3 |
| Maryland | 3,774 | 3,713 | 3,327 | 3,295 | 3,044 | 2,941 | 1.6 | 5.5 | 2.8 |
| Missouri | 364 | 644 | 497 | 761 | 592 | 3,782 | –43.5 | –11.5 | –22.9 |
| Montana | 37,199 | 34,374 | 35,789 | 37,775 | 32,583 | 35,272 | 8.2 | 3.4 | .6 |
| New Mexico | 24,517 | 21,834 | 24,324 | 25,438 | 25,644 | 19,779 | 12.3 | –1.1 | 2.4 |
| North Dakota | 26,834 | 27,089 | 27,317 | 29,289 | 29,005 | 26,971 | –.9 | –1.9 | * |
| Ohio | 26,449 | 25,920 | 23,694 | 27,122 | 26,141 | 30,883 | 2.0 | .3 | –1.7 |
| Oklahoma | 1,470 | 1,543 | 1,702 | 1,733 | 1,595 | 1,938 | –4.7 | –2.0 | –3.0 |
| Pennsylvania Total | 69,126 | 61,636 | 55,860 | 56,460 | 54,159 | 64,088 | 12.1 | 6.3 | .8 |
| Anthracite | 4,244 | 4,310 | 4,248 | 4,192 | 3,906 | 3,225 | –1.5 | 2.1 | 3.1 |
| Bituminous | 64,882 | 57,325 | 51,613 | 52,268 | 50,253 | 60,864 | 13.2 | 6.6 | .7 |
| Tennessee | 2,994 | 3,312 | 2,922 | 2,709 | 2,764 | 5,905 | –9.6 | 2.0 | –7.3 |
| Texas | 48,378 | 50,044 | 47,794 | 47,488 | 49,502 | 47,428 | –3.3 | –.6 | .2 |
| Utah | 24,206 | 24,954 | 22,831 | 22,135 | 19,819 | 16,477 | –3.0 | 5.1 | 4.4 |
| Virginia | 32,511 | 32,286 | 30,934 | 33,683 | 35,668 | 41,627 | .7 | –2.3 | –2.7 |
| Washington | 4,078 | 4,142 | 4,416 | 4,439 | 4,300 | 4,691 | –1.5 | –1.3 | –1.5 |
| West Virginia Total | 157,617 | 154,614 | 147,869 | 146,760 | 118,411 | 131,546 | 1.9 | 7.4 | 2.0 |
| Northern | 38,829 | 41,649 | 41,834 | 44,739 | 30,665 | 48,309 | –6.8 | 6.1 | –2.4 |
| Southern | 118,788 | 112,965 | 106,034 | 102,022 | 87,746 | 83,237 | 5.1 | 7.9 | 4.0 |
| Wyoming | 255,718 | 252,597 | 239,336 | 215,086 | 190,626 | 148,791 | 1.2 | 7.6 | 6.2 |
| **Appalachian Total**[1] | **424,361** | **409,928** | **394,499** | **404,033** | **371,690** | **407,664** | **3.5** | **3.4** | **.4** |
| **Interior Total**[1] | **155,005** | **156,805** | **152,884** | **163,164** | **151,658** | **175,107** | **–1.1** | **.5** | **–1.3** |
| **Western Total**[1] | **409,404** | **398,381** | **389,715** | **370,382** | **334,327** | **279,296** | **2.8** | **5.2** | **4.3** |
| **East of Miss. River** | **525,595** | **511,351** | **493,732** | **513,729** | **468,306** | **525,773** | **2.8** | **2.9** | ***** |
| **West of Miss. River** | **463,175** | **453,763** | **443,367** | **423,851** | **389,369** | **336,294** | **2.1** | **4.4** | **3.6** |
| **U.S. Total** | **988,770** | **965,114** | **937,098** | **937,580** | **857,675** | **862,066** | **2.4** | **3.6** | **1.5** |

[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, 1988, 1993-1997

(Thousand Metric Tons)

| Coal-Producing State and Region | 1997 | 1996 | 1995 | 1994 | 1993 | 1988[1] | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| Alabama | 26,382 | 29,174 | 29,526 | 29,982 | 25,325 | 27,554 | –9.6 | 1.0 | –0.5 |
| 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 |
| California | – | – | – | – | – | w | – | – | – |
| Colorado | 32,174 | 26,608 | 29,425 | 28,191 | 27,252 | 19,041 | 20.9 | 4.2 | 6.0 |
| Illinois | 46,741 | 55,998 | 51,371 | 62,971 | 62,886 | 64,890 | –16.5 | –7.1 | –3.6 |
| Indiana | 33,565 | 32,263 | 31,984 | 35,318 | 39,875 | 37,920 | 4.0 | –4.2 | –1.3 |
| Iowa | – | – | – | w | w | w | – | – | – |
| Kansas | w | w | w | w | w | w | w | w | w |
| Kentucky Total | 177,312 | 171,662 | 184,316 | 193,618 | 185,796 | 154,879 | 3.3 | –1.2 | 1.5 |
| Eastern | 138,510 | 132,169 | 137,993 | 146,720 | 142,717 | 112,749 | 4.8 | –.7 | 2.3 |
| Western | 38,802 | 39,493 | 46,323 | 46,897 | 43,079 | 42,130 | –1.8 | –2.6 | –.9 |
| Louisiana | w | w | w | w | w | w | w | w | w |
| Maryland | 4,430 | 4,477 | 3,999 | 3,930 | 3,563 | 4,150 | –1.0 | 5.6 | .7 |
| Missouri | 626 | 949 | 980 | 1,097 | w | w | –34.0 | w | w |
| Montana | 50,930 | 50,961 | 46,808 | 46,361 | 46,129 | 45,594 | –.1 | 2.5 | 1.2 |
| New Mexico | 28,670 | 29,660 | 29,719 | 29,762 | 30,264 | 29,739 | –3.3 | –1.3 | –.4 |
| North Dakota | 29,545 | 29,197 | 31,265 | 32,586 | 32,995 | 36,268 | 1.2 | –2.7 | –2.3 |
| Ohio | 30,339 | 34,096 | 30,854 | 39,848 | 38,315 | 45,359 | –11.0 | –5.7 | –4.4 |
| Oklahoma | 2,223 | 1,797 | 2,320 | 2,042 | 2,197 | 4,135 | 23.7 | .3 | –6.7 |
| Pennsylvania Total | 79,404 | 74,102 | 70,023 | 73,460 | 74,524 | 78,491 | 7.1 | 1.6 | .1 |
| Anthracite | 4,993 | 4,993 | 5,939 | 5,240 | 5,267 | 3,130 | * | –1.3 | 5.3 |
| Bituminous | 74,411 | 69,109 | 64,083 | 68,220 | 69,256 | 75,361 | 7.7 | 1.8 | –.1 |
| Tennessee | 3,719 | 3,637 | 3,402 | 3,092 | 3,414 | 7,277 | 2.3 | 2.2 | –7.2 |
| Texas | 49,545 | 54,072 | 49,676 | 50,672 | 51,814 | 62,760 | –8.4 | –1.1 | –2.6 |
| Utah | 27,470 | 27,424 | 28,021 | 25,075 | 23,526 | 26,862 | .2 | 3.9 | .2 |
| Virginia | 39,029 | 37,733 | 39,042 | 42,150 | 46,156 | 44,527 | 3.4 | –4.1 | –1.4 |
| Washington | w | w | w | w | w | w | w | w | w |
| West Virginia Total | 184,164 | 197,230 | 185,825 | 182,964 | 173,913 | 147,140 | –6.6 | 1.4 | 2.5 |
| Northern | 46,034 | 49,534 | 51,124 | 53,792 | 54,445 | 54,543 | –7.1 | –4.1 | –1.9 |
| Southern | 138,130 | 147,696 | 134,701 | 129,172 | 119,468 | 92,597 | –6.5 | 3.7 | 4.5 |
| Wyoming | 332,647 | 318,338 | 305,888 | 291,248 | 252,084 | 233,767 | 4.5 | 7.2 | 4.0 |
| **Appalachian Total**[2] | **505,978** | **512,618** | **500,664** | **522,147** | **507,927** | **467,246** | **–1.3** | **–.1** | **.9** |
| **Interior Total**[2] | **175,740** | **188,385** | **186,329** | **203,116** | **204,968** | **221,799** | **–6.7** | **–3.8** | **–2.5** |
| **Western Total**[2] | **520,850** | **500,757** | **491,489** | **472,817** | **431,858** | **410,024** | **4.0** | **4.8** | **2.7** |
| **East of Miss. River** | **625,085** | **640,372** | **630,341** | **667,333** | **653,767** | **612,186** | **–2.4** | **–1.1** | **.2** |
| **West of Miss. River** | **577,483** | **561,387** | **548,141** | **530,746** | **490,986** | **486,883** | **2.9** | **4.1** | **1.9** |
| **U.S. Total** | **1,202,568** | **1,201,759** | **1,178,482** | **1,198,079** | **1,144,753** | **1,099,069** | **.1** | **1.2** | **1.0** |

[1] For 1988, Form EIA-7A solicited data on ''Daily Productive Capacity.'' To obtain annual productive capacity for a mine in 1988, 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.

* Data round to zero.

**w** Withheld to avoid disclosure of individual company data.

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.

