

# U.S. Coal Supply and Demand: 2002 Review

by

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## Overview

The coal industry was forefront in the nation's consciousness in 2002 as it burst onto national television in a big way. In July of 2002, the coal industry's existence became very real to most of the country, as the nation's attention was riveted to the television screen to watch the rescue of nine miners trapped beneath the ground of a dairy farm in southwestern Pennsylvania. For three days, the public was transfixed as rescuers worked around the clock to extricate the men from an underground mine shaft rapidly filling with water. Through the efforts of the many people involved, all of the miners were rescued as the public learned of some of the hazards that these workers can face on a daily basis. This was just one of many elements that enveloped the coal industry in 2002.

U.S. coal production declined in 2002 by 33.9 million short tons to end the year at 1,093.8 million short tons according to preliminary data from the Energy Information Administration (Table 1), down 3.0 percent from the 2001 level of 1,127.7 million short tons. (Note: All percentage change calculations are done at the short ton level.) Total coal consumption rose in 2002, with the electric power sector increasing consumption by 1.7 percent, more than enough to offset the decreases in consumption experienced by most of the other sectors. Total coal stocks remained unchanged for the year. This phenomenon was a result of the electric power sector continuing to build stockpiles that had been depleted substantially during 2000, while coal producers used their stockpiles to replace some of the production shortfalls that were experienced in 2002.

The sluggish economy, coupled with the warm winter experienced over most of the country in 2002, helped to hold down demand for coal during the first half of the year. However, the warmer-than-normal summer over many parts of the nation, helped to increase coal consumption for electric power generation for the year. Preliminary data show that total electricity generation increased by 3.0 percent in 2002. However, coal-based generation only increased by 1.5 percent, as it was constrained by the increased generation by hydroelectric power which rose for the first time in five years, as well as an increase in natural gas generation for the year. Coal use in the non-electricity sector declined by 6.0 percent to a level of 90.0 million short tons.

A relatively new aspect of the coal industry in the U.S. has started to show its influence on the marketplace. As a result of

the Section 29 Tax Credit law, coal-synfuel plants that came into operation have begun to affect both the supply and demand sides of the coal industry. The amount of coal that is processed by these plants has increased dramatically, increasing from 49.3 million short tons in 2001, to 83.1 million short tons in 2002 (Table 3).

In the international markets in 2002, both U.S. coal exports and imports fell. U.S. coal exports continued in a downward trend to end 2002 at a level not seen in over 40 years. Coal exports were 39.6 million short tons, a decrease of 9.1 million short tons. U.S. coal imports declined for the first time in five years in 2002. Total coal imports were 16.9 million short tons, a drop of 2.9 million short tons.

For the first time in 20 years, the average delivered price of coal increased in all three consuming sectors as well as in the international market for a second consecutive year. The price increase ranged from 0.6 percent in the electric utility sector to 10.4 percent in the coking coal sector. The average price of export coal rose by 9.4 percent in 2002, while the price of coal imported into the U.S. increased by 4.4 percent.

## Production

The year 2002 proved to be a very interesting one in the coal industry, with declining production of coal while consumption increased. The lack of demand for coal deliveries led to some large companies idling mines for periods of time that ranged from a few weeks, to several months. As a result, coal production decreased in 2002 by 3.0 percent to a level of 1,093.8 million short tons (Figure 1 and Table 1). In a departure from what usually occurs in a year of declining U.S. coal production, the Western Region increased somewhat, the Interior Region fell only slightly, while the Appalachian Region decreased significantly (Figure 2 and Table 2). The drop of 33.9 million short tons in production in 2002 was primarily a consequence of sluggish demand by all coal-consuming sectors due to a weak economy and milder than normal weather for many parts of the country during most of the year.

However, there were other factors that had some effect on coal production in 2002. The coal industry was still in the midst of some legal issues that had some impact on total production. The subject of increasing the weight of coal trucks used to transport coal in West Virginia was not resolved in 2002. The suspension in May of permits by the Corps of Engineers office in Huntington, West Virginia (covering eastern Kentucky, Ohio, and southern West Virginia) due to the ruling in a district court,

**Table 1. U.S. Coal Supply, Disposition, and Prices, 1999-2002**  
(Million Short Tons and Nominal Dollars per Short Ton)

