

U.S. Coal Supply and Demand: 2009 Review

By

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Overview

Coal production in the United States in 2009 decreased to a level of 1,072.8 million short tons according to preliminary data from the U.S. Energy Information Administration (EIA), a decline of 8.5 percent, or 99.1 million short tons below the 2008 record level of 1,171.8 million short tons (Table 1). In 2009 U.S. coal consumption decreased in all sectors while total coal stocks increased for the year. Coal consumption in the electric power sector in 2009 was lower by 10.0 percent, while coking coal consumption decreased by 30.6 percent and the other industrial sector declined by 16.6 percent. The commercial and institutional sector (which prior to 2008 had been called 'residential and commercial'), the smallest of all the coal-consuming sectors, declined by 8.4 percent in 2009. (Note: All percentage change calculations are done at the short-tons level.) U.S. coal exports fell from the 2008 levels, while coal imports decreased for a second year in a row.

The decline in coal consumption during the year was the consequence of the domestic economic conditions combined with the weather in 2009, which resulted in lower demand for electricity. Preliminary data show that total generation in the electric power sector (electric utilities and independent power producers, including useful thermal output) in the U.S. decreased in 2009. Coal-based generation also decreased, resulting in a 104.0 million short ton drop in coal consumed in the electric power sector. Coal use in the non-electricity sector decreased by 20.1 percent to a level of 63.9 million short tons.

The international coal markets for most of 2009 were reflective of a worldwide economic slowdown. U.S. coal exports and imports both declined for the year. U.S. coal exports totaled 59.1 million short tons, a decrease of 22.4 million short tons from the 2008 level, while coal imports ended the year at 22.6

million short tons, 11.6 million short tons below the 2008 level.

Most coal prices continued to increase in 2009, even as the spot market prices declined from the highs of the previous year. In the domestic markets in 2009, the electric utility price-per-short-ton increase was 8.2 percent, while the increase was 1.9 percent for independent power producers. Coking coal prices had the greatest increase domestically, climbing by 21.1 percent, while the price for the other industrial sector increased by 2.3 percent and by 12.5 percent for the commercial and industrial sector in 2009. Overall coal prices in the international markets had an increase in spite of the slowing world economy. The average price per ton of export coal, measured in free alongside ship (f.a.s.) value, grew by 3.8 percent in 2009, while the price of coal imported into the U.S., measured by the customs import value (c.i.v.), rose by 6.8 percent.