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

## Table B4. Recoverable Coal Reserves at Producing Mines by State, 1988, 1993-1997
(Million Metric Tons)

| Coal-Producing State and Region | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| Alabama | 340 | 410 | 463 | 415 | 387 | 463 | –17.1 | –3.2 | –3.4 |
| 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 |
| California | – | – | – | – | – | w | – | – | – |
| Colorado | 515 | 582 | 628 | 614 | 552 | 592 | –11.5 | –1.7 | –1.5 |
| Illinois | 675 | 808 | 800 | 874 | 965 | 1,225 | –16.4 | –8.5 | –6.4 |
| Indiana | 357 | 350 | 294 | 276 | 344 | 413 | 1.9 | .9 | –1.6 |
| Iowa | – | – | – | w | w | w | – | – | – |
| Kansas | w | w | w | w | w | w | w | w | w |
| Kentucky Total | 1,207 | 1,139 | 1,160 | 1,238 | 1,658 | 1,569 | 6.0 | –7.6 | –2.9 |
| Eastern | 875 | 742 | 692 | 734 | 1,222 | 1,018 | 17.9 | –8.0 | –1.7 |
| Western | 332 | 396 | 468 | 505 | 436 | 551 | –16.3 | –6.6 | –5.5 |
| Louisiana | w | w | w | w | w | w | w | w | w |
| Maryland | 61 | 64 | 52 | 80 | 60 | 81 | –4.6 | .6 | –3.0 |
| Missouri | 1 | 2 | 2 | 11 | w | w | –60.9 | w | w |
| Montana | 1,059 | 1,187 | 1,135 | 1,163 | 1,166 | 1,427 | –10.8 | –2.3 | –3.3 |
| New Mexico | 1,284 | 1,303 | 1,343 | 1,322 | 1,336 | 1,443 | –1.5 | –1.0 | –1.3 |
| North Dakota | 1,098 | 1,181 | 1,513 | 1,537 | 1,280 | 1,264 | –6.9 | –3.8 | –1.5 |
| Ohio | 289 | 376 | 425 | 435 | 472 | 738 | –23.2 | –11.5 | –9.9 |
| Oklahoma | 21 | 17 | 17 | 39 | 42 | 32 | 26.4 | –15.4 | –4.4 |
| Pennsylvania Total | 821 | 722 | 668 | 828 | 852 | 1,162 | 13.7 | –.9 | –3.8 |
| Anthracite | 109 | 81 | 45 | 34 | 59 | 52 | 34.3 | 16.5 | 8.5 |
| Bituminous | 712 | 641 | 623 | 794 | 793 | 1,109 | 11.1 | –2.7 | –4.8 |
| Tennessee | 51 | 54 | 62 | 38 | 27 | 101 | –4.1 | 17.8 | –7.3 |
| Texas | 836 | 797 | 853 | 931 | 1,002 | 1,059 | 4.9 | –4.4 | –2.6 |
| Utah | 393 | 258 | 340 | 384 | 405 | 487 | 52.1 | –.8 | –2.4 |
| Virginia | 188 | 171 | 184 | 215 | 305 | 373 | 10.3 | –11.3 | –7.3 |
| Washington | w | w | w | w | w | w | w | w | w |
| West Virginia Total | 1,576 | 1,570 | 1,571 | 1,660 | 1,752 | 2,148 | .3 | –2.6 | –3.4 |
| Northern | 648 | 673 | 709 | 781 | 747 | 1,113 | –3.6 | –3.5 | –5.8 |
| Southern | 928 | 898 | 861 | 879 | 1,005 | 1,035 | 3.3 | –2.0 | –1.2 |
| Wyoming | 5,865 | 5,980 | 6,100 | 6,350 | 6,197 | 5,848 | –1.9 | –1.4 | * |
| **Appalachian Total**[1] | **4,202** | **4,110** | **4,117** | **4,404** | **5,076** | **6,084** | **2.2** | **–4.6** | **–4.0** |
| **Interior Total**[1] | **2,351** | **2,501** | **2,572** | **2,784** | **2,994** | **3,609** | **–6.0** | **–5.9** | **–4.6** |
| **Western Total**[1] | **10,833** | **11,014** | **11,550** | **11,878** | **11,466** | **11,699** | **–1.6** | **–1.4** | **–.8** |
| **East of Miss. River** | **5,566** | **5,665** | **5,679** | **6,059** | **6,822** | **8,273** | **–1.7** | **–4.9** | **–4.3** |
| **West of Miss. River** | **11,820** | **11,960** | **12,560** | **13,007** | **12,715** | **13,119** | **–1.2** | **–1.8** | **–1.1** |
| **U.S. Total** | **17,386** | **17,625** | **18,239** | **19,066** | **19,536** | **21,392** | **–1.3** | **–2.9** | **–2.3** |

[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. 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, 1988, 1993-1997

(Metric Tons)

| Continent and Country of Origin | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **North America Total** | **1,099,428** | **1,300,730** | **1,219,813** | **1,137,082** | **955,786** | **541,167** | **–15.5** | **3.6** | **8.2** |
| Canada | 1,099,108 | 1,294,100 | 1,197,249 | 1,136,881 | 953,696 | 500,982 | –15.1 | 3.6 | 9.1 |
| Guatemala | – | – | – | – | 4 | – | – | –100.0 | – |
| Mexico | 320 | 6,630 | 196 | 201 | 2,086 | 40,185 | –95.2 | –37.4 | –41.5 |
| Netherlands Antilles | – | – | 22,368 | – | – | – | – | – | – |
| **South America Total** | **4,201,364** | **3,619,341** | **4,157,892** | **4,463,532** | **4,912,696** | **1,295,440** | **16.1** | **–3.8** | **14.0** |
| Argentina | 12 | – | – | – | – | – | – | – | – |
| Colombia | 2,827,805 | 2,292,279 | 2,482,908 | 3,075,043 | 3,734,915 | 1,111,452 | 23.4 | –6.7 | 10.9 |
| Venezuela | 1,373,547 | 1,327,062 | 1,674,984 | 1,388,489 | 1,177,781 | 183,988 | 3.5 | 3.9 | 25.0 |
| **Europe Total** | **24,163** | **2,369** | **474** | **36** | **56** | **1,029** | **NM** | **355.8** | **42.0** |
| Belgium & Luxembourg | 5,458 | 2,243 | – | – | – | – | 143.3 | – | – |
| Denmark | – | – | 214 | – | 54 | 161 | – | –100.0 | –100.0 |
| Germany, FR | 18 | – | – | – | – | 181 | – | – | –22.6 |
| Netherlands | – | – | – | – | – | 290 | – | – | –100.0 |
| Norway | 18,491 | – | – | – | – | – | – | – | – |
| Poland | – | – | – | 36 | 2 | – | – | –100.0 | – |
| Spain | – | 90 | – | – | – | 112 | –100.0 | – | –100.0 |
| Switzerland | 182 | – | – | – | – | – | – | – | – |
| Turkey | – | 36 | – | – | – | – | –100.0 | – | – |
| United Kingdom | 14 | – | 260 | – | – | 285 | – | – | –28.4 |
| **Asia Total** | **1,324,946** | **1,392,520** | **923,980** | **1,046,493** | **642,359** | **38,275** | **–4.8** | **19.8** | **48.3** |
| China (Mainland) | 1,820 | – | 48 | 101 | – | – | – | – | – |
| Hong Kong | – | 1 | – | – | – | 2 | –100.0 | – | –100.0 |
| Indonesia | 1,293,569 | 1,392,517 | 923,908 | 1,025,543 | 642,359 | – | –7.1 | 19.1 | – |
| Japan | – | 2 | 24 | 1 | – | 38,273 | –100.0 | – | –100.0 |
| Vietnam | 29,557 | – | – | 20,848 | – | – | – | – | – |
| **Oceania & Australia Total** | **141,988** | **149,498** | **230,554** | **91,002** | **95,664** | **60,047** | **–5.0** | **10.4** | **10.0** |
| Australia | 104,789 | 149,498 | 192,054 | 83,646 | 90,787 | 60,047 | –29.9 | 3.6 | 6.4 |
| New Zealand | 37,199 | – | 38,500 | 7,356 | 4,877 | – | – | 66.2 | – |
| **Africa Total** | – | – | – | **141,931** | **23,967** | – | – | **–100.0** | – |
| South Africa, Rep of | – | – | – | 135,849 | 18,433 | – | – | –100.0 | – |
| Swaziland | – | – | – | 6,082 | 5,534 | – | – | –100.0 | – |
| **Total** | **6,791,889** | **6,464,458** | **6,532,713** | **6,880,076** | **6,630,528** | **1,935,958** | **5.1** | **.6** | **15.0** |

**NM** Not meaningful as value is greater than 500 percent.

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, 1988, 1993-1997

(Metric Tons of Coal Produced per Miner per Hour)

| Coal-Producing State and Region | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| Alabama | 2.17 | 2.00 | 2.03 | 2.04 | 2.14 | 1.84 | 8.4 | 0.3 | 1.8 |
| Alaska | 5.82 | 6.18 | 6.77 | 6.30 | 6.71 | 7.36 | –5.8 | –3.5 | –2.6 |
| Arizona | 6.16 | 5.72 | 5.75 | 6.08 | 5.63 | 5.85 | 7.7 | 2.3 | .6 |
| Arkansas | 1.76 | – | 1.33 | 1.38 | 1.26 | 6.96 | – | 8.8 | –14.1 |
| California | – | – | – | – | – | 13.55 | – | – | – |
| Colorado | 6.97 | 6.64 | 5.57 | 5.62 | 5.30 | 3.57 | 4.9 | 7.1 | 7.7 |
| Illinois | 3.81 | 3.79 | 3.51 | 3.26 | 2.93 | 2.43 | .3 | 6.8 | 5.1 |
| Indiana | 4.84 | 4.52 | 4.24 | 3.88 | 4.04 | 3.19 | 7.0 | 4.6 | 4.7 |
| Iowa | – | – | – | 1.38 | .65 | 1.41 | – | – | – |
| Kansas | 3.46 | 1.97 | 2.01 | 1.75 | 2.09 | 1.33 | 76.3 | 13.5 | 11.3 |
| Kentucky Total | 3.58 | 3.45 | 3.24 | 2.95 | 2.94 | 2.49 | 3.6 | 5.0 | 4.1 |
| Eastern | 3.48 | 3.34 | 3.14 | 2.94 | 2.88 | 2.43 | 4.2 | 4.8 | 4.1 |
| Western | 3.97 | 3.89 | 3.60 | 2.97 | 3.16 | 2.68 | 2.0 | 5.8 | 4.5 |
| Louisiana | 9.93 | 9.86 | 12.02 | 11.79 | 11.02 | 14.52 | .7 | –2.6 | –4.1 |
| Maryland | 3.56 | 3.74 | 3.46 | 3.34 | 3.10 | 2.76 | –4.8 | 3.6 | 2.9 |
| Missouri | 2.89 | 3.16 | 2.31 | 3.26 | 1.67 | 2.43 | –8.5 | 14.7 | 1.9 |
| Montana | 21.37 | 19.85 | 19.10 | 19.89 | 17.68 | 17.75 | 7.6 | 4.8 | 2.1 |
| New Mexico | 8.50 | 7.66 | 6.27 | 6.14 | 6.06 | 5.87 | 11.0 | 8.8 | 4.2 |
| North Dakota | 16.17 | 15.61 | 15.24 | 17.09 | 16.02 | 14.18 | 3.6 | .2 | 1.5 |
| Ohio | 3.65 | 3.59 | 3.29 | 3.10 | 3.14 | 2.17 | 1.6 | 3.8 | 5.9 |
| Oklahoma | 2.28 | 2.37 | 2.69 | 2.43 | 2.54 | 1.90 | –3.7 | –2.7 | 2.0 |
| Pennsylvania Total | 3.29 | 3.05 | 2.93 | 2.71 | 2.54 | 1.91 | 7.9 | 6.7 | 6.2 |
| Anthracite | 1.60 | 1.74 | 1.89 | 1.75 | 1.68 | 1.10 | –8.1 | –1.2 | 4.2 |
| Bituminous | 3.53 | 3.23 | 3.06 | 2.82 | 2.64 | 1.98 | 9.3 | 7.5 | 6.6 |
| Tennessee | 2.15 | 1.99 | 2.14 | 2.03 | 2.24 | 1.43 | 7.8 | –1.0 | 4.6 |
| Texas | 9.29 | 9.19 | 8.25 | 8.00 | 7.63 | 5.91 | 1.1 | 5.0 | 5.1 |
| Utah | 5.75 | 6.56 | 6.37 | 5.98 | 5.41 | 3.77 | –12.3 | 1.5 | 4.8 |
| Virginia | 2.51 | 2.46 | 2.27 | 2.28 | 2.18 | 2.10 | 2.0 | 3.6 | 2.0 |
| Washington | 3.26 | 3.60 | 3.67 | 3.73 | 3.62 | 3.24 | –9.6 | –2.6 | * |
| West Virginia Total | 4.05 | 3.55 | 3.40 | 3.35 | 2.97 | 2.43 | 14.1 | 8.0 | 5.8 |
| Northern | 4.06 | 3.68 | 3.38 | 3.29 | 2.70 | 2.40 | 10.5 | 10.7 | 6.0 |
| Southern | 4.04 | 3.50 | 3.40 | 3.37 | 3.07 | 2.44 | 15.5 | 7.1 | 5.7 |
| Wyoming | 31.34 | 29.08 | 27.27 | 23.63 | 22.19 | 17.05 | 7.8 | 9.0 | 7.0 |
| **Appalachian Total**[1] | **3.41** | **3.16** | **3.01** | **2.90** | **2.73** | **2.22** | **8.0** | **5.8** | **4.9** |
| **Interior Total**[1] | **5.02** | **4.89** | **4.51** | **4.02** | **4.01** | **3.13** | **2.8** | **5.8** | **5.4** |
| **Western Total**[1] | **16.10** | **15.79** | **14.22** | **13.23** | **12.27** | **9.98** | **1.9** | **7.0** | **5.4** |
| **East of Miss. River** | **3.53** | **3.30** | **3.13** | **2.98** | **2.82** | **2.30** | **7.1** | **5.8** | **4.9** |
| **West of Miss. River** | **14.55** | **14.21** | **12.87** | **11.99** | **11.01** | **8.51** | **2.4** | **7.2** | **6.1** |
| **U.S. Total** | **5.48** | **5.16** | **4.88** | **4.51** | **4.26** | **3.22** | **6.1** | **6.5** | **6.1** |

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

* Data round to zero.