Item	1999	2000	2001	2002
<b>Production By Region</b>				
Appalachian .....	425.6	419.4	431.2	396.0
Interior.....	162.5	143.5	146.9	146.2
Western .....	512.3	510.7	547.9	550.8
Refuse Recovery .....	0.0	0.0	1.8	0.8
<b>Total .....</b>	<b>1100.4</b>	<b>1073.6</b>	<b>1127.7</b>	<b>1093.8</b>
<b>Consumption By Sector</b>				
Electric Power.....	940.9	985.8	965.1	981.9
Coke Plants .....	28.1	28.9	26.1	22.5
Other Industrial Plants .....	64.7	65.2	65.3	63.1
Combined Heat and Power (CHP).....	27.7	28.0	26.4	26.5
Non – CHP.....	37.0	37.2	38.8	36.6
Residential/Commercial Users .....	4.9	4.1	4.4	4.4
Residential.....	0.6	0.5	0.5	0.5
Commercial.....	4.3	3.7	3.9	3.9
<b>Total .....</b>	<b>1038.6</b>	<b>1084.1</b>	<b>1060.8</b>	<b>1071.9</b>
<b>Year-End Coal Stocks</b>				
Electric Power.....	136.5	102.0	138.5	143.0
Coke Plants .....	1.9	1.5	1.5	1.2
Other Industrial Plants .....	5.6	4.6	6.0	5.8
Producers/Distributors .....	39.5	31.9	35.9	32.0
<b>Total .....</b>	<b>183.5</b>	<b>140.0</b>	<b>181.9</b>	<b>181.9</b>
<b>U.S. Coal Trade</b>				
Exports.....	58.5	58.5	48.7	39.6
Steam Coal .....	26.3	25.7	23.3	18.1
Metallurgical Coal .....	32.1	32.8	25.4	21.5
Imports.....	9.1	12.5	19.8	16.9
Net Exports .....	49.4	46.0	28.9	22.7
<b>Average Delivered Price</b>				
Electric Utilities .....	24.72	24.28	24.68	24.84
Coke Plants .....	45.85	44.38	46.42	51.27
Other Industrial Plants .....	31.59	31.46	32.26	33.39
<b>Average Free Alongside Ship (f.a.s.) Price</b>				
Exports.....	36.50	34.90	36.97	40.44
Steam Coal .....	29.91	29.67	31.88	34.51
Metallurgical Coal .....	41.91	38.99	41.63	45.41
Imports.....	30.77	30.10	34.00	35.51

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

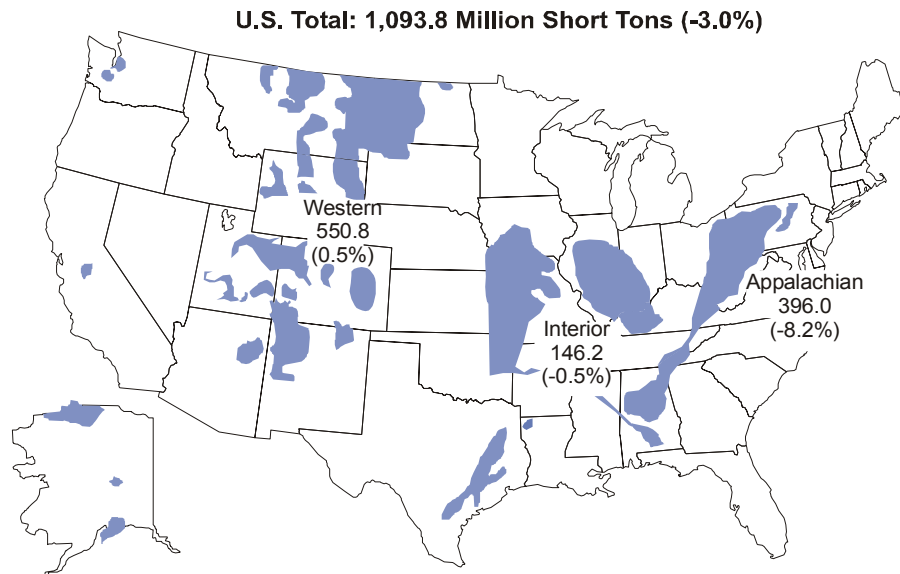
**Sources: Production, consumption, stocks, and prices:** Energy Information Administration, *Quarterly Coal Report, October-December 2002*, DOE/EIA-0121(2002/Q4) (Washington, DC, March 2003); *Coal Industry Annual 2000*, DOE/EIA-0584(2000) (Washington DC, January 2002); *Electric Power Monthly, January 2003*, DOE/EIA-0226(2003/01) (Washington DC, February 2003); and Federal Energy Regulatory Commission Form 423, "Cost and Quality of Fuels for Electric Utilities." **Exports and imports:** U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545" and "Monthly Report IM 145."

## Appalachian Region

contributed to the delay in the opening of new mines in that area. Bankruptcies again entered into the coal industry picture as both several producers and consumers filed for Chapter 11 during the year. Some of the coal companies filed for bankruptcy protection while they tried to realign their finances. The year also saw several other coal mining companies exit the coal business as they sold off their mining interests to other parties.