Production

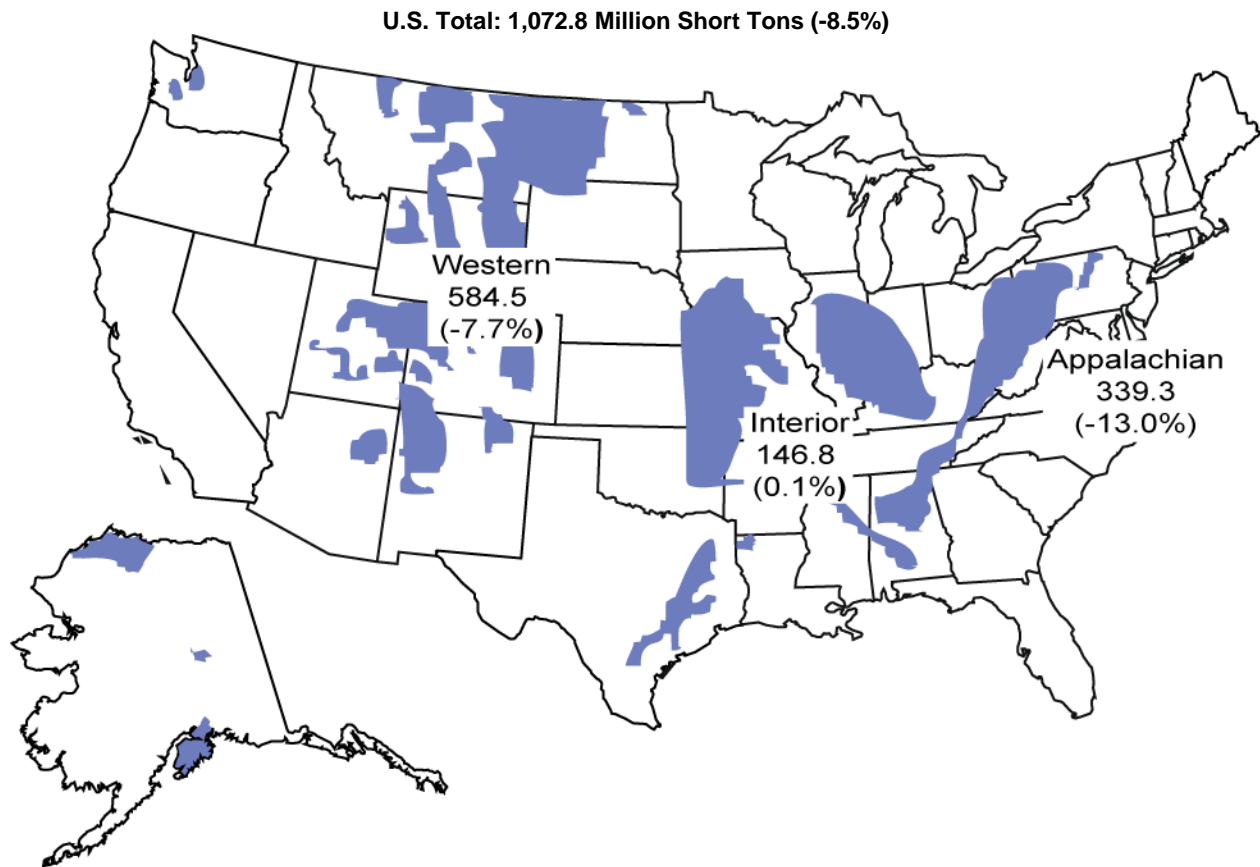
U.S. coal production decreased considerably in 2009, dropping by 8.5 percent to a level of 1,072.8 million short tons (Figure 1 and Table 1), 99.1 million short tons less than the 2008 production total. The decline in coal production in 2009 was the largest percent decline since 1958 (when production declined by 16.7 percent) and the largest tonnage decline since 1949 (when production declined by 176.1 million short tons). Although total U.S. coal production was lower in 2009, one of the three coal-producing regions actually had a slight increase in coal production while the other two had large declines. Exclusive of refuse production, the Appalachian and Western Regions had decreases in their respective production levels in 2009 of 13.0 percent and 7.7 percent respectively, while the Interior Region remained essentially unchanged (Figure 2 and Table 2). The decrease in the Appalachian Region production was 50.9 million short tons, while the decrease in Western Region production in 2009 was 49.1 million short tons. Coal production in the Interior Region did increase, but by only 216 thousand short tons.

Table 1. U.S. Coal Supply, Disposition, and Prices, 2005 - 2009

(Million Short Tons and Nominal Dollars per Short Ton)