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, 1988, 1993-1997
(Thousand Metric Tons)

| Census Division and State | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **New England** | **7,131** | **6,372** | **6,043** | **5,945** | **5,883** | **6,382** | **11.9** | **4.9** | **1.2** |
| Connecticut | 966 | 845 | 822 | 782 | 715 | 799 | 14.4 | 7.8 | 2.1 |
| Maine | 176 | 212 | 256 | 421 | 407 | 251 | –17.2 | –19.0 | –3.9 |
| Massachusetts | 4,437 | 4,062 | 3,732 | 3,567 | 3,457 | 4,048 | 9.2 | 6.4 | 1.0 |
| New Hampshire | 1,547 | 1,249 | 1,229 | 1,167 | 1,295 | 1,115 | 23.8 | 4.5 | 3.7 |
| Rhode Island | 3 | 3 | 2 | 3 | 3 | 159 | –11.5 | –3.0 | –36.6 |
| Vermont | 2 | 2 | 3 | 4 | 5 | 10 | 46.8 | –18.8 | –14.9 |
| **Middle Atlantic** | **66,385** | **64,379** | **62,108** | **61,268** | **63,856** | **67,724** | **3.1** | **1.0** | **–.2** |
| New Jersey | 2,601 | 2,179 | 1,881 | 1,786 | 2,135 | 2,774 | 19.3 | 5.0 | –.7 |
| New York | 10,632 | 10,284 | 10,036 | 10,409 | 10,776 | 11,753 | 3.4 | –.3 | –1.1 |
| Pennsylvania | 53,153 | 51,915 | 50,191 | 49,073 | 50,945 | 53,197 | 2.4 | 1.1 | * |
| **East North Central** | **212,259** | **207,746** | **197,496** | **193,401** | **191,082** | **187,069** | **2.2** | **2.7** | **1.4** |
| Illinois | 43,201 | 40,307 | 35,946 | 35,450 | 34,595 | 30,764 | 7.2 | 5.7 | 3.8 |
| Indiana | 59,912 | 58,079 | 56,818 | 54,427 | 54,751 | 50,648 | 3.1 | 2.3 | 1.9 |
| Michigan | 32,557 | 33,288 | 32,479 | 32,363 | 29,226 | 32,053 | –2.2 | 2.7 | .2 |
| Ohio | 53,463 | 54,282 | 51,328 | 51,447 | 53,552 | 55,425 | –1.5 | * | –.4 |
| Wisconsin | 23,125 | 21,790 | 20,925 | 19,714 | 18,957 | 18,178 | 6.1 | 5.1 | 2.7 |
| **West North Central** | **125,333** | **123,961** | **118,867** | **113,935** | **109,715** | **102,643** | **1.1** | **3.4** | **2.2** |
| Iowa | 19,704 | 19,206 | 18,721 | 17,546 | 17,407 | 14,618 | 2.6 | 3.1 | 3.4 |
| Kansas | 16,033 | 17,313 | 14,987 | 15,566 | 15,772 | 13,563 | –7.4 | .4 | 1.9 |
| Minnesota | 17,315 | 17,476 | 17,189 | 16,991 | 16,620 | 15,681 | –.9 | 1.0 | 1.1 |
| Missouri | 33,262 | 31,191 | 28,806 | 25,096 | 21,211 | 23,694 | 6.6 | 11.9 | 3.8 |
| Nebraska | 10,170 | 9,415 | 9,431 | 8,437 | 8,769 | 7,309 | 8.0 | 3.8 | 3.7 |
| North Dakota | 26,635 | 27,679 | 27,431 | 27,545 | 27,490 | 25,427 | –3.8 | –.8 | .5 |
| South Dakota | 2,215 | 1,680 | 2,302 | 2,754 | 2,445 | 2,350 | 31.8 | –2.4 | –.6 |
| **South Atlantic** | **154,853** | **150,180** | **140,849** | **137,833** | **136,604** | **136,107** | **3.1** | **3.2** | **1.4** |
| Delaware | 1,692 | 1,775 | 1,825 | 2,020 | 2,219 | 2,436 | –4.6 | –6.5 | –4.0 |
| District of Columbia | 36 | 21 | 5 | 43 | 46 | 28 | 72.1 | –6.0 | 2.8 |
| Florida | 26,054 | 25,803 | 24,064 | 23,661 | 23,977 | 22,313 | 1.0 | 2.1 | 1.7 |
| Georgia | 29,659 | 28,266 | 28,384 | 26,539 | 24,567 | 25,995 | 4.9 | 4.8 | 1.5 |
| Maryland | 10,216 | 10,311 | 10,159 | 9,518 | 9,315 | 10,666 | –.9 | 2.3 | –.5 |
| North Carolina | 26,860 | 25,060 | 21,849 | 21,121 | 23,369 | 18,602 | 7.2 | 3.5 | 4.2 |
| South Carolina | 12,801 | 12,566 | 11,139 | 11,787 | 11,715 | 10,829 | 1.9 | 2.2 | 1.9 |
| Virginia | 13,858 | 13,592 | 12,136 | 11,605 | 12,323 | 12,184 | 1.9 | 3.0 | 1.4 |
| West Virginia | 33,677 | 32,785 | 31,288 | 31,540 | 29,072 | 33,054 | 2.7 | 3.7 | .2 |
| **East South Central** | **102,636** | **100,199** | **96,008** | **90,074** | **94,371** | **83,306** | **2.4** | **2.1** | **2.3** |
| Alabama | 33,052 | 33,613 | 31,124 | 28,552 | 29,980 | 23,918 | –1.7 | 2.5 | 3.6 |
| Kentucky | 38,309 | 37,070 | 35,849 | 34,555 | 35,467 | 31,911 | 3.3 | 1.9 | 2.0 |
| Mississippi | 5,691 | 5,254 | 4,178 | 3,887 | 3,656 | 4,660 | 8.3 | 11.7 | 2.2 |
| Tennessee | 25,585 | 24,262 | 24,856 | 23,079 | 25,268 | 22,817 | 5.4 | .3 | 1.3 |
| **West South Central** | **136,394** | **132,877** | **126,195** | **125,419** | **127,729** | **115,260** | **2.6** | **1.6** | **1.9** |
| Arkansas | 12,763 | 13,441 | 12,284 | 11,427 | 10,384 | 11,389 | –5.0 | 5.3 | 1.3 |
| Louisiana | 12,586 | 11,371 | 12,118 | 12,791 | 12,407 | 11,655 | 10.7 | .3 | .8 |
| Oklahoma | 19,149 | 18,257 | 17,777 | 16,080 | 17,115 | 13,613 | 4.9 | 2.8 | 3.9 |
| Texas | 91,895 | 89,809 | 84,017 | 85,121 | 87,823 | 78,602 | 2.3 | 1.1 | 1.8 |
| **Mountain** | **101,051** | **97,274** | **97,906** | **104,957** | **100,401** | **94,774** | **3.9** | **.2** | **.7** |
| Arizona | 16,515 | 15,234 | 15,134 | 17,763 | 17,228 | 13,177 | 8.4 | –1.0 | 2.5 |
| Colorado | 16,293 | 15,623 | 15,395 | 15,853 | 15,485 | 14,388 | 4.3 | 1.3 | 1.4 |
| Idaho | 327 | 360 | 421 | 484 | 479 | 475 | –9.2 | –9.1 | –4.1 |
| Montana | 8,634 | 7,286 | 9,076 | 10,060 | 8,389 | 9,647 | 18.5 | .7 | –1.2 |
| Nevada | 6,750 | 6,898 | 6,659 | 7,229 | 7,081 | 7,508 | –2.1 | –1.2 | –1.2 |
| New Mexico | 14,412 | 13,877 | 13,809 | 13,947 | 13,619 | 13,349 | 3.8 | 1.4 | .8 |
| Utah | 14,445 | 13,823 | 13,886 | 14,711 | 14,377 | 13,166 | 4.5 | .1 | 1.0 |
| Wyoming | 23,674 | 24,173 | 23,526 | 24,910 | 23,742 | 23,065 | –2.1 | –.1 | .3 |
| **Pacific** | **8,060** | **9,079** | **8,081** | **11,034** | **10,362** | **7,839** | **–11.2** | **–6.1** | **.3** |
| Alaska | 671 | 640 | 740 | 722 | 783 | 250 | 4.9 | –3.8 | 11.6 |
| California | 1,936 | 2,102 | 2,375 | 2,266 | 2,226 | 2,004 | –7.9 | –3.4 | –.4 |
| Hawaii | 132 | 154 | 174 | 78 | 66 | 46 | –14.3 | 18.8 | 12.5 |
| Oregon | 832 | 1,029 | 1,020 | 2,249 | 1,904 | 160 | –19.1 | –18.7 | 20.1 |
| Washington | 4,489 | 5,155 | 3,772 | 5,718 | 5,383 | 5,379 | –12.9 | –4.4 | –2.0 |
| Other Power Producers | 19,598 | 20,175 | 19,195 | 19,286 | 16,454 | – | –2.9 | 4.5 | – |
| **U.S. Total** | **933,701** | **912,241** | **872,747** | **863,151** | **856,456** | **801,627** | **2.4** | **2.2** | **1.7** |

* Data round to zero.

Note: Totals may not equal sum of components due to independent rounding. Regional totals for 1988 may not sum to the U.S. total due to distribution to unknown State.

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; and EIA-867, ''Annual Non-utility Power Producer Report.''

