

# Annual Coal Report

## 2005

October 2006

### Energy Information Administration

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# Preface

The *Annual Coal Report* (ACR) provides information about U.S. coal production, number of mines, prices, productivity, employment, productive capacity, and recoverable reserves to a wide audience, including Congress, Federal and State agencies, the coal industry, and the general public. This report is published by the Energy Information Administration (EIA) to fulfill data collection and dissemination responsibilities as specified in the Federal Energy Administration Act of 1974 (Public Law 93-275), as amended.

This report presents annual data on coal production, prices, recoverable reserves, employment, productivity, productive capacity, consumption, and stocks. U.S. coal production, employment, and productivity are based on the U.S. Department of Labor's Mine Safety and Health Administration's Form 7000-2, "Quarterly Mine

Employment and Coal Production Report." Prices, recoverable reserves, and productive capacity are based on EIA's annual survey form, EIA-7A, "Coal Production Report."

This report is the 30<sup>th</sup> 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 acknowledges the cooperation of the respondents in supplying the information published in the *Annual Coal Report* and appreciates the valuable assistance of State coal mining agencies and the U.S. Department of Labor: Mine Safety and Health Administration.

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# Executive Summary

Coal production in the United States reached a record level in 2005, ending the year at 1,131.5 million short tons, according to data from the Energy Information Administration (Table ES1). Production in 2005 was 19.4 million short tons higher than the 2004 level of 1,112.1 million short tons, and surpassed the prior record set in 2001 by 3.8 million short tons. Although total U.S. coal consumption rose in 2005, not all coal-consuming sectors had increased consumption for the year. Coal consumption increased in the electric power sector by 2.1 percent and declined in both the other industrial sector and coking coal sector. (Note: All unit and percentage change calculations are done at the short-tons level.) Total coal stocks declined during the year, as electric generators used their stockpiles to help meet increased demands and missed shipments, while coal producers used their stockpiles to supplement their production levels in 2005.

The expanding economy and the warmer than normal summer weather in 2005 helped to drive up the demand for coal in the electric power sector during the year. Coal consumption in the electric power sector increased 21.2 million short tons in 2005. Data show that total generation in the electric power sector (electric utilities and independent power producers) in the United States increased by 2.4 percent in 2005, while coal-based generation increased by 1.8 percent. As a result of a larger proportion of lower Btu coal being used in 2005, coal generation did not rise as much as coal consumption measured in short tons. Coal use in the non-electricity sector declined by 3.3 percent to a level of 88.0 million short tons.

For a second consecutive year, the average delivered price of coal increased in all domestic markets in 2005. The U.S. electric utility price-per-short-ton increase was 14.4 percent. Coking coal prices had the largest increase in average delivered price for any domestic sector, increasing by 36.2 percent, while the price for the other industrial sector increased by 21.2 percent in 2005. Average open market mine prices increased by 18.3 percent.

## Production

U.S. coal production increased in 2005 by 1.7 percent to reach a record level of 1,131.5 million short tons (Figure ES1 and Table ES1), 19.4 million short tons higher than the 2004 production. The 2005 coal production was 0.3 percent higher than the prior record set in 2001 of 1,127.7

million short tons. Exclusive of refuse production, all three major coal-producing regions had an increase in their production levels in 2005, something that had not happened since 2001. The percentage increases were 1.7 percent in both the Appalachia and Western regions and 2.1 percent in the Interior region. The tonnage increase in coal production in the Western Region accounted for 49.7 percent of the total increase in the United States in 2005 (Figure ES1 and Table ES2).

The recurring problems that the coal industry typically deals with had varying impacts on coal production in 2005. Although many of these issues were the same as last year (weather, environmental, legal challenges, and global economics), the overriding issue for the U.S. coal industry in 2005 was transportation of coal from the mines to the consumers.

The majority of coal in the United States is moved by railroads exclusively or in multi-modal service with another method of transportation. Other modes of coal transport are barges, trucks, tramways, and conveyors. In 2005, flooding on the major waterways, along with river lock repairs and sunken barges during the winter, as well as low water levels on some major river systems during the summer, contributed to the transportation problems. In addition, three major hurricanes hit the United States in 2005 (Dennis, Katrina, and Rita) causing numerous problems for the coal industry including flooding, disruptions in deliveries, closed deep-water ports, and off-line power plants. However, the one transportation issue that most affected the coal industry in 2005 was the disruption of rail traffic from the Powder River Basin (PRB) due to track maintenance. In mid-May of 2005, there were two train derailments on the southern PRB joint line, caused in part by severe weather and coal dust on the rails. This resulted in an extensive program of track repair and replacement that affected the ability of mines in the area to ship coal to consumers throughout the country. The repair work on the joint line ended for the year in early December and was scheduled to start up again after the winter season. This incident reverberated throughout all aspects of the coal industry. Several consumers experienced major disruptions in coal shipments that then resulted in precariously low stock levels and led to a major scramble to find other sources of coal to help ease the situation. The Union Pacific Railroad instituted an embargo on new southern PRB business, and the spot market price of PRB coal hit record levels in the latter part of 2005.

**Table ES1. U.S. Coal Supply, Disposition, and Prices, 2004-2005**  
(Million Short Tons and Dollars per Short Ton)

<b>Item</b>	<b>2004</b>	<b>2005</b>
Production by Region		
Appalachian	389.9	396.7
Interior	146.0	149.2
Western	575.2	585.0
Refuse Recovery	1.0	0.7
<b>Total</b>	<b>1,112.1</b>	<b>1,131.5</b>
Consumption by Sector		
Electric Power	1,016.3	1,037.5
Coke Plants	23.7	23.4
Other Industrial Plants	62.2	60.3
Residential/Commercial	5.1	4.2
<b>Total</b>	<b>1,107.3</b>	<b>1,125.5</b>
Year-End Coal Stocks		
Electric Power	106.7	101.1
Coke Plants	1.3	2.6
Other Industrial Plants	4.8	5.6
Producers/Distributors	41.2	35.0
<b>Total</b>	<b>154.0</b>	<b>144.3</b>
Average Delivered Price		
Electric Utilities	\$27.30	\$31.22
Coke Plants	\$61.50	\$83.79
Other Industrial Plants	\$39.30	\$47.63
Average U.S. Open Market Mine Price	\$19.93	\$23.59

Notes: Totals may not equal sum of components due to independent rounding. Sum of stock changes and consumption may not equal production, primarily because the supply and disposition data are obtained from different surveys.

Sources: Energy Information Administration, *Annual Coal Report 2005*, tables 1; 26; 27; 28; and 34; DOE/EIA-0584 (2005) (Washington, DC, October 2006).

### **Appalachian Region**

Coal production in the Appalachian Region increased in 2005 by 6.8 million short tons, to end the year at 396.7 million short tons, an increase of 1.7 percent. The increase in 2005 in coal production in the region was in part fueled by the rise in U.S. metallurgical coal exports (which are produced in the East) and the increases in spot coal prices in the region that occurred during the year. However, this is the first time the Appalachian Region has experienced four consecutive years of coal production of less than 400 million short tons since the 1960s.

Although the Appalachian Region produced more coal in 2005 than in 2004, the production level was still encumbered by several factors. Transportation problems affected the amount of eastern coal moved to markets by

railroads, although not to the extent of western rail problems affecting the southern PRB. Barge transportation of coal in 2005 from the region was curtailed due to river flooding, lock maintenance, lack of available barges, and blocked river locks due to sunken barges. The combination of reserve degradation in the region, along with the legacy of past lawsuits that had either temporarily halted or extended the review time for the issuance of needed permits for new mines or to expand current operations, continued to constrain the amount of coal produced. Increased operating costs (fuel, steel, explosives, training of new miners, etc.), along with some geological issues (roof falls, sandstone intrusions, and high methane gas levels), also contributed to the lackluster production levels in the region. However, only three States in the region had lower production levels in 2005 than in 2004.



West Virginia, the largest coal-producing State in the Appalachian Region and the second largest in the United States, increased its coal output by 3.8 percent in 2005 to end the year with 153.7 million short tons of production, 5.7 million short tons above the 2004 level. The increase in coal production in West Virginia was in part fueled by two new mines that began production in 2005 (Alpha Resources' Seven Pines and Massey Energy's Laurel

mine more than offset the drop in production due to the closing of Maple Creek's High Quality mine as a result of a legal dispute with the State mining agency.

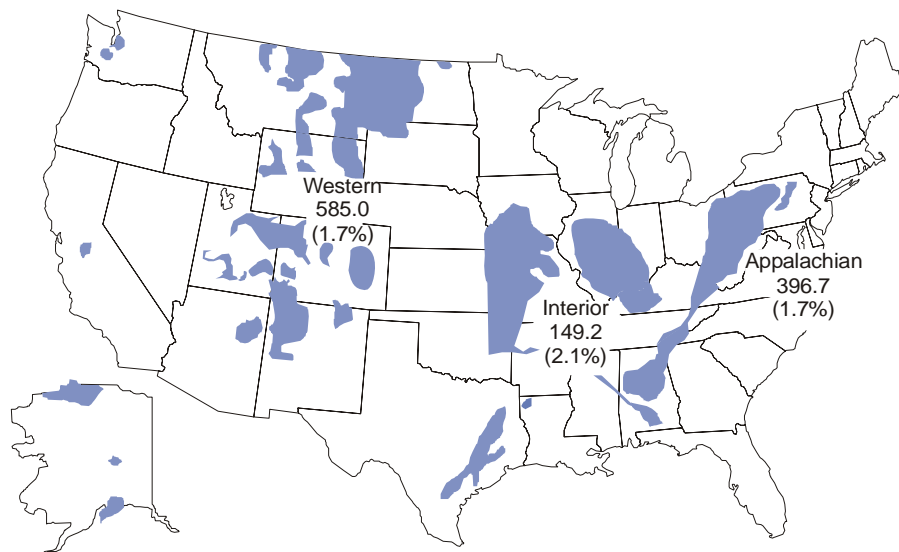
Coal production in Ohio increased in 2005 to a total of 24.7 million short tons, an increase of 6.4 percent, as both the Century and Powhatan longwall mines each expanded production by 0.8 million short tons. Tennessee increased its coal production in 2005 by 0.3

**Figure ES1. Coal Production by Coal-Producing Region, 2005**

(Million Short Tons and Percent Change from 2004)

Regional totals do not include refuse recovery

**U.S. Total: 1,131.5 Million Short Tons (1.7%)**



**Source:** Energy Information Administration, *Annual Coal Report, 2005*, DOE/EIA-0584(2005) (Washington, DC, October 2006).

Canyon), and in part by three mines that had opened in late 2004 and had a full year's production in 2005 (Miller Brothers' Millers Creek; Dynamic Energy's Coal Mountain No. 1; and Massey Energy's Slip Ridge Cedar Grove).

Eastern Kentucky coal production was 93.3 million short tons in 2005, up by 2.5 million short tons or 2.7 percent above 2004, reversing a three-year declining trend. The production increase in 2005 in Eastern Kentucky was in part driven by an entire year's production at five mines that only had partial utilization in 2004. The increases in production in these five mines (Matrix Energy's No. 1; Massey Energy's White Cabin No. 7; Miller Brothers' Trap Branch; R & R Mining's Mine No. 30; and James River's Mine No. 23) totaled 3.7 million short tons, more than offsetting the declines in production at various other Eastern Kentucky mines in 2005. Coal production in Pennsylvania in 2005 was 67.5 million short tons, an increase of 2.3 percent from 2004, or 1.5 million short tons. The expanded production levels at Foundation's Cumberland and Emerald mines and Consol's Bailey

million short tons as five new mines opened in the State. Coal production decreased in Alabama in 2005 by 4.2 percent to 21.3 million short tons. Even though seven new mines opened in Alabama during 2005, total coal production was down for the year due to production declines at two existing mines. The Jim Walter Resources No. 5 mine was idle for a period of time during 2005 due to excess water entering the mine from a previously sealed area. Production also decreased in 2005 at Drummond's Shoal Creek mine, one of the largest mines in the State. Maryland's coal production decreased slightly in 2005 by 0.8 percent, while coal production in Virginia decreased by 11.7 percent, or 3.7 million short tons, ending the year with a total of 27.7 million short tons. The drop in coal production in Virginia was primarily a result of the problems experienced at Consol's Buchanan mine during the year. In February 2005, the Buchanan mine experienced a fire that shut the underground mine for a period of four months. In September, the mine experienced a malfunction of the system that transfers the coal from the mine to the surface that lasted for almost another four months.

## Interior Region

The Interior Region experienced an increase in coal production in 2005 of 3.1 million short tons, or 2.1 percent, to achieve a total of 149.2 million short tons, the highest level seen in the region since 1999. The increase in coal production in the Interior Region was primarily a result of the increased coal production by mines in Western Kentucky, which accounted for almost 97 percent of the total regional increase. Western Kentucky coal production rose by 3.0 million short tons in 2005 to end the year at a total of 26.4 million short tons, 13.0 percent than in 2004. While several new mines in Western Kentucky contributed to the additional production, expansions at the Cardinal, East Volunteer, and Highland No. 9 mines were the key factor in the increase for the year. Texas is the largest coal-producing State in the Interior Region and it accounts for about one-third of the region's coal production. In 2005, coal production in Texas increased slightly by 0.2 percent to end the year at 45.9 million short tons, as demand from coal-based electric generators in the State remained stable.

Indiana, the second largest coal-producing State in the Interior Region, saw a decrease of 1.9 percent to 34.5 million short tons in 2005. The decline in coal production in 2005 for Indiana was in large part a consequence of the idling of Kindill Mining's No. 2 mine near the end of 2004. Coal production in Illinois rose slightly by 0.5 percent to end the year at 32.0 million short tons, as two new mines began production in 2005, North American Auger Mining's N.A.A.M. No. 11 mine and Knight Hawk Coal's Prairie Eagle mine. The other States in the Interior Region (Arkansas, Kansas, Louisiana, Mississippi, Missouri, and Oklahoma), which accounted for a total of 6.9 percent of the entire Region's production in 2005, all had slight changes from their 2004 coal production levels.

## Western Region

Coal production in the Western Region increased in 2005 by 1.7 percent to a total of 585.0 million short tons, 51.7 percent of total U.S. coal production. The increase of 1.7 percent resulted in another record level for the region, surpassing the 2004 level by 9.8 million short tons. Even with the record level of coal production, four of the nine States in the Western Region had lower coal production levels in 2005: Alaska, Arizona, Colorado, and Washington.

Wyoming continued its dominance as the biggest coal-producing State in the Nation, a position it has held since 1988. In 2005, Wyoming produced a record 404.3 million short tons of coal, an increase of 2.0 percent for the year. The sheer dominance of Wyoming's coal industry in the United States is illustrated by the fact that

Wyoming accounted for about 69.1 percent of the Western Region; produced 7.7 million short tons more than the entire Appalachian Region; produced almost three times the Interior Region; and produced 35.7 percent of the total U.S. coal production for the year. Also, if the 26 States that produced coal in 2005 were ranked by descending total production levels, Wyoming produced 63.4 million short tons more than the next three largest coal-producing States (West Virginia, Kentucky, and Pennsylvania) combined, and 18.7 million short tons more coal than the combined total of the States ranked 5<sup>th</sup> through 26<sup>th</sup>. Although there were declines in coal production in several mines in Wyoming in 2005, in part due to the shipping issues related to the reduced capacity of the railroads during the maintenance work on the southern PRB, the expansion in production and shipments at Peabody's Caballo and Rawhide mines in the northern PRB accounted for most of the increase for the year.

In 2005, Montana was the second largest coal-producing State in the Western Region, with a total amount of coal produced of 40.4 million short tons, a slight increase over 2004 of 0.9 percent. Even with an increase in coal production in Montana in 2005, it was still below the record level set by the State in 1998 of 42.8 million short tons. Although there was a decrease in production at Decker Coal's Decker mine, the increases in production at Spring Creek Coal's Spring Creek mine and Western Energy's Rosebud mine in the northern PRB more than offset the decline. Colorado had a decline in its coal production in 2005, ending the year with a total of 38.5 million short tons, a decrease of 1.4 million short tons from 2004, due in part to the temporary closing of Mountain Coal's West Elk mine due to high carbon monoxide levels experienced in the latter part of the year.

Coal production in Utah in 2005 increased by 12.8 percent to a level of 24.5 million short tons. The 2.8-million-short-ton increase in Utah was a result of the increased production at three mines in the State: Consol Coal's Emery, Canyon Fuel's Dugout Canyon, and Genwal Resources' Crandall Canyon. The Emery mine, which had been inactive for a period of time, restarted production in late 2004 and continued to produce for all of 2005, while expansions at the Dugout and Crandall Canyon mines added to the increased coal production level for the year.

Coal production in New Mexico increased by 1.3 million short tons in 2005 to end the year with a total of 28.5 million short tons, an increase of 4.7 percent, attributable to the increased production level at BHP's Navajo mine. Coal production in 2005 in North Dakota was 30.0 million short tons, and production in Alaska was 1.5 million short tons, both about the same level as the prior year.

**Table ES2. U.S. Coal Production by Coal-Producing Region and State, 2004-2005**  
(Million Short Tons)

Coal-Producing Region and State	2004	2005
<b>Appalachian Total</b>	<b>389.9</b>	<b>396.7</b>
Alabama	22.3	21.3
Kentucky, Eastern	90.9	93.3
Maryland	5.2	5.2
Ohio	23.2	24.7
Pennsylvania Total	66.0	67.5
Anthracite	1.7	1.6
Bituminous	64.3	65.8
Tennessee	2.9	3.2
Virginia	31.4	27.7
West Virginia	148.0	153.7
Northern	40.6	42.6
Southern	107.3	111.0
<b>Interior Total</b>	<b>146.0</b>	<b>149.2</b>
Arkansas	*	*
Illinois	31.9	32.0
Indiana	35.1	34.5
Kansas	0.1	0.2
Kentucky, Western	23.4	26.4
Louisiana	3.8	4.2
Mississippi	3.6	3.6
Missouri	0.6	0.6
Oklahoma	1.8	1.9
Texas	45.9	45.9
<b>Western Total</b>	<b>575.2</b>	<b>585.0</b>
Alaska	1.5	1.5
Arizona	12.7	12.1
Colorado	39.9	38.5
Montana	40.0	40.4
New Mexico	27.3	28.5
North Dakota	29.9	30.0
Utah	21.7	24.5
Washington	5.7	5.3
Wyoming	396.5	404.3
<b>Refuse Recovery</b>	<b>1.0</b>	<b>0.7</b>
<b>U.S. Total</b>	<b>1,112.1</b>	<b>1,131.5</b>

\* = Less than 50 thousand short tons.

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

Sources: U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Arizona and Washington both had declines in their coal production levels in 2005. Arizona, which has two mines, Peabody's Kayenta and Black Mesa mines, had a decrease of 0.7 million short tons to end the year at a total of 12.1 million short tons. Washington, which has only one mine, the Trans Alta's Centralia mine, had a decrease of 0.4 million short tons to end the year at a total of 5.3 million short tons. The decline in coal production in Washington was in part due to increased hydro-electric generation in the State in 2005.

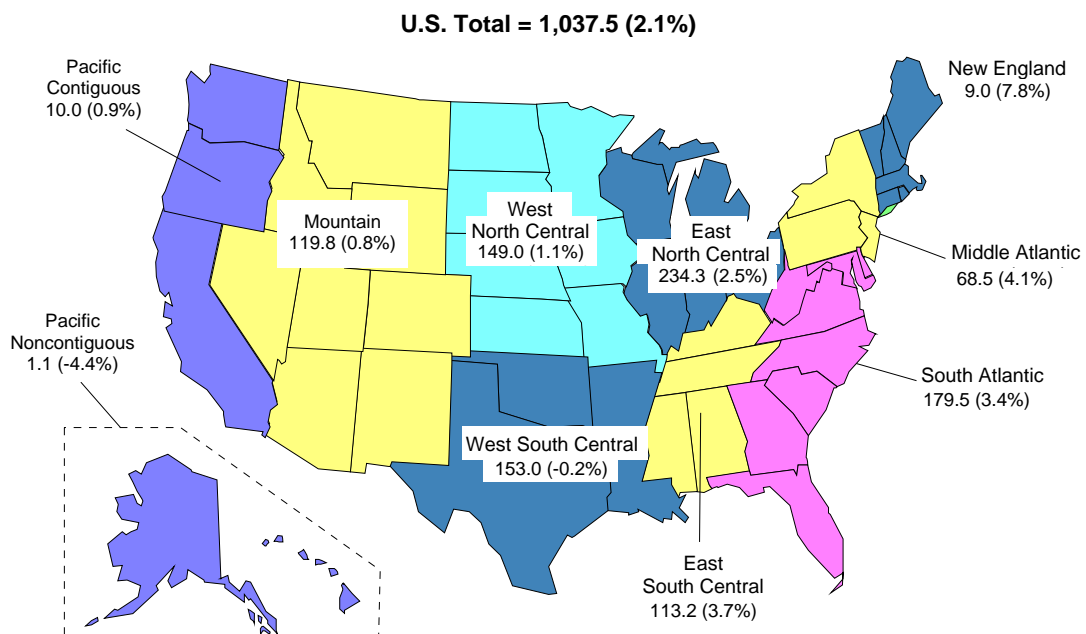
## Consumption

The combination of the continuing economic expansion with the warmer summer weather over most of the country in 2005 pushed total U.S. coal consumption to another record level. Data show that total coal consumption increased 18.2 million short tons to reach a level of 1,125.5 million short tons, an increase of 1.6 percent. Accounting for about 92 percent of all coal consumed in the United States, the electric power sector (electric utilities and independent power producers) is the driving force for all coal consumption. The other coal-consuming sectors (coking coal, other industrial, and residential and commercial sectors) had some changes in their consumption totals. The other industrial sector had a decline in coal consumption in 2005 of 3.0 percent, while the coking coal sector had a decrease of 1.0 percent. The residential and commercial sector, the smallest of all coal consuming sectors, (accounting for less than one half of one percent of total consumption), declined by 0.9 million short tons in 2005.

Coal consumption in the electric power sector increased by 21.2 million short tons to end 2005 at a record level of 1,037.5 million short tons (Figure ES2). Although coal consumption by the electric power sector increased by 2.1 percent in 2005, coal-based generation increased at a slightly lower rate, 1.8 percent, reflecting the higher volumes of lower Btu western coals (subbituminous and lignite) necessary to generate an equivalent amount of electricity. Even though there was an increase in coal consumption for electricity generation, coal's share of total generation declined slightly, decreasing by 0.6 percent. Nationally, total generation in the electric power sector from all fuels increased in 2005 by 2.4 percent, with a substantial gain in electricity generation by natural gas, helping to replace the loss in generation from nuclear facilities in the U.S. (Figure ES3). The increase in electric generation by natural gas plants of 8.9 percent in 2005 was due to in large part to the numerous new natural gas-fired generating facilities which came on-line in the last several years. In 2005, almost 84 percent of the 18 gigawatts of new capacity to come on line during the year were natural gas-fired, while new coal-fired capacity was less than 3 percent. The 2005 decrease in nuclear generation of 0.8 percent from 2004's record level of generation was a result of scheduled outages for maintenance and refueling.

There are two major factors that influence total electric generation: economic growth and weather. Economic growth continued throughout 2005. For the year, the Gross Domestic Product (GDP) of the U.S. increased by 3.5 percent. As for the weather, although it was a mild

**Figure ES2. Electric Power Sector Consumption of Coal by Census Division, 2005**  
(Million Short Tons and Percent Change from 2004)



**Source:** Energy Information Administration, Form EIA-906, "Power Plant Report."

winter, it was a hot summer in 2005. According to data from the National Oceanic and Atmospheric Administration (NOAA), compared to 2004, cooling degree-days in 2005 were higher for the country as a whole, by 14.9 percent, while heating degree-days were only 0.1 percent higher. The summer weather in 2005 was also significantly warmer (22.1 percent) than normal (30-year average) for the nation, while the winter weather (January through March) was only marginally warmer (4.5 percent) than normal.

Of the nine Census Divisions, coal is a minor component (less than 20 percent) in the fuel mix for electricity generation in two Divisions, New England and Pacific, and a major component (more than 50 percent) in five Divisions, East North Central, West North Central, South Atlantic, East South Central, and Mountain. In the other two divisions, coal is one of the two main fuel sources for the electric power sector. In the Middle Atlantic, coal competes with nuclear power for dominance, while in the West South Central coal competes with natural gas.

Eight of the nine Census Divisions had increases in coal consumption in the electric power sector in 2005, while seven of those eight had increases in coal generation. However, slightly more than half of the total increase in coal consumption in the electric power sector was attributable to two of the nine Census Divisions, the South Atlantic and the East North Central. In the South Atlantic Division, where coal's share of electric generation is about 53 percent, total generation increased by 3.3 percent in 2005, while coal-based generation increased by 3.0 percent. The increase in 2005 in coal-based generation resulted in an increase of 5.9 million short tons, or 3.4 percent in coal consumed in the electric power sector in the South Atlantic Division. Coal accounts for over 70 percent of all electric generation in the East North Central Division, making it the largest coal consuming region for the electric power sector with about 23 percent of all coal consumed for electric generation in the U.S. in 2005. Coal consumption for the electric power sector in this Division increased in 2005 by 5.7 million short tons, or 2.5 percent, and that increase represents one quarter of the total increase in U.S. coal consumption in the electric power sector for the year. Total generation in the East North Central Division increased in 2005 by 2.9 percent, while coal-based generation increased by 2.2 percent (Table ES3).

Two of the Census Divisions, the East South Central and the Middle Atlantic, accounted for about one-third of the total increase in coal consumption in the electric power sector in 2005.

The East South Central Division had an increase of 1.5 percent in total generation in 2005 and an increase of 2.7 percent in coal-based generation. Coal consumption in the East South Central Division in the electric power sector increased by 4.0 million short tons, or 3.7 percent

in 2005. The Middle Atlantic Census Division had an increase of 4.3 percent in total generation and an increase of 1.9 percent in coal-based generation, which resulted in an increase in coal consumption of 2.7 million short tons, or 4.1 percent.

In two of the Census Divisions, the Mountain and the West North Central, coal accounts for over 60 percent of the fuel mix for electric generation. Each of these Census Divisions accounted for about 7 percent of the total increase in coal consumption in 2005 for the electric

**Table ES3. Electric Power Sector Net Generation, 2004-2005 (Million Kilowatthours)**

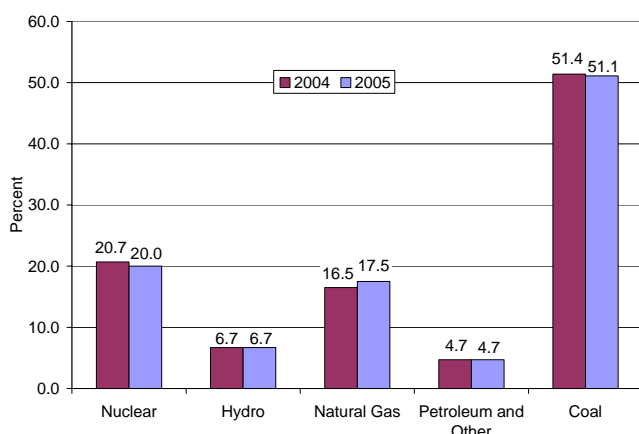
Census Division	2004	2005	Percent Change
<b>New England</b>			
Coal	19,024	20,220	6.3
Total	126,832	128,815	1.6
<b>Middle Atlantic</b>			
Coal	148,401	151,190	1.9
Total	401,317	418,614	4.3
<b>East North Central</b>			
Coal	449,078	459,062	2.2
Total	633,442	651,726	2.9
<b>West North Central</b>			
Coal	228,016	230,271	1.0
Total	295,280	299,713	1.5
<b>South Atlantic</b>			
Coal	412,433	424,999	3.0
Total	775,681	801,066	3.3
<b>East South Central</b>			
Coal	234,796	241,173	2.7
Total	362,445	367,904	1.5
<b>West South Central</b>			
Coal	228,415	227,675	-0.3
Total	528,683	540,497	2.2
<b>Mountain</b>			
Coal	219,311	219,829	0.2
Total	341,220	345,705	1.3
<b>Pacific</b>			
Coal	17,719	17,641	-0.4
Total	343,461	347,415	1.2
<b>U.S. Total</b>			
Coal	1,957,194	1,992,060	1.8
Total	3,808,360	3,901,457	2.4

Source: Energy Information Administration, Form EIA-906, "Power Plant Report."

power sector. In the Mountain Census Division in 2005 total generation increased by only 1.3 percent, while coal-based generation increased by only 0.2 percent. This slight increase in coal-based generation resulted in an increase of 0.9 million short tons, or 0.8 percent, in coal consumption in 2005. The West North Central Division had an increase in 2005 of 1.5 percent in total generation and 1.0 percent increase in coal generation. Coal consumption for electric generation in the West North Central Division increased by 1.6 million short tons in 2005, or 1.1 percent.

In the West South Central Census Division, coal competes directly with natural gas as the main fuel for the electric power sector. In 2005 in the West South Central Division, total generation in the electric power sector increased by 2.2 percent, while coal-based generation declined by 0.3 percent, resulting in a decrease in coal consumption of only 0.3 million short tons. All of the increase in electricity generation in the

**Figure ES3. Share of Electric Power Sector Net Generation by Energy Source, 2004 vs. 2005**



**Source:** Energy Information Administration, Form EIA-906, "Power Plant Report."

West South Central Division was fueled by natural gas which increased by 8.8 percent in 2005. In the other two Census Divisions, New England and Pacific, coal is a small component in the fuel mix for the electric power sector, and there were minor changes in coal consumption in those two Divisions in 2005.