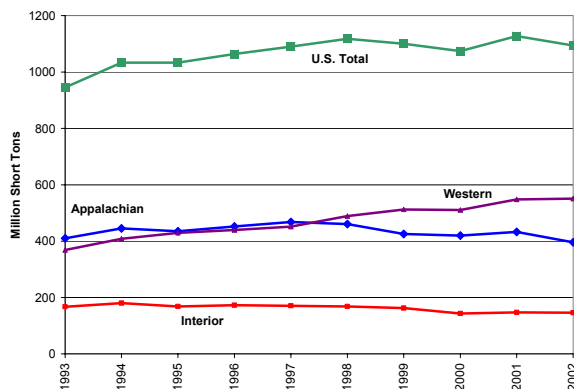
Coal production in the Appalachian Region dropped dramatically in 2002 to a total of 396.0 million short tons, a level not seen since 1983, as some of the largest coal companies in the region idled mines over the course of the year. The decline in coal production in the Appalachian Region was a result of several factors. Among them were the continued decreases in U.S. coal exports (which are primarily produced in the East), as well as the lower demand for coal deliveries to consumers.

**Figure 1. Coal Production by Coal-Producing Region, 2002**  
(Million Short Tons and Percent Change from 2001;  
Regional Totals do not include refuse recovery



Source: Energy Information Administration, "Quarterly Coal Report", October – December 2002, DOE/EIA-0121(2002/Q4) (Washington, D.C., March 2003)

**Figure 2. Coal Production by Region, 1993-2002**



Source: Energy Information Administration, Quarterly Coal Report, October – December 2002, DOE/EIA-0121(2002/4Q) (Washington, DC, March 2003); Coal Industry Annual, DOE/EIA-0584, various issues; and Annual Coal Report 2001, DOE/EIA-0584(2001), (Washington, DC, March 2003).

West Virginia, the largest coal-producing State in the region and the second largest in the U.S., declined 7.3 percent to end the year with 150.6 million short tons of production. Part of the decrease in production in West Virginia was the result of the idling of several mines in the State for varying periods of time due to lack of demand for coal during the year. Eastern Kentucky produced 98.9 million short tons of coal in 2002, down by 10.2 million short tons, a level not seen since 1978 when a prolonged miners strike affected production for the year. Pennsylvania produced 68.7 million short tons, a drop of 7.4 percent from 2001. Maryland was the only State in the Appalachian Region to show an increase in coal production

for the year. Maryland produced 4.7 million short tons of coal in 2002, a slight increase of 1.6 percent. The remaining four States in the region (Alabama, Ohio, Tennessee, and Virginia) had a decrease in their production levels ranging from 3.2 percent decline in Alabama to 16.1 percent drop in Ohio.

### Interior Region

The Interior Region experienced a slight decrease in coal production in 2002, declining only 0.7 million short tons, or 0.5 percent. The primary reason coal production for the Interior Region did not fall further was that Mississippi, with its fourth year of recorded coal production ever, increased production by 1.7 million short tons, to a level of 2.3 million short tons. This additional production was a result of the increased coal needs of the Red Hills mine's only customer, a power plant, reaching full commercial operating status in 2002. Texas, the largest coal-producing State in the region showed a slight increase in coal production, ending the year at 45.2 million short tons, up 0.3 percent. This was the first increase in Texas coal production in three years. Indiana, the second largest coal producing State in the Interior Region declined in 2002 by 3.3 percent to 35.5 million short tons. Coal production in both Illinois and Western Kentucky decreased slightly in 2002, down by 1.4 percent and 1.1 percent, respectively. The other States in the Interior Region (Arkansas, Kansas, Louisiana, Missouri, and Oklahoma), which accounted for only 3.7 percent of the entire region's production in 2002, all fluctuated some from their 2001 coal production levels.

### Western Region

Coal production in the Western Region increased slightly in 2002, rising by a total of only 2.9 million short tons, or 0.5