## Table B8. Year-End Consumer Coal Stocks by Census Division and State, 1988, 1993-1997

(Thousand Metric Tons)

| Census Division and State | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **New England Total** | **740** | **1,176** | **879** | **1,013** | **897** | **1,032** | **–37.1** | **–4.7** | **–3.6** |
| 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 | – | – | – | – | – | 25 | – | – | – |
| Vermont | – | – | – | – | – | * | – | – | – |
| **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 | w | w | w | w | w | w | w | w | w |
| Pennsylvania | 7,855 | 8,035 | 9,346 | 10,940 | 11,127 | 11,612 | –2.2 | –8.3 | –4.3 |
| **East North Central Total** | **28,332** | **27,955** | **30,679** | **32,507** | **27,363** | **40,067** | **1.3** | **.9** | **–3.8** |
| Illinois | w | w | w | w | w | w | w | w | w |
| Indiana | 6,026 | 7,217 | 8,435 | 10,620 | 7,074 | 10,422 | –16.5 | –3.9 | –5.9 |
| Michigan | w | w | w | w | w | w | w | w | w |
| Ohio | 5,737 | 4,924 | 5,385 | 7,090 | 6,922 | 7,097 | 16.5 | –4.6 | –2.3 |
| Wisconsin | 4,016 | 4,045 | 3,317 | 3,118 | 2,896 | 4,101 | –.7 | 8.5 | –.2 |
| **West North Central Total** | **13,456** | **16,626** | **16,976** | **16,072** | **13,515** | **19,123** | **–19.1** | **–.1** | **–3.8** |
| Iowa | 2,671 | 4,184 | 4,034 | 3,790 | 3,465 | 4,605 | –36.2 | –6.3 | –5.9 |
| Kansas | 2,085 | 2,707 | 3,501 | 2,380 | 1,836 | 3,025 | –23.0 | 3.2 | –4.0 |
| Minnesota | 1,809 | 1,577 | 1,800 | 2,026 | 1,134 | 2,423 | 14.7 | 12.4 | –3.2 |
| Missouri | 3,494 | 4,824 | 4,335 | 4,145 | 3,360 | 4,304 | –27.6 | 1.0 | –2.3 |
| Nebraska | w | w | w | w | w | w | 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 | 3,182 | 3,119 | 2,965 | 3,550 | 3,212 | 4,467 | 2.0 | –.2 | –3.7 |
| Georgia | 2,184 | 3,491 | 3,435 | 4,394 | 2,655 | 5,025 | –37.4 | –4.8 | –8.8 |
| Maryland | w | w | w | w | w | w | w | w | w |
| North Carolina | 1,836 | 2,423 | 2,590 | 3,917 | 2,776 | 3,620 | –24.2 | –9.8 | –7.3 |
| South Carolina | 1,833 | 1,975 | 1,990 | 2,298 | 1,717 | 1,800 | –7.2 | 1.6 | .2 |
| 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 | 2,696 | 2,593 | 3,310 | 3,748 | 2,538 | 4,443 | 3.9 | 1.5 | –5.4 |
| Kentucky | w | w | w | w | w | w | w | w | w |
| Mississippi | w | w | w | w | w | w | w | w | w |
| Tennessee | 1,657 | 1,361 | 1,709 | 1,601 | 1,703 | 3,789 | 21.7 | –.7 | –8.8 |
| **West South Central Total** | **10,291** | **18,040** | **18,656** | **14,478** | **13,703** | **15,652** | **–42.9** | **–6.9** | **–4.5** |
| Arkansas | 865 | 2,467 | 2,558 | 1,612 | 1,706 | 1,739 | –64.9 | –15.6 | –7.5 |
| Louisiana | 1,141 | 2,250 | 2,422 | 1,744 | 1,814 | 2,584 | –49.3 | –10.9 | –8.7 |
| Oklahoma | 2,352 | 3,819 | 3,852 | 2,238 | 1,862 | 2,561 | –38.4 | 6.0 | –.9 |
| Texas | 5,933 | 9,504 | 9,824 | 8,884 | 8,320 | 8,768 | –37.6 | –8.1 | –4.2 |
| **Mountain Total** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** |
| Arizona | 1,283 | 1,836 | 2,751 | 2,941 | 3,372 | 3,837 | –30.1 | –21.5 | –11.5 |
| Colorado | 2,246 | 2,771 | 3,340 | 2,853 | 3,133 | 3,447 | –18.9 | –8.0 | –4.6 |
| Idaho | 96 | 70 | 107 | 71 | 78 | 115 | 36.3 | 5.1 | –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 | w | w | w | w | w | w | w | w | w |
| Wyoming | 1,411 | 2,057 | 2,664 | 2,316 | 1,670 | 2,611 | –31.4 | –4.1 | –6.6 |
| **Pacific Total** | **1,055** | **1,156** | **2,346** | **796** | **833** | **1,778** | **–8.7** | **6.1** | **–5.6** |
| Alaska | * | 1 | 1 | 2 | 4 | 2 | –56.2 | –48.3 | –20.2 |
| California | 107 | 136 | 121 | 114 | 84 | 140 | –21.3 | 6.2 | –3.0 |
| Hawaii | w | w | w | w | w | w | w | w | w |
| Oregon | w | w | w | w | w | w | w | w | w |
| Washington | 800 | 777 | 1,786 | 516 | 416 | 863 | 2.9 | 17.8 | –.8 |
| **U.S. Total** | **96,921** | **111,564** | **122,142** | **123,504** | **109,278** | **143,710** | **–13.1** | **–2.9** | **–4.3** |

* Data round to zero.

**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, 1988, 1993-1997

(Thousand Metric Tons)

| Continent and Country of Destination | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **North America Total** | **15,374** | **12,346** | **9,444** | **8,623** | **8,363** | **17,846** | **24.5** | **16.4** | **–1.6** |
| Canada[1] | 13,586 | 10,912 | 8,552 | 8,340 | 8,064 | 17,447 | 24.5 | 13.9 | –2.7 |
| Mexico | 1,722 | 1,369 | 790 | 218 | 226 | 276 | 25.9 | 66.1 | 22.6 |
| Other[2] | 66 | 66 | 102 | 65 | 73 | 124 | .3 | –2.6 | –6.7 |
| **South America Total** | **7,452** | **6,808** | **6,321** | **5,394** | **5,216** | **5,406** | **9.4** | **9.3** | **3.6** |
| Argentina | 295 | 276 | 310 | 411 | 476 | 553 | 7.1 | –11.2 | –6.7 |
| Brazil | 6,763 | 5,933 | 5,761 | 4,973 | 4,715 | 4,765 | 14.0 | 9.4 | 4.0 |
| Chile | 132 | 521 | 206 | * | * | 51 | –74.6 | 492.9 | 11.2 |
| Other[2] | 262 | 79 | 44 | 11 | 25 | 37 | 231.7 | 79.2 | 24.4 |
| **Europe Total** | **37,495** | **42,813** | **44,107** | **32,500** | **34,088** | **40,948** | **–12.4** | **2.4** | **–1.0** |
| Belgium & Luxembourg | 3,918 | 4,145 | 4,084 | 4,455 | 4,744 | 5,888 | –5.5 | –4.7 | –4.4 |
| Bulgaria | 1,011 | 1,258 | 1,214 | 1,123 | 822 | – | –19.6 | 5.3 | – |
| Denmark | 318 | 1,194 | 1,905 | 432 | 305 | 2,544 | –73.4 | 1.0 | –20.6 |
| Finland | 600 | 638 | 1,187 | 342 | 229 | 62 | –6.0 | 27.2 | 28.7 |
| France | 3,083 | 3,495 | 3,319 | 2,608 | 3,603 | 3,903 | –11.8 | –3.8 | –2.6 |
| Germany, FR | 789 | 957 | 1,772 | 293 | 461 | 636 | –17.5 | 14.4 | 2.4 |
| Greece | * | 265 | * | – | * | * | –99.9 | .2 | –4.8 |
| Iceland | 49 | 56 | 36 | 7 | – | 45 | –13.3 | – | .9 |
| Ireland | 578 | 694 | 829 | 883 | 894 | 1,333 | –16.8 | –10.3 | –8.9 |
| Italy | 6,368 | 8,350 | 8,222 | 6,843 | 6,276 | 10,042 | –23.7 | .4 | –4.9 |
| Netherlands | 4,377 | 6,403 | 6,624 | 4,421 | 5,046 | 4,614 | –31.6 | –3.5 | –.6 |
| Norway | 87 | 77 | 109 | 79 | 92 | 244 | 13.4 | –1.1 | –10.8 |
| Portugal | 1,334 | 1,635 | 1,590 | 958 | 1,353 | 801 | –18.4 | –.3 | 5.8 |
| Romania | 2,035 | 1,372 | 1,800 | 1,409 | 653 | 1,372 | 48.4 | 32.9 | 4.5 |
| Spain | 3,750 | 3,713 | 4,221 | 3,748 | 3,687 | 2,306 | 1.0 | .4 | 5.5 |
| Sweden | 756 | 970 | 1,014 | 636 | 668 | 651 | –22.0 | 3.1 | 1.7 |
| Turkey | 1,898 | 1,966 | 1,825 | 1,211 | 1,456 | 1,836 | –3.5 | 6.8 | .4 |
| United Kingdom | 6,518 | 5,621 | 4,288 | 3,051 | 3,730 | 3,330 | 16.0 | 15.0 | 7.7 |
| Other[2] | 26 | 3 | 71 | * | 71 | 1,341 | NM | –22.3 | –35.5 |
| **Asia Total** | **13,152** | **16,311** | **17,323** | **16,290** | **17,690** | **20,933** | **–19.4** | **–7.1** | **–5.0** |
| China (Taiwan) | 2,033 | 2,215 | 2,298 | 3,061 | 3,117 | 4,241 | –8.2 | –10.1 | –7.8 |
| Israel | 538 | 1,090 | 690 | 784 | 770 | 221 | –50.6 | –8.6 | 10.4 |
| Japan | 7,234 | 9,551 | 10,693 | 9,215 | 10,776 | 12,811 | –24.3 | –9.5 | –6.1 |
| Korea, Republic of | 3,165 | 3,423 | 3,640 | 3,228 | 3,008 | 3,574 | –7.5 | 1.3 | –1.3 |
| Other[2] | 182 | 32 | 2 | 3 | 20 | 87 | 461.0 | 74.6 | 8.6 |
| **Oceania & Australia Total** | **1** | **1** | ***** | ***** | **1** | **2** | **–10.9** | **–5.8** | **–9.7** |
| Other[2] | 1 | 1 | * | * | 1 | 2 | –10.9 | –5.8 | –9.7 |
| **Africa Total** | **2,317** | **3,796** | **3,133** | **1,927** | **2,245** | **1,069** | **–38.9** | **.8** | **9.0** |
| Algeria | 240 | 160 | 200 | 322 | 371 | 642 | 49.6 | –10.3 | –10.4 |
| Egypt | 1,025 | 941 | 1,120 | 951 | 788 | 391 | 8.9 | 6.8 | 11.3 |
| Morocco | 129 | 1,497 | 1,099 | 76 | 533 | 36 | –91.4 | –29.9 | 15.4 |
| South Africa, Rep of | 895 | 1,197 | 713 | 578 | 515 | – | –25.2 | 14.8 | – |
| Other[2] | 28 | – | – | – | 38 | * | – | –7.3 | 97.2 |
| **Total** | **75,791** | **82,075** | **80,329** | **64,735** | **67,603** | **86,203** | **–7.6** | **2.9** | **–1.4** |

[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 1996.

* Data round to zero.