Coal consumption in the non-electric power sector declined in 2005. Although a new coke plant (the first one in 7 years) began production early in the year, coal consumption at coke plants still decreased slightly in 2005 (0.2 million short tons) to end the year at 23.4 million short tons. Even with the slight decline in U.S.

coke production in 2005, concerns about the availability and price of coke in the international market resulted in decisions to: 1) expand the capacity at the newest coke plant (construct an additional 100 coke ovens); 2) build another new coke plant; and 3) refurbish a previously closed coke plant.

Even though the GDP grew by 3.5 percent, the economic growth did not extend into the coal-fired manufacturing sector in 2005, and as a result, coal consumption in the other industrial sector declined by 1.9 million short tons to end the year at 60.3 million short tons. The slight increases in coal consumption in 2005 experienced in some manufacturing sectors (food and fabricated metal) were more than offset by decreases in coal consumption in other manufacturing sectors (beverage, textile, paper, chemical, nonmetallic mineral, primary metal, and transportation equipment). Coal consumption in the residential and commercial sector declined by 0.9 million short tons in 2005.

### Coal Prices

For the second year in a row, coal prices rose across the board. The average open market f.o.b. (free on board) mine price increased in 2005 to \$23.59 per ton, an increase of 18.3 percent over 2004, a price level not seen since the mid-1980's. While spot coal prices for some of the producing regions set record levels again in 2005, average delivered prices in the consuming sectors increased for the year but, for most, not as steeply as the spot prices. The majority of coal deliveries to the electric power sector are through long-term contracts, sometimes in conjunction with spot purchases to supplement demand. Averaged delivered coal prices at electric utilities (a subset of the electric power sector) increased for a fifth consecutive year, to \$31.22 per short ton, an increase of 14.4 percent. The increase in the delivered price of coal to the other sectors increased even more significantly in 2005 as both the coking coal sector and the other industrial sector rely more heavily on short-term contracts and the spot market. The average delivered price of coal to the other industrial sector increased by 21.2 percent to an average price of \$47.63 per short ton in 2005. However, the largest increase in consumer prices was in the coking coal sector. The tight specifications needed for coal to produce coke limit the availability of the coal. With a tight world market for metallurgical coal coupled with the U.S. metallurgical coal production issues that occurred in 2005, the average delivered price of coal to U.S. coke plants increased by 36.2 percent to reach an average price of \$83.79 per short ton in 2005.

## **Coal Stocks**

Total coal stocks at the end of 2005 were 144.3 million short tons, a decrease of 9.7 million short tons from the prior year. Coal stocks held by producers and distributors decreased by 6.2 million short tons. Industrial users, including coke plants, held a total of 8.2

million short tons at the end of 2005, 2.0 million short tons more than the level at the start of the year. Coal stocks in the electric power sector dropped for the third consecutive year in 2005, declining by 5.5 million short tons (5.2 percent), to end the year at 101.1 million short tons, as power facilities used their stockpiles to meet increasing demand for electricity.





# Coal Production

**Table 1. Coal Production and Number of Mines by State and Mine Type, 2005-2004**  
(Thousand Short Tons)

Coal-Producing State and Region <sup>1</sup>	2005		2004		Percent Change	
	Number of Mines	Production	Number of Mines	Production	Number of Mines	Production
<b>Alabama</b> .....	<b>53</b>	<b>21,339</b>	<b>49</b>	<b>22,271</b>	<b>8.2</b>	<b>-4.2</b>
Underground.....	9	13,295	8	16,114	12.5	-17.5
Surface.....	44	8,044	41	6,156	7.3	30.7
<b>Alaska</b> .....	<b>1</b>	<b>1,454</b>	<b>1</b>	<b>1,512</b>	-	<b>-3.8</b>
Surface.....	1	1,454	1	1,512	-	-3.8
<b>Arizona</b> .....	<b>2</b>	<b>12,072</b>	<b>2</b>	<b>12,731</b>	-	<b>-5.2</b>
Surface.....	2	12,072	2	12,731	-	-5.2
<b>Arkansas</b> .....	<b>1</b>	<b>3</b>	<b>2</b>	<b>7</b>	<b>-50.0</b>	<b>-65.0</b>
Underground.....	-	-	1	1	-100.0	-100.0
Surface.....	1	3	1	6	-	-59.9
<b>Colorado</b> .....	<b>13</b>	<b>38,510</b>	<b>13</b>	<b>39,870</b>	-	<b>-3.4</b>
Underground.....	8	28,439	8	29,608	-	-3.9
Surface.....	5	10,071	5	10,262	-	-1.9
<b>Illinois</b> .....	<b>20</b>	<b>32,014</b>	<b>19</b>	<b>31,853</b>	<b>5.3</b>	<b>0.5</b>
Underground.....	12	26,343	12	26,907	-	-2.1
Surface.....	8	5,671	7	4,946	14.3	14.7
<b>Indiana</b> .....	<b>29</b>	<b>34,457</b>	<b>29</b>	<b>35,110</b>	-	<b>-1.9</b>
Underground.....	8	11,189	7	10,092	14.3	10.9
Surface.....	21	23,268	22	25,018	-4.5	-7.0
<b>Kansas</b> .....	<b>1</b>	<b>171</b>	<b>1</b>	<b>71</b>	-	<b>141.6</b>
Surface.....	1	171	1	71	-	141.6
<b>Kentucky Total</b> .....	<b>432</b>	<b>119,734</b>	<b>419</b>	<b>114,244</b>	<b>3.1</b>	<b>4.8</b>
Underground.....	224	73,702	223	71,765	*	2.7
Surface.....	208	46,032	196	42,478	6.1	8.4
<b>Eastern</b> .....	<b>404</b>	<b>93,322</b>	<b>397</b>	<b>90,871</b>	<b>1.8</b>	<b>2.7</b>
Underground.....	211	52,054	212	52,445	*	-0.7
Surface.....	193	41,269	185	38,426	4.3	7.4
<b>Western</b> .....	<b>28</b>	<b>26,412</b>	<b>22</b>	<b>23,373</b>	<b>27.3</b>	<b>13.0</b>
Underground.....	13	21,648	11	19,321	18.2	12.0
Surface.....	15	4,763	11	4,052	36.4	17.5
<b>Louisiana</b> .....	<b>2</b>	<b>4,161</b>	<b>2</b>	<b>3,805</b>	-	<b>9.3</b>
Surface.....	2	4,161	2	3,805	-	9.3
<b>Maryland</b> .....	<b>16</b>	<b>5,183</b>	<b>19</b>	<b>5,225</b>	<b>-15.8</b>	<b>-0.8</b>
Underground.....	3	3,175	3	3,339	-	-4.9
Surface.....	13	2,009	16	1,886	-18.8	6.5
<b>Mississippi</b> .....	<b>1</b>	<b>3,555</b>	<b>1</b>	<b>3,586</b>	-	<b>-0.9</b>
Surface.....	1	3,555	1	3,586	-	-0.9
<b>Missouri</b> .....	<b>2</b>	<b>598</b>	<b>3</b>	<b>578</b>	<b>-33.3</b>	<b>3.4</b>
Surface.....	2	598	3	578	-33.3	3.4
<b>Montana</b> .....	<b>6</b>	<b>40,354</b>	<b>6</b>	<b>39,989</b>	-	<b>0.9</b>
Underground.....	1	162	1	158	-	3.0
Surface.....	5	40,192	5	39,831	-	0.9
<b>New Mexico</b> .....	<b>4</b>	<b>28,519</b>	<b>4</b>	<b>27,250</b>	-	<b>4.7</b>
Underground.....	1	7,905	1	7,685	-	2.9
Surface.....	3	20,613	3	19,565	-	5.4
<b>North Dakota</b> .....	<b>4</b>	<b>29,956</b>	<b>4</b>	<b>29,943</b>	-	<b>*</b>
Surface.....	4	29,956	4	29,943	-	*
<b>Ohio</b> .....	<b>54</b>	<b>24,718</b>	<b>52</b>	<b>23,222</b>	<b>3.8</b>	<b>6.4</b>
Underground.....	10	15,823	8	14,270	25.0	10.9
Surface.....	44	8,896	44	8,952	-	-0.6
<b>Oklahoma</b> .....	<b>9</b>	<b>1,856</b>	<b>8</b>	<b>1,792</b>	<b>12.5</b>	<b>3.6</b>
Underground.....	1	465	1	409	-	13.8
Surface.....	8	1,391	7	1,383	14.3	0.6
<b>Pennsylvania Total</b> .....	<b>266</b>	<b>67,494</b>	<b>260</b>	<b>65,996</b>	<b>2.3</b>	<b>2.3</b>
Underground.....	53	54,563	58	53,224	-8.6	2.5
Surface.....	213	12,931	202	12,772	5.4	1.2
<b>Anthracite</b> .....	<b>68</b>	<b>1,645</b>	<b>66</b>	<b>1,679</b>	<b>3.0</b>	<b>-2.0</b>
Underground.....	14	264	20	271	-30.0	-2.3
Surface.....	54	1,380	46	1,408	17.4	-2.0
<b>Bituminous</b> .....	<b>198</b>	<b>65,849</b>	<b>194</b>	<b>64,317</b>	<b>2.1</b>	<b>2.4</b>
Underground.....	39	54,298	38	52,953	2.6	2.5
Surface.....	159	11,551	156	11,364	1.9	1.6
<b>Tennessee</b> .....	<b>28</b>	<b>3,217</b>	<b>32</b>	<b>2,887</b>	<b>-12.5</b>	<b>11.4</b>
Underground.....	13	1,224	12	826	8.3	48.2
Surface.....	15	1,993	20	2,061	-25.0	-3.3
<b>Texas</b> .....	<b>13</b>	<b>45,939</b>	<b>13</b>	<b>45,863</b>	-	<b>0.2</b>
Surface.....	13	45,939	13	45,863	-	0.2
<b>Utah</b> .....	<b>13</b>	<b>24,521</b>	<b>13</b>	<b>21,746</b>	-	<b>12.8</b>
Underground.....	13	24,521	13	21,746	-	12.8

See footnotes at end of table.

**Table 1. Coal Production and Number of Mines by State and Mine Type, 2005-2004 (Continued)**  
(Thousand Short Tons)

Coal-Producing State and Region <sup>1</sup>	2005		2004		Percent Change	
	Number of Mines	Production	Number of Mines	Production	Number of Mines	Production
<b>Virginia</b> .....	<b>132</b>	<b>27,743</b>	<b>123</b>	<b>31,420</b>	<b>7.3</b>	<b>-11.7</b>
Underground.....	83	16,386	77	20,437	7.8	-19.8
Surface.....	49	11,357	46	10,983	6.5	3.4
<b>Washington</b> .....	<b>1</b>	<b>5,266</b>	<b>1</b>	<b>5,653</b>	<b>-</b>	<b>-6.9</b>
Surface.....	1	5,266	1	5,653	-	-6.9
<b>West Virginia Total</b> .....	<b>277</b>	<b>153,650</b>	<b>261</b>	<b>147,993</b>	<b>6.1</b>	<b>3.8</b>
Underground.....	166	91,009	152	90,932	9.2	*
Surface.....	111	62,641	109	57,061	1.8	9.8
<b>Northern</b> .....	<b>50</b>	<b>42,628</b>	<b>49</b>	<b>40,646</b>	<b>2.0</b>	<b>4.9</b>
Underground.....	29	37,590	27	36,082	7.4	4.2
Surface.....	21	5,037	22	4,564	-4.5	10.4
<b>Southern</b> .....	<b>227</b>	<b>111,022</b>	<b>212</b>	<b>107,347</b>	<b>7.1</b>	<b>3.4</b>
Underground.....	137	53,419	125	54,851	9.6	-2.6
Surface.....	90	57,603	87	52,497	3.4	9.7
<b>Wyoming</b> .....	<b>18</b>	<b>404,319</b>	<b>20</b>	<b>396,493</b>	<b>-10.0</b>	<b>2.0</b>
Underground.....	1	410	1	43	-	NM
Surface.....	17	403,908	19	396,450	-10.5	1.9
<b>Appalachian Total</b> .....	<b>1,230</b>	<b>396,666</b>	<b>1,193</b>	<b>389,884</b>	<b>3.1</b>	<b>1.7</b>
Underground.....	548	247,528	530	251,588	3.4	-1.6
Surface.....	682	149,139	663	138,297	2.9	7.8
<b>Northern</b> .....	<b>386</b>	<b>140,023</b>	<b>380</b>	<b>135,089</b>	<b>1.6</b>	<b>3.7</b>
Underground.....	95	111,151	96	106,915	-1.0	4.0
Surface.....	291	28,873	284	28,174	2.5	2.5
<b>Central</b> .....	<b>790</b>	<b>235,297</b>	<b>764</b>	<b>232,525</b>	<b>3.4</b>	<b>1.2</b>
Underground.....	443	123,075	426	128,559	4.0	-4.3
Surface.....	347	112,222	338	103,966	2.7	7.9
<b>Southern</b> .....	<b>54</b>	<b>21,347</b>	<b>49</b>	<b>22,271</b>	<b>10.2</b>	<b>-4.1</b>
Underground.....	10	13,303	8	16,114	25.0	-17.4
Surface.....	44	8,044	41	6,156	7.3	30.7
<b>Interior Total</b> .....	<b>106</b>	<b>149,165</b>	<b>100</b>	<b>146,038</b>	<b>6.0</b>	<b>2.1</b>
Underground.....	34	59,645	32	56,729	6.3	5.1
Surface.....	72	89,520	68	89,309	5.9	0.2
<b>Illinois Basin Total</b> .....	<b>77</b>	<b>92,883</b>	<b>70</b>	<b>90,336</b>	<b>10.0</b>	<b>2.8</b>
Underground.....	33	59,180	30	56,319	10.0	5.1
Surface.....	44	33,703	40	34,016	10.0	-0.9
<b>Western Total</b> .....	<b>62</b>	<b>584,970</b>	<b>64</b>	<b>575,186</b>	<b>-3.1</b>	<b>1.7</b>
Underground.....	24	61,438	24	59,240	-	3.7
Surface.....	38	523,532	40	515,946	-5.0	1.5
<b>Powder River Basin</b> .....	<b>16</b>	<b>429,996</b>	<b>17</b>	<b>420,992</b>	<b>-5.9</b>	<b>2.1</b>
Underground.....	-	-	-	-	-	-
Surface.....	16	429,996	17	420,992	-5.9	2.1
<b>Uinta Region</b> .....	<b>24</b>	<b>62,145</b>	<b>24</b>	<b>60,744</b>	<b>-</b>	<b>2.3</b>
Underground.....	20	52,495	20	50,896	-	3.1
Surface.....	4	9,650	4	9,848	-	-2.0
<b>East of Miss. River</b> .....	<b>1,308</b>	<b>493,105</b>	<b>1,264</b>	<b>483,806</b>	<b>3.5</b>	<b>1.9</b>
<b>West of Miss. River</b> .....	<b>90</b>	<b>637,697</b>	<b>93</b>	<b>627,303</b>	<b>-3.2</b>	<b>1.7</b>
<b>U.S. Subtotal</b> .....	<b>1,398</b>	<b>1,130,802</b>	<b>1,357</b>	<b>1,111,109</b>	<b>3.0</b>	<b>1.8</b>
<b>Refuse Recovery</b> .....	<b>17</b>	<b>696</b>	<b>22</b>	<b>990</b>	<b>-22.7</b>	<b>-29.6</b>
<b>U.S. Total</b> .....	<b>1,415</b>	<b>1,131,498</b>	<b>1,379</b>	<b>1,112,099</b>	<b>2.6</b>	<b>1.7</b>

<sup>1</sup> For a definition of coal producing regions, see the Glossary.

\* Quantity is less than 0.5 thousand short tons or percent change is less than 0.1%.

NM = Changes of 500 percent or more are not shown.

Note: • Totals may not equal sum of components because of independent rounding.

Source: • U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

**Table 2. Coal Production and Number of Mines by State, County, and Mine Type, 2005**  
(Thousand Short Tons)

Coal-Producing State and County	Underground		Surface		Total	
	Number of Mines	Production	Number of Mines	Production	Number of Mines	Production
<b>Alabama</b> .....	<b>9</b>	<b>13,295</b>	<b>44</b>	<b>8,044</b>	<b>53</b>	<b>21,339</b>
Bibb .....	-	-	1	58	1	58
Cullman .....	-	-	3	760	3	760
Franklin .....	-	-	1	84	1	84
Jackson .....	1	7	3	100	4	107
Jefferson .....	3	4,029	10	1,993	13	6,021
Marion .....	-	-	3	157	3	157
Shelby .....	-	-	1	102	1	102
Tuscaloosa .....	4	9,168	5	1,414	9	10,581
Walker .....	1	92	15	3,065	16	3,156
Winston .....	-	-	2	312	2	312
<b>Alaska</b> .....	-	-	<b>1</b>	<b>1,454</b>	<b>1</b>	<b>1,454</b>
Yukon-Koyukuk Division .....	-	-	1	1,454	1	1,454
<b>Arizona</b> .....	-	-	<b>2</b>	<b>12,072</b>	<b>2</b>	<b>12,072</b>
Navajo .....	-	-	2	12,072	2	12,072
<b>Arkansas</b> .....	-	-	<b>1</b>	<b>3</b>	<b>1</b>	<b>3</b>
Sebastian .....	-	-	1	3	1	3
<b>Colorado</b> .....	<b>8</b>	<b>28,439</b>	<b>5</b>	<b>10,071</b>	<b>13</b>	<b>38,510</b>
Delta .....	2	4,071	-	-	2	4,071
Garfield .....	1	261	-	-	1	261
Gunnison .....	2	12,122	-	-	2	12,122
La Plata .....	1	466	-	-	1	466
Moffat .....	-	-	3	8,504	3	8,504
Montrose .....	-	-	1	421	1	421
Rio Blanco .....	1	2,149	-	-	1	2,149
Routt .....	1	9,370	1	1,146	2	10,516
<b>Illinois</b> .....	<b>12</b>	<b>26,343</b>	<b>8</b>	<b>5,671</b>	<b>20</b>	<b>32,014</b>
Gallatin .....	-	-	2	2,702	2	2,702
Jackson .....	-	-	2	1,843	2	1,843
Macoupin .....	3	6,445	-	-	3	6,445
Perry .....	-	-	3	1,109	3	1,109
Randolph .....	1	508	-	-	1	508
Saline .....	3	10,322	-	-	3	10,322
Sangamon .....	1	2,332	-	-	1	2,332
Vermilion .....	2	2,376	-	-	2	2,376
Wabash .....	1	1,726	1	17	2	1,743
White .....	1	2,635	-	-	1	2,635
<b>Indiana</b> .....	<b>8</b>	<b>11,189</b>	<b>21</b>	<b>23,268</b>	<b>29</b>	<b>34,457</b>
Clay .....	1	27	1	929	2	955
Crawford .....	-	-	1	208	1	208
Daviess .....	-	-	2	3,542	2	3,542
Gibson .....	3	5,179	4	9,723	7	14,902
Knox .....	3	2,760	3	1,241	6	4,001
Pike .....	1	3,223	4	1,719	5	4,942
Spencer .....	-	-	1	217	1	217
Sullivan .....	-	-	1	15	1	15
Vigo .....	-	-	2	4,295	2	4,295
Warrick .....	-	-	2	1,379	2	1,379
<b>Kansas</b> .....	-	-	<b>1</b>	<b>171</b>	<b>1</b>	<b>171</b>
Bourbon .....	-	-	1	171	1	171
<b>Kentucky</b> .....	<b>224</b>	<b>73,702</b>	<b>208</b>	<b>46,032</b>	<b>432</b>	<b>119,734</b>
Bell .....	6	561	8	533	14	1,095
Boyd .....	-	-	1	*	1	*
Breathitt .....	1	162	6	1,299	7	1,461
Carter .....	-	-	1	25	1	25
Clay .....	1	220	2	22	3	242
Elliott .....	-	-	1	39	1	39
Floyd .....	22	1,469	9	1,661	31	3,130
Harlan .....	34	8,457	14	2,243	48	10,701
Henderson .....	1	1,559	2	1,355	3	2,914
Hopkins .....	5	5,067	3	1,212	8	6,279
Jackson .....	-	-	3	52	3	52
Johnson .....	-	-	7	331	7	331
Knott .....	20	6,386	15	3,962	35	10,348
Knox .....	6	156	7	720	13	876
Laurel .....	-	-	3	154	3	154
Lawrence .....	2	665	10	1,939	12	2,604
Lee .....	-	-	1	3	1	3
Leslie .....	5	3,214	7	1,933	12	5,147

See footnotes at end of table.

**Table 2. Coal Production and Number of Mines by State, County, and Mine Type, 2005 (Continued)**  
(Thousand Short Tons)

Coal-Producing State and County	Underground		Surface		Total	
	Number of Mines	Production	Number of Mines	Production	Number of Mines	Production
<b>Kentucky (continued)</b>						
Letcher.....	25	5,578	19	2,941	44	8,520
Magoffin.....	-	-	4	1,292	4	1,292
Martin.....	8	4,142	3	1,170	11	5,312
Morgan.....	-	-	1	12	1	12
Muhlenberg.....	1	2,314	9	2,081	10	4,395
Ohio.....	1	1,319	-	-	1	1,319
Owsley.....	-	-	2	36	2	36
Perry.....	10	4,545	19	8,546	29	13,091
Pike.....	68	16,390	44	11,984	112	28,374
Rockcastle.....	-	-	1	61	1	61
Union.....	2	4,980	1	115	3	5,096
Webster.....	3	6,409	-	-	3	6,409
Whitley.....	3	109	4	307	7	416
Wolfe.....	-	-	1	1	1	1
<b>Louisiana</b> .....	-	-	<b>2</b>	<b>4,161</b>	<b>2</b>	<b>4,161</b>
De Soto.....	-	-	1	3,563	1	3,563
Red River.....	-	-	1	598	1	598
<b>Maryland</b> .....	<b>3</b>	<b>3,175</b>	<b>13</b>	<b>2,009</b>	<b>16</b>	<b>5,183</b>
Allegany.....	1	159	8	1,152	9	1,311
Garrett.....	2	3,016	5	856	7	3,872
<b>Mississippi</b> .....	-	-	<b>1</b>	<b>3,555</b>	<b>1</b>	<b>3,555</b>
Choctaw.....	-	-	1	3,555	1	3,555
<b>Missouri</b> .....	-	-	<b>2</b>	<b>598</b>	<b>2</b>	<b>598</b>
Bates.....	-	-	2	598	2	598
<b>Montana</b> .....	<b>1</b>	<b>162</b>	<b>5</b>	<b>40,192</b>	<b>6</b>	<b>40,354</b>
Big Horn.....	-	-	3	26,485	3	26,485
Musselshell.....	1	162	-	-	1	162
Richland.....	-	-	1	330	1	330
Rosebud.....	-	-	1	13,377	1	13,377
<b>New Mexico</b> .....	<b>1</b>	<b>7,905</b>	<b>3</b>	<b>20,613</b>	<b>4</b>	<b>28,519</b>
Mckinley.....	-	-	2	10,818	2	10,818
San Juan.....	1	7,905	1	9,795	2	17,701
<b>North Dakota</b> .....	-	-	<b>4</b>	<b>29,956</b>	<b>4</b>	<b>29,956</b>
McLean.....	-	-	1	7,743	1	7,743
Mercer.....	-	-	2	17,845	2	17,845
Oliver.....	-	-	1	4,368	1	4,368
<b>Ohio</b> .....	<b>10</b>	<b>15,823</b>	<b>44</b>	<b>8,896</b>	<b>54</b>	<b>24,718</b>
Athens.....	1	1,149	-	-	1	1,149
Belmont.....	1	5,343	5	1,758	6	7,101
Carroll.....	1	315	2	190	3	505
Columbiana.....	-	-	3	433	3	433
Coshocton.....	-	-	1	419	1	419
Harrison.....	2	1,379	8	1,835	10	3,214
Jackson.....	-	-	2	394	2	394
Jefferson.....	2	687	6	283	8	970
Lawrence.....	-	-	1	1	1	1
Mahoning.....	-	-	2	13	2	13
Monroe.....	1	6,631	-	-	1	6,631
Muskingum.....	-	-	1	31	1	31
Noble.....	-	-	1	501	1	501
Perry.....	1	14	2	803	3	816
Stark.....	-	-	3	323	3	323
Tuscarawas.....	1	306	5	1,041	6	1,348
Vinton.....	-	-	2	871	2	871
<b>Oklahoma</b> .....	<b>1</b>	<b>465</b>	<b>8</b>	<b>1,391</b>	<b>9</b>	<b>1,856</b>
Craig.....	-	-	1	302	1	302
Haskell.....	-	-	1	409	1	409
Le Flore.....	1	465	4	466	5	932
Okmulgee.....	-	-	1	5	1	5
Rogers.....	-	-	1	208	1	208
<b>Pennsylvania</b> .....	<b>53</b>	<b>54,563</b>	<b>213</b>	<b>12,931</b>	<b>266</b>	<b>67,494</b>
Allegheny.....	-	-	1	42	1	42
Armstrong.....	11	4,401	13	905	24	5,307
Beaver.....	1	382	-	-	1	382
Bedford.....	-	-	1	*	1	*
Butler.....	-	-	5	320	5	320
Cambria.....	2	707	9	458	11	1,165
Cameron.....	-	-	1	40	1	40
Centre.....	-	-	1	27	1	27
Clarion.....	-	-	3	374	3	374

See footnotes at end of table.

**Table 2. Coal Production and Number of Mines by State, County, and Mine Type, 2005 (Continued)**  
(Thousand Short Tons)

Coal-Producing State and County	Underground		Surface		Total	
	Number of Mines	Production	Number of Mines	Production	Number of Mines	Production
<b>Pennsylvania (continued)</b>						
Clearfield.....	1	368	41	3,376	42	3,743
Columbia.....	-	-	4	385	4	385
Elk.....	1	474	7	436	8	910
Fayette.....	-	-	12	548	12	548
Greene.....	8	39,808	4	26	12	39,834
Indiana.....	5	2,598	16	1,089	21	3,686
Jefferson.....	1	169	14	539	15	708
Lackawanna.....	-	-	2	17	2	17
Lawrence.....	-	-	2	20	2	20
Luzerne.....	-	-	6	341	6	341
Lycoming.....	-	-	1	214	1	214
Mercer.....	-	-	1	112	1	112
Northumberland.....	3	183	7	115	10	299
Schuylkill.....	11	81	35	522	46	603
Somerset.....	7	1,450	16	2,390	23	3,841
Venango.....	-	-	1	5	1	5
Washington.....	2	3,940	4	393	6	4,334
Westmoreland.....	-	-	6	236	6	236
<b>Tennessee.....</b>	<b>13</b>	<b>1,224</b>	<b>15</b>	<b>1,993</b>	<b>28</b>	<b>3,217</b>
Anderson.....	1	19	1	27	2	47
Campbell.....	4	435	4	291	8	725
Claiborne.....	5	716	8	1,604	13	2,320
Cumberland.....	1	10	1	38	2	47
Fentress.....	-	-	1	33	1	33
Grundy.....	1	8	-	-	1	8
Scott.....	1	36	-	-	1	36
<b>Texas.....</b>	<b>-</b>	<b>-</b>	<b>13</b>	<b>45,939</b>	<b>13</b>	<b>45,939</b>
Atascosa.....	-	-	1	3,329	1	3,329
Bastrop.....	-	-	1	2,552	1	2,552
Freestone.....	-	-	1	4,438	1	4,438
Harrison.....	-	-	1	4,603	1	4,603
Hopkins.....	-	-	1	2,509	1	2,509
Leon.....	-	-	1	6,916	1	6,916
Milam.....	-	-	1	3,202	1	3,202
Panola.....	-	-	2	7,028	2	7,028
Robertson.....	-	-	1	2,179	1	2,179
Rusk.....	-	-	1	5,983	1	5,983
Titus.....	-	-	2	3,200	2	3,200
<b>Utah.....</b>	<b>13</b>	<b>24,521</b>	<b>-</b>	<b>-</b>	<b>13</b>	<b>24,521</b>
Carbon.....	6	9,620	-	-	6	9,620
Emery.....	6	7,332	-	-	6	7,332
Sevier.....	1	7,569	-	-	1	7,569
<b>Virginia.....</b>	<b>83</b>	<b>16,386</b>	<b>49</b>	<b>11,357</b>	<b>132</b>	<b>27,743</b>
Buchanan.....	22	4,821	13	2,935	35	7,756
Dickenson.....	14	2,021	7	546	21	2,567
Lee.....	2	322	2	307	4	629
Russell.....	6	213	3	739	9	952
Tazewell.....	6	1,074	2	164	8	1,238
Wise.....	33	7,935	22	6,666	55	14,601
<b>Washington.....</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>5,266</b>	<b>1</b>	<b>5,266</b>
Lewis.....	-	-	1	5,266	1	5,266
<b>West Virginia.....</b>	<b>166</b>	<b>91,009</b>	<b>111</b>	<b>62,641</b>	<b>277</b>	<b>153,650</b>
Barbour.....	5	655	2	168	7	823
Boone.....	29	15,166	16	15,727	45	30,893
Brooke.....	-	-	1	221	1	221
Clay.....	1	155	1	3,942	2	4,097
Fayette.....	6	1,435	10	3,012	16	4,448
Grant.....	3	255	1	528	4	783
Greenbrier.....	1	333	1	40	2	374
Harrison.....	3	6,671	4	143	7	6,814
Kanawha.....	12	7,948	7	5,580	19	13,528
Lincoln.....	3	1,403	-	-	3	1,403
Logan.....	10	3,121	12	8,936	22	12,057
Marion.....	1	6,359	3	89	4	6,448
Marshall.....	2	13,925	-	-	2	13,925
McDowell.....	29	2,256	14	2,397	43	4,653
Mercer.....	-	-	1	8	1	8
Mineral.....	-	-	2	130	2	130
Mingo.....	15	6,074	13	8,468	28	14,542
Monongalia.....	3	4,949	4	387	7	5,336

See footnotes at end of table.