**Table 2. U.S. Coal Production by Coal-Producing region and State, 1999 – 2002**  
(Million Short Tons)

Coal-Producing Region and State	1999	2000	2001	2002	Percent Change 2001 - 2002
<b>Appalachian Total</b> .....	<b>425.6</b>	<b>419.4</b>	<b>431.2</b>	<b>396.0</b>	<b>-8.2</b>
Alabama.....	19.5	19.3	19.4	18.8	-3.2
Kentucky, Eastern.....	110.0	104.9	109.1	98.9	-9.4
Maryland.....	3.8	4.5	4.6	4.7	1.6
Ohio.....	22.5	22.3	25.4	21.3	-16.1
Pennsylvania Total.....	76.4	74.6	74.1	68.7	-7.4
Anthracite.....	4.8	4.6	1.5	1.2	-16.1
Bituminous.....	71.6	70.0	72.7	67.4	-7.2
Tennessee.....	3.0	2.7	3.3	3.2	-4.8
Virginia.....	32.3	32.8	32.8	29.9	-8.8
West Virginia.....	158.0	158.3	162.4	150.6	-7.3
Northern.....	38.8	37.6	38.2	34.3	-10.1
Southern.....	119.2	120.7	124.5	116.3	-6.6
<b>Interior Total</b> .....	<b>162.5</b>	<b>143.5</b>	<b>146.9</b>	<b>146.2</b>	<b>-0.5</b>
Arkansas.....	*	*	*	*	88.5
Illinois.....	40.4	33.4	33.8	33.3	-1.4
Indiana.....	34.0	28.0	36.7	35.5	-3.3
Kansas.....	0.4	0.2	0.2	0.2	16.2
Kentucky, Western.....	29.6	25.8	24.7	24.5	-1.1
Louisiana.....	3.0	3.7	3.7	3.5	-5.7
Mississippi.....	*	0.9	0.6	2.3	281.8
Missouri.....	0.4	0.4	0.4	0.2	-32.3
Oklahoma.....	1.7	1.6	1.7	1.4	-19.0
Texas.....	53.1	49.5	45.0	45.2	0.3
<b>Western Total</b> .....	<b>512.3</b>	<b>510.7</b>	<b>547.9</b>	<b>550.8</b>	<b>0.5</b>
Alaska.....	1.6	1.6	1.5	1.1	-24.3
Arizona.....	11.8	13.1	13.4	12.8	-4.6
Colorado.....	30.0	29.1	33.4	35.1	5.2
Montana.....	41.1	38.4	39.1	37.4	-4.5
New Mexico.....	29.2	27.3	29.6	28.9	-2.4
North Dakota.....	31.1	31.3	30.5	30.8	1.1
Utah.....	26.4	26.7	27.0	25.3	-6.2
Washington.....	4.1	4.3	4.6	5.8	26.0
Wyoming.....	337.1	338.9	368.7	373.5	1.3
<b>Refuse Recovery</b> .....	<b>0.0</b>	<b>0.0</b>	<b>1.8</b>	<b>0.8</b>	<b>-51.8</b>
<b>U.S. Total</b> .....	<b>1100.4</b>	<b>1073.6</b>	<b>1127.7</b>	<b>1093.8</b>	<b>-3.0</b>

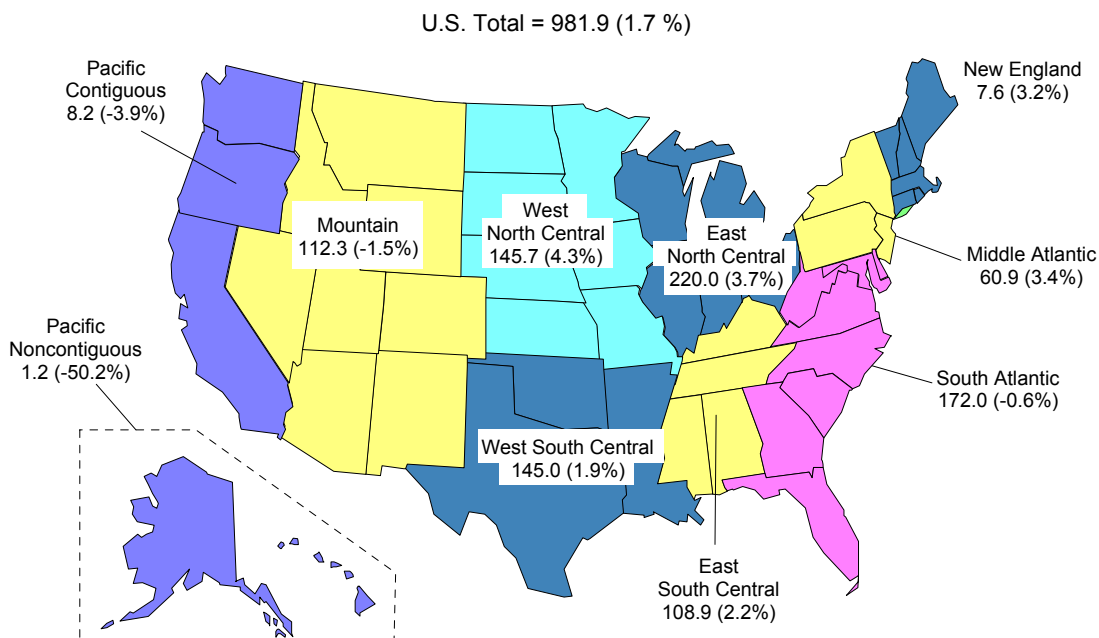
\* Less than 0.5 million short tons.

Source: Energy Information Administration, *Quarterly Coal Report*, DOE/EIA-0584(2000) (Washington, DC, January 2002); *Annual Coal Report 2001*, DOE/EIA-0584(2001) (Washington, DC, March 2003); and *Quarterly Coal Report*, October – December 2002, DOE/EIA-0121(2002/4Q) (Washington, DC, March 2003).

percent. This increase was the smallest experienced in the Western Region since 1992. Of the nine States in the Western Region, only four had increased coal production in 2002, Colorado, North Dakota, Washington, and Wyoming. The other five States had declines in coal production ranging from 0.4 to over 1.8 million short tons, with the causes of the declines ranging from lost coal contracts to closing of some mines in the region. Wyoming continued its dominance as the biggest coal-producing State in the nation, a position it has held for 15 consecutive years. In 2002, Wyoming produced a record 373.5 million short tons of coal, an increase of 1.3 percent for the year. This level was 30.9 million short tons more than the combined total of the next three largest coal producing States