**NM** Not meaningful as value is greater than 500 percent.

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 of Coal by State, 1988, 1993-1997

(Nominal Dollars per Metric Ton)

| Coal-Producing State and Region | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| Alabama | $42.41 | $43.52 | $42.38 | $44.22 | $46.67 | $45.44 | –2.5 | –2.4 | –0.8 |
| 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 |
| California | – | – | – | – | – | w | – | – | – |
| Colorado | $20.35 | $19.77 | $21.23 | $21.78 | $22.44 | $25.45 | 2.9 | –2.4 | –2.4 |
| Illinois | 23.63 | 25.07 | 25.41 | 25.50 | 27.86 | 31.47 | –5.7 | –4.0 | –3.1 |
| Indiana | 21.62 | 22.31 | 23.93 | 24.56 | 25.23 | 26.78 | –3.1 | –3.8 | –2.3 |
| Iowa | – | – | – | w | w | w | – | – | – |
| Kansas | w | w | w | w | w | w | w | w | w |
| Kentucky Total | $26.14 | $26.36 | $27.33 | $27.42 | $27.31 | $28.88 | –.8 | –1.1 | –1.1 |
| Eastern | 27.17 | 27.54 | 28.66 | 27.83 | 28.11 | 29.73 | –1.3 | –.8 | –1.0 |
| Western | 22.59 | 22.47 | 22.88 | 26.05 | 24.64 | 26.42 | .5 | –2.1 | –1.7 |
| Louisiana | w | w | w | w | w | w | w | w | w |
| Maryland | $25.63 | $26.90 | $27.22 | $29.04 | $27.79 | $28.21 | –4.7 | –2.0 | –1.0 |
| Missouri | 18.60 | 25.70 | 20.84 | 24.01 | w | w | –27.6 | w | w |
| Montana | 10.85 | 10.98 | 10.61 | 11.46 | $12.18 | $11.09 | –1.2 | –2.8 | –.2 |
| New Mexico | 24.06 | 27.18 | 26.24 | 25.68 | 25.31 | 25.11 | –11.5 | –1.3 | –.5 |
| North Dakota | 8.89 | 8.83 | 8.81 | 8.40 | 8.41 | 8.13 | .6 | 1.4 | 1.0 |
| Ohio | 26.08 | 27.39 | 28.62 | 32.11 | 30.91 | 33.62 | –4.8 | –4.2 | –2.8 |
| Oklahoma | 29.02 | 29.25 | 26.60 | 28.18 | 27.46 | 34.23 | –.8 | 1.4 | –1.8 |
| Pennsylvania Total | 28.64 | 28.42 | 29.52 | 28.86 | 29.21 | 32.96 | .8 | –.5 | –1.5 |
| Anthracite | 38.71 | 40.54 | 43.85 | 39.76 | 36.31 | 48.68 | –4.5 | 1.6 | –2.5 |
| Bituminous | 28.01 | 27.54 | 28.41 | 28.05 | 28.70 | 32.23 | 1.7 | –.6 | –1.5 |
| Tennessee | 29.80 | 30.63 | 29.70 | 29.95 | 30.01 | 29.52 | –2.7 | –.2 | .1 |
| Texas | 13.40 | 13.41 | 13.41 | 13.65 | 14.19 | 12.51 | –.1 | –1.4 | .8 |
| Utah | 19.41 | 23.85 | 21.06 | 21.24 | 22.94 | 24.72 | –18.6 | –4.1 | –2.6 |
| Virginia | 31.13 | 31.36 | 31.38 | 29.59 | 29.55 | 29.20 | –.7 | 1.3 | .7 |
| Washington | w | w | w | w | w | w | w | w | w |
| West Virginia Total | $29.37 | $29.30 | $29.96 | $30.23 | $30.40 | $31.11 | .2 | –.8 | –.6 |
| Northern | 28.51 | 27.41 | 27.46 | 29.51 | 30.96 | 30.96 | 4.0 | –2.0 | –.9 |
| Southern | 29.65 | 30.00 | 30.94 | 30.54 | 30.20 | 31.19 | –1.1 | –.5 | –.6 |
| Wyoming | 6.62 | 7.06 | 7.25 | 7.53 | 8.06 | 10.09 | –6.3 | –4.8 | –4.6 |
| **Appalachian Total**[1] | **29.26** | **29.52** | **30.25** | **30.16** | **30.47** | **31.84** | **–.9** | **–1.0** | **–.9** |
| **Interior Total**[1] | **19.75** | **20.29** | **20.73** | **21.90** | **22.08** | **24.28** | **–2.7** | **–2.7** | **–2.3** |
| **Western Total**[1] | **10.50** | **11.06** | **11.19** | **11.65** | **12.28** | **13.48** | **–5.0** | **–3.8** | **–2.7** |
| **East of Miss. River** | **27.99** | **28.33** | **29.04** | **29.15** | **29.56** | **31.15** | **–1.2** | **–1.3** | **–1.2** |
| **West of Miss. River** | **10.93** | **11.46** | **11.56** | **12.03** | **12.68** | **13.73** | **–4.6** | **–3.6** | **–2.5** |
| **U.S. Total** | **19.99** | **20.39** | **20.76** | **21.40** | **21.88** | **24.33** | **–1.9** | **–2.2** | **–2.1** |

[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. 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, 1988, 1993-1997

(Nominal Dollars per Metric Ton)

| Census Division and State | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **New England Total** | **$48.14** | **$48.01** | **$47.78** | **$47.19** | **$47.78** | **$50.25** | **0.3** | **0.2** | **–0.5** |
| Connecticut | 55.14 | 55.17 | 54.37 | 51.20 | 49.38 | 66.22 | * | 2.8 | –2.0 |
| Massachusetts | 47.09 | 47.00 | 47.00 | 47.40 | 47.83 | 46.58 | .2 | –.4 | .1 |
| New Hampshire | 46.98 | 46.55 | 45.93 | 43.72 | 46.73 | 52.23 | .9 | .1 | –1.2 |
| **Middle Atlantic Total** | **37.91** | **38.67** | **38.17** | **40.04** | **40.41** | **40.70** | **–2.0** | **–1.6** | **–.8** |
| New Jersey | 50.65 | 50.18 | 52.00 | 53.45 | 52.36 | 50.43 | .9 | –.8 | * |
| New York | 41.14 | 40.95 | 40.63 | 41.49 | 42.58 | 44.67 | .4 | –.9 | –.9 |
| Pennsylvania | 36.69 | 37.55 | 36.91 | 39.01 | 39.39 | 39.27 | –2.3 | –1.8 | –.8 |
| **East North Central Total** | **30.52** | **31.18** | **32.70** | **33.69** | **34.15** | **39.35** | **–2.1** | **–2.8** | **–2.8** |
| Illinois | 33.52 | 35.43 | 35.91 | 36.04 | 38.92 | 44.68 | –5.4 | –3.7 | –3.1 |
| Indiana | 26.84 | 27.20 | 28.59 | 29.54 | 29.47 | 34.21 | –1.3 | –2.3 | –2.6 |
| Michigan | 31.89 | 32.34 | 34.12 | 36.26 | 36.57 | 44.97 | –1.4 | –3.4 | –3.7 |
| Ohio | 34.62 | 35.61 | 37.96 | 38.25 | 37.54 | 39.92 | –2.8 | –2.0 | –1.6 |
| Wisconsin | 22.52 | 21.55 | 23.40 | 25.50 | 25.31 | 31.29 | 4.5 | –2.9 | –3.6 |
| **West North Central Total** | **16.96** | **17.12** | **17.75** | **18.47** | **18.60** | **22.17** | **–.9** | **–2.3** | **–2.9** |
| Iowa | 17.89 | 17.96 | 18.88 | 19.17 | 19.32 | 25.07 | –.4 | –1.9 | –3.7 |
| Kansas | 19.74 | 19.30 | 19.66 | 19.68 | 19.49 | 24.52 | 2.3 | .3 | –2.4 |
| Minnesota | 21.47 | 20.94 | 22.18 | 22.14 | 22.12 | 23.05 | 2.5 | –.7 | –.8 |
| Missouri | 18.52 | 19.08 | 20.00 | 23.58 | 26.90 | 31.70 | –2.9 | –8.9 | –5.8 |
| Nebraska | 11.09 | 13.64 | 14.18 | 14.45 | 14.24 | 15.98 | –18.7 | –6.1 | –4.0 |
| North Dakota | 11.25 | 10.71 | 10.64 | 10.23 | 10.34 | 10.21 | 5.0 | 2.1 | 1.1 |
| South Dakota | 17.62 | 18.67 | 15.82 | 14.44 | 14.66 | 16.96 | –5.6 | 4.7 | .4 |
| **South Atlantic Total** | **40.05** | **40.43** | **42.17** | **43.57** | **44.98** | **45.79** | **–.9** | **–2.8** | **–1.5** |
| Delaware | 45.25 | 45.76 | 46.60 | 46.28 | 48.53 | 51.37 | –1.1 | –1.7 | –1.4 |
| Florida | 46.10 | 46.74 | 48.42 | 48.18 | 48.04 | 48.67 | –1.4 | –1.0 | –.6 |
| Georgia | 41.09 | 40.28 | 42.57 | 43.89 | 47.72 | 46.88 | 2.0 | –3.7 | –1.4 |
| Maryland | 42.71 | 42.43 | 42.99 | 43.92 | 44.95 | 44.22 | .7 | –1.3 | –.4 |
| North Carolina | 38.97 | 40.65 | 44.72 | 46.04 | 46.69 | 49.22 | –4.1 | –4.4 | –2.6 |
| South Carolina | 41.02 | 41.38 | 42.83 | 43.92 | 44.28 | 49.19 | –.9 | –1.9 | –2.0 |
| Virginia | 38.56 | 39.38 | 40.68 | 40.84 | 41.41 | 43.78 | –2.1 | –1.8 | –1.4 |
| West Virginia | 33.82 | 34.09 | 34.84 | 38.25 | 39.05 | 39.63 | –.8 | –3.5 | –1.7 |
| **East South Central Total** | **31.64** | **32.35** | **33.16** | **35.75** | **36.71** | **38.97** | **–2.2** | **–3.6** | **–2.3** |
| Alabama | 39.22 | 40.11 | 40.78 | 44.55 | 46.91 | 52.21 | –2.2 | –4.4 | –3.1 |
| Kentucky | 26.68 | 26.93 | 28.34 | 29.94 | 30.08 | 30.43 | –.9 | –2.9 | –1.4 |
| Mississippi | 35.76 | 36.71 | 37.92 | 39.18 | 44.66 | 50.58 | –2.6 | –5.4 | –3.8 |
| Tennessee | 29.40 | 30.46 | 30.80 | 33.75 | 34.11 | 35.46 | –3.5 | –3.6 | –2.1 |
| **West South Central Total** | **21.70** | **22.19** | **22.78** | **22.91** | **24.40** | **25.44** | **–2.2** | **–2.9** | **–1.8** |
| Arkansas | 31.48 | 28.83 | 30.85 | 30.76 | 32.52 | 30.28 | 9.2 | –.8 | .4 |
| Louisiana | 26.42 | 27.27 | 27.70 | 27.61 | 28.27 | 28.08 | –3.1 | –1.7 | –.7 |
| Oklahoma | 17.50 | 18.51 | 18.74 | 19.29 | 23.50 | 29.12 | –5.5 | –7.1 | –5.5 |
| Texas | 20.61 | 21.24 | 21.66 | 21.86 | 23.05 | 23.70 | –3.0 | –2.8 | –1.5 |
| **Mountain Total** | **23.72** | **24.05** | **23.71** | **24.07** | **24.37** | **23.51** | **–1.4** | **–.7** | **.1** |
| Arizona | 31.91 | 32.57 | 31.59 | 31.15 | 30.63 | 32.99 | –2.0 | 1.0 | –.4 |
| Colorado | 21.97 | 22.31 | 22.85 | 23.16 | 23.80 | 22.97 | –1.5 | –2.0 | –.5 |
| Montana | 12.69 | 13.12 | 12.64 | 12.99 | 12.98 | 10.25 | –3.2 | –.6 | 2.4 |
| Nevada | 34.28 | 33.55 | 31.99 | 35.68 | 35.64 | 33.30 | 2.1 | –1.0 | .3 |
| New Mexico | 26.71 | 28.71 | 28.21 | 28.08 | 27.12 | 23.42 | –6.9 | –.4 | 1.5 |
| Utah | 27.80 | 27.18 | 27.85 | 28.77 | 30.13 | 32.05 | 2.3 | –2.0 | –1.6 |
| Wyoming | 15.61 | 15.76 | 15.75 | 15.53 | 15.47 | 16.21 | –1.0 | .2 | –.4 |
| **Pacific Total** | **27.77** | **26.42** | **25.16** | **24.18** | **23.75** | **28.00** | **5.1** | **4.0** | **–.1** |
| Oregon | 21.99 | 20.73 | 20.72 | 21.14 | 21.77 | 26.13 | 6.1 | .3 | –1.9 |
| Washington | 28.82 | 27.46 | 26.17 | 25.27 | 24.35 | 28.08 | 5.0 | 4.3 | .3 |
| **U.S. Total** | **28.83** | **29.16** | **29.77** | **30.89** | **31.51** | **33.78** | **–1.1** | **–2.2** | **–1.7** |