Item	2005	2006	2007	2008	2009
Production By Region					
Appalachia ¹	396.7	391.2	377.8	390.2	339.3
Northern Appalachia	140.0	136.2	132.1	135.6	126.5
Central Appalachia	235.3	236.1	226.2	234.0	194.0
Southern Appalachia	21.3	18.8	19.3	20.6	18.7
Interior	149.2	151.4	146.7	146.6	146.8
Western	585.0	619.4	621.0	633.6	584.5
Refuse Recovery	0.7	0.8	1.2	1.4	2.1
Total	1,131.5	1,162.8	1,146.6	1,171.8	1,072.8
Consumption By Sector					
Electric Power	1,037.5	1,026.6	1,045.1	1,040.6	936.5
Coke Plants	23.4	23.0	22.7	22.1	15.3
Other Industrial Plants	60.3	59.5	56.6	54.4	45.4
Residential/Commercial Users ²	4.7	3.2	3.5	3.5	3.2
Total	1,126.0	1,112.3	1,128.0	1,120.5	1,000.4
Year-End Coal Stocks					
Electric Power	101.1	141.0	151.2	161.6	190.0
Coke Plants	2.6	2.9	1.9	2.3	2.0
Other Industrial Plants	5.6	6.5	5.6	6.0	5.1
Producers/Distributors	35.0	36.5	34.0	34.7	41.3
Commercial/Institutional	-	-	-	0.5	0.5
Total	144.3	186.9	192.8	205.1	238.8
U.S. Coal Trade					
Exports	49.9	49.6	59.2	81.5	59.1
Steam Coal	21.3	22.1	27.0	39.0	21.8
Metallurgical Coal	28.7	27.5	32.2	42.5	37.3
Imports	30.5	36.2	36.3	34.2	22.6
Steam Coal	28.7	34.6	34.7	32.5	21.6
Metallurgical Coal	1.8	1.7	1.7	1.7	1.0
Net Exports	19.5	13.4	22.8	47.3	36.5
Average Prices					
Domestic					
Average Delivered Price					
Electric Utilities	\$31.22	\$34.26	\$36.06	\$41.32	\$44.72
Independent Power Producers	\$30.39	\$33.04	\$33.11	\$38.98	\$39.72
Coke Plants	\$83.79	\$92.87	\$94.97	\$118.09	\$143.04
Other Industrial Plants	\$47.63	\$51.67	\$54.42	\$63.44	\$64.87
Commercial/Institutional	-	-	-	\$86.50	\$97.28
International					
Average Free Alongside Ship (f.a.s.) Price					
Exports	\$67.10	\$70.93	\$70.25	\$97.68	\$101.44
Steam Coal	\$47.64	\$46.25	\$47.90	\$57.35	\$73.63
Metallurgical Coal	\$81.56	\$90.81	\$88.99	\$134.62	\$117.73
Average Customs Import Value (c.i.v.) Price					
Imports	\$46.71	\$49.10	\$47.64	\$59.83	\$63.91
Steam Coal	\$43.35	\$46.15	\$45.31	\$56.75	\$61.40
Metallurgical Coal	\$101.88	\$109.36	\$96.05	\$117.18	\$115.93
<small>1. Appalachia is divided into three sub groupings as Northern, Central, and Southern. Northern Appalachia is defined as Maryland, Ohio, Pennsylvania, and northern counties of West Virginia. Central Appalachia is defined as Virginia, the eastern counties of Kentucky, the southern counties of West Virginia, and the northeastern counties of Tennessee. Southern Appalachia is defined as Alabama and the southeastern counties of Tennessee. 2. The sector that was titled 'Residential and Commercial' has been renamed as 'Commercial and Institutional' beginning in 2008. Notes: Totals may not equal sum of components due to independent rounding. Sum of net exports, stock changes, and consumption may not equal production, primarily because the supply and disposition data are obtained from different surveys. Sources: Production, consumption, stocks, and prices: Energy Information Administration, Quarterly Coal Report, October-December 2006, DOE/EIA-0121(2006/Q4) (Washington, DC, March 2007); Annual Coal Report 2006, DOE/EIA-0584(2006) (Washington, DC, November 2007); Annual Coal Report 2008, DOE/EIA-0584(2008) (Washington, DC, February 2010); and Electric Power Monthly, March 2010, DOE/EIA-0226(2010/03) (Washington DC, March 2010). Exports and imports: U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545" and "Monthly Report IM 145."</small>					

Figure 1. Coal Production by Coal-Producing Region, 2009
 (Million Short Tons and Percent Change from 2008)
 Regional Totals do not include refuse recovery



Source: Energy Information Administration, Quarterly Coal Report, October-December 2009, DOE/EIA-0121(2009/Q4) (Washington, DC, April 2010).

Appalachian Region

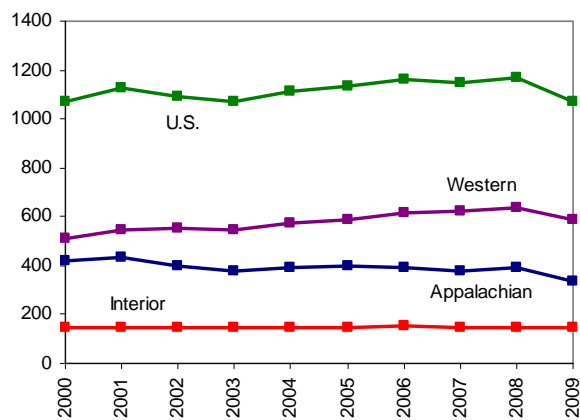
Coal production in the Appalachian Region ended 2009 at 339.3 million short tons, a decrease of 13.0 percent, or 50.9 million short tons, its lowest level in almost 50 years. The decline in 2009 in coal production in the Appalachian Region was primarily driven by the domestic and international economic situation combined with the lower natural gas prices that prevailed during most of the year. The decrease in U.S. coal exports, which are predominantly produced in this region, helped to hold down the 2009 production. The drop in demand for coal by all the domestic coal-consuming sectors combined with the increasing coal stock level at electric power plants also had an influence on coal production for the year. Ohio was the only State in the Appalachian Region that had an increase in coal production in 2009, and one

of only eight States in the nation to have a higher level of coal production for the year.