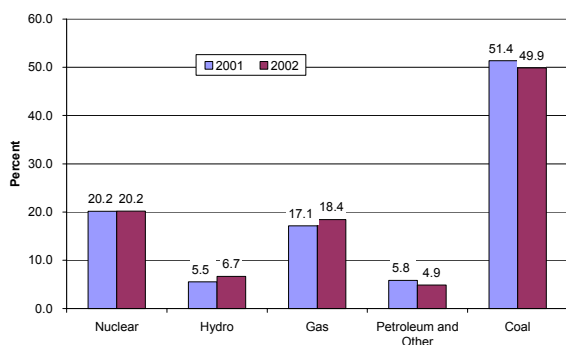
(West Virginia, Kentucky, and Pennsylvania). The sheer dominance of Wyoming's coal industry in the U.S. is further illustrated by the fact that if those three (second tier) States' production is excluded, Wyoming's coal production level in 2002 was just 3.3 million short tons less than the total produced by the rest of the 22 coal-producing States. Near the end of the year, the Black Thunder mine, one of the largest mines in the country, shipped its 750<sup>th</sup> million short ton of coal. This accomplishment was achieved 25 years after the first coal shipment. Colorado produced 35.1 million short tons of coal in 2002, an increase of 1.7 million short tons. The majority of the higher production level is credited to the 1.5 million short ton increase in production at the West Elk mine in Gunnison

**Figure 3. Electric Power Sector Consumption of Coal by Census Division, 2002**  
(Million Short Tons and Percent Change from 2001)



Sources: Energy Information Administration, *Electric Power Monthly, January 2003*, DOE/EIA-0226(2003/01) (Washington, DC, February 2003); and *Short-Term Energy Outlook, March 2003*, DOE/EIA (Washington, DC March 2003).

**Figure 4. Share of Electric Power Industry Net Generation by Energy Source, 2001 vs. 2002**



Sources: Energy Information Administration, *Electric Power Monthly, January 2003*, DOE/EIA-0226(2003/01) (Washington, DC, February 2003).

county. The mine had been bothered by high levels of methane, which impeded production, but through an extensive work program, it has been able to improve methane reduction as well as increase coal production. Coal production in Washington was up in 2002, ending the year at 5.8 million short tons, an increase of 1.2 million short tons. The increase was used to generate electricity to help replace some of the

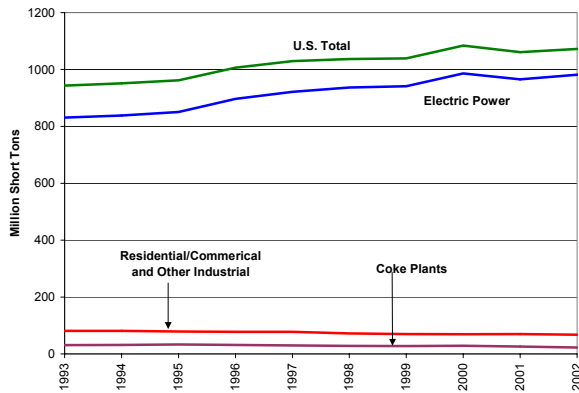
losses due to the still low hydroelectric generation totals in the State. Coal production in North Dakota rose by 1.1 percent in 2002 to end the year at 30.8 million short tons.

Montana, the second largest coal-producing State in the Western Region, had a decline in coal production in 2002 of 1.8 million short tons, to end the year at 37.4 million short tons. The decrease was partly due to a lost coal contract by one of the mining companies. Coal production in Utah fell to 25.3 million short tons, a drop of 1.7 million short tons, as a result of the closing of three mines in 2001. Alaska had a drop of 0.4 million short tons in 2002, to end the year at 1.1 million short tons, as a long-term coal contract with an overseas electricity supplier expired during the year and was not renewed. All of the remaining States in the Western Region experienced declines in their coal production levels in 2002.

## Consumption

As the economy recovered slightly in 2002, so did total coal consumption. Preliminary data shows that total coal consumption increased 11.1 million short tons to reach a level of 1071.9 million short tons, still well below the consumption level of 2000. Almost 92 percent of all coal consumed in the U.S. was in the electric power sector, the driving force for all coal consumption. With the exception of the residential and

**Figure 5. Coal Consumption by Sector, 1993-2002**



Sources: Energy Information Administration, *Electric Power Monthly, January 2003*, DOE/EIA-0226(2003/01) (Washington, DC, February 2003); and *Short-Term Energy Outlook, March 2003*, DOE/EIA (Washington, DC March 2003).

commercial sector, all of the other coal consuming sectors had declining coal consumption in 2002.