* 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, 1988, 1993-1997

(Nominal Dollars per Metric Ton)

| Census Division and State | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **New England Total** | **$69.95** | **$63.22** | **$62.72** | **$61.44** | **$63.75** | **$69.59** | **10.6** | **2.3** | ***** |
| Connecticut | – | – | – | – | – | w | – | – | – |
| Maine | w | w | w | w | w | w | w | w | w |
| Massachusetts | w | w | w | w | w | w | w | w | w |
| New Hampshire | – | – | – | – | – | w | – | – | – |
| Vermont | – | – | – | – | – | 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 | $45.77 | $44.21 | $46.19 | $46.52 | $46.47 | $47.21 | 3.5 | –.4 | –0.3 |
| Pennsylvania | 37.69 | 37.30 | 37.56 | 37.10 | 37.53 | 39.87 | 1.1 | .1 | –.6 |
| **East North Central Total** | **36.96** | **37.96** | **38.45** | **38.27** | **38.07** | **39.62** | **–2.6** | **–.7** | **–.8** |
| Illinois | 32.80 | 32.72 | 32.00 | 32.11 | 32.43 | 34.37 | .2 | .3 | –.5 |
| Indiana | 32.80 | 35.01 | 36.53 | 34.56 | 34.07 | 36.59 | –6.3 | –.9 | –1.2 |
| Michigan | 46.23 | 45.50 | 45.39 | 45.42 | 45.70 | 47.43 | 1.6 | .3 | –.3 |
| Ohio | 37.53 | 38.89 | 38.78 | 39.40 | 38.38 | 37.58 | –3.5 | –.6 | * |
| Wisconsin | 44.12 | 44.12 | 44.32 | 45.45 | 45.02 | 47.17 | * | –.5 | –.7 |
| **West North Central Total** | **20.97** | **21.00** | **20.86** | **20.52** | **19.84** | **19.02** | **–.1** | **1.4** | **1.1** |
| Iowa | 31.88 | 32.32 | 32.23 | 31.44 | 30.87 | 36.20 | –1.4 | .8 | –1.4 |
| Kansas | 35.20 | 35.78 | 35.74 | 35.55 | 36.44 | 34.33 | –1.6 | –.9 | .3 |
| Minnesota | 34.21 | 31.80 | 37.92 | 39.31 | 39.47 | 38.85 | 7.6 | –3.5 | –1.4 |
| Missouri | 33.14 | 34.58 | 36.17 | 36.24 | 35.40 | 32.41 | –4.2 | –1.6 | .2 |
| Nebraska | w | w | w | w | w | w | w | w | w |
| North Dakota | w | w | w | w | w | w | w | w | w |
| South Dakota | $25.74 | $27.45 | $24.48 | $24.01 | $17.16 | $16.02 | –6.2 | 10.7 | 5.4 |
| **South Atlantic Total** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** |
| Delaware | w | w | w | w | w | w | w | w | w |
| Florida | $49.75 | $50.36 | $51.41 | $51.37 | $53.22 | $50.87 | –1.2 | –1.7 | –.2 |
| Georgia | 49.42 | 48.73 | 49.21 | 50.39 | 49.82 | 48.24 | 1.4 | –.2 | .3 |
| Maryland | 35.95 | 35.85 | 34.90 | 35.47 | 35.47 | 36.18 | .3 | .3 | –.1 |
| North Carolina | 47.55 | 47.80 | 47.72 | 48.08 | 47.89 | 48.01 | –.5 | –.2 | –.1 |
| South Carolina | 48.75 | 48.59 | 47.58 | 48.32 | 47.78 | 46.10 | .3 | .5 | .6 |
| Virginia | 48.33 | 47.96 | 46.85 | 45.82 | 45.49 | 42.29 | .8 | 1.5 | 1.5 |
| West Virginia | 38.92 | 36.78 | 37.05 | 36.07 | 36.28 | 34.15 | 5.8 | 1.8 | 1.5 |
| **East South Central Total** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** |
| Alabama | $44.31 | $44.26 | $43.58 | $42.70 | $43.00 | $43.38 | .1 | .8 | .2 |
| Kentucky | 49.28 | 48.52 | 48.60 | 47.64 | 46.63 | 48.32 | 1.6 | 1.4 | .2 |
| Mississippi | w | w | w | w | w | w | w | w | w |
| Tennessee | $40.05 | $38.82 | $39.33 | $38.96 | $39.04 | $38.17 | 3.2 | .6 | .5 |
| **West South Central Total** | **24.71** | **24.02** | **24.29** | **25.29** | **23.57** | **26.44** | **2.9** | **1.2** | **–.7** |
| Arkansas | 46.71 | 47.67 | 47.97 | 48.81 | 48.57 | 49.86 | –2.0 | –1.0 | –.7 |
| Louisiana | w | w | w | w | w | w | w | w | w |
| Oklahoma | w | w | w | w | w | w | w | w | w |
| Texas | $22.19 | $20.93 | $20.68 | $21.54 | $19.38 | $20.30 | 6.0 | 3.4 | 1.0 |
| **Mountain Total** | **29.91** | **29.44** | **29.83** | **31.73** | **31.43** | **31.40** | **1.6** | **–1.2** | **–.5** |
| Arizona | 42.78 | 43.29 | 44.60 | 45.58 | 44.65 | 42.09 | –1.2 | –1.1 | .2 |
| Colorado | 27.70 | 25.54 | 28.78 | 31.92 | 31.56 | 31.83 | 8.5 | –3.2 | –1.5 |
| Idaho | 38.10 | 40.11 | 37.60 | 36.76 | 36.13 | 35.88 | –5.0 | 1.3 | .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 | $21.25 | $21.06 | $21.76 | $29.29 | $29.23 | $28.08 | .9 | –7.6 | –3.0 |
| Wyoming | 26.11 | 24.61 | 25.05 | 25.21 | 25.83 | 27.48 | 6.1 | .3 | –.6 |
| **Pacific Total** | **47.67** | **46.79** | **48.15** | **49.51** | **48.31** | **49.30** | **1.9** | **–.3** | **–.4** |
| California | 44.25 | 43.58 | 45.32 | 47.83 | 47.25 | 49.21 | 1.5 | –1.6 | –1.2 |
| Hawaii | w | w | w | w | w | w | w | w | w |
| Oregon | w | w | w | w | w | w | w | w | w |
| Washington | $65.92 | $64.83 | $65.20 | $64.89 | $58.54 | $53.78 | 1.7 | 3.0 | 2.3 |
| **U.S. Total** | **35.72** | **35.63** | **35.74** | **35.88** | **35.53** | **36.85** | **.3** | **.1** | **–.3** |

* 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, 1988, 1993-1997

(Nominal Dollars per Metric Ton)

| Census Division and State | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **Middle Atlantic Total** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** |
| New York | w | w | w | w | w | w | w | w | w |
| Pennsylvania | $50.93 | $49.79 | $50.83 | $50.98 | $51.16 | $47.52 | 2.3 | –0.1 | 0.8 |
| **East North Central Total** | **54.15** | **54.61** | **54.12** | **52.06** | **54.58** | **56.46** | **–.8** | **–.2** | **–.5** |
| Illinois | w | w | w | w | w | w | w | w | w |
| Indiana | $55.94 | $57.25 | $58.13 | $56.11 | $57.64 | $59.81 | –2.3 | –.7 | –.7 |
| Michigan | w | w | w | w | w | w | w | w | w |
| Ohio | $51.69 | $49.58 | $46.50 | $46.32 | $49.68 | $51.06 | 4.2 | 1.0 | .1 |
| **South Atlantic Total** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** | **w** |
| Maryland | – | – | – | – | – | 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 | $55.16 | $54.42 | $53.38 | $52.31 | $52.36 | $50.19 | 1.3 | 1.3 | 1.0 |
| Kentucky | w | w | w | w | w | w | w | w | w |
| Tennessee | – | – | – | – | – | 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** | **$52.48** | **$52.17** | **$52.18** | **$51.32** | **$52.30** | **$52.58** | **.6** | **.1** | ***** |

* 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, 1988, 1993-1997

(Nominal Dollars per Metric Ton)

| Continent and Country of Origin | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **North America Total** | **$42.01** | **$38.46** | **$38.72** | **$33.96** | **$32.63** | **$29.61** | **9.2** | **6.5** | **4.0** |
| Canada | 42.01 | 38.47 | 38.72 | 33.96 | 32.65 | 29.44 | 9.2 | 6.5 | 4.0 |
| Mexico | – | 36.85 | – | – | 23.35 | 31.46 | –100.0 | –100.0 | –100.0 |
| **South America Total** | **35.81** | **34.44** | **36.11** | **31.97** | **30.46** | **30.07** | **4.0** | **4.1** | **1.9** |
| Colombia | 35.40 | 34.61 | 34.33 | 30.27 | 30.04 | 30.30 | 2.3 | 4.2 | 1.7 |
| Venezuela | 36.66 | 34.14 | 38.74 | 35.73 | 31.82 | 28.76 | 7.4 | 3.6 | 2.7 |
| **Europe Total** | **54.25** | – | **28.27** | – | **35.65** | **39.88** | – | **11.1** | **3.5** |
| Denmark | – | – | – | – | 35.65 | 39.88 | – | –100.0 | –100.0 |
| Norway | 54.51 | – | – | – | – | – | – | – | – |
| Switzerland | 45.51 | – | – | – | – | – | – | – | – |
| United Kingdom | – | – | 28.27 | – | – | – | – | – | – |
| **Asia Total** | **36.43** | **35.77** | **38.73** | **37.58** | **47.07** | – | **1.8** | **–6.2** | – |
| Indonesia | 36.18 | 35.77 | 38.73 | 37.26 | 47.07 | – | 1.1 | –6.4 | – |
| Vietnam | 54.11 | – | – | 53.00 | – | – | – | – | – |
| **Oceania & Australia Total** | **36.89** | **36.83** | **37.00** | **34.35** | **34.79** | **32.12** | **.2** | **1.5** | **1.5** |
| Australia | 36.89 | 36.83 | 34.16 | 33.09 | 34.79 | 32.12 | .2 | 1.5 | 1.5 |
| New Zealand | – | – | 51.17 | 48.67 | – | – | – | – | – |
| **Africa Total** | – | – | – | **27.92** | **30.66** | – | – | **–100.0** | – |
| South Africa, Rep of | – | – | – | 27.92 | – | – | – | – | – |
| Swaziland | – | – | – | – | 30.66 | – | – | –100.0 | – |
| **Total**[1] | **36.93** | **35.46** | **36.97** | **33.08** | **32.46** | **30.02** | **4.1** | **3.3** | **2.3** |
| **U.S. Total**[2] | **37.83** | **36.87** | **37.62** | **33.30** | **32.94** | **33.02** | **2.6** | **3.5** | **1.5** |

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 $55 per short ton ($18.14 to $49.90 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, 1988, 1993-1997