**Table 2. Coal Production and Number of Mines by State, County, and Mine Type, 2005 (Continued)**  
(Thousand Short Tons)

Coal-Producing State and County	Underground		Surface		Total	
	Number of Mines	Production	Number of Mines	Production	Number of Mines	Production
<b>West Virginia (continued)</b>						
Nicholas.....	2	498	2	3,409	4	3,907
Preston.....	1	1,509	1	20	2	1,529
Raleigh.....	14	6,547	3	3,072	17	9,619
Randolph.....	1	203	-	-	1	203
Tucker.....	1	115	-	-	1	115
Upshur.....	6	1,209	1	3	7	1,211
Wayne.....	3	4,191	2	833	5	5,024
Webster.....	3	1,742	2	3,349	5	5,091
Wyoming.....	12	4,291	8	2,178	20	6,469
<b>Wyoming</b> .....	<b>1</b>	<b>410</b>	<b>17</b>	<b>403,908</b>	<b>18</b>	<b>404,319</b>
Campbell.....	-	-	11	360,182	11	360,182
Converse.....	-	-	1	29,953	1	29,953
Hot Springs.....	-	-	1	6	1	6
Lincoln.....	-	-	1	4,617	1	4,617
Sweetwater.....	1	410	3	9,150	4	9,561
<b>U.S. Subtotal</b> .....	<b>606</b>	<b>368,612</b>	<b>792</b>	<b>762,190</b>	<b>1,398</b>	<b>1,130,802</b>
<b>Refuse Recovery</b> .....	-	-	-	-	<b>17</b>	<b>696</b>
<b>U.S. Total</b> .....	<b>606</b>	<b>368,612</b>	<b>792</b>	<b>762,190</b>	<b>1,415</b>	<b>1,131,498</b>

\* Quantity is less than 0.5 thousand short tons or percent change is less than 0.1%.

Note: • Totals may not equal sum of components because of independent rounding.

Source: • U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

**Table 3. Underground Coal Production by State and Mining Method, 2005**  
(Thousand Short Tons)

Coal-Producing State and Region <sup>1</sup>	Continuous <sup>2</sup>	Conventional <sup>3</sup>	Longwall <sup>4</sup>	Other <sup>5</sup>	Total
Alabama.....	186	-	13,102	7	13,295
Colorado.....	727	-	27,712	-	28,439
Illinois.....	17,421	-	8,921	-	26,343
Indiana.....	11,189	-	-	-	11,189
Kentucky Total.....	70,650	874	2,099	79	73,702
Eastern.....	49,187	689	2,099	79	52,054
Western.....	21,463	185	-	-	21,648
Maryland.....	3,175	-	-	-	3,175
Montana.....	162	-	-	-	162
New Mexico.....	-	-	7,905	-	7,905
Ohio.....	2,550	-	13,272	-	15,823
Oklahoma.....	465	-	-	-	465
Pennsylvania Total.....	9,788	1,359	43,374	41	54,563
Anthracite.....	202	30	-	32	264
Bituminous.....	9,586	1,329	43,374	9	54,298
Tennessee.....	1,204	-	-	20	1,224
Utah.....	1,495	-	23,026	-	24,521
Virginia.....	13,060	302	2,972	52	16,386
West Virginia Total.....	45,273	36	45,667	33	91,009
Northern.....	7,022	36	30,533	-	37,590
Southern.....	38,251	-	15,134	33	53,419
Wyoming.....	410	-	-	-	410
<b>Appalachian Total.....</b>	<b>124,423</b>	<b>2,386</b>	<b>120,488</b>	<b>231</b>	<b>247,528</b>
Northern.....	22,536	1,395	87,179	41	111,151
Central.....	101,702	991	20,206	176	123,075
Southern.....	186	-	13,102	14	13,303
<b>Interior Total.....</b>	<b>50,539</b>	<b>185</b>	<b>8,921</b>	<b>-</b>	<b>59,645</b>
Illinois Basin.....	50,074	185	8,921	-	59,180
<b>Western Total.....</b>	<b>2,794</b>	<b>-</b>	<b>58,644</b>	<b>-</b>	<b>61,438</b>
Powder River Basin.....	-	-	-	-	-
Uinta Region.....	1,756	-	50,739	-	52,495
<b>East of Miss. River.....</b>	<b>174,497</b>	<b>2,571</b>	<b>129,409</b>	<b>231</b>	<b>306,708</b>
<b>West of Miss. River.....</b>	<b>3,260</b>	<b>-</b>	<b>58,644</b>	<b>-</b>	<b>61,904</b>
<b>U.S. Total.....</b>	<b>177,757</b>	<b>2,571</b>	<b>188,053</b>	<b>231</b>	<b>368,612</b>

<sup>1</sup> For a definition of coal producing regions, see the Glossary.

<sup>2</sup> Mines that produce greater than 50 percent of their coal by continuous mining methods.

<sup>3</sup> Mines that produce greater than 50 percent of their coal by conventional mining methods.

<sup>4</sup> Mines that have any production from the longwall mining method. A typical longwall mining operation uses 80 percent longwall mining and 20 percent continuous mining.

<sup>5</sup> 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, or mines that produce less than 10,000 short tons, which are not required to provide data.

Note: • Totals may not equal sum of components because of independent rounding.

Source: • Energy Information Administration 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."



**Table 4. Coal Production by Coalbed Thickness and Mine Type, 2005**  
(Thousand Short Tons)

Coalbed Thickness (inches)	Underground	Surface	Total
< 7.....	-	8	8
7-12.....	792	3,625	4,417
13-18.....	488	7,351	7,839
19-24.....	306	18,448	18,755
25-30.....	2,597	22,451	25,048
31-36.....	19,868	42,748	62,615
37-42.....	26,305	35,678	61,983
43-48.....	47,975	21,966	69,940
49-54.....	22,046	21,487	43,532
55-60.....	40,423	23,579	64,002
61-66.....	29,872	51,918	81,790
67-72.....	55,912	20,145	76,057
73-78.....	9,858	8,725	18,583
79-84.....	31,252	8,802	40,054
85-90.....	8,721	3,806	12,527
91-96.....	15,154	11,087	26,241
97-102.....	17,358	2,013	19,371
103-108.....	688	6,584	7,272
109-114.....	6,140	6,580	12,720
115-120.....	869	5,056	5,925
> 120.....	31,769	439,587	471,356
<b>Unknown<sup>1</sup>.....</b>	<b>219</b>	<b>548</b>	<b>1,463</b>
<b>U.S. Total.....</b>	<b>368,612</b>	<b>762,190</b>	<b>1,131,498</b>

<sup>1</sup> Includes mines with production of less than 10,000 short tons, which are not required to provide data, and refuse recovery.

Note: • Totals may not equal sum of components because of independent rounding.

Source: • Energy Information Administration 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."

**Table 5. Coal Production and Coalbed Thickness by Major Coalbeds and Mine Type, 2005**

Coalbed ID Number <sup>1</sup> Coalbed Name	Production (thousand short tons)			Thickness (inches)		
	Underground	Surface	Total	Average <sup>2</sup>	Low	High
1699 Wyodak .....	-	344,268	344,268	672	38	900
0036 Pittsburgh .....	87,143	3,242	90,385	74	11	159
0489 No. 9 .....	37,528	9,393	46,921	62	24	84
0111 Coalburg .....	7,098	24,508	31,606	67	9	120
1697 Canyon .....	-	29,557	29,557	416	18	804
1569 Beulah-Zap .....	-	27,880	27,880	183	144	210
0151 Upper Elkhorn No. 3 .....	16,861	7,134	23,994	49	12	120
0484 Herrin (Illinois No. 6) .....	17,062	4,756	21,818	70	46	96
0084 Lower Kittanning .....	9,774	9,282	19,056	49	12	105
1696 Anderson-Dietz 1-Dietz 2 .....	-	17,338	17,338	553	390	660
1808 Rosebud .....	-	16,988	16,988	263	216	276
1787 Roland .....	-	16,311	16,311	504	375	660
0168 Lower Elkhorn .....	11,653	2,499	14,152	51	11	88
0176 Eagle .....	10,077	2,403	12,480	55	15	108
0103 Stockton-Lewiston .....	3,852	8,624	12,475	66	12	120
0135 Hazard No. 4 .....	7,696	4,727	12,423	46	15	98
1488 Fruitland No. 8 .....	7,905	4,408	12,313	159	26	196
1753 Somerset B .....	11,518	-	11,518	169	96	240
0280 Blue Creek .....	9,182	998	10,180	52	11	200
0142 Williamson (Amburgy) .....	7,029	2,873	9,903	41	11	87
1750 Wadge .....	9,370	367	9,737	101	100	120
0071 Upper Freeport .....	5,730	3,424	9,154	56	16	89
0480 No. 7 .....	2,950	5,747	8,697	44	12	54
0080 Middle Kittanning .....	2,426	6,210	8,636	55	11	90
1847 Upper Hiawatha .....	7,569	-	7,569	162	162	162
<b>Major Coalbeds Total .....</b>	<b>272,424</b>	<b>552,936</b>	<b>825,360</b>	<b>361</b>	<b>9</b>	<b>900</b>
<b>Other Coalbeds .....</b>	<b>95,969</b>	<b>208,706</b>	<b>304,675</b>	<b>88</b>	<b>4</b>	<b>841</b>
<b>Unknown<sup>3</sup> .....</b>	<b>219</b>	<b>548</b>	<b>1,463</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
<b>U.S. Total .....</b>	<b>368,612</b>	<b>762,190</b>	<b>1,131,498</b>	<b>287</b>	<b>4</b>	<b>900</b>

<sup>1</sup> 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. See Coalbed name discussion in note below.

<sup>2</sup> Average thickness is the bed thickness weighted by bed production.

<sup>3</sup> Includes mines with production of less than 10,000 short tons, which are not required to provide data, and refuse recovery.

NA = This estimated value is not available due to insufficient data or inadequate data/model performance.

Notes: • Major coalbeds for this table are the top 25 producing coalbeds. The category "Other Coalbeds" includes all coalbeds from which less than 7.6 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 7.6 million short tons. Totals may not equal sum of components due to independent rounding. • The coalbed name given is the name most commonly used in the State having the greatest production from that coalbed. The States having greatest production for each coalbed are Alabama (coalbed 0280), Colorado (1750 and 1753); Illinois (0484); Indiana (0480); Eastern Kentucky (0135, 0142, 0151, and 0168); Western Kentucky (0489); Montana (1696 and 1808); New Mexico (1488); North Dakota (1569); Ohio (0080); Pennsylvania (0036 and 0071); Utah (1847); West Virginia (0084, 0103, 0111 and 0176); and Wyoming (1697, 1699, and 1787). In some other States where these are major producing beds, the following alternative coalbed names are also used: 0084, No 5 Block (Eastern Kentucky); 0111, Hazard No 5 (Eastern Kentucky); 0135, Chilton (West Virginia); 0151, Jellico (Tennessee); Taggart (Virginia); Cedar Grove (West Virginia); 0168, No 2 Gas (West Virginia); 0176, Middle Eagle (West Virginia); 0483, No 14 (Western Kentucky); 0484, No 11 (Western Kentucky); 0489, No 5 (Illinois and Indiana).

Source: • Energy Information Administration 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."

**Table 6. Coal Production and Number of Mines by State and Coal Rank, 2005**  
(Thousand Short Tons)

Coal-Producing State and Region <sup>1</sup>	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.....	53	21,339	-	-	-	-	-	-	53	21,339
Alaska.....	-	-	1	1,454	-	-	-	-	1	1,454
Arizona.....	2	12,072	-	-	-	-	-	-	2	12,072
Arkansas.....	1	3	-	-	-	-	-	-	1	3
Colorado.....	10	30,006	3	8,504	-	-	-	-	13	38,510
Illinois.....	20	32,014	-	-	-	-	-	-	20	32,014
Indiana.....	29	34,457	-	-	-	-	-	-	29	34,457
Kansas.....	1	171	-	-	-	-	-	-	1	171
Kentucky Total.....	432	119,734	-	-	-	-	-	-	432	119,734
Eastern.....	404	93,322	-	-	-	-	-	-	404	93,322
Western.....	28	26,412	-	-	-	-	-	-	28	26,412
Louisiana.....	-	-	-	-	2	4,161	-	-	2	4,161
Maryland.....	16	5,183	-	-	-	-	-	-	16	5,183
Mississippi.....	-	-	-	-	1	3,555	-	-	1	3,555
Missouri.....	2	598	-	-	-	-	-	-	2	598
Montana.....	-	-	5	40,024	1	330	-	-	6	40,354
New Mexico <sup>2</sup> .....	2	13,409	2	15,110	-	-	-	-	4	28,519
North Dakota.....	-	-	-	-	4	29,956	-	-	4	29,956
Ohio.....	54	24,718	-	-	-	-	-	-	54	24,718
Oklahoma.....	9	1,856	-	-	-	-	-	-	9	1,856
Pennsylvania Total.....	198	65,849	-	-	-	-	68	1,645	266	67,494
Anthracite.....	-	-	-	-	-	-	68	1,645	68	1,645
Bituminous.....	198	65,849	-	-	-	-	-	-	198	65,849
Tennessee.....	28	3,217	-	-	-	-	-	-	28	3,217
Texas.....	-	-	-	-	13	45,939	-	-	13	45,939
Utah.....	13	24,521	-	-	-	-	-	-	13	24,521
Virginia.....	132	27,743	-	-	-	-	-	-	132	27,743
Washington.....	-	-	1	5,266	-	-	-	-	1	5,266
West Virginia Total.....	277	153,650	-	-	-	-	-	-	277	153,650
Northern.....	50	42,628	-	-	-	-	-	-	50	42,628
Southern.....	227	111,022	-	-	-	-	-	-	227	111,022
Wyoming.....	-	-	18	404,319	-	-	-	-	18	404,319
<b>Appalachian Total.....</b>	<b>1,162</b>	<b>395,022</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>68</b>	<b>1,645</b>	<b>1,230</b>	<b>396,666</b>
Northern.....	318	138,379	-	-	-	-	68	1,645	386	140,023
Central.....	790	235,297	-	-	-	-	-	-	790	235,297
Southern.....	54	21,347	-	-	-	-	-	-	54	21,347
<b>Interior Total.....</b>	<b>90</b>	<b>95,510</b>	<b>-</b>	<b>-</b>	<b>16</b>	<b>53,655</b>	<b>-</b>	<b>-</b>	<b>106</b>	<b>149,165</b>
Illinois Basin.....	77	92,883	-	-	-	-	-	-	77	92,883
<b>Western Total.....</b>	<b>27</b>	<b>80,008</b>	<b>30</b>	<b>474,675</b>	<b>5</b>	<b>30,287</b>	<b>-</b>	<b>-</b>	<b>62</b>	<b>584,970</b>
Powder River Basin.....	-	-	16	429,996	-	-	-	-	16	429,996
Uinta Region.....	21	53,641	3	8,504	-	-	-	-	24	62,145
<b>East of Miss. River.....</b>	<b>1,239</b>	<b>487,905</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>3,555</b>	<b>68</b>	<b>1,645</b>	<b>1,308</b>	<b>493,105</b>
<b>West of Miss. River.....</b>	<b>40</b>	<b>82,635</b>	<b>30</b>	<b>474,675</b>	<b>20</b>	<b>80,386</b>	<b>-</b>	<b>-</b>	<b>90</b>	<b>637,697</b>
<b>U.S. Subtotal.....</b>	<b>1,279</b>	<b>570,540</b>	<b>30</b>	<b>474,675</b>	<b>21</b>	<b>83,942</b>	<b>68</b>	<b>1,645</b>	<b>1,398</b>	<b>1,130,802</b>
<b>Refuse Recovery.....</b>	<b>14</b>	<b>637</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>3</b>	<b>59</b>	<b>17</b>	<b>696</b>
<b>U.S. Total.....</b>	<b>1,293</b>	<b>571,177</b>	<b>30</b>	<b>474,675</b>	<b>21</b>	<b>83,942</b>	<b>71</b>	<b>1,704</b>	<b>1,415</b>	<b>1,131,498</b>

<sup>1</sup> For a definition of coal producing regions, see Glossary.

<sup>2</sup> One Mine in New Mexico periodically produces both bituminous and subbituminous coal. When this occurs, it is double counted as a subbituminous and bituminous mine, but is not double counted in the total.

Note: • Totals may not equal sum of components because of independent rounding.

Source: • Energy Information Administration 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."

**Table 7. Coal Production by State, Mine Type, and Union Status, 2005**  
(Thousand Short Tons)

Coal-Producing State and Region <sup>1</sup>	Union		Nonunion		Total	
	Underground	Surface	Underground	Surface	Underground	Surface
Alabama.....	13,102	554	186	7,473	13,288	8,027
Alaska.....	-	1,454	-	-	-	1,454
Arizona.....	-	12,072	-	-	-	12,072
Colorado.....	2,149	3,450	26,290	6,621	28,439	10,071
Illinois.....	12,578	-	13,765	5,671	26,343	5,671
Indiana.....	-	-	11,189	23,268	11,189	23,268
Kansas.....	-	-	-	171	-	171
Kentucky Total.....	5,455	589	68,168	45,336	73,623	45,925
Eastern.....	469	589	51,507	40,579	51,975	41,168
Western.....	4,987	-	16,661	4,757	21,648	4,757
Louisiana.....	-	-	-	4,161	-	4,161
Maryland.....	-	-	3,175	1,998	3,175	1,998
Mississippi.....	-	-	-	3,555	-	3,555
Missouri.....	-	-	-	598	-	598
Montana.....	-	27,073	162	13,119	162	40,192
New Mexico.....	7,905	15,298	-	5,315	7,905	20,613
North Dakota.....	-	7,206	-	22,751	-	29,956
Ohio.....	5,343	661	10,479	8,192	15,823	8,853
Oklahoma.....	-	-	465	1,383	465	1,383
Pennsylvania Total.....	22,634	555	31,900	12,090	54,534	12,645
Anthracite.....	-	223	244	1,073	244	1,296
Bituminous.....	22,634	332	31,656	11,017	54,290	11,349
Tennessee.....	-	-	1,204	1,982	1,204	1,982
Texas.....	-	28,912	-	17,027	-	45,939
Utah.....	5,513	-	19,008	-	24,521	-
Virginia.....	2,819	715	13,515	10,616	16,334	11,331
Washington.....	-	5,266	-	-	-	5,266
West Virginia Total.....	42,633	8,982	48,342	53,628	90,976	62,609
Northern.....	30,533	-	7,058	5,028	37,590	5,028
Southern.....	12,101	8,982	41,285	48,600	53,385	57,582
Wyoming.....	410	7,963	-	395,940	410	403,902
<b>Appalachian Total.....</b>	<b>87,000</b>	<b>12,056</b>	<b>160,309</b>	<b>136,558</b>	<b>247,309</b>	<b>148,614</b>
Northern.....	58,510	1,216	52,612	27,307	111,122	28,523
Central.....	15,388	10,285	107,511	101,778	122,899	112,063
Southern.....	13,102	554	186	7,473	13,288	8,027
<b>Interior Total.....</b>	<b>17,565</b>	<b>28,912</b>	<b>42,080</b>	<b>60,591</b>	<b>59,645</b>	<b>89,503</b>
Illinois Basin.....	17,565	-	41,615	33,696	59,180	33,696
<b>Western Total.....</b>	<b>15,978</b>	<b>79,780</b>	<b>45,460</b>	<b>443,745</b>	<b>61,438</b>	<b>523,526</b>
Powder River Basin.....	-	26,742	-	403,254	-	429,996
Uinta Region.....	7,663	3,029	44,832	6,621	52,495	9,650
<b>East of Miss. River.....</b>	<b>104,565</b>	<b>12,056</b>	<b>201,924</b>	<b>173,810</b>	<b>306,489</b>	<b>185,866</b>
<b>West of Miss. River.....</b>	<b>15,978</b>	<b>108,692</b>	<b>45,926</b>	<b>467,084</b>	<b>61,904</b>	<b>575,777</b>
<b>Unknown<sup>2</sup>.....</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>219</b>	<b>548</b>
<b>U.S. Total.....</b>	<b>120,543</b>	<b>120,748</b>	<b>247,849</b>	<b>640,894</b>	<b>368,612</b>	<b>762,190</b>

<sup>1</sup> For a definition of coal producing regions, see Glossary.

<sup>2</sup> Includes mines with production of less than 10,000 short tons, which are not required to provide data.

Note: • Totals may not equal sum of components because of independent rounding. Excludes refuse recovery operations.

Source: • Energy Information Administration 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."

**Table 8. Coal Disposition by State, 2005**  
(Thousand Short Tons)

Coal-Producing State	Open Market Sales <sup>1</sup>	Captive Sales/Transactions <sup>2</sup>	Total
Alabama.....	22,156	-	22,156
Alaska.....	W	-	W
Arizona.....	W	-	W
Colorado.....	36,214	3,411	39,625
Illinois.....	28,377	3,548	31,925
Indiana.....	30,320	4,293	34,613
Kansas.....	W	-	W
Kentucky Total.....	116,725	2,457	119,183
Eastern.....	90,354	2,376	92,730
Western.....	26,372	81	26,452
Louisiana.....	W	W	W
Maryland.....	5,167	368	5,535
Mississippi.....	W	-	W
Missouri.....	W	-	W
Montana.....	38,863	1,431	40,294
New Mexico.....	26,268	-	26,268
North Dakota.....	25,631	4,438	30,070
Ohio.....	22,783	1,047	23,829
Oklahoma.....	1,849	-	1,849
Pennsylvania Total.....	64,798	3,311	68,108
Anthracite.....	1,507	169	1,676
Bituminous.....	63,291	3,142	66,432
Tennessee.....	3,146	-	3,146
Texas.....	13,595	33,798	47,394
Utah.....	12,022	12,348	24,370
Virginia.....	18,662	9,210	27,873
Washington.....	-	W	W
West Virginia Total.....	140,237	13,804	154,040
Northern.....	38,203	4,379	42,582
Southern.....	102,034	9,425	111,459
Wyoming.....	368,043	36,080	404,124
<b>U.S. Total<sup>3</sup>.....</b>	<b>995,799</b>	<b>136,591</b>	<b>1,132,390</b>

<sup>1</sup> Open market sales include all coal sold on the open market to other coal companies or consumers.

<sup>2</sup> Captive sales transactions include all coal used by the producing company or sold to affiliated or parent companies.

<sup>3</sup> Excludes mines producing less than 10,000 short tons, which are not required to provide data, and refuse recovery.

W = Withheld to avoid disclosure of individual company data.

Note: • Totals may not equal sum of components because of independent rounding.

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

**Table 9. Major U.S. Coal Mines, 2005**

Rank	Mine Names/Company	Mine Type	State	Production (short tons)
1	Black Thunder/Thunder Basin Coal Company LLC	Surface	Wyoming	87,586,375
2	North Antelope Rochelle Complex/Powder River Coal Company	Surface	Wyoming	82,688,918
3	Cordero Mine/Cordero Mining Co.	Surface	Wyoming	37,836,811
4	Jacobs Ranch Mine/Jacobs Ranch Coal Company	Surface	Wyoming	37,277,820
5	Caballo Mine/Caballo Coal Company	Surface	Wyoming	30,532,313
6	Antelope Coal Mine/Antelope Coal Company	Surface	Wyoming	29,953,375
7	Eagle Butte Mine/Rag Coal West, Inc.	Surface	Wyoming	24,133,324
8	Buckskin Mine/Triton Coal Company	Surface	Wyoming	19,568,058
9	Belle Ayr Mine/Foundation Coal West Incorporation	Surface	Wyoming	19,326,943
10	Freedom Mine/Coteau Properties Company	Surface	North Dakota	15,007,352
11	Rosebud Mine & Crusher/Conveyor/Western Energy Company	Surface	Montana	13,376,542
12	Spring Creek Coal Company/Spring Creek Coal Company	Surface	Montana	13,119,202
13	Rawhide Mine/Caballo Coal Company	Surface	Wyoming	12,430,351
14	Bailey Mine/Consol Pennsylvania Coal Company	Underground	Pennsylvania	11,076,662
15	McElroy Mine/McElroy Coal Company	Underground	West Virginia	10,419,128
16	Navajo Mine/BHP Navajo Coal Company	Surface	New Mexico	9,795,038
17	Enlow Mine/Consol Pennsylvania Coal Company	Underground	Pennsylvania	9,773,883
18	Foidel Creek Mine/Twenty mile Coal Company	Underground	Colorado	9,369,969
19	Kayenta Mine/Peabody Western Coal Company	Surface	Arizona	8,192,967
20	San Juan South/San Juan Coal Company	Underground	New Mexico	7,905,477
21	Falkirk Mine/The Falkirk Mining Company	Surface	North Dakota	7,743,341
22	Sufco/Canyon Fuel Company LLC	Underground	Utah	7,568,934
23	Cumberland Mine/Cumberland Coal Resources, LP	Underground	Pennsylvania	7,090,672
24	Jewett Mine/Texas Westmoreland Coal Co.	Surface	Texas	6,916,386
25	Decker Mine/Decker Coal Company	Surface	Montana	6,915,690
26	Century Mine/American Energy Corporation	Underground	Ohio	6,630,590
27	Elk Creek Mine/Oxbow Mining, LLC	Underground	Colorado	6,545,485
28	Absaloka Mine/Washington Group International	Surface	Montana	6,449,835
29	Loveridge No 22/Consolidation Coal Company	Underground	West Virginia	6,359,281
30	Emerald Mine No. 1/Emerald Coal Resources, LP	Underground	Pennsylvania	6,343,553
31	Robinson Run No 95/Consolidation Coal Company	Underground	West Virginia	6,148,474
32	Oak Hill Strip/TXU Mining Company LP	Surface	Texas	5,983,205
33	Galatia Mine/The American Coal Company	Underground	Illinois	5,913,651
34	Colowyo Mine/Colowyo Coal Company L P	Surface	Colorado	5,688,873
35	West Elk Mine/Mountain Coal Company, L.L.C.	Underground	Colorado	5,576,731
36	Beckville Strip/TXU Mining Company LP	Surface	Texas	5,524,859
37	McKinley/The Pittsburg & Midway Coal Mining Co	Surface	New Mexico	5,503,290
38	Powhatan No. 6 Mine/The Ohio Valley Coal Company	Underground	Ohio	5,343,145
39	Lee Ranch Coal Co/Lee Ranch Coal Company	Surface	New Mexico	5,314,923
40	Centralia Coal Mine/Trans Alta Centralia Mining LLC	Surface	Washington	5,265,672
41	Blacksville No 2/Consolidation Coal Company	Underground	Pennsylvania	5,259,338
42	Dotiki Mine/Webster County Coal LLC	Underground	Kentucky	4,733,689
43	Wyodak/Wyodak Resources Development Co	Surface	Wyoming	4,707,316
44	Twilight MTR Surface Mine/Progress Coal	Surface	West Virginia	4,693,784
45	Kemmerer Mine/The Pittsburg & Midway Coal Mining Co	Surface	Wyoming	4,616,597
46	South Hallsville No 1 Mine/Sabine Mining Company	Surface	Texas	4,602,752
47	Dugout Canyon Mine/Arch Western Bituminous Group	Underground	Utah	4,591,851
48	Big Brown Strip/TXU Mining Company LP	Surface	Texas	4,438,449
49	Center Mine/BNI Coal Ltd	Surface	North Dakota	4,367,952
50	Samples Mine/Catenary Coal Company LLC	Surface	West Virginia	4,156,379
51	Federal No 2/Eastern Associated Coal Corp	Underground	West Virginia	4,100,023
52	Dry Fork Mine/Dry Fork Coal Company	Surface	Wyoming	4,093,611
53	Cardinal/Warrior Coal, LLC	Underground	Kentucky	4,033,055
	<b>Subtotal</b>			<b>672,591,894</b>
	<b>All Other Mines</b>			<b>458,906,205</b>
	<b>U.S. Total</b>			<b>1,131,498,099</b>

Note: • Major mines are mines that produced more than 4 million short tons in 2005. The company is the firm operating the mine.