Coal consumption in the electric power sector increased by 16.8 million short tons to end 2002 at 981.9 million short tons, still slightly below the 2000 consumption total. Six of the ten Census Divisions had an increase in coal consumption for electricity generation in 2002. In five of the Census Divisions, coal usually accounts for over 50 percent of total electric power generation from all energy sources. Three of those five divisions, the East North Central, the West North Central, and the East South Central, accounted for over 99 percent of the additional increase in coal consumption for the electric power sector in 2002 (Figure 3). However, even with the increased total coal consumption, coal's share of generation fell to below 50 percent for the first time since 1979 (Figure 4). Gains in electricity generation by natural gas, as well as hydroelectric plants, helped to keep coal's share below that of the last two decades. Helping to drive the increase in total consumption was the hotter-than-normal summer weather experienced in July and August over many parts of the country in 2002. Overall, the U.S. experienced a 16.5 percent increase in cooling degree-days during the summer. The three Census Divisions that accounted for most of the increased coal consumption for electric power generation had increases of 39.1 percent (East North Central), 17.0 percent (West North Central), and 17.4 percent (East South Central) in cooling degree-days for the year.

Overall coal consumption in the non-electric power sectors decreased in 2002 for the second consecutive year. Although the U.S. Government approved imposing duties on many types of imported steel as a move to help the struggling domestic steel companies that were still operating, coal consumption at coke plants declined in 2002 by 13.6 percent to 22.5 million short tons. The economic recovery in 2002 did not extend very deeply into the manufacturing sector. As a result, coal consumption in the other industrial sector decreased by 3.4 percent to end the year at 63.1 million short tons. Although it is the smallest of the coal consuming

sectors, the amount of coal consumed in the residential and commercial sector remained steady in 2002 at 4.4 million short tons (Figure 5).

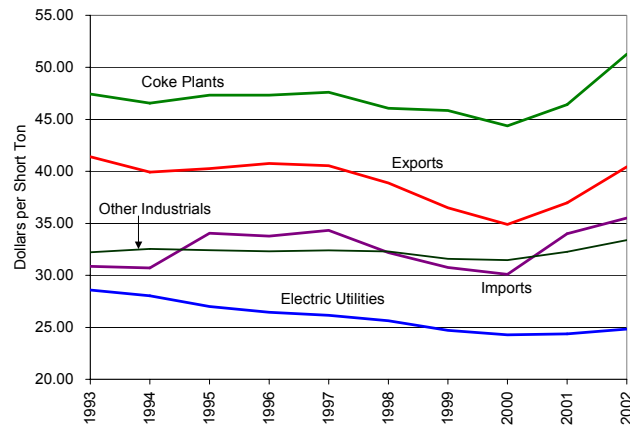
### Coal Prices

On an annual basis, coal prices increased in all sectors in 2002. The delivered price of coal rose for the second consecutive year in all sectors. The average delivered price of coal to electric utilities (a subset of the electric power sector) was \$24.84 per short ton, an increase of 0.6 percent from the 2001 level of \$24.68 per short ton. Even though there was a shrinking domestic coking coal market, the average delivered price of coal to coke plants increased in 2002 by 10.4 percent to reach \$51.27 per short ton. The average price of coal delivered to the other industrial sector increased in 2002 by 3.5 percent, to \$33.39 per short ton (Figure 6).

### Coal Synfuel

Coal synfuel plants have recently become a large part of the industry picture. These plants are located in all of the coal producing regions. According to preliminary data, there were 44 coal-synfuel plants in operation in the U.S. at the end of 2002 (Figure 7 and Table 3). These plants process both waste coal and run of mine coal to produce their end product that then enters into the supply chain and is consumed by various users in all coal consuming sectors.

**Figure 6. Delivered Coal Prices, 1993-2002 (Nominal Dollars)**



Sources: Energy Information Administration, *Quarterly Coal Report*, October-December 2002, DOE/EIA-0121(2002/4Q) (Washington, DC March 2003); *Coal Industry Annual*, DOE/EIA-0584, various issues; and *Annual Coal Report 2001*, DOE/EIA-0584(2001), Washington, DC, March 2003; and U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545" and "Monthly Report IM 145."

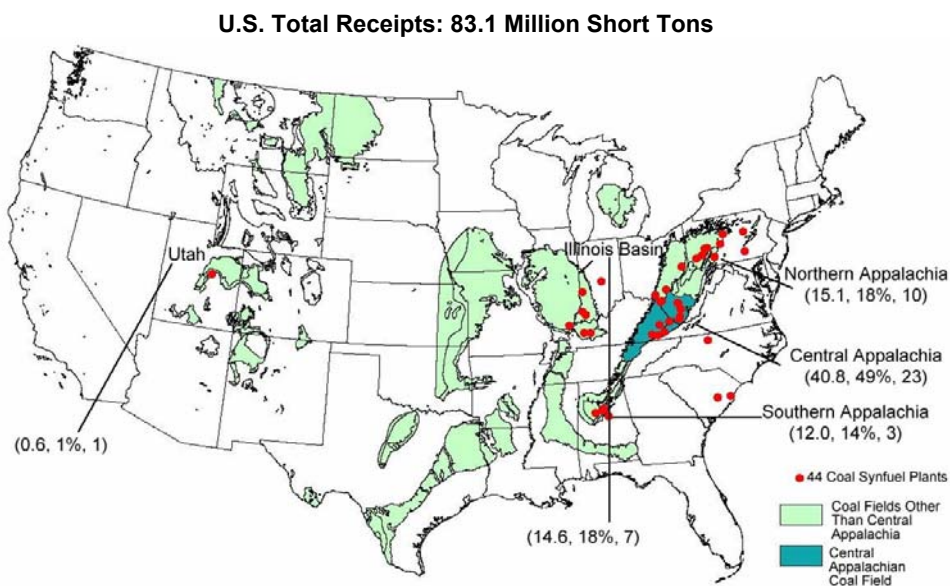
**Table 3. Coal Statistics for Synthetic Fuel Plants**  
(Thousand Short Tons)