(Nominal Dollars per Metric Ton)

| Continent and Country of Destination | 1997 | 1996 | 1995 | 1994 | 1993 | 1988 | Percent Change 1996-1997 | Average Annual Percent Change | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1993-1997 | 1988-1997 |
| **North America Total** | **$33.70** | **$36.48** | **$37.53** | **$35.73** | **$37.53** | **$45.75** | **–7.6** | **–2.6** | **–3.3** |
| Canada[1] | 32.15 | 35.53 | 36.92 | 35.36 | 37.22 | 45.82 | –9.5 | –3.6 | –3.9 |
| Mexico | 45.53 | 43.77 | 44.05 | 48.81 | 48.55 | 45.26 | 4.0 | –1.6 | .1 |
| Other[2] | 41.97 | 41.92 | 37.80 | 39.22 | 37.23 | 37.60 | .1 | 3.0 | 1.2 |
| **South America Total** | **48.44** | **48.29** | **47.90** | **46.61** | **48.25** | **48.93** | **.3** | **.1** | **–.1** |
| Argentina | 52.57 | 51.11 | 47.84 | 46.83 | 47.63 | 48.18 | 2.9 | 2.5 | 1.0 |
| Brazil | 48.64 | 49.25 | 48.37 | 46.59 | 48.32 | 49.04 | –1.2 | .2 | –.1 |
| Chile | 35.54 | 35.69 | 34.94 | 38.12 | 51.59 | 51.80 | –.4 | –8.9 | –4.1 |
| Other[2] | 44.98 | 43.19 | 47.87 | 45.04 | 43.50 | 28.97 | 4.1 | .8 | 5.0 |
| **Europe Total** | **47.42** | **46.41** | **45.10** | **46.14** | **47.45** | **46.30** | **2.2** | ***** | **.3** |
| Belgium & Luxembourg | 50.38 | 50.41 | 47.92 | 46.55 | 47.65 | 46.66 | * | 1.4 | .8 |
| Bulgaria | 51.17 | 48.79 | 48.54 | 46.40 | 46.25 | – | 4.9 | 2.5 | – |
| Denmark | 34.97 | 32.29 | 32.37 | 32.22 | 38.53 | 33.17 | 8.3 | –2.4 | .6 |
| Finland | 45.89 | 46.42 | 43.51 | 45.34 | 43.66 | 46.00 | –1.1 | 1.3 | * |
| France | 50.66 | 49.53 | 48.19 | 48.76 | 46.56 | 48.31 | 2.3 | 2.1 | .5 |
| Germany, FR | 49.15 | 45.28 | 38.57 | 49.97 | 42.97 | 49.02 | 8.6 | 3.4 | * |
| Greece | 44.95 | 37.42 | 44.76 | – | 44.91 | 44.14 | 20.1 | * | .2 |
| Iceland | 65.40 | 63.38 | 61.78 | 41.89 | – | 58.69 | 3.2 | – | 1.2 |
| Ireland | 41.88 | 41.17 | 39.76 | 37.28 | 39.51 | 45.33 | 1.7 | 1.5 | –.9 |
| Italy | 50.19 | 49.66 | 48.66 | 47.40 | 48.86 | 47.09 | 1.1 | .7 | .7 |
| Netherlands | 49.57 | 45.59 | 46.26 | 46.22 | 48.75 | 44.50 | 8.7 | .4 | 1.2 |
| Norway | 64.35 | 62.89 | 62.19 | 60.16 | 58.95 | 48.11 | 2.3 | 2.2 | 3.3 |
| Portugal | 40.52 | 40.26 | 40.18 | 39.96 | 41.56 | 42.97 | .6 | –.6 | –.6 |
| Romania | 49.14 | 51.76 | 46.77 | 42.00 | 42.48 | 48.01 | –5.0 | 3.7 | .3 |
| Spain | 40.79 | 41.41 | 38.30 | 44.23 | 47.02 | 49.79 | –1.5 | –3.5 | –2.2 |
| Sweden | 53.13 | 52.36 | 53.14 | 50.22 | 50.66 | 49.01 | 1.4 | 1.2 | .9 |
| Turkey | 50.78 | 48.86 | 46.97 | 45.51 | 46.94 | 47.70 | 3.9 | 2.0 | .7 |
| United Kingdom | 43.32 | 42.88 | 45.11 | 49.67 | 50.64 | 49.13 | 1.0 | –3.8 | –1.4 |
| Other[2] | 37.99 | 38.65 | 41.95 | 45.09 | 43.65 | 47.26 | –1.7 | –3.4 | –2.4 |
| **Asia Total** | **43.79** | **43.62** | **43.10** | **42.58** | **44.63** | **46.21** | **.4** | **–.5** | **–.6** |
| China (Taiwan) | 40.51 | 40.63 | 40.73 | 42.60 | 43.53 | 44.33 | –.3 | –1.8 | –1.0 |
| Israel | 40.58 | 40.12 | 39.45 | 36.63 | 38.35 | 40.69 | 1.1 | 1.4 | * |
| Japan | 42.99 | 43.44 | 43.14 | 42.47 | 44.88 | 46.65 | –1.0 | –1.1 | –.9 |
| Korea, Republic of | 48.48 | 47.10 | 45.17 | 44.35 | 46.43 | 46.93 | 2.9 | 1.1 | .4 |
| Other[2] | 40.05 | 53.89 | 33.52 | 41.05 | 48.75 | 59.15 | –25.7 | –4.8 | –4.2 |
| **Oceania & Australia Total** | **44.93** | **44.89** | **43.82** | **44.04** | **37.99** | **42.19** | **.1** | **4.3** | **.7** |
| Other[2] | 44.93 | 44.89 | 43.82 | 44.04 | 37.99 | 42.19 | .1 | 4.3 | .7 |
| **Africa Total** | **53.46** | **48.90** | **47.47** | **48.05** | **46.90** | **48.37** | **9.3** | **3.3** | **1.1** |
| Algeria | 51.41 | 55.37 | 52.69 | 47.66 | 48.85 | 48.85 | –7.1 | 1.3 | .6 |
| Egypt | 56.54 | 58.83 | 54.42 | 47.55 | 49.45 | 48.65 | –3.9 | 3.4 | 1.7 |
| Morocco | 33.81 | 37.40 | 36.37 | 38.62 | 37.32 | 36.75 | –9.6 | –2.4 | –.9 |
| South Africa, Rep of | 53.64 | 54.61 | 52.23 | 50.34 | 51.67 | – | –1.8 | .9 | – |
| Other[2] | 43.29 | – | – | – | 44.68 | 44.00 | – | –.8 | –.2 |
| **Total**[3] | **44.36** | **44.67** | **44.13** | **43.98** | **45.55** | **46.36** | **–.7** | **–.7** | **–.5** |
| **U.S. Total**[4] | **44.70** | **44.93** | **44.39** | **44.02** | **45.65** | **46.55** | **–.5** | **–.5** | **–.4** |

[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 1996.

[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 $20 to $60 per short ton ($18.14 to $54.43 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

# References

**Figure C1. Coal-Bearing Areas of the United States**

# 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**

# Coal Reports and Feature Articles

## *Coal Reports*

- *Weekly Coal Production*, DOE/EIA-0218 (97-35).
- *Coal Data: A Reference*, DOE/EIA-0064 (93), February 1995.
- *State Coal Profiles*, DOE/EIA-0576, January 1994.
- *Quarterly Coal Report*, DOE/EIA-0121(98/1Q).
- *The Changing Structure of the U.S. Coal Industry: An Update*, DOE/EIA-0513(93), July 1993.
- *U.S. Coal Reserves: A Review and Update* DOE/EIA-0529(95), August 1996.
- *Annual Energy Outlook 1998*, DOA/EIA-0383(98), December 1997.
- *Energy Policy Transportation Rate Study, Interim Report on Coal Transportation* DOE/EIA-0549, September 1991.
- *Electric Power Monthly*, DOE/EIA-0226(98/08), August 1998.
- *Electric Power Annual*, DOE/EIA-0348(96), Vol. 2, February 1998.
- *Longwall Mining*, DOE/EIA-TR-0588 March 1995.
- *Monthly Energy Review*, DOE/EIA-0035(98/08) August 1998.
- *Short-Term Energy Outlook: Quarterly Projections January 1998*, DOE/EIA-0202(98/1Q), January 1998.
- *Cost and Quality of Fuels for Electric Utility Plants 1997*, DOE/EIA-0191(97), May 1998.

## *Feature Articles*

- "U.S. Coal Supply and Demand: 1997 Review," *Mining Engineering*, May 1998, Vol.50,No.5, May 1998, pp.60-68.
- "Carbon Dioxide Emission Factors for Coal," *Quarterly Coal Report*, DOE/EIA-0121 (94/1Q), August 1994.
- "Federal and Indian Coal Lands: A Growing Source of Energy and Revenue," *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," *Coal Production 1991*, DOE/EIA-0118(91), October 1992.
- "Profile of New Coal Mines in the 1980's," *Coal Production 1990*, DOE/EIA-0118), September 1991.
- "The Comparability of Resource and Reserve Data for Crude Oil, Natural Gas, Coal, and Uranium," *Quarterly Coal Report October-December 1994*, DOE/EIA-0121 (94/4Q) May 1995.
- "Annual Review 1995: Coal Overview," *Mining Engineering*, Vol. 48, No. 5, May 1996, pp. 41-46.
- "Coal Geology, Reserves and Production in Northern and Central Appalachia," *Mining Engineering*, Special Edition, December 1995.

# 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 Corporation, 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); and miner injury and fatality data which were collected by the U.S. Department of Labor (Mine Safety and Health Administration).

## 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 1997 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 1997. All other data collected on Form EIA-7A are reported for only those companies that owned a mining operation that produced, processed, or prepared 10,000 short tons or more of coal in 1997 and preparation plants with 5,000 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. EIA compares respondents to this survey 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 1997, there were 2,033 mining operations that produced, processed, or prepared 10,000 or more short tons of coal. Of these mining operations, 75.6 percent (1,572) responded to the EIA-7A survey. In 1997, there were 1,547 mines that produced 10,000 or more short tons of coal. Of these mines, 76.1 percent (1,177) responded to the EIA-7A survey; they accounted for 1,061 million short tons, or 97.3 percent of the 1997 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

**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 Mine Safety and Health Administration Data | | Number of Operations | Production |
| | Number of Operations | Production | Number of Operations | Production | | |
| Alabama | 49 | 24,100 | 14 | 368 | 63 | 24,468 |
| Alaska | 1 | 1,450 | – | – | 1 | 1,450 |
| Arizona | 3 | 11,723 | – | – | 3 | 11,723 |
| Arkansas | – | – | 3 | 18 | 3 | 18 |
| Colorado | 19 | 27,449 | – | – | 19 | 27,449 |
| Illinois | 31 | 41,129 | 2 | 30 | 33 | 41,159 |
| Indiana | 41 | 35,479 | 1 | 19 | 42 | 35,497 |
| Kansas | 2 | 268 | 1 | 91 | 3 | 360 |
| Kentucky Total | 488 | 143,904 | 195 | 11,949 | 683 | 155,853 |
| Eastern | 437 | 110,482 | 184 | 10,436 | 621 | 120,918 |
| Western | 51 | 33,422 | 11 | 1,513 | 62 | 34,936 |
| Louisiana | 2 | 3,545 | – | – | 2 | 3,545 |
| Maryland | 16 | 4,141 | 3 | 18 | 19 | 4,160 |
| Missouri | 3 | 396 | 1 | 5 | 4 | 401 |
| Montana | 7 | 40,997 | 1 | 8 | 8 | 41,005 |
| New Mexico | 6 | 27,025 | – | – | 6 | 27,025 |
| North Dakota | 5 | 29,579 | 2 | 1 | 7 | 29,580 |
| Ohio | 79 | 28,479 | 20 | 675 | 99 | 29,154 |
| Oklahoma | 9 | 1,614 | 2 | 7 | 11 | 1,621 |
| Pennsylvania Total | 324 | 73,702 | 189 | 2,496 | 513 | 76,198 |
| Anthracite | 86 | 3,234 | 95 | 1,444 | 181 | 4,678 |
| Bituminous | 238 | 70,468 | 94 | 1,052 | 332 | 71,520 |
| Tennessee | 35 | 3,030 | 7 | 270 | 42 | 3,300 |
| Texas | 12 | 53,328 | – | – | 12 | 53,328 |
| Utah | 13 | 26,104 | 2 | 579 | 15 | 26,683 |
| Virginia | 158 | 29,461 | 89 | 6,376 | 247 | 35,837 |
| Washington | 3 | 4,495 | – | – | 3 | 4,495 |
| West Virginia Total | 360 | 167,604 | 118 | 6,139 | 478 | 173,743 |
| Northern | 77 | 41,128 | 32 | 1,674 | 109 | 42,802 |
| Southern | 283 | 126,476 | 86 | 4,465 | 369 | 130,941 |
| Wyoming | 25 | 281,881 | – | – | 25 | 281,881 |
| **U.S. Total** | 1,691 | 1,060,883 | 650 | 29,049 | 2,341 | 1,089,932 |

Notes: 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.''