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

**Table 10. Major U.S. Coal Producers, 2005**

Rank	Company Name	Production (thousand short tons)	Percent of Total Production
1	Peabody Coal Co.	201,410	17.8
2	Rio Tinto Energy America, Inc.	123,876	10.9
3	Arch Coal, Inc.	117,402	10.4
4	CONSOL Energy, Inc.	65,626	5.8
5	Foundation Coal Corp.	64,071	5.7
6	A.T. Massey Coal Co., Inc.	42,272	3.7
7	North American Coal Corp.	30,909	2.7
8	Westmoreland Coal Co.	29,911	2.6
9	TXU Corp.	23,158	2.0
10	Alliance Coal, LLC	21,897	1.9
11	Robert Murray	19,878	1.8
12	Peter Kiewit Sons, Inc.	19,568	1.7
13	International Coal Group Inc. (ICG)	18,505	1.6
14	BHP Minerals Group	17,701	1.6
15	Alpha Natural Resources., LLC	14,172	1.3
16	Magnum Coal Co.	10,842	1.0
17	Pittsburg & Midway Coal Mining Co.	10,120	0.9
18	PacifiCorp	9,302	0.8
19	James River Coal Co.	7,729	0.7
20	Peter Kiewit/Kennecott	6,916	0.6
21	Oxbow Carbon & Minerals, Inc.	6,545	0.6
22	Wexford Capital LLC	6,435	0.6
23	Andalex Resources Inc	6,183	0.5
24	TECO Energy, Inc.	5,874	0.5
25	Alcoa, Inc.	5,754	0.5
26	Walter Industries, Inc.	5,736	0.5
27	Transalta Centralia Mining LLC	5,266	0.5
	<b>Subtotal</b>	<b>897,055</b>	<b>79.3</b>
	<b>All Other Coal Producers</b>	<b>234,443</b>	<b>20.7</b>
	<b>U.S. Total</b>	<b>1,131,498</b>	<b>100.0</b>

Note: • Major coal producers are companies that produced more than 5 million short tons in 2005. A controlling company of a mine is defined as the company "controlling the coal, particularly the sale of the coal." Most often, but not always, this is the owner of the mine.

Source: • COALdat, a product of RDI/Platts and U.S. Department of Labor, Mine Safety and Health Administration Form 7000-2, "Quarterly Mine Employment and Coal Production Report."





# **Productive Capacity**

**Table 11. Productive Capacity of Coal Mines by State, 2005, 2004**  
(Thousand Short Tons)

Coal-Producing State	2005			2004			Percent Change		
	Underground	Surface	Total	Underground	Surface	Total	Underground	Surface	Total
Alabama.....	15,139	10,165	25,304	17,377	7,784	25,161	-12.9	30.6	0.6
Alaska.....	-	W	W	-	W	W	-	W	W
Arizona.....	-	W	W	-	W	W	-	W	W
Colorado.....	32,622	10,503	43,125	32,492	11,428	43,920	0.4	-8.1	-1.8
Illinois.....	32,666	7,495	40,162	29,487	6,180	35,667	10.8	21.3	12.6
Indiana.....	11,837	27,253	39,089	11,638	27,226	38,864	1.7	*	0.6
Kansas.....	-	W	W	-	W	W	-	W	W
Kentucky Total.....	92,065	57,460	149,525	95,138	55,665	150,804	-3.2	3.2	-0.8
Eastern.....	66,372	51,807	118,179	73,071	50,516	123,586	-9.2	2.6	-4.4
Western.....	25,693	5,653	31,346	22,068	5,149	27,217	16.4	9.8	15.2
Louisiana.....	-	W	W	-	W	W	-	W	W
Maryland.....	W	W	5,702	W	W	6,171	W	W	-7.6
Mississippi.....	-	W	W	-	W	W	-	W	W
Missouri.....	-	W	W	-	W	W	-	W	W
Montana.....	W	W	47,003	W	W	50,384	W	W	-6.7
New Mexico.....	W	W	29,503	W	W	30,300	W	W	-2.6
North Dakota.....	-	33,500	33,500	-	33,000	33,000	-	1.5	1.5
Ohio.....	16,760	17,454	34,214	15,216	12,879	28,095	10.1	35.5	21.8
Oklahoma.....	W	W	2,294	W	W	2,361	W	W	-2.9
Pennsylvania Total.....	62,418	17,428	79,846	59,764	16,782	76,546	4.4	3.9	4.3
Anthracite.....	258	2,636	2,894	276	2,592	2,868	-6.4	1.7	0.9
Bituminous.....	62,160	14,792	76,952	59,488	14,190	73,678	4.5	4.2	4.4
Tennessee.....	1,747	2,610	4,357	1,755	3,520	5,276	-0.5	-25.9	-17.4
Texas.....	-	49,493	49,493	-	47,005	47,005	-	5.3	5.3
Utah.....	27,383	-	27,383	28,304	-	28,304	-3.3	-	-3.3
Virginia.....	23,661	15,970	39,631	27,864	15,239	43,103	-15.1	4.8	-8.1
Washington.....	-	W	W	-	W	W	-	W	W
West Virginia Total.....	121,396	82,404	203,800	114,083	69,507	183,590	6.4	18.6	11.0
Northern.....	41,205	6,804	48,010	37,767	5,121	42,889	9.1	32.9	11.9
Southern.....	80,190	75,600	155,790	76,316	64,386	140,702	5.1	17.4	10.7
Wyoming.....	W	W	488,378	W	W	448,798	W	W	8.8
<b>U.S. Total.....</b>	<b>450,310</b>	<b>922,947</b>	<b>1,373,258</b>	<b>445,712</b>	<b>862,801</b>	<b>1,308,513</b>	<b>1.0</b>	<b>7.0</b>	<b>4.9</b>

\* Quantity is less than 0.5 thousand short tons or percent change is less than 0.1%.

W = Withheld to avoid disclosure of individual company data.

Note: • Productive capacity is the maximum amount of coal that can be produced annually as reported by mining companies on Form EIA-7A. Excludes mines producing less than 10,000 short tons, which are not required to provide data and refuse recovery. Totals may not equal sum of components because of independent rounding.

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

**Table 12. Capacity Utilization of Coal Mines by State, 2005, 2004**  
(Percent)

Coal-Producing State	2005			2004		
	Underground	Surface	Total	Underground	Surface	Total
Alabama.....	87.78	78.97	84.24	92.73	78.73	88.40
Alaska.....	-	W	W	-	W	W
Arizona.....	-	W	W	-	W	W
Colorado.....	87.18	95.88	89.30	91.12	89.80	90.78
Illinois.....	80.64	75.66	79.71	91.25	80.04	89.31
Indiana.....	94.53	85.38	88.15	86.71	91.89	90.34
Kansas.....	-	W	W	-	W	W
Kentucky Total.....	79.97	79.92	79.95	75.33	76.05	75.60
Eastern.....	78.31	79.46	78.82	71.64	75.78	73.34
Western.....	84.26	84.14	84.24	87.55	78.66	85.87
Louisiana.....	-	W	W	-	W	W
Maryland.....	W	W	90.72	W	W	84.20
Mississippi.....	-	W	W	-	W	W
Missouri.....	-	W	W	-	W	W
Montana.....	W	W	85.85	W	W	79.37
New Mexico.....	W	W	96.66	W	W	89.93
North Dakota.....	-	89.42	89.42	-	90.74	90.74
Ohio.....	94.41	50.72	72.12	93.79	69.20	82.52
Oklahoma.....	W	W	80.59	W	W	75.69
Pennsylvania Total.....	87.37	72.56	84.14	89.00	74.68	85.86
Anthracite.....	94.47	49.17	53.21	87.13	52.40	55.74
Bituminous.....	87.34	76.72	85.30	89.01	78.75	87.03
Tennessee.....	68.93	75.95	73.13	46.81	58.24	54.44
Texas.....	-	92.82	92.82	-	97.57	97.57
Utah.....	89.55	-	89.55	76.83	-	76.83
Virginia.....	69.03	70.95	69.81	73.30	71.96	72.83
Washington.....	-	W	W	-	W	W
West Virginia Total.....	74.94	75.98	75.36	79.69	82.00	80.57
Northern.....	91.23	73.89	88.77	95.53	88.73	94.72
Southern.....	66.57	76.17	71.23	71.86	81.47	76.26
Wyoming.....	W	W	82.79	W	W	88.34
<b>U.S. Total.....</b>	<b>81.81</b>	<b>82.52</b>	<b>82.29</b>	<b>82.43</b>	<b>86.11</b>	<b>84.86</b>

W = Withheld to avoid disclosure of individual company data.

Note: • Capacity utilization is the ratio of annual production to annual productive capacity. Excludes mines producing less than 10,000 short tons, which are not required to provide data and refuse recovery. Totals may not equal sum of components because of independent rounding.

Source: • Energy Information Administration Form EIA-7A, "Coal Production Report," for productive capacity, and U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report," for annual production.

**Table 13. Productive Capacity and Capacity Utilization of Underground Coal Mines by State and Mining Method, 2005**  
(Thousand Short Tons)

Coal-Producing State	Continuous		Conventional		Longwall		Other		Total	
	Productive Capacity	Capacity Utilization Percent	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	-	-	15,139	87.78
Colorado.....	W	W	-	-	W	W	-	-	32,622	87.18
Illinois.....	W	W	-	-	W	W	-	-	32,666	80.64
Indiana.....	11,837	94.53	-	-	-	-	-	-	11,837	94.53
Kentucky Total.....	87,779	80.49	W	W	W	W	-	-	92,065	79.97
Eastern.....	W	W	W	W	W	W	-	-	66,372	78.31
Western.....	W	W	W	W	-	-	-	-	25,693	84.26
Maryland.....	W	W	-	-	-	-	-	-	W	W
Montana.....	W	W	-	-	-	-	-	-	W	W
New Mexico.....	-	-	-	-	W	W	-	-	W	W
Ohio.....	W	W	-	-	W	W	-	-	16,760	94.41
Oklahoma.....	W	W	-	-	-	-	-	-	W	W
Pennsylvania Total.....	W	67.76	3,344	W	44,616	97.22	W	W	62,418	87.37
Anthracite.....	W	W	W	W	-	-	W	W	258	94.47
Bituminous.....	W	W	W	W	44,616	97.22	-	-	62,160	87.34
Tennessee.....	1,747	68.93	-	-	-	-	-	-	1,747	68.93
Utah.....	3,435	43.52	-	-	23,948	96.15	-	-	27,383	89.55
Virginia.....	17,596	74.22	467	64.64	W	W	-	-	23,661	69.03
West Virginia Total.....	64,613	W	W	W	W	80.68	-	-	121,396	74.94
Northern.....	W	W	W	W	W	W	-	-	41,205	91.23
Southern.....	W	W	-	-	W	W	-	-	80,190	66.57
Wyoming.....	W	W	-	-	-	-	-	-	W	W
<b>U.S. Total.....</b>	<b>231,730</b>	<b>76.71</b>	<b>W</b>	<b>W</b>	<b>212,950</b>	<b>88.31</b>	<b>W</b>	<b>W</b>	<b>450,310</b>	<b>81.81</b>

W = Withheld to avoid disclosure of individual company data.

Note: • Productive capacity is the maximum amount of coal that can be produced annually. Capacity utilization is the ratio of total production to annual productive capacity. Excludes mines producing less than 10,000 short tons, which are not required to provide data and recovery operations. Totals may not equal sum of components because of independent rounding.

Source: • Energy Information Administration Form EIA-7A, "Coal Production Report," for productive capacity, and U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report," for annual production.

## **Recoverable Reserves**

**Table 14. Recoverable Coal Reserves and Average Recovery Percentage at Producing Mines by State, 2005, 2004**  
(Million Short Tons)

Coal-Producing State	2005		2004		Percent Change Recoverable Coal Reserves
	Recoverable Coal Reserves	Average Recovery Percentage	Recoverable Coal Reserves	Average Recovery Percentage	
Alabama.....	355	59.47	341	58.76	4.1
Alaska.....	W	W	W	W	W
Arizona.....	W	W	W	W	W
Arkansas.....	-	-	-	-	-
Colorado.....	382	66.88	415	69.34	-7.9
Illinois.....	747	59.32	796	59.40	-6.1
Indiana.....	382	67.55	398	66.95	-4.2
Kansas.....	W	W	W	W	W
Kentucky Total.....	1,169	55.26	1,129	55.17	3.6
Eastern.....	784	55.92	823	56.14	-4.7
Western.....	385	53.94	306	52.58	26.0
Louisiana.....	W	W	W	W	W
Maryland.....	35	60.08	17	62.64	111.2
Mississippi.....	W	W	W	W	W
Missouri.....	W	W	W	W	W
Montana.....	1,234	90.94	1,140	87.75	8.2
New Mexico.....	526	89.12	1,304	91.31	-59.6
North Dakota.....	1,214	89.20	1,191	89.41	2.0
Ohio.....	371	73.55	318	72.36	16.7
Oklahoma.....	15	67.77	17	68.95	-9.6
Pennsylvania Total.....	616	69.06	614	68.22	0.3
Anthracite.....	21	55.65	22	52.73	-5.3
Bituminous.....	596	69.52	592	68.79	0.6
Tennessee.....	19	65.57	26	74.73	-26.4
Texas.....	772	93.28	546	92.35	41.4
Utah.....	281	60.37	317	58.57	-11.3
Virginia.....	294	57.01	250	56.95	18.0
Washington.....	W	W	W	W	W
West Virginia Total.....	1,741	60.33	1,518	60.63	14.7
Northern.....	325	59.68	375	60.03	-13.1
Southern.....	1,416	60.48	1,144	60.82	23.8
Wyoming.....	7,975	92.99	7,053	92.92	13.1
<b>U.S. Total.....</b>	<b>18,944</b>	<b>81.72</b>	<b>18,122</b>	<b>81.42</b>	<b>4.5</b>

W = Withheld to avoid disclosure of individual company data.

Note: • 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 mines producing less than 10,000 short tons, which are not required to provide data and refuse recovery. Totals may not equal sum of components because of independent rounding.

Source: • Energy Information Administration 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."

**Table 15. Recoverable Coal Reserves at Producing Mines, Estimated Recoverable Reserves, and Demonstrated Reserve Base by Mining Method, 2005**  
(Million Short Tons)

Coal-Resource State	Underground - Minable Coal			Surface - Minable Coal			Total		
	Recoverable Reserves at Producing Mines	Estimated Recoverable Reserves	Demonstrated Reserve Base	Recoverable Reserves at Producing Mines	Estimated Recoverable Reserves	Demonstrated Reserve Base	Recoverable Reserves at Producing Mines	Estimated Recoverable Reserves	Demonstrated Reserve Base
Alabama.....	306	508	1,007	50	2,278	3,198	355	2,785	4,205
Alaska.....	-	2,335	5,423	W	499	687	W	2,834	6,110
Arizona.....	-	-	-	W	-	-	W	-	-
Arkansas.....	-	127	272	-	101	144	-	228	417
Colorado.....	338	6,015	11,461	44	3,747	4,762	382	9,761	16,223
Georgia.....	-	1	2	-	1	2	-	2	4
Idaho.....	-	2	160	-	-	-	-	2	160
Illinois.....	708	27,927	87,919	40	10,073	16,550	747	38,000	104,469
Indiana.....	249	3,620	8,741	133	434	742	382	4,054	9,483
Iowa.....	-	807	1,732	-	320	457	-	1,127	2,189
Kansas.....	-	-	-	W	681	972	W	681	972
Kentucky Total.....	965	7,411	17,055	204	7,483	12,965	1,169	14,894	30,020
Eastern.....	603	658	1,178	181	5,214	9,337	784	5,872	10,516
Western.....	362	6,753	15,877	23	2,269	3,628	385	9,022	19,504
Louisiana.....	-	-	-	W	312	422	W	312	422
Maryland.....	W	317	578	W	44	65	35	361	643
Michigan.....	-	55	123	-	3	5	-	59	128
Mississippi.....	-	-	-	W	-	-	W	-	-
Missouri.....	-	689	1,479	W	3,157	4,510	W	3,847	5,989
Montana.....	W	35,922	70,958	W	39,021	48,272	1,234	74,944	119,230
New Mexico.....	W	2,801	6,156	W	4,188	5,975	526	6,988	12,131
North Carolina.....	-	5	11	-	-	-	-	5	11
North Dakota.....	-	-	-	1,214	6,906	9,053	1,214	6,906	9,053
Ohio.....	205	7,719	17,546	166	3,767	5,754	371	11,486	23,300
Oklahoma.....	W	574	1,231	W	226	323	15	800	1,554
Oregon.....	-	6	15	-	2	3	-	9	17
Pennsylvania Total.....	520	10,710	23,221	96	1,044	4,251	616	11,754	27,472
Anthracite.....	2	340	3,844	18	420	3,355	21	760	7,198
Bituminous.....	518	10,370	19,377	78	625	896	596	10,994	20,274
South Dakota.....	-	-	-	-	277	366	-	277	366
Tennessee.....	8	280	510	11	179	264	19	459	774
Texas.....	-	-	-	772	9,534	12,385	772	9,534	12,385
Utah.....	281	2,514	5,128	-	212	268	281	2,726	5,396
Virginia.....	235	2,949	1,130	59	171	562	294	3,121	1,693
Washington.....	-	1,030	1,332	W	6	8	W	1,036	1,340
West Virginia Total.....	1,179	15,576	29,184	562	2,382	3,775	1,741	17,958	32,960
Northern.....	290	NA	NA	35	NA	NA	325	NA	NA
Southern.....	888	NA	NA	527	NA	NA	1,416	NA	NA
Wyoming.....	W	22,950	42,500	W	17,657	21,319	7,975	40,607	63,819
<b>U.S. Total.....</b>	<b>5,502</b>	<b>152,850</b>	<b>334,876</b>	<b>13,442</b>	<b>114,705</b>	<b>158,059</b>	<b>18,944</b>	<b>267,554</b>	<b>492,935</b>

W = Withheld to avoid disclosure of individual company data.

NA = This estimated value is not available due to insufficient data or inadequate data/model performance.

Notes: • The demonstrated reserve base and the estimated recoverable reserves as of 1/1/2006 incorporate revisions made to eliminate a discrepancy between data expressed by coal rank versus data allocated to Btu ranges. The minor differences resulted from the fact that coal rank classifications are based in part, but not entirely, on Btu content. EIA's data - originally allocated to Btu ranges for coal supply and demand modeling - had been used to approximate the estimated recoverable reserves by coal rank in the early 1990's. Over time, the small differences between resources and reserves by coal rank and by Btu ranges became significant due to cumulative depletion adjustments. The 1/1/2006 data include internal additions to coal tonnages by Btu ranges to identify the coal ranks where more than one rank occurs in borderline resource areas and unify the tonnage totals. • Recoverable coal reserves at producing mines represent the quantity of coal that can be recovered (i.e. mined) from existing coal reserves at reporting mines. • EIA's estimated recoverable reserves include the coal in the demonstrated reserve base considered recoverable after excluding coal estimated to be unavailable due to land use restrictions or currently economically unattractive for mining, and after applying assumed mining recovery rates; see Glossary for criteria. • The effective date for the demonstrated reserve base, as customarily worded, is "Remaining as of January 1, 2006." These data are contemporaneous with the Recoverable Reserves at Producing Mines, customarily presented as of the end of the past year's mining, that is in this case, December 31, 2005. Current or recent mining in a State does not imply that data for a demonstrated reserve base and estimated recoverable reserves. • The demonstrated reserve base includes publicly available data on coal mapped to measured and indicated degrees of accuracy and found at depths and in coalbed thicknesses considered technologically minable at the time of determinations; see Glossary for criteria. • All reserve expressions excludes silt, culm, refuse bank, slurry dam, and dredge operations. • Reserves at Producing Mines excludes mines producing less than 10,000 short tons, which are not required to provide reserves data.

Source: • Energy Information Administration 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," and EIA estimates.

**Table 16. Recoverable Coal Reserves and Average Recovery Percentage at Producing Underground Coal Mines by State and Mining Method, 2005**  
(Million Short Tons)

Coal-Producing State	Continuous <sup>1</sup>		Conventional <sup>2</sup>		Longwall <sup>3</sup>		Other <sup>4</sup>		Total	
	Recoverable Coal Reserves at Producing Mines	Average Recovery Percentage	Recoverable Coal Reserves at Producing Mines	Average Recovery Percentage	Recoverable Coal Reserves at Producing Mines	Average Recovery Percentage	Recoverable Coal Reserves at Producing Mines	Average Recovery Percentage	Recoverable Coal Reserves at Producing Mines	Average Recovery Percentage
Alabama.....	W	W	-	-	W	W	-	-	306	54.40
Colorado.....	W	W	-	-	W	W	-	-	338	64.03
Illinois.....	W	W	-	-	W	W	-	-	708	58.30
Indiana.....	249	60.64	-	-	-	-	-	-	249	60.64
Kentucky Total.....	943	W	W	59.73	W	W	-	-	965	48.82
Eastern.....	W	W	W	W	W	W	-	-	603	47.21
Western.....	W	W	W	W	-	-	-	-	362	51.49
Maryland.....	W	W	-	-	-	-	-	-	W	W
Montana.....	W	W	-	-	-	-	-	-	W	W
New Mexico.....	-	-	-	-	W	W	-	-	W	W
Ohio.....	W	W	-	-	W	W	-	-	205	63.27
Oklahoma.....	W	W	-	-	-	-	-	-	W	W
Pennsylvania Total.....	W	68.54	22	70.22	392	W	W	W	520	66.84
Anthracite.....	W	W	W	W	-	-	W	W	2	75.43
Bituminous.....	W	W	W	W	392	W	-	-	518	66.81
Tennessee.....	8	52.16	-	-	-	-	-	-	8	52.16
Utah.....	49	70.25	-	-	232	58.27	-	-	281	60.37
Virginia.....	178	48.74	W	W	W	W	-	-	235	49.18
West Virginia Total.....	670	W	W	W	W	51.29	-	-	1,179	51.06
Northern.....	W	W	W	W	W	W	-	-	290	58.45
Southern.....	W	W	-	-	W	W	-	-	888	48.65
Wyoming.....	W	W	-	-	-	-	-	-	W	W
<b>U.S. Total.....</b>	<b>2,959</b>	<b>56.51</b>	<b>W</b>	<b>W</b>	<b>2,513</b>	<b>60.33</b>	<b>W</b>	<b>W</b>	<b>5,502</b>	<b>58.32</b>

<sup>1</sup> Mines that produce greater than 50 percent of their coal by continuous mining methods.

<sup>2</sup> Mines that produce greater than 50 percent of their coal by conventional mining methods.

<sup>3</sup> Mines that have any production from the longwall mining method. A typical longwall mining operation uses 80 percent longwall mining and 20 percent continuous mining.

<sup>4</sup> Mines that produce coal using shortwall, scoop loading, hand loading, or other mining methods or 50/50 percent continuous conventional split in mining method.

\* Quantity is less than 0.5 thousand short tons or percent change is less than 0.1%.

W = Withheld to avoid disclosure of individual company data.

Note: • Recoverable coal reserves at producing mines 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 mines producing less than 10,000 short tons, which are not required to provide data and refuse recovery.

Source: • Energy Information Administration 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."



**Table 17. Recoverable Coal Reserves and Average Recovery Percentage at Producing U.S. Mines by Mine Production Range and Mine Type, 2005**  
(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.....	3,546	58.21	12,502	91.95	16,048	84.50
500 to 1,000.....	481	47.17	379	84.02	860	63.40
200 to 500.....	575	55.89	255	82.88	830	64.20
100 to 200.....	550	70.83	108	82.31	658	72.70
50 to 100.....	246	61.83	84	83.34	330	67.32
10 to 50.....	104	52.52	114	77.04	218	65.31
<b>U.S. Total.....</b>	<b>5,502</b>	<b>58.32</b>	<b>13,442</b>	<b>91.30</b>	<b>18,944</b>	<b>81.72</b>

Note: • Recoverable coal reserves at producing mines 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 mines producing less than 10,000 short tons, which are not required to provide data and refuse recovery.

Source: • Energy Information Administration 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."



# Employment

**Table 18. Average Number of Employees by State and Mine Type, 2005, 2004**

Coal-Producing State and Region <sup>1</sup>	2005			2004			Percent Change		
	Underground	Surface	Total	Underground	Surface	Total	Underground	Surface	Total
Alabama.....	2,887	1,251	4,138	2,649	984	3,633	9.0	27.1	13.9
Alaska.....	-	97	97	-	92	92	-	5.4	5.4
Arizona.....	-	567	567	-	598	598	-	-5.2	-5.2
Arkansas.....	-	2	2	9	3	12	-100.0	-33.3	-83.3
Colorado.....	1,640	586	2,226	1,488	604	2,092	10.2	-3.0	6.4
Illinois.....	3,393	424	3,817	3,188	385	3,573	6.4	10.1	6.8
Indiana.....	1,143	1,540	2,683	1,122	1,708	2,830	1.9	-9.8	-5.2
Kansas.....	-	25	25	-	15	15	-	66.7	66.7
Kentucky Total.....	11,137	5,853	16,990	10,251	5,271	15,522	8.6	11.0	9.5
Eastern.....	8,883	5,407	14,290	8,371	4,901	13,272	6.1	10.3	7.7
Western.....	2,254	446	2,700	1,880	370	2,250	19.9	20.5	20.0
Louisiana.....	-	242	242	-	231	231	-	4.8	4.8
Maryland.....	272	230	502	264	233	497	3.0	-1.3	1.0
Mississippi.....	-	193	193	-	211	211	-	-8.5	-8.5
Missouri.....	-	24	24	-	25	25	-	-4.0	-4.0
Montana.....	53	782	835	39	683	722	35.9	14.5	15.7
New Mexico.....	362	1,046	1,408	334	1,054	1,388	8.4	-0.8	1.4
North Dakota.....	-	927	927	-	918	918	-	1.0	1.0
Ohio.....	1,384	1,150	2,534	1,312	1,198	2,510	5.5	-4.0	1.0
Oklahoma.....	48	148	196	44	132	176	9.1	12.1	11.4
Pennsylvania Total.....	5,043	2,566	7,609	5,003	2,521	7,524	0.8	1.8	1.1
Anthracite.....	228	663	891	230	660	890	-0.9	0.5	0.1
Bituminous.....	4,815	1,903	6,718	4,773	1,861	6,634	0.9	2.3	1.3
Tennessee.....	318	373	691	244	402	646	30.3	-7.2	7.0
Texas.....	-	2,196	2,196	-	2,274	2,274	-	-3.4	-3.4
Utah.....	1,812	5	1,817	1,522	11	1,533	19.1	-54.5	18.5
Virginia.....	3,577	1,557	5,134	3,374	1,468	4,842	6.0	6.1	6.0
Washington.....	-	672	672	-	581	581	-	15.7	15.7
West Virginia Total.....	12,483	6,128	18,611	11,136	5,267	16,403	12.1	16.3	13.5
Northern.....	4,085	544	4,629	3,805	458	4,263	7.4	18.8	8.6
Southern.....	8,398	5,584	13,982	7,331	4,809	12,140	14.6	16.1	15.2
Wyoming.....	62	4,988	5,050	37	4,916	4,953	67.6	1.5	2.0
<b>Appalachian Total.....</b>	<b>34,847</b>	<b>18,662</b>	<b>53,509</b>	<b>32,353</b>	<b>16,974</b>	<b>49,327</b>	<b>7.7</b>	<b>9.9</b>	<b>8.5</b>
Northern.....	10,784	4,490	15,274	10,384	4,410	14,794	3.9	1.8	3.2
Central.....	21,163	12,921	34,084	19,320	11,580	30,900	9.5	11.6	10.3
Southern.....	2,900	1,251	4,151	2,649	984	3,633	9.5	27.1	14.3
<b>Interior Total.....</b>	<b>6,838</b>	<b>5,240</b>	<b>12,078</b>	<b>6,243</b>	<b>5,354</b>	<b>11,597</b>	<b>9.5</b>	<b>-2.1</b>	<b>4.1</b>
Illinois Basin.....	6,790	2,410	9,200	6,190	2,463	8,653	9.7	-2.2	6.3
<b>Western Total.....</b>	<b>3,929</b>	<b>9,670</b>	<b>13,599</b>	<b>3,420</b>	<b>9,457</b>	<b>12,877</b>	<b>14.9</b>	<b>2.3</b>	<b>5.6</b>
Powder River Basin.....	-	5,053	5,053	-	4,771	4,771	-	5.9	5.9
Uinta Region.....	3,394	562	3,956	2,951	589	3,540	15.0	-4.6	11.8
<b>East of Miss. River.....</b>	<b>41,637</b>	<b>21,265</b>	<b>62,902</b>	<b>38,543</b>	<b>19,648</b>	<b>58,191</b>	<b>8.0</b>	<b>8.2</b>	<b>8.1</b>
<b>West of Miss. River.....</b>	<b>3,977</b>	<b>12,307</b>	<b>16,284</b>	<b>3,473</b>	<b>12,137</b>	<b>15,610</b>	<b>14.5</b>	<b>1.4</b>	<b>4.3</b>
<b>U.S. Subtotal.....</b>	<b>45,614</b>	<b>33,572</b>	<b>79,186</b>	<b>42,016</b>	<b>31,785</b>	<b>73,801</b>	<b>8.6</b>	<b>5.6</b>	<b>7.3</b>
<b>Refuse Recovery.....</b>	<b>-</b>	<b>-</b>	<b>97</b>	<b>-</b>	<b>-</b>	<b>111</b>	<b>-</b>	<b>-</b>	<b>-12.6</b>
<b>U.S. Total.....</b>	<b>45,614</b>	<b>33,572</b>	<b>79,283</b>	<b>42,016</b>	<b>31,785</b>	<b>73,912</b>	<b>8.6</b>	<b>5.6</b>	<b>7.3</b>

<sup>1</sup> For a definition of coal producing regions, see Glossary.

Note: • Includes all employees engaged in production, preparation, processing, development, maintenance, repair shop, or yard work at mining operations, including office workers. Excludes preparation plants with less than 5,000 employee hours per year, which are not required to provide data.