Year and Quarter	Coal Receipts	Average Price of Receipts	Coal Used	Coal Stocks
2001				
January – March .....	9,409	\$26.69	9,326	287
April – June.....	11,370	\$28.19	11,158	523
July – September.....	13,261	\$31.08	13,309	507
October – December .....	15,286	\$32.61	14,578	631
<b>Total</b>	<b>49,326</b>	<b>\$30.05</b>	<b>48,371</b>	
2002				
January – March .....	17,635	\$32.27	17,237	970
April – June.....	20,241	\$31.44	20,549	748
July – September.....	22,607	\$31.35	22,288	1,094
October – December .....	22,585	\$31.57	22,762	930
<b>Total</b>	<b>83,068</b>	<b>\$31.63</b>	<b>82,836</b>	

Note: Total may not equal sum of the components because of independent rounding.

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

**Figure 7. Coal Receipts at Coal Synfuel Plants by Producing Sub-Region, 2002**  
(Million Short Tons, Percent of U.S. Total, and Number of Plants)



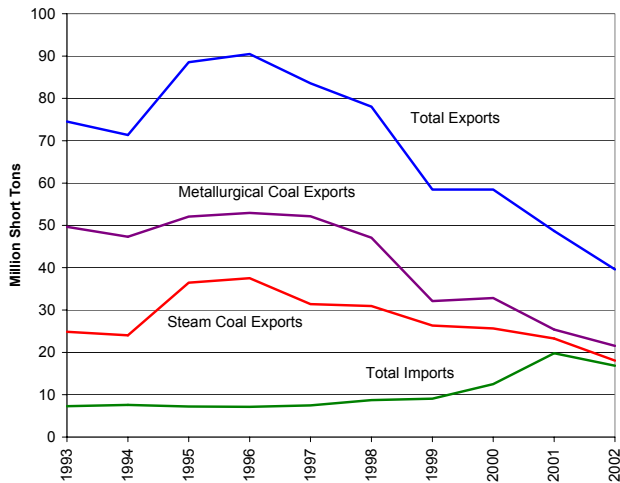
Source: Energy Information Administration, Form EIA-3, "Quarterly Coal Consumption and Quality Report - Manufacturing Plants."

## Exports and Imports

**Exports.** Australia continued to be the dominant player in the world coal market, while the U.S. dropped further on the list of suppliers in the international marketplace. In 2002, total U.S. coal exports fell to 39.6 million short tons (Figure 8), a level of just slightly above the total coal exports shipped in 1961. Although export coal shipments were down in 2002, the average price per ton increased by 9.4 percent to \$40.44.

In the past, the U.S. was a swing supplier of coal in the world market. It has now become a marginal supplier in the international coal trade, particularly in the steam coal market. Total steam coal exports declined by 22.3 percent to a level of 18.1 million short tons in 2002, while the average price per ton increased by 8.2 percent to \$34.51. Canada continued as the largest market for U.S. steam coal exports, accounting for two-thirds of all steam coal exports. Canada received 12.0 million short tons of U.S. steam coal exports, a drop of 1.8 million short tons (12.8 percent).

**Figure 8. US Coal Exports and Imports, 1993-2002**



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

Europe, which has traditionally been a mainstay for U.S. steam coal exports, declined dramatically in its take of U.S. steam coal in 2002. Steam coal exports to Europe were 3.9 million short tons, a decline of 36.3 percent from 2001. Italy accounted for 40.0 percent of the total drop, with Portugal and the Netherlands representing 23.9 percent and 20.0 percent respectively, of the decline in European steam coal exports. Steam coal exports to Asia fell 1.1 million short tons (39.1 percent) in 2002. Japan, the largest market for U.S. steam coal in Asia (accounting for 73.0 percent of the Asian steam coal market), received only 1.3 million short tons in 2002, a decrease of 0.8 million short tons (39.5 percent).

Metallurgical coal exports declined in 2002 to 21.5 million short tons, a decrease of 15.3 percent from the 2001 total, while the price per ton increased by 9.1 percent to \$45.41. Canada was the major market for U.S. metallurgical coal, accounting for 21.9 percent of all metallurgical coal exports. The increase of 0.8 million short tons (20.9 percent) was in part a response to some production problems experienced at some Canadian metallurgical coal mines. The increase to Canada was more than offset by the decline in metallurgical coal exports to the second largest market, Brazil. Shipments to Brazil declined by 1.0 million short tons, or 21.7 percent in 2002.