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 with 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. EIA maintains data from the Form EIA-7A on an automated database at its 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 2, 1998. Nonresponse letters were mailed March 11 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 1996 production was 100,000 short tons or more.

[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.

Some forms could not be delivered. Where possible, address corrections were obtained. Some mining operations that had reported in earlier surveys or operated only in 1997 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 604 mines, which produced 29 million short tons, or 2.7 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 10,000 or more short tons, missing production quantity data were derived from the secondary source for 547 mines, representing 2.6 percent (28.3 million short tons).

Since 1992, California has not reported coal production as the courts determined that the product mined in that State did not meet the standard classification for coal.

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 classified as open market unless information was available to classify it as captive. Of those mines whose production was 10,000 or more short tons, value data were estimated for 509 mines, representing 6.3 percent (68.7 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 10,000 or more short tons, one or more of these data elements were derived from secondary sources or estimated for 521 mines representing 4.8 percent (52.3 million short tons) of their production total. Of the mining operations that produced, processed, or prepared 10,000 or more short tons, one or more of these data elements were derived from secondary sources or estimated for 632 mining operations, or 31.1 percent of the total operations in this category.

Missing *direct labor hours* were estimated using county-level 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-level 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 1996 recoverable reserves minus the mine's 1997 production. If this calculation could not be made, the mine's projected production for 1997 was used. If recoverable coal reserves for 1996 and 1997 and projected production for 1997 were all missing, no estimate was made. In 1997, recoverable reserves were reported by or estimated for 1,131 mines, representing 1,040 million short tons, or 73.1 percent of the mines whose production exceeded 10,000 or more short tons.

Missing *recovery percentage* data were estimated by using 1997 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 1997 production. If productive capacity was reported as less than annual production, productive capacity was equated to 1997 production. There were 557 in-scope mines with production of 189.7 million short tons for which 1997 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 1997 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 78.83 versus 82.20, when those mines are included.

In 1997, there were 35 mines that produced 2.7 million short tons of refuse bituminous and subbituminous coal. Those operations are not included in this report. In 1997, there were 2.3 million short tons of anthracite refuse produced and included in this report. An additional 4 million short tons of anthracite refuse was recovered and used by nonutility power producers in Pennsylvania is 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."

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 1,000 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 1,000 or more tons in the past year were required to report. In 1997, 633 manufacturers responded to the EIA-3 survey. The response rate for the 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 99 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 manufac-

**Table D2. Interquartile Range and Average Mine Price by State and Mine Type, 1997**
(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 | 39.54 | 11.75 | 35.15 | 11.16 | 38.48 | 10.42 |
| Alaska | – | – | w | w | w | w |
| Arizona | – | – | w | w | w | w |
| Arkansas | – | – | w | w | w | w |
| Colorado | 18.50 | – | 18.40 | – | 18.46 | 2.46 |
| Illinois | 22.22 | 2.29 | 17.12 | – | 21.44 | 2.79 |
| Indiana | w | w | w | w | 19.62 | 3.94 |
| Kansas | – | – | w | w | w | w |
| Kentucky Total | 24.73 | 5.81 | 22.08 | 4.78 | 23.72 | 6.17 |
| Eastern | 26.26 | 2.85 | 22.45 | 5.40 | 24.65 | 5.02 |
| Western | 20.67 | 2.14 | 19.92 | 1.88 | 20.49 | 3.08 |
| Louisiana | – | – | w | w | w | w |
| Maryland | w | w | w | w | 23.26 | – |
| Missouri | – | – | 16.87 | – | 16.87 | – |
| Montana | – | – | 9.84 | 8.85 | 9.84 | 8.85 |
| New Mexico | w | w | w | w | 21.83 | 5.19 |
| North Dakota | – | – | 8.06 | – | 8.06 | – |
| Ohio | 25.16 | 14.03 | 21.57 | 6.39 | 23.66 | 9.66 |
| Oklahoma | w | w | w | w | 26.32 | – |
| Pennsylvania Total | 26.30 | 1.68 | 25.13 | 7.81 | 25.98 | 3.62 |
| Anthracite | 43.63 | – | 34.39 | 26.13 | 35.12 | 25.87 |
| Bituminous | 26.19 | 1.68 | 22.87 | 8.20 | 25.41 | 3.42 |
| Tennessee | w | w | w | w | 27.03 | 5.55 |
| Texas | – | – | 12.15 | 2.43 | 12.15 | 2.43 |
| Utah | 17.61 | 6.28 | – | – | 17.61 | 6.28 |
| Virginia | 29.07 | 4.65 | 25.74 | 7.32 | 28.24 | 8.76 |
| Washington | – | – | w | w | w | w |
| West Virginia Total | 27.64 | 6.45 | 24.60 | 5.59 | 26.64 | 6.36 |
| Northern | 26.41 | 4.99 | 22.31 | 8.46 | 25.86 | 5.81 |
| Southern | 28.22 | 5.91 | 24.86 | 4.31 | 26.90 | 5.88 |
| Wyoming | w | w | w | w | 6.00 | 1.65 |
| **Appalachian Total**[1] | **27.74** | **6.37** | **24.24** | **6.67** | **26.55** | **6.52** |
| **Interior Total**[1] | **21.62** | **2.49** | **15.64** | **8.03** | **17.91** | **8.31** |
| **Western Total**[1] | **17.90** | **1.46** | **8.54** | **3.73** | **9.52** | **10.69** |
| **East of Miss. River** | **26.67** | **6.04** | **23.08** | **6.59** | **25.39** | **6.83** |
| **West of Miss. River** | **17.95** | **6.44** | **9.10** | **1.46** | **9.92** | **9.82** |
| **U.S. Total** | **25.68** | **7.50** | **13.39** | **15.74** | **18.14** | **18.45** |

[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.''

turing 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 per year. In

1997, 633 manufacturers responded to the EIA-3A survey. The response rate for the year 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 1997, there were 27 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 1997, there were 27 respondents to the EIA-5A survey, and the response rate was 100 percent.

### Coal Distribution Report (Form EIA-6A)

Form EIA-6 is used to survey all U.S. companies (producers and/or distributors) that own or purchase and distribute more than 50,000 short tons annually.[2] Data on coal production and purchases, distribution by consumer category, and method of transportation are reported.

In 1997, there were about 950 respondents to the EIA-6A 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, respondents 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-6A 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-6A only represent the domestic coal distributed; therefore, imported coal distributed during the quartes 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-6A 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 700 plants, accounted for 100 percent of total electric utility generation.

[2] For the States of Arkansas, Maryland, Oklahoma, and the anthracite portion of Pennsylvania, the threshold is 10,000 tons.

Beginning with the 1996 data collection, the Form EIA-759 is a cutoff model sample of approximately 360 electric utilities drawn from the frame of all operators of electric utility plants (approximately 700 electric utilities) that generate electric power for public use. Data will be collected on an annual basis from the remaining operators of electric utiltiy plants. The new monthly data collection is from all utilities with at least one plant with a name- plate capacity of 25 megawatts or more. (Note: includes all nuclear units). However, the few utilities that generate electricity by using renewable fuel sources other than hydroelectric are all included in the sample. The Form EIA-759 is used to collect monthly data on net generation; consumption of coal, petroleum, and natural gas; and end-of-the-month stocks of coal and petroleum for each plant by fuel-type combination.

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.

## 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

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.

## 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 breakdown as well as the country destination 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 link 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 account 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 because there are differences in reporting time and survey thresholds.

***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 for deriving data.

## 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.

***Nonutility Electric Generating Facilities.*** Consumption is reported on Form EIA-867.

***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 food manufacturing (North American Industry Classification System (NAICS 311), paper manufacturing (NAICS 322), chemicals manufacturing (NAICS 325), petroleum and coal products (NAICs 324), nonmetallic mineral products (NAICS 327) and primary metal manufacturing (NAICS 331).

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 fourth 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 2 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 35 with EIA reported imported coal receipts at electric utilities, manufacturers, and coke plants for 1997 shows a difference of about 1.3 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. Revisions

All data published in this report are considered final. 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 1-percent threshold are left to the discretion of the Office Director.

# 10. 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 excise and sales taxes.

## Table D3. Implicit Price Deflator, 1988-1997

| Year | Implicit Price Deflator (1992 = 100) |
|---|---|
| 1988 | 86.1 |
| 1989 | 89.7 |
| 1990 | 93.6 |
| 1991 | 97.3 |
| 1992 | 100.0 |
| 1993 | 102.6 |
| 1994[R] | 105.1 |
| 1995[R] | 107.8 |
| 1996[R] | 110.2 |
| 1997 | 112.4 |

[R] Revised data.

Source: Bureau of Economic Analysis, U.S. Department of Commerce, *Survey of Current Business.*

# 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 $n^{th}$ 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 carbon, 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, Washington, 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.
- ***Pennsylvania 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 thousand 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 sequential 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 unloading 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 atmospheric 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: or from its "outer continental shelf" as defined in 43 U.S.C. 1331. 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 Francisco, 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 thousand 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 discharged 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 kilowatt hours, 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, mechanical 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.

**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.

**Highwall**: the unexcavated face of exposed overburden and coal in a surface mine.

**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.

**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.

**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 negotiation 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 naphtha 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 pentane 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. Lignite comprises two groups classified according to the following ASTM Specification 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 semifinished) products. Includes coal used for gasification/liquefaction.

**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, pentane 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 aviation gasoline, special naphtha, 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. Excluded 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, pentane plus, aviation gasoline, motor gasoline, naphtha-type jet fuel, kerosene-type jet fuel, kerosene, distillate fuel oil, residual fuel oil, petrochemical feedstocks, special naphtha, lubricants, waxes, petroleum coke, asphalt, road oil, still gas, and miscellaneous products.

**Photovoltaic 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 (photovoltaic) 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 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 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 2,000 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 1 percent), medium (greater than 1 percent and less than or equal to 3 percent), and high (greater than 3 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 naphtha 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.