Source: • U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

**Table 19. Average Number of Employees at Underground and Surface Mines by State and Mine Production Range, 2005**

Coal-Producing State, Region <sup>1</sup> , and Mine Type	Mine Production Range (Thousand Short Tons)								Total Number of Employees
	1,000 and Greater	500 to 1,000	200 to 500	100 to 200	50 to 100	10 to 50	Less Than 10	Zero <sup>2</sup>	
<b>Alabama</b> .....	<b>2,437</b>	<b>595</b>	<b>392</b>	<b>248</b>	<b>270</b>	<b>61</b>	<b>11</b>	<b>124</b>	<b>4,138</b>
Underground.....	2,437	323	-	-	74	-	5	48	2,887
Surface.....	-	272	392	248	196	61	6	76	1,251
<b>Alaska</b> .....	<b>97</b>	-	-	-	-	-	-	-	<b>97</b>
Surface.....	97	-	-	-	-	-	-	-	97
<b>Arizona</b> .....	<b>532</b>	-	-	-	-	-	-	<b>35</b>	<b>567</b>
Surface.....	532	-	-	-	-	-	-	35	567
<b>Arkansas</b> .....	-	-	-	-	-	-	<b>2</b>	-	<b>2</b>
Surface.....	-	-	-	-	-	-	2	-	2
<b>Colorado</b> .....	<b>2,085</b>	<b>22</b>	<b>114</b>	-	-	-	-	<b>5</b>	<b>2,226</b>
Underground.....	1,550	-	85	-	-	-	-	5	1,640
Surface.....	535	22	29	-	-	-	-	-	586
<b>Illinois</b> .....	<b>3,278</b>	<b>347</b>	<b>51</b>	-	<b>3</b>	<b>8</b>	-	<b>130</b>	<b>3,817</b>
Underground.....	2,993	318	-	-	-	-	-	82	3,393
Surface.....	285	29	51	-	3	8	-	48	424
<b>Indiana</b> .....	<b>1,965</b>	<b>288</b>	<b>202</b>	-	<b>56</b>	<b>52</b>	-	<b>120</b>	<b>2,683</b>
Underground.....	884	113	74	-	-	32	-	40	1,143
Surface.....	1,081	175	128	-	56	20	-	80	1,540
<b>Kansas</b> .....	-	-	-	<b>25</b>	-	-	-	-	<b>25</b>
Surface.....	-	-	-	25	-	-	-	-	25
<b>Kentucky Total</b> .....	<b>3,940</b>	<b>3,112</b>	<b>3,510</b>	<b>1,717</b>	<b>1,271</b>	<b>1,276</b>	<b>286</b>	<b>1,878</b>	<b>16,990</b>
Underground.....	3,227	1,609	2,155	1,226	845	722	159	1,194	11,137
Surface.....	713	1,503	1,355	491	426	554	127	684	5,853
<b>Eastern</b> .....	<b>2,034</b>	<b>2,936</b>	<b>3,207</b>	<b>1,599</b>	<b>1,213</b>	<b>1,260</b>	<b>282</b>	<b>1,759</b>	<b>14,290</b>
Underground.....	1,393	1,560	1,993	1,156	798	722	159	1,102	8,883
Surface.....	641	1,376	1,214	443	415	538	123	657	5,407
<b>Western</b> .....	<b>1,906</b>	<b>176</b>	<b>303</b>	<b>118</b>	<b>58</b>	<b>16</b>	<b>4</b>	<b>119</b>	<b>2,700</b>
Underground.....	1,834	49	162	70	47	-	-	92	2,254
Surface.....	72	127	141	48	11	16	4	27	446
<b>Louisiana</b> .....	<b>206</b>	<b>36</b>	-	-	-	-	-	-	<b>242</b>
Surface.....	206	36	-	-	-	-	-	-	242
<b>Maryland</b> .....	<b>173</b>	<b>108</b>	<b>78</b>	<b>35</b>	<b>27</b>	<b>35</b>	<b>12</b>	<b>34</b>	<b>502</b>
Underground.....	173	-	46	22	-	-	-	31	272
Surface.....	-	108	32	13	27	35	12	3	230
<b>Mississippi</b> .....	<b>193</b>	-	-	-	-	-	-	-	<b>193</b>
Surface.....	193	-	-	-	-	-	-	-	193
<b>Missouri</b> .....	-	-	<b>24</b>	-	-	-	-	-	<b>24</b>
Surface.....	-	-	24	-	-	-	-	-	24
<b>Montana</b> .....	<b>770</b>	-	<b>12</b>	<b>53</b>	-	-	-	-	<b>835</b>
Underground.....	-	-	-	53	-	-	-	-	53
Surface.....	770	-	12	-	-	-	-	-	782
<b>New Mexico</b> .....	<b>1,240</b>	-	-	-	-	-	-	<b>168</b>	<b>1,408</b>
Underground.....	296	-	-	-	-	-	-	66	362
Surface.....	944	-	-	-	-	-	-	102	1,046
<b>North Dakota</b> .....	<b>927</b>	-	-	-	-	-	-	-	<b>927</b>
Surface.....	927	-	-	-	-	-	-	-	927
<b>Ohio</b> .....	<b>1,126</b>	<b>448</b>	<b>444</b>	<b>100</b>	<b>100</b>	<b>73</b>	<b>61</b>	<b>182</b>	<b>2,534</b>
Underground.....	1,126	3	135	-	20	23	-	77	1,384
Surface.....	-	445	309	100	80	50	61	105	1,150
<b>Oklahoma</b> .....	-	-	<b>183</b>	-	<b>7</b>	<b>2</b>	<b>4</b>	-	<b>196</b>
Underground.....	-	-	48	-	-	-	-	-	48
Surface.....	-	-	135	-	7	2	4	-	148
<b>Pennsylvania Total</b> .....	<b>3,279</b>	<b>619</b>	<b>991</b>	<b>924</b>	<b>253</b>	<b>479</b>	<b>250</b>	<b>814</b>	<b>7,609</b>
Underground.....	3,279	391	432	427	51	48	34	381	5,043
Surface.....	-	228	559	497	202	431	216	433	2,566
<b>Anthracite</b> .....	-	-	<b>23</b>	<b>155</b>	<b>37</b>	<b>192</b>	<b>107</b>	<b>377</b>	<b>891</b>
Underground.....	-	-	-	46	-	42	25	115	228
Surface.....	-	-	23	109	37	150	82	262	663
<b>Bituminous</b> .....	<b>3,279</b>	<b>619</b>	<b>968</b>	<b>769</b>	<b>216</b>	<b>287</b>	<b>143</b>	<b>437</b>	<b>6,718</b>
Underground.....	3,279	391	432	381	51	6	9	266	4,815
Surface.....	-	228	536	388	165	281	134	171	1,903
<b>Tennessee</b> .....	-	<b>125</b>	<b>266</b>	<b>41</b>	<b>41</b>	<b>100</b>	<b>49</b>	<b>69</b>	<b>691</b>
Underground.....	-	-	112	26	41	59	37	43	318
Surface.....	-	125	154	15	-	41	12	26	373
<b>Texas</b> .....	<b>2,134</b>	<b>62</b>	-	-	-	-	-	-	<b>2,196</b>
Surface.....	2,134	62	-	-	-	-	-	-	2,196
<b>Utah</b> .....	<b>1,378</b>	-	<b>256</b>	<b>64</b>	-	-	-	<b>119</b>	<b>1,817</b>
Underground.....	1,378	-	256	64	-	-	-	114	1,812
Surface.....	-	-	-	-	-	-	-	5	5

See footnotes at end of table.

**Table 19. Average Number of Employees at Underground and Surface Mines by State and Mine Production Range, 2005 (Continued)**

Coal-Producing State, Region <sup>1</sup> , and Mine Type	Mine Production Range (Thousand Short Tons)								Total Number of Employees
	1,000 and Greater	500 to 1,000	200 to 500	100 to 200	50 to 100	10 to 50	Less Than 10	Zero <sup>2</sup>	
<b>Virginia</b> .....	<b>1,128</b>	<b>549</b>	<b>1,291</b>	<b>580</b>	<b>492</b>	<b>312</b>	<b>142</b>	<b>640</b>	<b>5,134</b>
Underground.....	829	301	835	418	406	235	84	469	3,577
Surface.....	299	248	456	162	86	77	58	171	1,557
<b>Washington</b> .....	<b>672</b>	-	-	-	-	-	-	-	<b>672</b>
Surface.....	672	-	-	-	-	-	-	-	672
<b>West Virginia Total</b> .....	<b>8,168</b>	<b>2,401</b>	<b>3,108</b>	<b>1,363</b>	<b>710</b>	<b>488</b>	<b>110</b>	<b>2,263</b>	<b>18,611</b>
Underground.....	5,382	1,336	2,188	1,107	585	293	86	1,506	12,483
Surface.....	2,786	1,065	920	256	125	195	24	757	6,128
<b>Northern</b> .....	<b>3,073</b>	<b>310</b>	<b>498</b>	<b>207</b>	<b>126</b>	<b>92</b>	<b>21</b>	<b>302</b>	<b>4,629</b>
Underground.....	2,878	208	448	193	81	61	15	201	4,085
Surface.....	195	102	50	14	45	31	6	101	544
<b>Southern</b> .....	<b>5,095</b>	<b>2,091</b>	<b>2,610</b>	<b>1,156</b>	<b>584</b>	<b>396</b>	<b>89</b>	<b>1,961</b>	<b>13,982</b>
Underground.....	2,504	1,128	1,740	914	504	232	71	1,305	8,398
Surface.....	2,591	963	870	242	80	164	18	656	5,584
<b>Wyoming</b> .....	<b>4,966</b>	-	<b>62</b>	-	-	-	<b>4</b>	<b>18</b>	<b>5,050</b>
Underground.....	-	-	62	-	-	-	-	-	62
Surface.....	4,966	-	-	-	-	-	4	18	4,988
<b>Appalachian Total</b> .....	<b>18,345</b>	<b>7,781</b>	<b>9,777</b>	<b>4,890</b>	<b>3,106</b>	<b>2,808</b>	<b>917</b>	<b>5,885</b>	<b>53,509</b>
Underground.....	14,619	3,914	5,741	3,156	1,975	1,380	405	3,657	34,847
Surface.....	3,726	3,867	4,036	1,734	1,131	1,428	512	2,228	18,662
<b>Northern</b> .....	<b>7,651</b>	<b>1,485</b>	<b>2,011</b>	<b>1,266</b>	<b>506</b>	<b>679</b>	<b>344</b>	<b>1,332</b>	<b>15,274</b>
Underground.....	7,456	602	1,061	642	152	132	49	690	10,784
Surface.....	195	883	950	624	354	547	295	642	4,490
<b>Central</b> .....	<b>8,257</b>	<b>5,701</b>	<b>7,374</b>	<b>3,376</b>	<b>2,330</b>	<b>2,068</b>	<b>549</b>	<b>4,429</b>	<b>34,084</b>
Underground.....	4,726	2,989	4,680	2,514	1,749	1,248	338	2,919	21,163
Surface.....	3,531	2,712	2,694	862	581	820	211	1,510	12,921
<b>Southern</b> .....	<b>2,437</b>	<b>595</b>	<b>392</b>	<b>248</b>	<b>270</b>	<b>61</b>	<b>24</b>	<b>124</b>	<b>4,151</b>
Underground.....	2,437	323	-	-	74	-	18	48	2,900
Surface.....	-	272	392	248	196	61	6	76	1,251
<b>Interior Total</b> .....	<b>9,682</b>	<b>909</b>	<b>763</b>	<b>143</b>	<b>124</b>	<b>78</b>	<b>10</b>	<b>369</b>	<b>12,078</b>
Underground.....	5,711	480	284	70	47	32	-	214	6,838
Surface.....	3,971	429	479	73	77	46	10	155	5,240
<b>Illinois Basin</b> .....	<b>7,149</b>	<b>811</b>	<b>556</b>	<b>118</b>	<b>117</b>	<b>76</b>	<b>4</b>	<b>369</b>	<b>9,200</b>
Underground.....	5,711	480	236	70	47	32	-	214	6,790
Surface.....	1,438	331	320	48	70	44	4	155	2,410
<b>Western Total</b> .....	<b>12,667</b>	<b>22</b>	<b>444</b>	<b>117</b>	-	-	<b>4</b>	<b>345</b>	<b>13,599</b>
Underground.....	3,224	-	403	117	-	-	-	185	3,929
Surface.....	9,443	22	41	-	-	-	4	160	9,670
<b>Powder River Basin</b> .....	<b>5,035</b>	-	-	-	-	-	-	<b>18</b>	<b>5,053</b>
Surface.....	5,035	-	-	-	-	-	-	18	5,053
<b>Uinta Region</b> .....	<b>3,463</b>	<b>22</b>	<b>283</b>	<b>64</b>	-	-	-	<b>124</b>	<b>3,956</b>
Underground.....	2,928	-	283	64	-	-	-	119	3,394
Surface.....	535	22	-	-	-	-	-	5	562
<b>East of Miss. River</b> .....	<b>25,687</b>	<b>8,592</b>	<b>10,333</b>	<b>5,008</b>	<b>3,223</b>	<b>2,884</b>	<b>921</b>	<b>6,254</b>	<b>62,902</b>
Underground.....	20,330	4,394	5,977	3,226	2,022	1,412	405	3,871	41,637
Surface.....	5,357	4,198	4,356	1,782	1,201	1,472	516	2,383	21,265
<b>West of Miss. River</b> .....	<b>15,007</b>	<b>120</b>	<b>651</b>	<b>142</b>	<b>7</b>	<b>2</b>	<b>10</b>	<b>345</b>	<b>16,284</b>
Underground.....	3,224	-	451	117	-	-	-	185	3,977
Surface.....	11,783	120	200	25	7	2	10	160	12,307
<b>Subtotal</b> .....	<b>40,694</b>	<b>8,712</b>	<b>10,984</b>	<b>5,150</b>	<b>3,230</b>	<b>2,886</b>	<b>931</b>	<b>6,599</b>	<b>79,186</b>
Underground.....	23,554	4,394	6,428	3,343	2,022	1,412	405	4,056	45,614
Surface.....	17,140	4,318	4,556	1,807	1,208	1,474	526	2,543	33,572
<b>Refuse Recovery</b> .....	-	-	<b>14</b>	<b>3</b>	<b>5</b>	<b>39</b>	<b>34</b>	<b>2</b>	<b>97</b>
<b>U.S. Total</b> .....	<b>40,694</b>	<b>8,712</b>	<b>10,998</b>	<b>5,153</b>	<b>3,235</b>	<b>2,925</b>	<b>965</b>	<b>6,601</b>	<b>79,283</b>

<sup>1</sup> For a definition of coal producing regions, see Glossary.

<sup>2</sup> Includes all employees at preparation plants and tipples not co-located with a mine.

Note: • Includes all employees engaged in production, preparation, processing, development, maintenance, repair shop, or yard work at mining operations, including office workers. Excludes preparation plants with less than 5,000 employee hours per year, which are not required to provide data.

Source: • U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

Note: • Includes all employees engaged in production, preparation, processing, development, maintenance, repair shop, or yard work at mining operations, including office workers. Excludes preparation plants with less than 5,000 employee hours per year, which are not required to provide data.

Source: • U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production Report."

**Table 20. Average Number of Employees at Underground and Surface Mines by State and Union Status, 2005**

Coal-Producing State and Region <sup>1</sup>	Union <sup>2</sup>		Nonunion <sup>2</sup>	
	Underground	Surface	Underground	Surface
Alabama.....	2,799	94	83	1,152
Alaska.....	-	97	-	-
Arizona.....	-	567	-	-
Colorado.....	152	278	1,488	308
Illinois.....	1,646	43	1,747	381
Indiana.....	-	-	1,143	1,540
Kansas.....	-	-	-	25
Kentucky Total.....	728	80	10,250	5,668
Eastern.....	137	80	8,587	5,223
Western.....	591	-	1,663	445
Louisiana.....	-	-	-	242
Maryland.....	-	-	272	218
Mississippi.....	-	-	-	193
Missouri.....	-	-	-	24
Montana.....	-	634	53	148
New Mexico.....	362	810	-	236
North Dakota.....	-	277	-	650
Ohio.....	466	90	918	999
Oklahoma.....	-	-	48	144
Pennsylvania Total.....	2,448	235	2,561	2,118
Anthracite.....	-	167	203	417
Bituminous.....	2,448	68	2,358	1,701
Tennessee.....	-	-	281	361
Texas.....	-	1,358	-	838
Utah.....	575	-	1,237	7
Virginia.....	630	96	2,863	1,417
Washington.....	-	672	-	-
West Virginia Total.....	4,891	959	7,506	5,145
Northern.....	2,648	-	1,422	538
Southern.....	2,243	959	6,084	4,607
Wyoming.....	62	497	-	4,487
<b>Appalachian Total.....</b>	<b>11,371</b>	<b>1,554</b>	<b>23,071</b>	<b>16,633</b>
Northern.....	5,562	325	5,173	3,873
Central.....	3,010	1,135	17,815	11,608
Southern.....	2,799	94	83	1,152
<b>Interior Total.....</b>	<b>2,237</b>	<b>1,401</b>	<b>4,601</b>	<b>3,832</b>
Illinois Basin.....	2,237	43	4,553	2,366
<b>Western Total.....</b>	<b>1,151</b>	<b>3,832</b>	<b>2,778</b>	<b>5,836</b>
Powder River Basin.....	-	622	-	4,431
Uinta Region.....	727	249	2,667	315
<b>East of Miss. River.....</b>	<b>13,608</b>	<b>1,597</b>	<b>27,624</b>	<b>19,192</b>
<b>West of Miss. River.....</b>	<b>1,151</b>	<b>5,190</b>	<b>2,826</b>	<b>7,109</b>
<b>U.S. Total.....</b>	<b>14,759</b>	<b>6,787</b>	<b>30,450</b>	<b>26,301</b>

<sup>1</sup> For a definition of coal producing regions, see Glossary.

<sup>2</sup> Includes all employees at preparation plants and tipples not co-located with a mine.

Note: • Includes all employees engaged in production, preparation, processing, development, maintenance, repair shop, or yard work at mining operations, including office workers. Excludes mines producing less than 10,000 short tons and preparation plants with less than 5,000 employee hours per year, which are not required to provide data.

Source: • Energy Information Administration 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."





# Productivity

**Table 21. Coal Mining Productivity by State and Mine Type, 2005, 2004**

Coal-Producing State, Region <sup>1</sup> , and Mine Type	Number of Mining Operations <sup>2</sup>			Number of Employees <sup>3</sup>			Average Production per Employee per Hour (short tons) <sup>4</sup>		
	2005	2004	Percent Change	2005	2004	Percent Change	2005	2004	Percent Change
<b>Alabama</b> .....	<b>62</b>	<b>58</b>	<b>6.9</b>	<b>4,138</b>	<b>3,633</b>	<b>13.9</b>	<b>2.18</b>	<b>2.70</b>	<b>-19.1</b>
Underground.....	14	13	7.7	2,887	2,649	9.0	1.99	2.62	-24.1
Surface.....	48	45	6.7	1,251	984	27.1	2.60	2.93	-11.2
<b>Alaska</b> .....	<b>1</b>	<b>1</b>	<b>-</b>	<b>97</b>	<b>92</b>	<b>5.4</b>	<b>6.71</b>	<b>7.27</b>	<b>-7.6</b>
Surface.....	1	1	-	97	92	5.4	6.71	7.27	-7.6
<b>Arizona</b> .....	<b>3</b>	<b>3</b>	<b>-</b>	<b>567</b>	<b>598</b>	<b>-5.2</b>	<b>8.22</b>	<b>8.03</b>	<b>2.3</b>
Surface.....	3	3	-	567	598	-5.2	8.22	8.03	2.3
<b>Arkansas</b> .....	<b>1</b>	<b>2</b>	<b>-50.0</b>	<b>2</b>	<b>12</b>	<b>-83.3</b>	<b>0.80</b>	<b>0.28</b>	<b>188.8</b>
Underground.....	-	1	-100.0	-	9	-100.0	-	0.04	-100.0
Surface.....	1	1	-	2	3	-33.3	0.80	1.55	-48.4
<b>Colorado</b> .....	<b>14</b>	<b>15</b>	<b>-6.7</b>	<b>2,226</b>	<b>2,092</b>	<b>6.4</b>	<b>8.52</b>	<b>9.10</b>	<b>-6.4</b>
Underground.....	9	9	-	1,640	1,488	10.2	8.65	9.52	-9.1
Surface.....	5	6	-16.7	586	604	-3.0	8.17	8.09	1.0
<b>Illinois</b> .....	<b>31</b>	<b>29</b>	<b>6.9</b>	<b>3,817</b>	<b>3,573</b>	<b>6.8</b>	<b>3.70</b>	<b>3.97</b>	<b>-6.7</b>
Underground.....	18	17	5.9	3,393	3,188	6.4	3.46	3.74	-7.7
Surface.....	13	12	8.3	424	385	10.1	5.50	5.84	-5.7
<b>Indiana</b> .....	<b>48</b>	<b>49</b>	<b>-2.0</b>	<b>2,683</b>	<b>2,830</b>	<b>-5.2</b>	<b>5.06</b>	<b>5.05</b>	<b>0.2</b>
Underground.....	19	19	-	1,143	1,122	1.9	3.89	3.68	5.7
Surface.....	29	30	-3.3	1,540	1,708	-9.8	5.92	5.95	-0.5
<b>Kansas</b> .....	<b>1</b>	<b>1</b>	<b>-</b>	<b>25</b>	<b>15</b>	<b>66.7</b>	<b>2.94</b>	<b>2.42</b>	<b>21.7</b>
Surface.....	1	1	-	25	15	66.7	2.94	2.42	21.7
<b>Kentucky Total</b> .....	<b>560</b>	<b>547</b>	<b>2.4</b>	<b>16,990</b>	<b>15,522</b>	<b>9.5</b>	<b>3.13</b>	<b>3.32</b>	<b>-5.8</b>
Underground.....	291	288	1.0	11,137	10,251	8.6	2.93	3.17	-7.8
Surface.....	269	259	3.9	5,853	5,271	11.0	3.52	3.60	-2.3
<b>Eastern</b> .....	<b>524</b>	<b>512</b>	<b>2.3</b>	<b>14,290</b>	<b>13,272</b>	<b>7.7</b>	<b>2.93</b>	<b>3.13</b>	<b>-6.3</b>
Underground.....	273	271	0.7	8,883	8,371	6.1	2.64	2.90	-8.9
Surface.....	251	241	4.1	5,407	4,901	10.3	3.40	3.50	-2.9
<b>Western</b> .....	<b>36</b>	<b>35</b>	<b>2.9</b>	<b>2,700</b>	<b>2,250</b>	<b>20.0</b>	<b>4.11</b>	<b>4.38</b>	<b>-6.1</b>
Underground.....	18	17	5.9	2,254	1,880	19.9	3.94	4.27	-7.5
Surface.....	18	18	-	446	370	20.5	5.12	5.02	1.8
<b>Louisiana</b> .....	<b>2</b>	<b>2</b>	<b>-</b>	<b>242</b>	<b>231</b>	<b>4.8</b>	<b>7.98</b>	<b>7.74</b>	<b>3.1</b>
Surface.....	2	2	-	242	231	4.8	7.98	7.74	3.1
<b>Maryland</b> .....	<b>19</b>	<b>22</b>	<b>-13.6</b>	<b>502</b>	<b>497</b>	<b>1.0</b>	<b>4.75</b>	<b>5.11</b>	<b>-7.0</b>
Underground.....	4	5	-20.0	272	264	3.0	5.33	5.98	-10.9
Surface.....	15	17	-11.8	230	233	-1.3	4.05	4.06	-0.2
<b>Mississippi</b> .....	<b>1</b>	<b>1</b>	<b>-</b>	<b>193</b>	<b>211</b>	<b>-8.5</b>	<b>8.87</b>	<b>8.49</b>	<b>4.4</b>
Surface.....	1	1	-	193	211	-8.5	8.87	8.49	4.4
<b>Missouri</b> .....	<b>2</b>	<b>3</b>	<b>-33.3</b>	<b>24</b>	<b>25</b>	<b>-4.0</b>	<b>11.25</b>	<b>11.10</b>	<b>1.4</b>
Surface.....	2	3	-33.3	24	25	-4.0	11.25	11.10	1.4
<b>Montana</b> .....	<b>6</b>	<b>6</b>	<b>-</b>	<b>835</b>	<b>722</b>	<b>15.7</b>	<b>23.26</b>	<b>25.72</b>	<b>-9.6</b>
Underground.....	1	1	-	53	39	35.9	1.50	1.57	-4.5
Surface.....	5	5	-	782	683	14.5	24.70	27.38	-9.8
<b>New Mexico</b> .....	<b>5</b>	<b>5</b>	<b>-</b>	<b>1,408</b>	<b>1,388</b>	<b>1.4</b>	<b>9.68</b>	<b>9.74</b>	<b>-0.6</b>
Underground.....	2	2	-	362	334	8.4	9.87	11.19	-11.8
Surface.....	3	3	-	1,046	1,054	-0.8	9.61	9.27	3.7
<b>North Dakota</b> .....	<b>4</b>	<b>4</b>	<b>-</b>	<b>927</b>	<b>918</b>	<b>1.0</b>	<b>16.84</b>	<b>17.06</b>	<b>-1.3</b>
Surface.....	4	4	-	927	918	1.0	16.84	17.06	-1.3
<b>Ohio</b> .....	<b>74</b>	<b>73</b>	<b>1.4</b>	<b>2,534</b>	<b>2,510</b>	<b>1.0</b>	<b>4.02</b>	<b>3.78</b>	<b>6.5</b>
Underground.....	20	19	5.3	1,384	1,312	5.5	4.90	4.53	8.2
Surface.....	54	54	-	1,150	1,198	-4.0	3.05	2.99	2.1
<b>Oklahoma</b> .....	<b>9</b>	<b>8</b>	<b>12.5</b>	<b>196</b>	<b>176</b>	<b>11.4</b>	<b>3.55</b>	<b>3.83</b>	<b>-7.4</b>
Underground.....	1	1	-	48	44	9.1	3.55	3.26	8.9
Surface.....	8	7	14.3	148	132	12.1	3.55	4.04	-12.2
<b>Pennsylvania Total</b> .....	<b>357</b>	<b>346</b>	<b>3.2</b>	<b>7,609</b>	<b>7,524</b>	<b>1.1</b>	<b>3.96</b>	<b>3.99</b>	<b>-0.7</b>
Underground.....	88	94	-6.4	5,043	5,003	0.8	4.71	4.72	-0.3
Surface.....	269	252	6.7	2,566	2,521	1.8	2.38	2.43	-2.0
<b>Anthracite</b> .....	<b>115</b>	<b>114</b>	<b>0.9</b>	<b>891</b>	<b>890</b>	<b>0.1</b>	<b>0.95</b>	<b>0.97</b>	<b>-2.7</b>
Underground.....	31	37	-16.2	228	230	-0.9	0.63	0.67	-5.3
Surface.....	84	77	9.1	663	660	0.5	1.04	1.07	-2.0
<b>Bituminous</b> .....	<b>242</b>	<b>232</b>	<b>4.3</b>	<b>6,718</b>	<b>6,634</b>	<b>1.3</b>	<b>4.31</b>	<b>4.34</b>	<b>-0.9</b>
Underground.....	57	57	-	4,815	4,773	0.9	4.86	4.87	-0.3
Surface.....	185	175	5.7	1,903	1,861	2.3	2.81	2.89	-2.6
<b>Tennessee</b> .....	<b>38</b>	<b>41</b>	<b>-7.3</b>	<b>691</b>	<b>646</b>	<b>7.0</b>	<b>2.04</b>	<b>2.36</b>	<b>-13.4</b>
Underground.....	18	17	5.9	318	244	30.3	2.21	2.29	-3.4
Surface.....	20	24	-16.7	373	402	-7.2	1.95	2.39	-18.2
<b>Texas</b> .....	<b>13</b>	<b>13</b>	<b>-</b>	<b>2,196</b>	<b>2,274</b>	<b>-3.4</b>	<b>9.70</b>	<b>9.34</b>	<b>3.8</b>
Surface.....	13	13	-	2,196	2,274	-3.4	9.70	9.34	3.8
<b>Utah</b> .....	<b>19</b>	<b>19</b>	<b>-</b>	<b>1,817</b>	<b>1,533</b>	<b>18.5</b>	<b>6.37</b>	<b>6.75</b>	<b>-5.7</b>
Underground.....	18	17	5.9	1,812	1,522	19.1	6.39	6.81	-6.1

See footnotes at end of table.