Metallurgical coal exports to Europe declined in 2002 by 3.0 million short tons, a drop of 20.5 percent. Italy, the primary

European market, had a decline of 1.4 million short tons (35.6 percent), accounting for almost half of the entire decrease in metallurgical coal exports to Europe. Other major European markets for U.S. metallurgical coal also received less tonnage in 2002. Metallurgical coal exports to France were down by 0.8 million short tons (39.3 percent); the United Kingdom was down by 0.5 million short tons (28.4 percent) and Belgium and Luxembourg were down by 0.2 million short tons (11.4 percent). On the positive side, U.S. metallurgical coal exports to Spain increased by 0.3 million short tons, or 29.3 percent.

The Asian market for U.S. metallurgical coal, which only a few years ago imported several million short tons, virtually vanished in 2002, as Japan and Korea obtained metallurgical coal from other coal-producing countries, primarily Australia, to satisfy their needs. The U.S. metallurgical coal producers (primarily in the eastern part of the country) faced increased competition in the Asian market combined with the costs of transporting coal over such long distances. As a result, they shipped less than 18 thousand short tons in 2002.

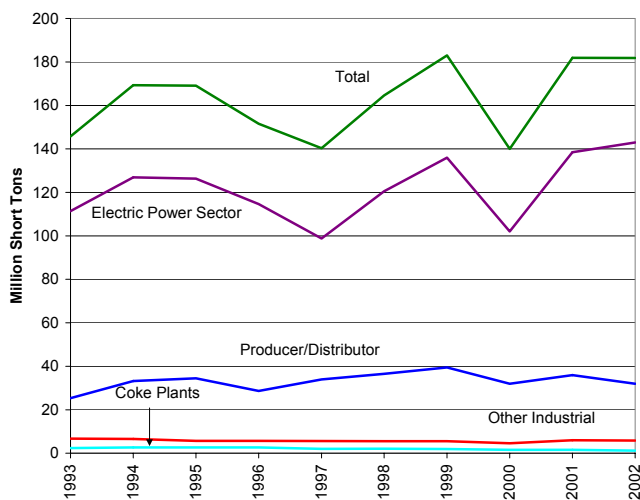
**Imports.** U.S. coal imports dropped for the first time in five years, to a level of 16.9 million short tons, a decline of 14.7 percent. While imports represent less than 2 percent of total U.S. coal consumption, in 2002 they were equivalent to over 42 percent of total U.S. coal exports. The average price of imported coal increased for a second consecutive year, rising by 4.4 percent to a level of \$35.51 per short ton. Colombia continued to dominate the U.S. coal import market, accounting for 9.2 million short tons, or 54.6 percent of all coal imports. This was a decline of 2.0 million short tons from the 2001 level. Coal imports from Venezuela, the second largest supplier, remained unchanged in 2002 with 3.3 million short tons, while coal imports from Canada dropped by 0.5 million short tons, or 17.9 percent.

## Coal Stocks

Total coal stocks at the end of 2002 totaled 181.9 million short tons, unchanged from the prior year (Figure 9). Stocks held by coal producers and distributors decreased by 3.9 million short tons, a drop of 11.0 percent. Industrial users, including coke plants, held a total of 7.0 million short tons, slightly less than the level at the start of the year. Coal stocks in the electric power sector increased 4.5 million short tons, an increase of 3.2 percent, as they continued to build stockpiles that had ended 2000 at low levels.



**Figure 9. Year-End Coal Stocks, 1993-2002**



Sources: Energy Information Administration, *Quarterly Coal Report*, October-December 2002, DOE/EIA-0121(2002/4Q) (Washington, DC March 2003); *Coal Industry Annual 2000*, DOE/EIA-0584(2000) (Washington, DC, January 2002); and *Annual Coal Report 2001*, DOE/EIA-0584(2001) (Washington, DC March 2003).

## Summary

In 2002, the coal industry again experienced falling production levels even as coal consumption increased. Coal exports declined to levels not seen in over 40 years, while coal imports decreased for the first time in five years. On the positive side for coal producers in 2002, delivered coal prices increased for a second consecutive year, something that has not occurred in two decades. Some of the negative factors that affected production are expected to change in 2003 as the economy continues to rebound and increasing demand for electricity push coal production levels higher. Factors contributing to increased coal demand and production in 2003 (see Energy Information Administration's *Short-Term Energy Outlook*) include:

- No further erosion in coal exports
- Continued economic recovery
- Return to normal weather patterns (colder winter weather)
- Settlement of legal issues surrounding surface mining

Although 2002 was not a banner year for the coal industry, there were many positive elements. The outlook for U.S. coal in 2003 is likely to be better than 2002, with increasing economic growth, rising consumer stocks, and normal weather patterns pushing production levels upward.