**Table 21. Coal Mining Productivity by State and Mine Type, 2005, 2004 (Continued)**

Coal-Producing State, Region <sup>1</sup> , and Mine Type	Number of Mining Operations <sup>2</sup>			Number of Employees <sup>3</sup>			Average Production per Employee per Hour (short tons) <sup>4</sup>		
	2005	2004	Percent Change	2005	2004	Percent Change	2005	2004	Percent Change
<b>Utah (continued)</b>									
Surface.....	1	2	-50.0	5	11	-54.5	-	-	-
<b>Virginia.....</b>	<b>179</b>	<b>171</b>	<b>4.7</b>	<b>5,134</b>	<b>4,842</b>	<b>6.0</b>	<b>2.54</b>	<b>2.95</b>	<b>-13.9</b>
Underground.....	109	104	4.8	3,577	3,374	6.0	2.25	2.83	-20.4
Surface.....	70	67	4.5	1,557	1,468	6.1	3.13	3.22	-2.7
<b>Washington.....</b>	<b>1</b>	<b>1</b>	<b>-</b>	<b>672</b>	<b>581</b>	<b>15.7</b>	<b>3.71</b>	<b>4.30</b>	<b>-13.7</b>
Surface.....	1	1	-	672	581	15.7	3.71	4.30	-13.7
<b>West Virginia Total.....</b>	<b>398</b>	<b>376</b>	<b>5.9</b>	<b>18,611</b>	<b>16,403</b>	<b>13.5</b>	<b>3.60</b>	<b>4.03</b>	<b>-10.7</b>
Underground.....	233	214	8.9	12,483	11,136	12.1	3.26	3.72	-12.6
Surface.....	165	162	1.9	6,128	5,267	16.3	4.26	4.65	-8.5
<b>Northern.....</b>	<b>71</b>	<b>69</b>	<b>2.9</b>	<b>4,629</b>	<b>4,263</b>	<b>8.6</b>	<b>4.13</b>	<b>4.39</b>	<b>-6.1</b>
Underground.....	39	36	8.3	4,085	3,805	7.4	4.16	4.40	-5.6
Surface.....	32	33	-3.0	544	458	18.8	3.91	4.35	-10.0
<b>Southern.....</b>	<b>327</b>	<b>307</b>	<b>6.5</b>	<b>13,982</b>	<b>12,140</b>	<b>15.2</b>	<b>3.43</b>	<b>3.91</b>	<b>-12.3</b>
Underground.....	194	178	9.0	8,398	7,331	14.6	2.83	3.38	-16.5
Surface.....	133	129	3.1	5,584	4,809	16.1	4.29	4.68	-8.3
<b>Wyoming.....</b>	<b>19</b>	<b>20</b>	<b>-5.0</b>	<b>5,050</b>	<b>4,953</b>	<b>2.0</b>	<b>38.01</b>	<b>38.83</b>	<b>-2.1</b>
Underground.....	1	1	-	62	37	67.6	3.50	2.87	21.9
Surface.....	18	19	-5.3	4,988	4,916	1.5	38.39	38.88	-1.3
<b>Appalachian Total.....</b>	<b>1,651</b>	<b>1,599</b>	<b>3.3</b>	<b>53,509</b>	<b>49,327</b>	<b>8.5</b>	<b>3.28</b>	<b>3.56</b>	<b>-7.9</b>
Underground.....	759	737	3.0	34,847	32,353	7.7	3.19	3.53	-9.7
Surface.....	892	862	3.5	18,662	16,974	9.9	3.43	3.61	-4.8
<b>Northern.....</b>	<b>521</b>	<b>510</b>	<b>2.2</b>	<b>15,274</b>	<b>14,794</b>	<b>3.2</b>	<b>4.05</b>	<b>4.10</b>	<b>-1.3</b>
Underground.....	151	154	-1.9	10,784	10,384	3.9	4.54	4.61	-1.5
Surface.....	370	356	3.9	4,490	4,410	1.8	2.85	2.89	-1.2
<b>Central.....</b>	<b>1,067</b>	<b>1,031</b>	<b>3.5</b>	<b>34,084</b>	<b>30,900</b>	<b>10.3</b>	<b>3.07</b>	<b>3.40</b>	<b>-9.7</b>
Underground.....	593	570	4.0	21,163	19,320	9.5	2.65	3.07	-13.6
Surface.....	474	461	2.8	12,921	11,580	11.6	3.71	3.93	-5.4
<b>Southern.....</b>	<b>63</b>	<b>58</b>	<b>8.6</b>	<b>4,151</b>	<b>3,633</b>	<b>14.3</b>	<b>2.18</b>	<b>2.70</b>	<b>-19.2</b>
Underground.....	15	13	15.4	2,900	2,649	9.5	1.99	2.62	-24.2
Surface.....	48	45	6.7	1,251	984	27.1	2.60	2.93	-11.2
<b>Interior Total.....</b>	<b>144</b>	<b>143</b>	<b>0.7</b>	<b>12,078</b>	<b>11,597</b>	<b>4.1</b>	<b>5.29</b>	<b>5.47</b>	<b>-3.1</b>
Underground.....	56	55	1.8	6,838	6,243	9.5	3.70	3.88	-4.7
Surface.....	88	88	-	5,240	5,354	-2.1	7.43	7.37	0.7
<b>Illinois Basin.....</b>	<b>115</b>	<b>113</b>	<b>1.8</b>	<b>9,200</b>	<b>8,653</b>	<b>6.3</b>	<b>4.25</b>	<b>4.45</b>	<b>-4.5</b>
Underground.....	55	53	3.8	6,790	6,190	9.7	3.70	3.90	-5.0
Surface.....	60	60	-	2,410	2,463	-2.2	5.72	5.80	-1.5
<b>Western Total.....</b>	<b>72</b>	<b>74</b>	<b>-2.7</b>	<b>13,599</b>	<b>12,877</b>	<b>5.6</b>	<b>20.47</b>	<b>21.28</b>	<b>-3.8</b>
Underground.....	31	30	3.3	3,929	3,420	14.9	7.54	8.33	-9.5
Surface.....	41	44	-6.8	9,670	9,457	2.3	25.63	25.90	-1.0
<b>Powder River Basin.....</b>	<b>17</b>	<b>17</b>	<b>-</b>	<b>5,053</b>	<b>4,771</b>	<b>5.9</b>	<b>40.11</b>	<b>42.09</b>	<b>-4.7</b>
Underground.....	-	-	-	-	-	-	-	-	-
Surface.....	17	17	-	5,053	4,771	5.9	40.11	42.09	-4.7
<b>Uinta Region.....</b>	<b>31</b>	<b>32</b>	<b>-3.1</b>	<b>3,956</b>	<b>3,540</b>	<b>11.8</b>	<b>7.60</b>	<b>8.19</b>	<b>-7.2</b>
Underground.....	26	25	4.0	3,394	2,951	15.0	7.51	8.24	-8.9
Surface.....	5	7	-28.6	562	589	-4.6	8.16	7.93	2.9
<b>East of Miss. River.....</b>	<b>1,767</b>	<b>1,713</b>	<b>3.2</b>	<b>62,902</b>	<b>58,191</b>	<b>8.1</b>	<b>3.44</b>	<b>3.71</b>	<b>-7.3</b>
Underground.....	814	790	3.0	41,637	38,543	8.0	3.28	3.59	-8.8
Surface.....	953	923	3.3	21,265	19,648	8.2	3.75	3.94	-4.9
<b>West of Miss. River.....</b>	<b>100</b>	<b>103</b>	<b>-2.9</b>	<b>16,284</b>	<b>15,610</b>	<b>4.3</b>	<b>18.50</b>	<b>19.01</b>	<b>-2.7</b>
Underground.....	32	32	-	3,977	3,473	14.5	7.48	8.22	-9.1
Surface.....	68	71	-4.2	12,307	12,137	1.4	21.99	22.05	-0.3
<b>Subtotal.....</b>	<b>1,867</b>	<b>1,816</b>	<b>2.8</b>	<b>79,186</b>	<b>73,801</b>	<b>7.3</b>	<b>6.36</b>	<b>6.80</b>	<b>-6.5</b>
Underground.....	846	822	2.9	45,614	42,016	8.6	3.62	3.96	-8.5
Surface.....	1,021	994	2.7	33,572	31,785	5.6	10.04	10.57	-5.0
<b>Refuse Recovery.....</b>	<b>18</b>	<b>26</b>	<b>-30.8</b>	<b>97</b>	<b>111</b>	<b>-12.6</b>	<b>3.99</b>	<b>5.73</b>	<b>-30.4</b>
<b>U.S. Total.....</b>	<b>1,885</b>	<b>1,842</b>	<b>2.3</b>	<b>79,283</b>	<b>73,912</b>	<b>7.3</b>	<b>6.36</b>	<b>6.80</b>	<b>-6.5</b>

<sup>1</sup> For a definition of coal producing regions, see Glossary.

<sup>2</sup> Mining operations that consist of a mine and preparation plant or preparation plant only processing both underground and surface coal are reported as two operations.

<sup>3</sup> Includes all employees engaged in production, preparation, processing, development, maintenance, repair shop, or yard work at mining operations, including office workers.

<sup>4</sup> Calculated by dividing total coal production by the total labor hours worked by all employees engaged in production, preparation, processing, development, maintenance, repair shop, or yard work at mining operations, including office workers.

Note: • Excludes preparation plants with less than 5,000 employee hours per year, which are not required to provide data.

Source: • Energy Information Administration 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."

**Table 22. Underground Coal Mining Productivity by State and Mining Method, 2005**  
(Short Tons Produced per Employee per Hour)

Coal-Producing State and Region <sup>1</sup>	Continuous <sup>2</sup>	Conventional <sup>3</sup>	Longwall <sup>4</sup>	Other <sup>5</sup>	Total
Alabama.....	1.31	-	2.01	-	2.00
Colorado.....	3.85	-	8.94	-	8.65
Illinois.....	3.59	-	3.22	-	3.46
Indiana.....	3.97	-	-	-	3.97
Kentucky Total.....	2.93	1.80	4.37	-	2.94
Eastern.....	2.62	1.92	4.37	-	2.65
Western.....	4.04	1.47	-	-	3.99
Maryland.....	5.33	-	-	-	5.33
Montana.....	1.50	-	-	-	1.50
New Mexico.....	-	-	9.87	-	9.87
Ohio.....	3.78	-	5.24	-	4.93
Oklahoma.....	3.55	-	-	-	3.55
Pennsylvania Total.....	3.63	1.92	5.35	0.27	4.72
Anthracite.....	0.74	0.42	-	0.27	0.63
Bituminous.....	3.95	2.09	5.35	-	4.86
Tennessee.....	2.30	-	-	-	2.30
Utah.....	2.11	-	7.37	-	6.39
Virginia.....	2.24	2.65	2.57	-	2.30
West Virginia Total.....	2.70	2.30	4.14	-	3.27
Northern.....	2.49	2.30	4.91	-	4.16
Southern.....	2.74	-	3.14	-	2.84
Wyoming.....	3.50	-	-	-	3.50
<b>Appalachian Total.....</b>	<b>2.70</b>	<b>1.99</b>	<b>4.04</b>	<b>0.27</b>	<b>3.21</b>
Northern.....	3.32	1.93	5.17	0.27	4.55
Central.....	2.60	2.09	3.13	-	2.67
Southern.....	1.31	-	2.01	-	2.00
<b>Interior Total.....</b>	<b>3.01</b>	<b>0.85</b>	<b>3.22</b>	-	<b>3.02</b>
Illinois Basin.....	3.86	1.47	3.22	-	3.73
<b>Western Total.....</b>	<b>2.49</b>	-	<b>8.35</b>	-	<b>7.54</b>
Powder River Basin.....	-	-	-	-	-
Uinta Region.....	2.28	-	8.15	-	7.51
<b>East of Miss. River.....</b>	<b>2.96</b>	<b>1.95</b>	<b>3.97</b>	<b>0.27</b>	<b>3.30</b>
<b>West of Miss. River.....</b>	<b>2.60</b>	-	<b>8.35</b>	-	<b>7.48</b>
<b>U.S. Total.....</b>	<b>2.95</b>	<b>1.95</b>	<b>4.75</b>	<b>0.27</b>	<b>3.64</b>

<sup>1</sup> For a definition of coal producing regions, see Glossary.

<sup>2</sup> Mines that produce greater than 50 percent of their coal by continuous mining methods.

<sup>3</sup> Mines that produce greater than 50 percent of their coal by conventional mining methods.

<sup>4</sup> Mines that have any production from longwall mining method. A typical longwall mining operation uses 80 percent longwall mining and 20 percent continuous mining.

<sup>5</sup> 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.

Note: • For each State, stand alone preparation plant hours are distributed across 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, including office workers. Excludes mines producing less than 10,000 short tons of coal and preparation plants with less than 5,000 employee hours during the year, which are not required to provide data.

Source: • Energy Information Administration 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."

**Table 23. Coal Mining Productivity by State, Mine Type, and Mine Production Range, 2005**  
(Short Tons Coal Produced per Employee per Hour)

Coal-Producing State, Region <sup>1</sup> , and Mine Type	Mine Production Range (Thousand Short Tons)							Total <sup>2</sup>
	1,000 and Greater	500 to 1,000	200 to 500	100 to 200	50 to 100	10 to 50	Less Than 10	
<b>Alabama</b> .....	<b>2.16</b>	<b>2.14</b>	<b>2.77</b>	<b>2.93</b>	<b>1.71</b>	<b>1.60</b>	<b>0.08</b>	<b>2.18</b>
Underground.....	2.16	1.00	-	-	1.17	-	0.06	1.99
Surface.....	-	3.12	2.77	2.93	1.91	1.60	0.10	2.60
<b>Alaska</b> .....	<b>6.71</b>	-	-	-	-	-	-	<b>6.71</b>
Surface.....	6.71	-	-	-	-	-	-	6.71
<b>Arizona</b> .....	<b>8.60</b>	-	-	-	-	-	-	<b>8.22</b>
Surface.....	8.60	-	-	-	-	-	-	8.22
<b>Arkansas</b> .....	-	-	-	-	-	-	<b>0.80</b>	<b>0.80</b>
Surface.....	-	-	-	-	-	-	0.80	0.80
<b>Colorado</b> .....	<b>8.66</b>	<b>18.28</b>	<b>4.50</b>	-	-	-	-	<b>8.52</b>
Underground.....	8.97	-	3.86	-	-	-	-	8.65
Surface.....	7.82	18.28	6.28	-	-	-	-	8.17
<b>Illinois</b> .....	<b>3.81</b>	<b>3.47</b>	<b>6.32</b>	-	<b>9.08</b>	<b>4.41</b>	-	<b>3.70</b>
Underground.....	3.61	2.89	-	-	-	-	-	3.46
Surface.....	5.78	9.17	6.32	-	9.08	4.41	-	5.50
<b>Indiana</b> .....	<b>5.43</b>	<b>4.37</b>	<b>5.78</b>	-	<b>2.28</b>	<b>0.73</b>	-	<b>5.06</b>
Underground.....	4.32	2.07	4.23	-	-	0.50	-	3.89
Surface.....	6.30	5.81	6.57	-	2.28	1.12	-	5.92
<b>Kansas</b> .....	-	-	-	<b>2.94</b>	-	-	-	<b>2.94</b>
Surface.....	-	-	-	2.94	-	-	-	2.94
<b>Kentucky Total</b> .....	<b>4.24</b>	<b>4.01</b>	<b>3.23</b>	<b>2.78</b>	<b>2.34</b>	<b>1.94</b>	<b>0.04</b>	<b>3.13</b>
Underground.....	3.98	3.62	3.03	2.56	2.03	1.58	0.03	2.93
Surface.....	5.46	4.41	3.54	3.31	3.08	2.34	0.06	3.52
<b>Eastern</b> .....	<b>4.01</b>	<b>3.97</b>	<b>3.18</b>	<b>2.82</b>	<b>2.38</b>	<b>1.93</b>	<b>0.04</b>	<b>2.93</b>
Underground.....	3.45	3.59	3.09	2.60	2.14	1.58	0.03	2.64
Surface.....	5.30	4.39	3.33	3.36	2.92	2.31	0.06	3.40
<b>Western</b> .....	<b>4.50</b>	<b>4.62</b>	<b>3.85</b>	<b>2.04</b>	<b>1.80</b>	<b>4.62</b>	<b>0.02</b>	<b>4.11</b>
Underground.....	4.40	4.87	2.13	1.62	0.76	-	-	3.94
Surface.....	6.85	4.54	6.11	2.63	7.38	4.62	0.15	5.12
<b>Louisiana</b> .....	<b>8.00</b>	<b>7.88</b>	-	-	-	-	-	<b>7.98</b>
Surface.....	8.00	7.88	-	-	-	-	-	7.98
<b>Maryland</b> .....	<b>7.11</b>	<b>5.51</b>	<b>2.84</b>	<b>4.12</b>	<b>2.42</b>	<b>1.90</b>	<b>0.11</b>	<b>4.75</b>
Underground.....	7.11	-	2.87	3.44	-	-	-	5.33
Surface.....	-	5.51	2.81	5.39	2.42	1.90	0.42	4.05
<b>Mississippi</b> .....	<b>8.87</b>	-	-	-	-	-	-	<b>8.87</b>
Surface.....	8.87	-	-	-	-	-	-	8.87
<b>Missouri</b> .....	-	-	<b>11.25</b>	-	-	-	-	<b>11.25</b>
Surface.....	-	-	11.25	-	-	-	-	11.25
<b>Montana</b> .....	<b>24.87</b>	-	<b>13.58</b>	<b>1.50</b>	-	-	-	<b>23.26</b>
Underground.....	-	-	-	1.50	-	-	-	1.50
Surface.....	24.87	-	13.58	-	-	-	-	24.70
<b>New Mexico</b> .....	<b>10.94</b>	-	-	-	-	-	-	<b>9.68</b>
Underground.....	11.82	-	-	-	-	-	-	9.87
Surface.....	10.64	-	-	-	-	-	-	9.61
<b>North Dakota</b> .....	<b>16.84</b>	-	-	-	-	-	-	<b>16.84</b>
Surface.....	16.84	-	-	-	-	-	-	16.84
<b>Ohio</b> .....	<b>5.42</b>	<b>3.96</b>	<b>3.54</b>	<b>3.34</b>	<b>1.93</b>	<b>1.57</b>	<b>0.08</b>	<b>4.02</b>
Underground.....	5.42	-	4.00	-	1.91	0.88	-	4.90
Surface.....	-	3.99	3.36	3.34	1.93	1.67	0.12	3.05
<b>Oklahoma</b> .....	-	-	<b>3.54</b>	-	<b>4.05</b>	<b>10.71</b>	<b>1.14</b>	<b>3.55</b>
Underground.....	-	-	3.55	-	-	-	-	3.55
Surface.....	-	-	3.54	-	4.05	10.71	1.14	3.55
<b>Pennsylvania Total</b> .....	<b>5.49</b>	<b>4.19</b>	<b>4.31</b>	<b>2.31</b>	<b>2.23</b>	<b>2.31</b>	<b>0.16</b>	<b>3.96</b>
Underground.....	5.49	5.06	4.85	1.93	1.91	1.00	0.04	4.71
Surface.....	-	2.78	3.91	2.58	2.30	2.45	0.24	2.38
<b>Anthracite</b> .....	-	-	<b>3.99</b>	<b>1.40</b>	<b>2.44</b>	<b>1.73</b>	<b>0.12</b>	<b>0.95</b>
Underground.....	-	-	-	1.59	-	1.04	0.09	0.63
Surface.....	-	-	3.99	1.30	2.44	1.90	0.13	1.04
<b>Bituminous</b> .....	<b>5.49</b>	<b>4.19</b>	<b>4.31</b>	<b>2.50</b>	<b>2.18</b>	<b>2.71</b>	<b>0.19</b>	<b>4.31</b>
Underground.....	5.49	5.06	4.85	1.98	1.91	0.80	0.01	4.86
Surface.....	-	2.78	3.90	2.89	2.26	2.77	0.40	2.81
<b>Tennessee</b> .....	-	<b>1.94</b>	<b>2.43</b>	<b>2.55</b>	<b>2.60</b>	<b>2.44</b>	<b>0.15</b>	<b>2.04</b>
Underground.....	-	-	3.03	3.03	2.60	2.12	0.15	2.21
Surface.....	-	1.94	2.11	2.05	-	2.71	0.16	1.95
<b>Texas</b> .....	<b>9.90</b>	<b>3.81</b>	-	-	-	-	-	<b>9.70</b>
Surface.....	9.90	3.81	-	-	-	-	-	9.70
<b>Utah</b> .....	<b>7.79</b>	-	<b>2.20</b>	<b>2.52</b>	-	-	-	<b>6.37</b>
Underground.....	7.79	-	2.20	2.52	-	-	-	6.39
Surface.....	-	-	-	-	-	-	-	-

See footnotes at end of table.

**Table 23. Coal Mining Productivity by State, Mine Type, and Mine Production Range, 2005 (Continued)**  
(Short Tons Coal Produced per Employee per Hour)

Coal-Producing State, Region <sup>1</sup> , and Mine Type	Mine Production Range (Thousand Short Tons)							Total <sup>2</sup>
	1,000 and Greater	500 to 1,000	200 to 500	100 to 200	50 to 100	10 to 50	Less Than 10	
<b>Virginia</b> .....	<b>3.27</b>	<b>3.69</b>	<b>3.04</b>	<b>2.38</b>	<b>2.37</b>	<b>1.43</b>	<b>0.05</b>	<b>2.54</b>
Underground.....	2.96	3.19	2.92	2.12	2.16	1.21	0.05	2.25
Surface.....	3.92	4.27	3.24	3.03	3.27	1.99	0.06	3.13
<b>Washington</b> .....	<b>3.71</b>	-	-	-	-	-	-	<b>3.71</b>
Surface.....	3.71	-	-	-	-	-	-	3.71
<b>West Virginia Total</b> .....	<b>4.69</b>	<b>4.27</b>	<b>3.23</b>	<b>2.64</b>	<b>2.45</b>	<b>2.49</b>	<b>0.01</b>	<b>3.60</b>
Underground.....	4.27	3.89	3.16	2.36	2.15	2.12	0.01	3.26
Surface.....	5.47	4.71	3.37	3.97	3.83	2.99	0.02	4.26
<b>Northern</b> .....	<b>4.80</b>	<b>3.92</b>	<b>3.22</b>	<b>2.33</b>	<b>3.35</b>	<b>2.98</b>	<b>0.01</b>	<b>4.13</b>
Underground.....	4.73	3.55	3.20	2.17	2.70	2.53	-	4.16
Surface.....	5.70	4.54	3.36	4.09	4.07	3.44	0.04	3.91
<b>Southern</b> .....	<b>4.64</b>	<b>4.31</b>	<b>3.23</b>	<b>2.70</b>	<b>2.25</b>	<b>2.70</b>	<b>0.01</b>	<b>3.43</b>
Underground.....	3.77	3.94	3.15	2.40	2.08	2.03	0.01	2.83
Surface.....	5.45	4.72	3.37	3.96	3.60	2.85	0.01	4.29
<b>Wyoming</b> .....	<b>38.51</b>	-	<b>3.50</b>	-	-	-	<b>0.18</b>	<b>38.01</b>
Underground.....	-	-	3.50	-	-	-	-	3.50
Surface.....	38.51	-	-	-	-	-	0.18	38.39
<b>Appalachian Total</b> .....	<b>4.42</b>	<b>3.91</b>	<b>3.26</b>	<b>2.66</b>	<b>2.28</b>	<b>2.02</b>	<b>0.05</b>	<b>3.28</b>
Underground.....	4.17	3.62	3.24	2.38	2.10	1.57	0.02	3.19
Surface.....	5.32	4.18	3.29	3.10	2.58	2.35	0.09	3.43
<b>Northern</b> .....	<b>5.24</b>	<b>4.16</b>	<b>3.82</b>	<b>2.47</b>	<b>2.38</b>	<b>2.27</b>	<b>0.11</b>	<b>4.05</b>
Underground.....	5.22	4.56	4.00	2.06	2.25	1.49	0.02	4.54
Surface.....	5.70	3.92	3.65	2.81	2.42	2.39	0.19	2.85
<b>Central</b> .....	<b>4.32</b>	<b>4.02</b>	<b>3.14</b>	<b>2.70</b>	<b>2.35</b>	<b>1.92</b>	<b>0.03</b>	<b>3.07</b>
Underground.....	3.55	3.68	3.08	2.45	2.14	1.58	0.02	2.65
Surface.....	5.29	4.38	3.24	3.39	3.06	2.38	0.04	3.71
<b>Southern</b> .....	<b>2.16</b>	<b>2.14</b>	<b>2.77</b>	<b>2.93</b>	<b>1.71</b>	<b>1.60</b>	<b>0.11</b>	<b>2.18</b>
Underground.....	2.16	1.00	-	-	1.17	-	0.11	1.99
Surface.....	-	3.12	2.77	2.93	1.91	1.60	0.10	2.60
<b>Interior Total</b> .....	<b>5.72</b>	<b>4.18</b>	<b>4.68</b>	<b>2.25</b>	<b>2.28</b>	<b>1.68</b>	<b>0.02</b>	<b>5.29</b>
Underground.....	4.00	2.86	2.94	1.62	0.76	0.50	-	3.70
Surface.....	8.25	5.52	5.64	2.76	4.54	2.82	0.05	7.43
<b>Illinois Basin</b> .....	<b>4.49</b>	<b>4.07</b>	<b>4.87</b>	<b>2.04</b>	<b>2.16</b>	<b>1.53</b>	<b>0.01</b>	<b>4.25</b>
Underground.....	4.00	2.86	2.78	1.62	0.76	0.50	-	3.70
Surface.....	6.23	5.61	6.35	2.63	4.64	2.57	0.02	5.72
<b>Western Total</b> .....	<b>21.76</b>	<b>18.28</b>	<b>3.29</b>	<b>2.05</b>	-	-	<b>0.01</b>	<b>20.47</b>
Underground.....	8.73	-	2.75	2.05	-	-	-	7.54
Surface.....	26.14	18.28	8.22	-	-	-	0.02	25.63
<b>Powder River Basin</b> .....	<b>40.21</b>	-	-	-	-	-	-	<b>40.11</b>
Surface.....	40.21	-	-	-	-	-	-	40.11
<b>Uinta Region</b> .....	<b>8.30</b>	<b>18.28</b>	<b>2.42</b>	<b>2.52</b>	-	-	-	<b>7.60</b>
Underground.....	8.39	-	2.42	2.52	-	-	-	7.51
Surface.....	7.82	18.28	-	-	-	-	-	8.16
<b>East of Miss. River</b> .....	<b>4.46</b>	<b>3.93</b>	<b>3.34</b>	<b>2.64</b>	<b>2.28</b>	<b>2.01</b>	<b>0.05</b>	<b>3.44</b>
Underground.....	4.12	3.54	3.23	2.37	2.05	1.54	0.02	3.28
Surface.....	5.67	4.30	3.48	3.09	2.64	2.35	0.09	3.75
<b>West of Miss. River</b> .....	<b>19.85</b>	<b>7.52</b>	<b>3.66</b>	<b>2.23</b>	<b>4.05</b>	<b>10.71</b>	<b>0.02</b>	<b>18.50</b>
Underground.....	8.73	-	2.86	2.05	-	-	-	7.48
Surface.....	22.84	7.52	5.17	2.94	4.05	10.71	0.05	21.99
<b>Subtotal</b> .....	<b>9.65</b>	<b>3.97</b>	<b>3.36</b>	<b>2.63</b>	<b>2.28</b>	<b>2.01</b>	<b>0.05</b>	<b>6.36</b>
Underground.....	4.68	3.54	3.20	2.35	2.05	1.54	0.02	3.62
Surface.....	16.75	4.38	3.56	3.09	2.65	2.36	0.09	10.04
<b>Refuse Recovery</b> .....	-	-	<b>6.77</b>	<b>14.18</b>	<b>15.01</b>	<b>2.11</b>	<b>0.87</b>	<b>3.99</b>
<b>U.S. Total</b> .....	<b>9.65</b>	<b>3.97</b>	<b>3.36</b>	<b>2.64</b>	<b>2.30</b>	<b>2.01</b>	<b>0.05</b>	<b>6.36</b>

<sup>1</sup> For a definition of coal producing regions, see Glossary.

<sup>2</sup> Includes all employees at preparation plants and tipples not co-located with a mine.

Note: • Productivity is calculated by dividing total coal production by the total labor hours worked by all employees engaged in production, preparation, processing, development, maintenance, repair shop, or yard work at mining operations, including office workers. Excludes preparation plants with less than 5,000 employee hours during the year, which are not required to provide data.

Source: • Energy Information Administration 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."

**Table 24. Coal Mining Productivity by State, Mine Type, and Union Status, 2005**  
(Short Tons Produced per Employee per Hour)

Coal-Producing State and Region <sup>1</sup>	Union		Nonunion	
	Underground	Surface	Underground	Surface
Alabama.....	2.02	2.35	1.05	2.62
Alaska.....	-	6.71	-	-
Arizona.....	-	8.22	-	-
Colorado.....	7.34	5.95	8.78	10.13
Illinois.....	3.51	-	3.41	6.06
Indiana.....	-	-	3.89	5.92
Kansas.....	-	-	-	2.94
Kentucky Total.....	3.22	2.81	2.91	3.54
Eastern.....	1.43	2.81	2.67	3.42
Western.....	3.65	-	4.04	5.12
Louisiana.....	-	-	-	7.98
Maryland.....	-	-	5.33	4.17
Mississippi.....	-	-	-	8.87
Missouri.....	-	-	-	11.25
Montana.....	-	20.61	1.50	41.85
New Mexico.....	9.87	9.21	-	11.01
North Dakota.....	-	14.52	-	17.74
Ohio.....	4.46	3.27	5.16	3.15
Oklahoma.....	-	-	3.55	3.59
Pennsylvania Total.....	4.06	1.08	5.33	2.59
Anthracite.....	-	0.62	0.63	1.25
Bituminous.....	4.06	2.13	5.66	2.89
Tennessee.....	-	-	2.30	1.96
Texas.....	-	9.64	-	9.80
Utah.....	4.79	-	7.08	-
Virginia.....	2.06	3.37	2.30	3.13
Washington.....	-	3.71	-	-
West Virginia Total.....	3.70	3.84	2.96	4.34
Northern.....	4.91	-	2.49	3.93
Southern.....	2.28	3.84	3.06	4.39
Wyoming.....	3.50	8.24	-	41.47
<b>Appalachian Total.....</b>	<b>3.28</b>	<b>3.25</b>	<b>3.16</b>	<b>3.48</b>
Northern.....	4.50	1.70	4.60	3.02
Central.....	2.20	3.73	2.74	3.72
Southern.....	2.02	2.35	1.05	2.62
<b>Interior Total.....</b>	<b>3.55</b>	<b>9.35</b>	<b>3.77</b>	<b>6.77</b>
Illinois Basin.....	3.55	-	3.77	5.81
<b>Western Total.....</b>	<b>6.77</b>	<b>9.82</b>	<b>7.85</b>	<b>36.09</b>
Powder River Basin.....	-	20.74	-	42.76
Uinta Region.....	5.31	5.91	8.08	9.89
<b>East of Miss. River.....</b>	<b>3.33</b>	<b>3.17</b>	<b>3.27</b>	<b>3.83</b>
<b>West of Miss. River.....</b>	<b>6.77</b>	<b>9.77</b>	<b>7.76</b>	<b>31.03</b>
<b>U.S. Total.....</b>	<b>3.57</b>	<b>8.09</b>	<b>3.66</b>	<b>10.60</b>

<sup>1</sup> For a definition of coal producing regions, see Glossary.

Note: • 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, including office workers. Excludes mines producing less than 10,000 short tons of coal and preparation plants with less than 5,000 employee hours during the year, which are not required to provide data.

Source: • Energy Information Administration 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."





## **Domestic Markets**

**Table 25. Coal Consumers in the Manufacturing and Coke Sectors, 2005**

Company Name	Plant Location
<b>Top Ten Manufacturers</b>	
Alcoa Inc (Aluminum Company of America)	(IN)(TX)
Archer Daniels Midland	(IA)(IL)(MN)(ND)
Cargill Incorporated	(AL)(GA)(IA)(MI)(NC)(NY)(OH)(TN)
Carumse North American Group	(AL)(IL)(IN)(KY)(MI)(OH)(PA)
Dakota Gasification Company	(ND)
Eastman Chemical Company	(AR)(TN)
Georgia-Pacific Corp	(AL)(GA)(OK)(VA)(WI)
International Paper Co	(AL)(FL)(GA)(IN)(LA)(MI)(MN)(NC)(SC)(VA)(WI)
Lafarge North America	(AL)(GA)(IA)(IL)(KS)(MI)(MO)(NY)(OK)(PA)(SC)(WA)
NewPage Corporation	(MD)(MI)(OH)(SC)(VA)
<b>Other Major Manufacturers</b>	
Abitibi Consolidated Sales Corp	(AZ)
Amalgamated Sugar Co, LLC	(ID)
American Crystal Sugar Co	(MN)(ND)
Ash Grove Cement Co	(AR)(KS)(MT)(NE)(UT)
Blue Ridge Paper Prod Inc	(NC)
Bowater Newsprint	(AL)(TN)
Buzzi Unicem USA	(IL)(IN)(KS)(MO)(OK)(TX)
California Portland Cement Co	(AZ)(CA)
Celanese Ltd	(TX)
Cemex, Inc	(AL)(CO)(GA)(KY)(MI)(PA)(TN)
Cinergy Solutions	(VA)
ESSROC Materials Inc	(IN)(MD)(PA)
Eastman Kodak Company	(NY)
FMC Corporation	(WY)
General Chemical Corporation	(WY)
Holcim Inc	(AL)(CO)(IA)(MI)(MS)(SC)(UT)
IMC Chemical Co	(CA)
International Steel Group Inc	(IN)
Ispat US Holdings BV	(IN)
Kennecott Utah Copper	(UT)
Lehigh Cement Co	(AL)(IA)(IN)(MD)(PA)
Mead Westvaco Corporation	(MD)(MI)(OH)(SC)(VA)
PPG Industries Inc	(WV)
Silver Bay Power Company	(MN)
Smurfit Stone Container Corp	(FL)(MI)(SC)(VA)
Stora Enso North America	(WI)
TXI Operations, LP	(TX)
Tate and Lyle Ingredients Americas Inc	(IL)(IN)(TN)
Thilmany LLC	(AL)(FL)(GA)(IN)(LA)(MI)(MN)(NC)(SC)(VA)(WI)
Weverhaeuser Inc	(AL)(NC)(PA)(WA)
<b>Top Ten Coke Producers</b>	
AK Steel Corp	(KY)(OH)
Citizens Gas & Coke Utility	(IN)
Drummond Company Inc	(AL)
Indiana Harbor Coke Co LP	(IN)
International Steel Group Inc	(OH)
Jewell Coke Company LP	(IN)(VA)
Mittal Steel USA Burns Harbor	(IN)(MI)
Sun Coke Co	(OH)
United States Steel Coporation	(IL)(IN)(PA)
Wheeling-Pittsburgh Steel Corp	(WV)

Note: • Major manufactures are the top 40 coal consumers in the manufacturing sector. Major coke producers are the top 10 coal consumers in the coke plant sector. Manufacturers and coke producers are listed in alphabetical order.

Source: • Energy Information Administration, Manufacturers: Form EIA-3, "Quarterly Coal Consumption and Quality Report, Manufacturing Plants;" and, Coke Plants: Form EIA-5, "Quarterly Coal Consumption and Quality Report, Coke Plants."

**Table 26. U.S. Coal Consumption by End Use Sector, by Census Division and State, 2005, 2004**  
(Thousand Short Tons)

Census Division and State	2005				2004				Total		
	Electric Power <sup>1</sup>	Other Industrial	Coke	Residential and Commercial	Electric Power <sup>1</sup>	Other Industrial	Coke	Residential and Commercial	2005	2004	Percent Change
<b>New England</b> .....	<b>8,963</b>	<b>195</b>	-	<b>60</b>	<b>8,316</b>	<b>171</b>	-	<b>47</b>	<b>9,219</b>	<b>8,534</b>	<b>8.0</b>
Connecticut.....	2,070	W	-	W	2,132	-	-	W	2,076	W	W
Maine.....	146	W	-	W	168	W	-	W	276	286	-3.5
Massachusetts.....	5,025	W	-	W	4,357	W	-	W	5,136	4,446	15.5
New Hampshire.....	1,723	-	-	W	1,660	-	-	W	W	W	3.9
Rhode Island.....	-	-	-	W	-	-	-	W	W	W	-7.2
Vermont.....	-	-	-	W	-	-	-	W	W	W	0.3
<b>Middle Atlantic</b> .....	<b>68,529</b>	<b>W</b>	<b>W</b>	<b>W</b>	<b>65,829</b>	<b>W</b>	<b>W</b>	<b>W</b>	<b>80,788</b>	<b>78,572</b>	<b>2.8</b>
New Jersey.....	4,995	W	-	W	4,429	W	-	W	5,004	4,440	12.7
New York.....	9,069	1,180	W	160	9,702	1,167	W	161	W	W	-5.6
Pennsylvania.....	54,464	2,937	W	623	51,698	3,337	W	680	W	W	3.6
<b>East North Central</b> .....	<b>234,327</b>	<b>14,253</b>	<b>11,064</b>	<b>1,306</b>	<b>228,619</b>	<b>15,001</b>	<b>11,322</b>	<b>1,467</b>	<b>260,951</b>	<b>256,409</b>	<b>1.8</b>
Illinois.....	53,822	3,502	W	146	54,078	3,525	W	250	W	W	-0.6
Indiana.....	60,011	5,289	W	257	59,459	5,788	7,989	429	W	73,665	W
Michigan.....	36,273	1,828	W	153	35,312	1,949	W	179	W	W	2.4
Ohio.....	59,607	1,940	W	333	54,994	1,973	W	456	W	W	8.7
Wisconsin.....	24,615	1,695	-	417	24,777	1,766	-	153	26,727	26,696	0.1
<b>West North Central</b> .....	<b>148,975</b>	<b>12,623</b>	-	<b>826</b>	<b>147,353</b>	<b>12,030</b>	-	<b>626</b>	<b>162,425</b>	<b>160,010</b>	<b>1.5</b>
Iowa.....	21,072	2,930	-	274	21,873	2,925	-	177	24,276	24,975	-2.8
Kansas.....	22,046	205	-	-	22,139	203	-	-	22,251	22,341	-0.4
Minnesota.....	20,008	1,300	-	72	20,070	1,312	-	*	21,381	21,382	*
Missouri.....	45,765	1,052	-	215	44,379	1,063	-	193	47,033	45,635	3.1
Nebraska.....	12,886	393	-	4	12,650	371	-	3	13,283	13,023	2.0
North Dakota.....	25,317	W	-	W	23,915	W	-	W	32,044	30,079	6.5
South Dakota.....	1,880	W	-	W	2,328	W	-	W	2,158	2,574	-16.1
<b>South Atlantic</b> .....	<b>179,548</b>	<b>W</b>	<b>W</b>	<b>W</b>	<b>173,685</b>	<b>W</b>	<b>W</b>	<b>W</b>	<b>192,809</b>	<b>187,796</b>	<b>2.7</b>
Delaware.....	2,208	W	-	W	2,055	W	-	W	2,325	2,174	6.9
District of Columbia.....	-	-	-	W	-	-	-	W	W	W	28.7
Florida.....	26,603	1,068	-	*	27,644	1,045	-	-	27,672	28,689	-3.5
Georgia.....	39,137	1,700	-	49	36,094	1,771	-	7	40,887	37,872	8.0
Maryland.....	11,710	1,349	-	32	11,576	1,375	-	56	13,090	13,006	0.6
North Carolina.....	31,303	1,408	-	149	29,922	1,448	-	352	32,860	31,722	3.6
South Carolina.....	15,793	1,504	-	-	15,557	1,794	-	-	17,296	17,351	-0.3
Virginia.....	14,920	2,196	W	121	14,882	2,146	W	93	W	W	0.6
West Virginia.....	37,875	1,151	W	80	35,956	1,501	W	56	W	W	4.1
<b>East South Central</b> .....	<b>113,228</b>	<b>W</b>	<b>W</b>	<b>W</b>	<b>109,208</b>	<b>W</b>	<b>2,644</b>	<b>W</b>	<b>122,632</b>	<b>119,028</b>	<b>3.0</b>
Alabama.....	36,997	1,874	W	2	35,083	2,110	W	*	W	W	4.4
Kentucky.....	40,352	1,212	W	289	39,342	1,328	W	274	W	W	2.3
Mississippi.....	9,760	W	-	W	9,950	W	-	W	9,885	10,110	-2.2
Tennessee.....	26,119	3,149	-	32	24,832	3,233	-	70	29,301	28,135	4.1
<b>West South Central</b> .....	<b>153,006</b>	<b>W</b>	-	<b>W</b>	<b>153,350</b>	<b>W</b>	-	<b>W</b>	<b>158,262</b>	<b>158,723</b>	<b>-0.3</b>
Arkansas.....	14,031	368	-	-	15,318	415	-	*	14,399	15,733	-8.5
Louisiana.....	15,790	W	-	W	15,975	W	-	W	15,856	16,059	-1.3
Oklahoma.....	21,952	727	-	1	20,294	714	-	-	22,680	21,008	8.0
Texas.....	101,233	4,082	-	12	101,763	4,148	-	11	105,327	105,927	-0.6
<b>Mountain</b> .....	<b>119,793</b>	<b>4,953</b>	-	<b>410</b>	<b>118,830</b>	<b>4,971</b>	-	<b>659</b>	<b>125,156</b>	<b>124,459</b>	<b>0.6</b>
Arizona.....	20,333	719	-	1	20,060	738	-	1	21,053	20,799	1.2
Colorado.....	19,013	W	-	W	19,251	W	-	W	19,445	19,766	-1.6
Idaho.....	-	536	-	13	-	600	-	7	548	607	-9.7
Montana.....	11,588	W	-	W	11,322	W	-	W	11,822	11,522	2.6
Nevada.....	8,622	W	-	W	8,502	W	-	W	8,826	8,715	1.3
New Mexico.....	17,034	W	-	W	16,661	W	-	W	17,116	16,745	2.2
Utah.....	17,118	1,431	-	45	16,606	1,330	-	213	18,594	18,150	2.4
Wyoming.....	26,086	1,597	-	69	26,428	1,627	-	102	27,752	28,156	-1.4
<b>Pacific</b> .....	<b>11,115</b>	<b>2,096</b>	-	<b>23</b>	<b>11,077</b>	<b>2,117</b>	-	<b>529</b>	<b>13,235</b>	<b>13,723</b>	<b>-3.6</b>
Alaska.....	398	W	-	W	393	W	-	W	403	891	-54.8
California.....	873	1,956	-	20	924	1,914	-	8	2,849	2,847	*
Hawaii.....	746	W	-	W	804	W	-	W	804	857	-6.1
Oregon.....	2,103	W	-	W	2,077	W	-	W	2,112	2,141	-1.4
Washington.....	6,996	W	-	W	6,879	W	-	W	7,067	6,986	1.2
<b>U.S. Total</b> .....	<b>1,037,485</b>	<b>60,340</b>	<b>23,434</b>	<b>4,217</b>	<b>1,016,268</b>	<b>62,195</b>	<b>23,670</b>	<b>5,122</b>	<b>1,125,476</b>	<b>1,107,255</b>	<b>1.6</b>

<sup>1</sup> The electric power sector (electric utilities and independent power producers) comprises electricity-only and combined-heat-and-power (CHP) plants whose primary business is to sell electricity, or electricity and heat, to the public -- i.e. NAICS 22 plants

\* Quantity is less than 0.5 thousand short tons or percent change is less than 0.1%.

W = Withheld to avoid disclosure of individual company data.

Note: • Totals may not equal sum of components because of independent rounding.

Source: • Energy Information Administration, Form EIA-906, "Power Plant Report," Form EIA-3, "Quarterly Coal Consumption and Quality Report, Manufacturing Plants," Form EIA-5, "Quarterly Coal Consumption and Quality Report, Coke Plants," Form EIA-6A, "Coal Distribution Report," Form EIA-7A, "Coal Production Report," and Form EIA-920, "Combined Heat and Power Plant Report."

**Table 27. Year-End Coal Stocks by Sector, by Census Division, 2005, 2004**  
(Thousand Short Tons)

Census Division	2005				2004				Total		
	Electric Power <sup>1</sup>	Other Industrial	Coke	Producer and Distributor	Electric Power <sup>1</sup>	Other Industrial	Coke	Producer and Distributor	2005	2004	Percent Change
New England.....	864	45	-	-	807	42	-	-	909	849	7.1
Middle Atlantic.....	6,312	412	W	4,019	5,709	447	W	3,022	W	W	19.9
East North Central.....	28,572	1,465	1,494	1,848	28,734	1,285	681	1,600	33,379	32,300	3.3
West North Central.....	14,808	1,209	-	2,647	19,417	1,047	-	2,832	18,664	23,295	-19.9
South Atlantic.....	17,358	1,068	W	9,945	17,211	920	W	11,074	W	W	-2.5
East South Central.....	10,789	494	W	4,368	8,126	365	182	4,597	W	13,270	W
West South Central.....	10,789	354	-	1,862	14,882	285	-	1,861	13,006	17,028	-23.6
Mountain.....	10,618	323	-	10,152	10,627	267	-	16,077	21,093	26,971	-21.8
Pacific.....	1,027	210	-	128	1,155	186	-	89	1,364	1,430	-4.6
U.S. Total.....	101,137	5,582	2,615	34,971	106,669	4,842	1,344	41,151	144,304	154,006	-6.3

<sup>1</sup> The electric power sector (electric utilities and independent power producers) comprises electricity-only and combined-heat-and-power (CHP) plants whose primary business is to sell electricity, or electricity and heat, to the public -- i.e. NAICS 22 plants.

W = Withheld to avoid disclosure of individual company data.

Note: • Stocks data for residential and commercial sector are not collected by EIA. Totals may not equal sum of components because of independent rounding.

Source: • Energy Information Administration, Form EIA-906, "Power Plant Report," Form EIA-3, "Quarterly Coal Consumption and Quality Report, Manufacturing Plants," Form EIA-5, "Quarterly Coal Consumption and Quality Report, Coke Plants," and Form EIA-6, "Coal Distribution Report."

## **Average Mine Sales Price**

**Table 28. Average Open Market Sales Price of Coal by State and Mine Type, 2005, 2004**  
(Dollars per Short Ton)

Coal-Producing State	2005			2004			Percent Change		
	Underground	Surface	Total	Underground	Surface	Total	Underground	Surface	Total
Alabama.....	54.75	51.74	53.63	41.69	41.84	41.73	31.3	23.7	28.5
Alaska.....	-	W	W	-	W	W	-	W	W
Arizona.....	-	W	W	-	W	W	-	W	W
Colorado.....	21.69	21.45	21.63	17.55	19.54	18.10	23.6	9.8	19.5
Illinois.....	29.18	31.63	29.67	26.07	23.84	25.72	11.9	32.6	15.4
Indiana.....	33.17	22.01	25.31	27.03	21.96	23.27	22.7	0.2	8.8
Kansas.....	-	W	W	-	W	W	-	W	W
Kentucky Total.....	38.70	41.24	39.68	32.34	33.41	32.74	19.7	23.4	21.2
Eastern.....	43.55	43.05	43.33	35.56	34.60	35.15	22.5	24.4	23.3
Western.....	27.48	25.87	27.19	23.77	22.87	23.60	15.6	13.1	15.2
Louisiana.....	-	W	W	-	W	W	-	W	W
Maryland.....	W	W	28.55	W	W	24.58	W	W	16.2
Mississippi.....	-	W	W	-	W	W	-	W	W
Missouri.....	-	W	W	-	W	W	-	W	W
Montana.....	W	W	9.74	W	W	10.09	W	W	-3.5
New Mexico.....	W	W	25.82	W	W	24.09	W	W	7.1
North Dakota.....	-	10.45	10.45	-	9.67	9.67	-	8.0	8.0
Ohio.....	25.25	30.06	26.88	23.64	24.12	23.82	6.8	24.6	12.9
Oklahoma.....	W	W	28.24	W	W	28.36	W	W	-0.4
Pennsylvania Total.....	36.23	37.05	36.39	29.93	34.27	30.77	21.0	8.1	18.3
Anthracite.....	46.74	39.71	41.00	52.52	37.96	39.77	-11.0	4.6	3.1
Bituminous.....	36.18	36.76	36.28	29.85	33.80	30.54	21.2	8.7	18.8
Tennessee.....	49.89	37.91	42.50	43.54	31.79	34.70	14.6	19.2	22.5
Texas.....	-	17.39	17.39	-	15.39	15.39	-	13.0	13.0
Utah.....	21.45	-	21.45	17.39	-	17.39	23.4	-	23.4
Virginia.....	48.01	47.93	47.97	38.85	37.93	38.51	23.6	26.4	24.6
West Virginia Total.....	41.99	42.33	42.14	35.63	35.09	35.41	17.8	20.6	19.0
Northern.....	32.52	38.10	33.16	27.98	31.25	28.39	16.2	21.9	16.8
Southern.....	49.06	42.66	45.50	40.13	35.41	37.76	22.3	20.5	20.5
Wyoming.....	-	7.71	7.71	-	7.12	7.12	-	8.3	8.3
<b>U.S. Total.....</b>	<b>36.42</b>	<b>17.37</b>	<b>23.59</b>	<b>30.36</b>	<b>14.75</b>	<b>19.93</b>	<b>19.9</b>	<b>17.7</b>	<b>18.3</b>

W = Withheld to avoid disclosure of individual company data.

Note: • Open market includes all coal sold on the open market to other coal companies or consumers. An average open market sales price is calculated by dividing the total free on board (f.o.b) rail/barge value of the open market coal sold by the total open market coal sold. Excludes mines producing less than 10,000 short tons, which are not required to provide data. Excludes silt, culm, refuse bank, slurry dam, and dredge operations. Totals may not equal sum of components because of independent rounding.

Source: • Energy Information Administration 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."

**Table 29. Average Open Market Sales Price of Coal by State and Underground Mining Method, 2005**  
(Dollars per Short Ton)

Coal-Producing State	Continuous <sup>1</sup>	Conventional <sup>2</sup>	Longwall <sup>3</sup>	Other <sup>4</sup>	Total
Alabama.....	W	-	W	-	54.75
Colorado.....	W	-	W	-	21.69
Illinois.....	W	-	W	-	29.18
Indiana.....	33.17	-	-	-	33.17
Kentucky Total.....	W	38.71	W	-	38.70
Eastern.....	W	W	W	-	43.55
Western.....	W	W	-	-	27.48
Maryland.....	W	-	-	-	W
Montana.....	W	-	-	-	W
New Mexico.....	-	-	W	-	W
Ohio.....	W	-	W	-	25.25
Oklahoma.....	W	-	-	-	W
Pennsylvania Total.....	46.07	40.17	W	W	36.23
Anthracite.....	W	W	-	W	46.74
Bituminous.....	W	W	W	-	36.18
Tennessee.....	49.89	-	-	-	49.89
Utah.....	25.17	-	21.02	-	21.45
Virginia.....	42.47	63.89	W	-	48.01
West Virginia Total.....	46.54	W	W	-	41.99
Northern.....	31.88	W	32.60	-	32.52
Southern.....	47.85	-	53.00	-	49.06
Wyoming.....	-	-	-	-	-
<b>U.S. Total.....</b>	<b>39.04</b>	<b>W</b>	<b>33.90</b>	<b>W</b>	<b>36.42</b>

<sup>1</sup> Mines that produce greater than 50 percent of their coal by continuous mining methods.

<sup>2</sup> Mines that produce greater than 50 percent of their coal by conventional mining methods.

<sup>3</sup> Mines that have any production from longwall mining method. A typical longwall mining operation uses 80 percent longwall mining and 20 percent continuous mining.

<sup>4</sup> Mines that produce coal using shortwall, scoop loading, hand loading, or other mining methods, or a 50/50 percent conventional/conventional split in mining method.

W = Withheld to avoid disclosure of individual company data.

Note: • Open market includes all coal sold on the open market to other coal companies or consumers. An average open market sales price is calculated by dividing the total free on board (f.o.b) rail/barge value of the open market coal sold by the total open market coal sold. Excludes mines producing less than 10,000 short tons, which are not required to provide data. Excludes silt, culm, refuse bank, slurry dam, and dredge operations. Totals may not equal sum of components because of independent rounding.

Source: • Energy Information Administration 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."

**Table 30. Average Open Market Sales Price of Coal by State, County, and Number of Mines, 2005**  
(Thousand Short Tons, Dollars per Short Ton)

Coal-Producing State and County	Number of Mines	Open Market Sales	Average Open Market Sales Price
<b>Alabama</b> .....	<b>50</b>	<b>22,156</b>	<b>53.63</b>
Bibb .....	1	W	W
Cullman .....	3	W	W
Franklin .....	1	W	W
Jackson .....	3	W	W
Jefferson .....	12	6,313	62.14
Marion .....	3	W	W
Shelby .....	1	W	W
Tuscaloosa .....	9	11,147	49.09
Walker .....	15	3,162	48.34
Winston .....	2	W	W
<b>Alaska</b> .....	<b>1</b>	<b>W</b>	<b>W</b>
Yukon-Koyukuk Division .....	1	W	W
<b>Arizona</b> .....	<b>2</b>	<b>W</b>	<b>W</b>
Navajo .....	2	W	W
<b>Colorado</b> .....	<b>13</b>	<b>36,214</b>	<b>21.63</b>
Delta .....	2	W	W
Garfield .....	1	W	W
Gunnison .....	2	W	W
La Plata .....	1	W	W
Moffat .....	3	W	W
Montrose .....	1	W	W
Rio Blanco .....	1	-	-
Routt .....	2	W	W
<b>Illinois</b> .....	<b>20</b>	<b>28,377</b>	<b>29.67</b>
Gallatin .....	2	W	W
Jackson .....	2	W	W
Macoupin .....	3	W	W
Perry .....	3	W	W
Randolph .....	1	W	W
Saline .....	3	W	W
Sangamon .....	1	W	W
Vermilion .....	2	W	W
Wabash .....	2	W	W
White .....	1	W	W
<b>Indiana</b> .....	<b>29</b>	<b>30,320</b>	<b>25.31</b>
Clay .....	2	W	W
Crawford .....	1	W	W
Daviess .....	2	W	W
Gibson .....	7	13,972	25.20
Knox .....	6	W	W
Pike .....	5	W	W
Spencer .....	1	W	W
Sullivan .....	1	W	W
Vigo .....	2	W	W
Warrick .....	2	W	W
<b>Kansas</b> .....	<b>1</b>	<b>W</b>	<b>W</b>
Bourbon .....	1	W	W
<b>Kentucky</b> .....	<b>389</b>	<b>116,725</b>	<b>39.68</b>
Bell .....	12	1,000	48.40
Breathitt .....	6	1,445	40.83
Carter .....	1	W	W
Clay .....	2	W	W
Elliott .....	1	W	W
Floyd .....	26	3,151	38.37
Harlan .....	47	10,543	40.86
Henderson .....	3	W	W
Hopkins .....	8	W	W
Jackson .....	2	W	W
Johnson .....	3	W	W
Knott .....	34	9,497	41.89
Knox .....	10	865	48.57
Laurel .....	3	W	W
Lawrence .....	11	2,584	39.60
Leslie .....	12	5,197	42.30
Letcher .....	38	7,109	44.10
Magoffin .....	4	W	W
Martin .....	10	5,520	41.04
Morgan .....	1	W	W

See footnotes at end of table.



**Table 30. Average Open Market Sales Price of Coal by State, County, and Number of Mines, 2005 (Continued)**  
(Thousand Short Tons, Dollars per Short Ton)

Coal-Producing State and County	Number of Mines	Open Market Sales	Average Open Market Sales Price
<b>Kentucky (continued)</b>			
Muhlenberg .....	9	W	W
Ohio .....	1	W	W
Owsley .....	2	W	W
Perry .....	28	12,808	46.11
Pike .....	102	28,106	44.56
Rockcastle .....	1	W	W
Union .....	3	W	W
Webster .....	3	W	W
Whitley .....	6	W	W
<b>Louisiana .....</b>	<b>2</b>	<b>W</b>	<b>W</b>
De Soto .....	1	W	W
Red River .....	1	W	W
<b>Maryland .....</b>	<b>14</b>	<b>5,167</b>	<b>28.55</b>
Allegany .....	8	W	W
Garrett .....	6	W	W
<b>Mississippi .....</b>	<b>1</b>	<b>W</b>	<b>W</b>
Choctaw .....	1	W	W
<b>Missouri .....</b>	<b>2</b>	<b>W</b>	<b>W</b>
Bates .....	2	W	W
<b>Montana .....</b>	<b>6</b>	<b>38,863</b>	<b>9.74</b>
Big Horn .....	3	W	W
Musselshell .....	1	W	W
Richland .....	1	-	-
Rosebud .....	1	W	W
<b>New Mexico .....</b>	<b>4</b>	<b>26,268</b>	<b>25.82</b>
Mckinley .....	2	W	W
San Juan .....	2	W	W
<b>North Dakota .....</b>	<b>4</b>	<b>25,631</b>	<b>10.45</b>
McLean .....	1	W	W
Mercer .....	2	W	W
Oliver .....	1	W	W
<b>Ohio .....</b>	<b>45</b>	<b>22,783</b>	<b>26.88</b>
Athens .....	1	W	W
Belmont .....	6	W	W
Carroll .....	3	W	W
Columbiana .....	3	W	W
Coshocton .....	1	W	W
Harrison .....	8	2,745	27.65
Jackson .....	2	W	W
Jefferson .....	7	974	28.11
Mahoning .....	1	W	W
Monroe .....	1	W	W
Muskingum .....	1	W	W
Noble .....	1	W	W
Perry .....	2	W	W
Stark .....	3	W	W
Tuscarawas .....	3	W	W
Vinton .....	2	W	W
<b>Oklahoma .....</b>	<b>7</b>	<b>1,849</b>	<b>28.24</b>
Craig .....	1	W	W
Haskell .....	1	W	W
Le Flore .....	4	W	W
Rogers .....	1	W	W
<b>Pennsylvania .....</b>	<b>183</b>	<b>64,798</b>	<b>36.39</b>
Allegheny .....	1	W	W
Armstrong .....	20	4,565	39.71
Beaver .....	1	W	W
Butler .....	3	W	W
Cambria .....	5	1,132	61.78
Cameron .....	1	W	W
Centre .....	1	W	W
Clarion .....	3	W	W
Clearfield .....	29	3,473	46.17
Columbia .....	3	W	W
Elk .....	5	W	W
Fayette .....	7	W	W
Greene .....	8	39,896	34.64
Indiana .....	17	1,951	32.08
Jefferson .....	12	545	41.89
Lackawanna .....	1	W	W

See footnotes at end of table.

**Table 30. Average Open Market Sales Price of Coal by State, County, and Number of Mines, 2005 (Continued)**  
(Thousand Short Tons, Dollars per Short Ton)

Coal-Producing State and County	Number of Mines	Open Market Sales	Average Open Market Sales Price
<b>Pennsylvania (continued)</b>			
Lawrence .....	1	W	W
Luzerne .....	4	W	W
Lycoming .....	1	W	W
Mercer .....	1	W	W
Northumberland .....	5	W	W
Schuylkill .....	23	536	30.37
Somerset .....	22	4,078	35.67
Washington .....	5	W	W
Westmoreland .....	4	W	W
<b>Tennessee.....</b>	<b>22</b>	<b>3,146</b>	<b>42.50</b>
Anderson .....	2	W	W
Campbell .....	5	W	W
Claiborne .....	12	2,277	39.49
Cumberland .....	1	W	W
Fentress .....	1	W	W
Scott .....	1	W	W
<b>Texas .....</b>	<b>13</b>	<b>13,595</b>	<b>17.39</b>
Atascosa .....	1	-	-
Bastrop .....	1	-	-
Freestone .....	1	-	-
Harrison .....	1	W	W
Hopkins .....	1	-	-
Leon .....	1	W	W
Milam .....	1	-	-
Panola .....	2	-	-
Robertson .....	1	W	W
Rusk .....	1	-	-
Titus .....	2	-	-
<b>Utah.....</b>	<b>13</b>	<b>12,022</b>	<b>21.45</b>
Carbon .....	6	W	W
Emery .....	6	W	W
Sevier .....	1	-	-
<b>Virginia.....</b>	<b>115</b>	<b>18,662</b>	<b>47.97</b>
Buchanan .....	32	4,841	55.94
Dickenson .....	16	821	52.40
Lee .....	3	W	W
Russell .....	7	W	W
Tazewell .....	8	W	W
Wise .....	49	10,919	44.00
<b>Washington .....</b>	<b>1</b>	<b>-</b>	<b>-</b>
Lewis .....	1	-	-
<b>West Virginia .....</b>	<b>263</b>	<b>140,237</b>	<b>42.14</b>
Barbour .....	7	W	W
Boone .....	45	30,799	44.09
Brooke .....	1	W	W
Clay .....	2	W	W
Fayette .....	14	4,529	48.84
Grant .....	4	W	W
Greenbrier .....	2	W	W
Harrison .....	7	W	W
Kanawha .....	19	12,753	41.85
Lincoln .....	3	-	-
Logan .....	21	11,288	40.18
Marion .....	3	W	W
Marshall .....	2	W	W
McDowell .....	40	4,369	60.35
Mineral .....	2	W	W
Mingo .....	27	11,010	44.35
Monongalia .....	6	W	W
Nicholas .....	4	W	W
Preston .....	2	W	W
Raleigh .....	16	7,225	56.05
Randolph .....	1	W	W
Tucker .....	1	W	W
Upshur .....	6	670	31.37
Wayne .....	5	W	W
Webster .....	5	W	W
Wyoming .....	18	6,052	62.45
<b>Wyoming .....</b>	<b>17</b>	<b>368,043</b>	<b>7.71</b>
Campbell .....	11	330,242	7.44

See footnotes at end of table.

**Table 30. Average Open Market Sales Price of Coal by State, County, and Number of Mines, 2005 (Continued)**  
(Thousand Short Tons, Dollars per Short Ton)

Coal-Producing State and County	Number of Mines	Open Market Sales	Average Open Market Sales Price
<b>Wyoming (continued)</b>			
Converse.....	1	W	W
Lincoln.....	1	W	W
Sweetwater.....	4	3,744	15.37
<b>U.S. Total.....</b>	<b>1,217</b>	<b>995,799</b>	<b>23.59</b>

W = Withheld to avoid disclosure of individual company data.

Note: • Open market includes all coal sold on the open market to other coal companies or consumers. An average open market sales price is calculated by dividing the total free on board (f.o.b) rail/barge value of the open market coal sold by the total open market coal sold. Excludes mines producing less than 10,000 short tons, which are not required to provide data. Excludes silt, culm, refuse bank, slurry dam, and dredge operations. Totals may not equal sum of components because of independent rounding.

Source: • Energy Information Administration 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."

**Table 31. Average Open Market Sales Price of Coal by State and Coal Rank, 2005**  
(Dollars per Short Ton)

Coal-Producing State	Bituminous	Subbituminous	Lignite	Anthracite	Total
Alabama.....	53.63	-	-	-	53.63
Alaska.....	-	W	-	-	W
Arizona.....	W	-	-	-	W
Colorado.....	W	W	-	-	21.63
Illinois.....	29.67	-	-	-	29.67
Indiana.....	25.31	-	-	-	25.31
Kansas.....	W	-	-	-	W
Kentucky Total.....	39.68	-	-	-	39.68
Eastern.....	43.33	-	-	-	43.33
Western.....	27.19	-	-	-	27.19
Louisiana.....	-	-	W	-	W
Maryland.....	28.55	-	-	-	28.55
Mississippi.....	-	-	W	-	W
Missouri.....	W	-	-	-	W
Montana.....	-	9.74	-	-	9.74
New Mexico.....	W	W	-	-	25.82
North Dakota.....	-	-	10.45	-	10.45
Ohio.....	26.88	-	-	-	26.88
Oklahoma.....	28.24	-	-	-	28.24
Pennsylvania Total.....	36.28	-	-	41.00	36.39
Anthracite.....	-	-	-	41.00	41.00
Bituminous.....	36.28	-	-	-	36.28
Tennessee.....	42.50	-	-	-	42.50
Texas.....	-	-	17.39	-	17.39
Utah.....	21.45	-	-	-	21.45
Virginia.....	47.97	-	-	-	47.97
West Virginia Total.....	42.14	-	-	-	42.14
Northern.....	33.16	-	-	-	33.16
Southern.....	45.50	-	-	-	45.50
Wyoming.....	-	7.71	-	-	7.71
<b>U.S. Total.....</b>	<b>36.80</b>	<b>8.68</b>	<b>13.49</b>	<b>41.00</b>	<b>23.59</b>

W = Withheld to avoid disclosure of individual company data.

Note: • Open market includes all coal sold on the open market to other coal companies or consumers. An average open market sales price is calculated by dividing the total free on board (f.o.b) rail/barge value of the open market coal sold by the total open market coal sold. Excludes mines producing less than 10,000 short tons, which are not required to provide data. Excludes silt, culm, refuse bank, slurry dam, and dredge operations. Totals may not equal sum of components because of independent rounding.

Source: • Energy Information Administration 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."

**Table 32. Average Open Market Sales Price of Coal by Mine Production Range and Mine Type, 2005**  
(Dollars per Short Ton)

Mine Production Range (thousand short tons)	Underground	Surface	Total
Over 1,000.....	33.53	13.03	19.00
500 to 1,000.....	41.47	39.81	40.48
200 to 500.....	44.61	40.42	42.56
100 to 200.....	43.72	43.00	43.38
50 to 100.....	46.21	40.91	43.86
10 to 50.....	46.06	38.77	41.12
<b>U.S. Total.....</b>	<b>36.42</b>	<b>17.37</b>	<b>23.59</b>

Note: • Open market includes all coal sold on the open market to other coal companies or consumers. An average open market sales price is calculated by dividing the total free on board (f.o.b) rail/barge value of the open market coal sold by the total open market coal sold. Excludes mines producing less than 10,000 short tons, which are not required to provide data. Excludes silt, culm, refuse bank, slurry dam, and dredge operations. Totals may not equal sum of components because of independent rounding.

Source: • Energy Information Administration 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."

**Table 33. Average Sales Price of U.S. Coal by State and Disposition, 2005**  
(Dollars per Short Ton)

Coal-Producing State	Open Market <sup>1</sup>	Captive <sup>2</sup>
Alabama.....	53.63	-
Alaska.....	W	-
Arizona.....	W	-
Colorado.....	21.63	27.11
Illinois.....	29.67	23.42
Indiana.....	25.31	27.33
Kansas.....	W	-
Kentucky Total.....	39.68	35.62
Eastern.....	43.33	35.76
Western.....	27.19	31.49
Louisiana.....	W	W
Maryland.....	28.55	47.02
Mississippi.....	W	-
Missouri.....	W	-
Montana.....	9.74	8.10
New Mexico.....	25.82	-
North Dakota.....	10.45	7.99
Ohio.....	26.88	20.97
Oklahoma.....	28.24	-
Pennsylvania Total.....	36.39	39.37
Anthracite.....	41.00	107.55
Bituminous.....	36.28	35.70
Tennessee.....	42.50	-
Texas.....	17.39	13.24
Utah.....	21.45	18.49
Virginia.....	47.97	52.38
Washington.....	-	W
West Virginia Total.....	42.14	48.53
Northern.....	33.16	47.55
Southern.....	45.50	48.98
Wyoming.....	7.71	10.21
<b>U.S. Total.....</b>	<b>23.59</b>	<b>21.52</b>

<sup>1</sup> Open market includes coal sold on the open market to other coal companies or consumers.

<sup>2</sup> Captive includes all coal used by the producing company or sold to affiliated or parent companies.

W = Withheld to avoid disclosure of individual company data.

Note: • An average open market sales price is calculated by dividing the total free on board (f.o.b.) rail/barge value of the open market coal sold, by the total open market coal sold. An average captive market sales price is calculated by dividing the total free on board (f.o.b.) rail/barge value of the captive market coal sold, by the total captive market coal sold. Excludes mines producing less than 10,000 short tons, which are not required to provide data. Excludes silt, culm, refuse bank, slurry dam, and dredge operations.

Source: • Energy Information Administration 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."

# Average Consumer Prices

**Table 34. Average Price of Coal Delivered to End Use Sector by Census Division and State, 2005, 2004**  
(Dollars per Short Ton)

Census Division and State	2005			2004			Annual Percent Change		
	Electric Utility Plants	Other Industrial Plants	Coke Plants	Electric Utility Plants	Other Industrial Plants	Coke Plants	Electric Utility Plants	Other Industrial Plants	Coke Plants
<b>New England</b> .....	<b>65.39</b>	<b>85.57</b>	-	<b>52.14</b>	<b>65.54</b>	-	<b>25.4</b>	<b>30.6</b>	-
Connecticut.....	-	W	-	-	W	-	-	-	-
Maine.....	-	W	-	-	W	-	-	27.3	-
Massachusetts.....	71.71	W	-	48.24	W	-	48.7	29.0	-
New Hampshire.....	63.78	W	-	53.17	W	-	20.0	-	-
Rhode Island.....	-	W	-	-	W	-	-	-	-
Vermont.....	-	W	-	-	W	-	-	-	-
<b>Middle Atlantic</b> .....	<b>51.97</b>	<b>W</b>	<b>W</b>	<b>42.92</b>	<b>W</b>	<b>W</b>	<b>21.1</b>	<b>15.6</b>	<b>28.5</b>
New Jersey.....	67.55	W	-	59.88	W	-	12.8	-0.6	-
New York.....	54.94	54.85	W	41.19	48.90	W	33.4	12.2	23.9
Pennsylvania.....	38.77	51.09	W	31.81	43.57	W	21.9	17.3	28.9
<b>East North Central</b> .....	<b>30.45</b>	<b>53.89</b>	<b>89.97</b>	<b>26.69</b>	<b>41.22</b>	<b>63.30</b>	<b>14.1</b>	<b>30.7</b>	<b>42.1</b>
Illinois.....	21.43	33.10	W	22.05	29.66	W	-2.8	11.6	59.3
Indiana.....	30.15	58.11	W	25.70	40.00	64.75	17.3	45.3	W
Michigan.....	30.95	70.05	W	27.15	53.14	W	14.0	31.8	77.0
Ohio.....	37.00	58.87	W	31.99	47.40	W	15.7	24.2	19.2
Wisconsin.....	22.70	59.25	-	20.86	48.62	-	8.8	21.9	-
<b>West North Central</b> .....	<b>16.47</b>	<b>24.00</b>	-	<b>15.34</b>	<b>21.93</b>	-	<b>7.4</b>	<b>9.5</b>	-
Iowa.....	16.51	36.62	-	15.56	31.50	-	6.1	16.3	-
Kansas.....	19.22	41.22	-	17.74	38.19	-	8.3	7.9	-
Minnesota.....	19.73	39.50	-	18.78	33.27	-	5.1	18.7	-
Missouri.....	17.86	41.06	-	16.31	37.76	-	9.5	8.8	-
Nebraska.....	12.16	25.44	-	11.30	24.39	-	7.6	4.3	-
North Dakota.....	10.99	W	-	10.20	W	-	7.7	1.8	-
South Dakota.....	24.82	W	-	23.61	W	-	5.1	6.3	-
<b>South Atlantic</b> .....	<b>51.21</b>	<b>W</b>	<b>W</b>	<b>43.29</b>	<b>W</b>	<b>W</b>	<b>18.3</b>	<b>25.6</b>	<b>36.8</b>
Delaware.....	-	W	-	-	W	-	-	14.3	-
District of Columbia.....	-	W	-	-	W	-	-	-	-
Florida.....	55.76	76.57	-	46.16	57.26	-	20.8	33.7	-
Georgia.....	47.84	76.23	-	39.41	60.41	-	21.4	26.2	-
Maryland.....	-	56.10	-	-	50.80	-	-	10.4	-
North Carolina.....	58.91	65.25	-	49.26	53.14	-	19.6	22.8	-
South Carolina.....	54.45	75.72	-	48.00	57.37	-	13.4	32.0	-
Virginia.....	56.99	61.96	W	48.07	51.38	W	18.6	20.6	49.8
West Virginia.....	37.90	65.95	W	34.13	47.21	W	11.0	39.7	28.1
<b>East South Central</b> .....	<b>36.91</b>	<b>W</b>	<b>W</b>	<b>32.22</b>	<b>W</b>	<b>59.16</b>	<b>14.6</b>	<b>28.8</b>	<b>W</b>
Alabama.....	39.19	62.17	W	32.89	47.91	W	19.2	29.8	37.0
Kentucky.....	36.01	65.42	W	32.22	51.47	W	11.8	27.1	25.6
Mississippi.....	50.03	W	-	39.61	W	-	26.3	38.4	-
Tennessee.....	33.14	63.09	-	30.27	49.25	-	9.5	28.1	-
<b>West South Central</b> .....	<b>21.55</b>	<b>W</b>	-	<b>20.72</b>	<b>W</b>	-	<b>4.0</b>	<b>12.7</b>	-
Arkansas.....	25.56	61.67	-	21.49	45.81	-	18.9	34.6	-
Louisiana.....	24.66	W	-	21.41	W	-	15.2	38.2	-
Oklahoma.....	17.55	34.00	-	17.61	33.50	-	-0.3	1.5	-
Texas.....	21.53	26.48	-	21.82	24.25	-	-1.3	9.2	-
<b>Mountain</b> .....	<b>23.30</b>	<b>35.93</b>	-	<b>21.87</b>	<b>31.92</b>	-	<b>6.5</b>	<b>12.6</b>	-
Arizona.....	28.16	48.24	-	26.19	41.78	-	7.5	15.5	-
Colorado.....	20.89	W	-	19.09	W	-	9.4	45.5	-
Idaho.....	-	37.07	-	-	35.65	-	-	4.0	-
Montana.....	11.63	W	-	10.67	W	-	9.0	11.5	-
Nevada.....	34.44	W	-	30.28	W	-	13.7	9.1	-
New Mexico.....	27.68	W	-	27.25	W	-	1.6	3.4	-
Utah.....	24.71	42.22	-	24.94	33.32	-	-0.9	26.7	-
Wyoming.....	16.71	25.89	-	15.28	25.23	-	9.4	2.6	-
<b>Pacific</b> .....	<b>21.33</b>	<b>50.62</b>	-	<b>19.91</b>	<b>42.94</b>	-	<b>7.1</b>	<b>17.9</b>	-
Alaska.....	-	W	-	-	W	-	-	-	-
California.....	-	50.22	-	-	42.40	-	-	18.4	-
Hawaii.....	-	W	-	-	W	-	-	4.8	-
Oregon.....	21.33	-	-	19.91	W	-	7.1	-100.0	-
Washington.....	-	W	-	-	W	-	-	7.9	-
<b>U.S. Total</b> .....	<b>31.22</b>	<b>47.63</b>	<b>83.79</b>	<b>27.30</b>	<b>39.30</b>	<b>61.50</b>	<b>14.4</b>	<b>21.2</b>	<b>36.2</b>

W = Withheld to avoid disclosure of individual company data.

Note: • Includes manufacturing plants only.

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



# Glossary

**American Indian Coal Lease:** A lease granted to a mining company to produce coal from American Indian lands in exchange for royalties and other revenues; obtained by direct negotiation with Indian tribal authorities, but subject to approval and administration by the U.S. Department of the Interior.

**Anthracite:** The highest rank of coal; used primarily for residential and commercial space heating. It is a hard, brittle, and black lustrous coal, often referred to as hard coal, containing a high percentage of fixed carbon and a low percentage of volatile matter. The moisture content of fresh-mined anthracite generally is less than 15 percent. The heat content of anthracite ranges from 22 to 28 million Btu per short ton on a moist, mineral-matter-free basis. The heat content of anthracite coal consumed in the United States averages 25 million Btu per short ton, on the as-received basis (i.e., containing both inherent moisture and mineral matter). Note: Since the 1980's, anthracite refuse or mine waste has been used for steam electric power generation. This fuel typically has a heat content of 15 million Btu per short ton or less.

**Appalachian Region:** See Coal-Producing Regions.

**Area (Surface) Mining:** A method used on flat terrain to recover coal by mining long cuts or pits successively. The material excavated from the cut being mined is deposited in the cut previously mined.

**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 Number of Employees:** The arithmetic mean number of employees working each day at a mining operation. Includes maintenance, office, as well as production-related employees.

**Average Open Market Sales Price:** The ratio of the total value of the open market sales of coal produced at the mine to the total open market sales tonnage.

**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 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.

**Bed, Coalbed:** All the coal and partings lying between a roof and floor.

**Bituminous Coal:** A dense coal, usually black, sometimes dark brown, often with well-defined bands of bright and dull material, used primarily as fuel in steam-electric power generation, with substantial quantities also used for heat and power applications in manufacturing and to make coke. Bituminous coal is the most abundant coal in active U.S. mining regions. Its moisture content usually is less than 20 percent. The heat content of bituminous coal ranges from 21 to 30 million Btu per ton on a moist, mineral-matter-free basis. The heat content of bituminous coal consumed in the United States averages 24 million Btu per ton, on the as-received basis (i.e., containing both inherent moisture and mineral matter).

**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).

**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.

**Central Appalachian Region:** See Coal-Producing Regions.

**CIF:** See Cost, Insurance, Freight.

**Coal:** A readily combustible black or brownish-black rock whose composition, including inherent moisture, consists of more than 50 percent by weight and more than 70 percent by volume of carbonaceous material. It is formed from plant remains that have been compacted, hardened, chemically altered, and metamorphosed by heat and pressure over geologic time.

**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/Washing:** The treatment of coal to reject waste. In its broadest sense, preparation is any processing of mined coal to prepare it for market, including crushing and screening or sieving the coal to reach a uniform size, which normally results in removal of some non-coal material. The term coal preparation most commonly refers to processing, including crushing and screening, passing the material through one or more processes to remove impurities, sizing the product, and loading for shipment. Many of the processes separate rock, clay, and other minerals from coal in a liquid medium; hence the term washing is widely used. In some cases coal passes through a drying step before loading.

**Coal-Producing Regions:** A geographic classification of areas where coal is produced.

*Appalachian Region.* Consists of Alabama, Eastern Kentucky, Maryland, Ohio, Pennsylvania, Tennessee, Virginia, and West Virginia.

*Northern Appalachian Region.* Consists of Maryland, Ohio, Pennsylvania, and Northern West Virginia.

*Central Appalachian Region.* Consists of Eastern Kentucky, Virginia, Southern West Virginia, and the Tennessee counties of: Anderson, Campbell, Claiborne, Cumberland, Fentress, Morgan, Overton, Pickett, Putnam, Roane, and Scott.

*Southern Appalachian Region:* Consists of Alabama, and the Tennessee counties of: Bledsoe, Coffee, Franklin, Grundy, Hamilton, Marion, Rhea, Sequatchie, Van Buren, Warren, and White.

*Interior Region (with Gulf Coast).* Consists of Arkansas, Illinois, Indiana, Kansas, Louisiana, Mississippi, Missouri, Oklahoma, Texas, and Western Kentucky.

*Illinois Basin:* Consists of Illinois, Indiana, and Western Kentucky.

*Western Region.* Consists of Alaska, Arizona, Colorado, Montana, New Mexico, North Dakota, Utah, Washington, and Wyoming.

*Powder River Basin:* Consists of the Montana counties of Big Horn, Custer, Powder River, Rosebud, and Treasure and the Wyoming counties of Campbell, Converse, Crook, Johnson, Natrona, Niobrara, Sheridan, and Weston.

*Uinta Basin:* Consists of the Colorado counties of Delta, Garfield, Gunnison, Mesa, Moffat, Pitkin, Rio Blanco, Routt and the Utah counties of Carbon, Duchesne, Emery, Grand, Sanpete, Sevier, Uintah, Utah, and Wasatch.

**Coal-Producing States:** The States where mined and/or purchased coal originates are defined as follows: Alabama, Alaska, Arizona, Arkansas, Colorado, Illinois, Indiana, Kansas, Kentucky Eastern, Kentucky Western, Louisiana, Maryland, Mississippi, 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 by:

*Kentucky, Eastern.* All mines in the following counties in Eastern Kentucky: Bell, Boyd, Breathitt, Carter, Clay, Clinton, Elliot, Estill, Floyd, Greenup, Harlan, Jackson, Johnson, Knott, Knox, Laurel, Lawrence, Lee, Leslie, Letcher, Lewis, Magoffin, Martin, McCreary, Menifee, Morgan, Owsley, Perry, Pike, Powell, Pulaski, Rockcastle, Rowan, Wayne, Whitley, and Wolfe.

*Kentucky, Western.* All mines in the following counties in Western Kentucky: Breckinridge, Butler, Caldwell, Christian, Crittenden, Daviess, Edmonson, Grayson, Hancock, Hart, Henderson, Hopkins, Logan, McLean, Muhlenberg, Ohio, 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 the following counties: Allegheny, Armstrong, Beaver, Bedford, Butler, Cambria, Clarion, Clearfield, Elk, Fayette, Greene, Indiana, Jefferson, Lawrence, Lycoming, Somerset, Venango, Washington, and Westmoreland, 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, Tyler, Upshur, Webster, Wetzell, 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, Nicholas, Pocahontas, Putnam, Raleigh, Summers, Wayne, and Wyoming.

**Coal Rank:** The classification of coals according to their degree of progressive alteration from lignite to anthracite. In the United States, the standard ranks of coal include lignite, subbituminous coal, bituminous coal, and anthracite and are based on fixed carbon, volatile matter, heating value, and agglomerating (or caking) properties.

**Coal Stocks:** Coal quantities that are held in storage for future use and disposition. Note: When coal data are collected for a particular reporting period (month, quarter, or year), coal stocks are commonly measured as of the last day of this 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):** A solid carbonaceous residue derived from low-ash, low-sulfur 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 residual ash are fused together. Coke is used as a fuel and as a reducing agent in smelting iron ore in a blast furnace. Coke from coal is grey, hard, and porous and 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.

**Coking Coal:** Bituminous coal suitable for making coke. See Coke (coal).

**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 Lading 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.

**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.

**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 identified coal resources from which reserves are calculated.

**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, office workers, and technical or engineering work.

**Dredge Mining:** A method of recovering coal from rivers or streams.

**Drift Mine:** An underground mine that has a horizontal or nearly horizontal entry driven along to a coalbed exposed in a hillside.

**Electric Power Sector:** The electric power sector (electric utilities and independent power producers) comprises electricity-only and combined-heat-and-power (CHP) plants whose primary business is to sell electricity, or electricity and heat, to the public.

**Estimated Recoverable Reserves:** See recoverable reserves.

**F.O.B. Rail/Barge Price:** The free on board price of coal at the point of first sale. It excludes freight or shipping and insurance costs.

**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.

**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.

**Illinois Basin:** See Coal-Producing Regions.

**Indicated Resources:** Coal for which estimates of the rank, quality, and quantity have been computed partly from sample analyses and measurements and partly from reasonable geologic projections. Indicated resources are computed partly from specified measurements and partly from projection of visible data for a reasonable distance on the basis of geologic evidence. The points of observation are 0.5 to 1.5 miles apart. Indicated coal is projected to extend as a 0.5-mile-wide belt that lies more than 0.25 miles from the outcrop or points of observation or measurement.

**Industrial Sector:** The industrial sector is comprised of 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.

**Interior Region:** See Coal-Producing Regions.

**Lignite:** The lowest rank of coal, often referred to as brown coal, used almost exclusively as fuel for steam-electric power generation. It is brownish-black and has a high inherent moisture content, sometimes as high as 45 percent. The heat content of lignite ranges from 9 to 17 million Btu per ton on a moist, mineral-matter-free basis. The heat content of lignite consumed in the United States averages 13 million Btu per ton, on the as-received basis (i.e., containing both inherent moisture and mineral matter).

**Longwall Mining:** An automated form of underground coal mining characterized by high recovery and extraction rates, feasible only in relatively flat-lying, thick, and uniform coalbeds. A high-powered cutting machine is passed across the exposed face of coal, shearing away broken coal, which is continuously hauled away by a floor-level conveyor system. Longwall mining extracts all machine-minable coal between the floor and ceiling within a contiguous block of coal, known as a

panel, leaving no support pillars within the panel area. Panel dimensions vary over time and with mining conditions but currently average about 900 feet wide (coal face width) and more than 8,000 feet long (the minable extent of the panel, measured in direction of mining). 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.

**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/liquifaction and coal used for coal synfuels.

**Minable:** Capable of being mined under current mining technology and environmental and legal restrictions, rules, and regulations.

**Mine Type:** See Surface Mine and Underground Mine.

**Northern Appalachian:** See Coal-Producing Regions.

**Number of Mines:** The number of mines, or mines collocated with preparation plants or tipples, located in a particular geographic area (State or region).

**Number of Mining Operations:** The number of mining operations includes preparation plants. 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.

**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.

**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.

**Powder River Basin:** See Coal-Producing Regions.

**Preparation Plant:** A facility at which coal is crushed, screened, and mechanically cleaned.

**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.

**Recoverability:** In reference to accessible coal resources, the condition of being physically, technologically, and economically minable. Recovery rates and recovery factors may be determined or estimated for coal resources without certain knowledge of their economic minability; therefore, the availability of recovery rates or factors does not predict recoverability.

**Recoverable Coal:** Coal that is, or can be, extracted from a coal bed during mining.

**Recoverable Reserves at Producing Mines:** The amount of in situ coal that can be recovered by mining existing reserves at mines reporting on Form EIA-7A.

**Recoverable Reserves, Estimated Recoverable Reserves:** Reserve estimates (broad meaning) based on a demonstrated reserve base adjusted for assumed accessibility factors and recovery factors. The term is used by EIA to distinguish estimated recoverable reserves, which are derived without specific economic feasibility criteria by factoring (downward) from a demonstrated reserve base for one or more study areas or regions, from recoverable reserves at active mines, which are aggregated (upward) from reserve estimates reported by currently active, economically viable mines 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 Factor:** The percentage of total tons of coal estimated to be recoverable from a given area in relation to the total tonnage estimated to be in the demonstrated reserve base. For the purpose of calculating depletion factors only, the estimated recovery factors for the demonstrated reserve base generally are 50 percent for underground mining methods and 80 percent for surface mining methods. More precise recovery factors can be

computed by determining the total coal in place and the total coal recoverable in any specific locale.

**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 Recovery:** 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.

**Remaining (Resources/Reserves):** The amount of coal in the ground after some mining, excluding coal in the ground spoiled or left in place for which later recovery is not feasible.

**Reserve(s):** Root meaning: The amount of in-situ coal in a defined area that can be recovered by mining at a sustainable profit at the time of determination. Broad meaning: That portion of the demonstrated reserve base that is estimated to be recoverable at the time of determination. The reserve is derived by applying a recovery factor to that component of the identified resources of coal designated as the demonstrated reserve base.

**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).

**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.

**Run-of-mine:** The raw coal recovered from a mine, prior to any treatment.

**Salable Coal:** The shippable product of a coal mine or preparation plant. Depending on customer specifications, salable coal may be run-of-mine, crushed-and-screened (sized) coal, or the clean coal yield from a preparation plant.

**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.

**Seam:** A bed of coal lying between a roof and floor. Equivalent term to bed, commonly used by industry.

**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.

**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 recovery.)

**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.

**Southern Appalachian:** See Coal-Producing Regions.

**Stocks:** The supply of coal or coke at a mine, plant, or utility at the end of the reporting period.

**Subbituminous Coal:** A coal whose properties range from those of lignite to those of bituminous coal and used primarily as fuel for steam-electric power generation. It may be dull, dark brown to black, soft and crumbly, at the lower end of the range, to bright, jet black, hard, and relatively strong, at the upper end. Subbituminous coal contains 20 to 30 percent inherent moisture by weight. The heat content of subbituminous coal ranges from 17 to 24 million Btu per ton on a moist, mineral-matter-free basis. The heat content of subbituminous coal consumed in the United States averages 17 to 18 million Btu per ton, on the as-received basis (i.e., containing both inherent moisture and mineral matter).

**Surface Mine:** A coal 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. Surface mines include: area, contour, open-pit, strip, or auger mine.

**Tipple:** A central facility used in loading coal for transportation by rail or truck.

**Uinta Region:** See Coal-Producing Regions.

**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).

**Underground Mining:** The extraction of coal or its products from between enclosing rock strata by underground mining methods, such as room and pillar, longwall, and shortwall, or through in-situ gasification.

**Western Region:** See Coal-Producing Regions.