Coal production in Ohio in 2009 increased by 1.2 million short tons, or 4.5 percent to end the year at 27.4 million short tons, the highest level in a decade. Even though there were numerous mines in the State that had lower production in 2009 including one mine that had a drop of 0.8 million short tons, increases at other mines more than offset these decreases. The majority of the 2009 increase in production was a result of higher production levels at four mines and the opening of one new mine in the State. Ohio Valley Coal's Powhatan No. 6 mine had an increase of 0.9 million short tons in 2009, while Harrison Resources' Sexton No. 2 mine and Oxford Mining's Rice No. 1 mine each had an increase in their production levels of 0.5 million short tons. Ohio American Energy's Salt Run mine had an increase of 0.4 million short tons in 2009 and Gatling Ohio's Yellowbush mine produced a total of 0.3 million short tons in its first year of production.

Figure 2. Coal Production by Region, 2000-2009
(Million Short Tons)

Regional Totals do not include Refuse Recovery



Sources: Energy Information Administration, Quarterly Coal Report, October-December 2009, DOE/EIA-0121(2009/Q4) (Washington, DC, April 2010); Coal Industry Annual, DOE/EIA-0584, various issues; Annual Coal Report, DOE/EIA-0584, various issues.

West Virginia, the largest coal-producing State in the Appalachian Region and the second largest in the U.S., had the largest tonnage decline in the region in 2009, decreasing by 21.1 million short tons to end the year with a total of 136.7 million short tons, 13.4 percent below the 2008 level, and its lowest level since 1993 when a prolonged miners strike affected coal production. In 2009 there were 17 mines in West Virginia that had a decrease in their respective production levels of at least 0.5 million short tons. Two of the 17 mines were abandoned, Patriot Coal's Europa mine and Arch Coal's Coal Mac No. 68 mine, while the others were idled for some portion of the year as coal operators tried to balance their supply to consumers' decreasing demand. Fourteen of the 17 mines were located in the southern portion of West Virginia which is classified as part of the Central Appalachian region as identified by the coal industry. On a positive note for 2009 coal production in West Virginia, there were six mines that had an increase of at least 0.7 million short tons over their 2008 level and one new mine, Patriot Coal's Hill Fork mine, that produced 0.7 million short tons. Two of the mines with higher production levels, Consol Energy's Loveridge No. 22 mine and Patriot Coal's Federal No.2 mine, are in northern West Virginia which is considered part of Northern Appalachia. The other four mines with the increased production level, Massey Energy's Slabcamp mine, Republic mine, and Upper Big Branch, and Arch Coal's Coal Mac Holden No. 22 mine, are located in southern West Virginia.

Eastern Kentucky, which is identified as part of Central Appalachia, produced 73.4 million short tons of coal in 2009, a decrease of 18.7 percent or 16.9 million short tons below the 2008 level and its lowest production level since the early 1970's. In 2009 there were seven mines in Eastern Kentucky that had a decline of 0.5 million short tons or more for the year. They were: Kentucky Fuel Corporation's Bent Mountain mine; Consol Energy's Jones Fork mine; Massey Energy's Mine No. 1; Frasure Creek Mining's LLC F-2 mine; Alpha Natural Resources' Big Branch mine; Revelation Energy's S-1 Hunts Branch mine; and Miller Brothers Coal's Black Diamond mine. However, in 2009 there were also two mines in Eastern Kentucky that had increases in their coal production levels of 0.5 million short tons or more. They were: Alpha Natural Resources' Mine No. 9A and Big Branch West mine. There was also one new mine that had 0.5 million short tons of production in 2009, Massey Energy's MTR Wolf Creek mine.

Pennsylvania produced 58.1 million short tons, a decrease of 11.2 percent from 2008 or 7.3 million short tons, its lowest level in over 100 years. While the two largest mines in the State, Consol Energy's Enlow Fork mine and Bailey mine (also the two largest underground mines in the U.S.) both produced in 2009 at about the same level as 2008, declines by many other mines resulted in Pennsylvania's coal production dropping for the year. In 2009 there were declines in coal production of at least 0.5 million short tons by four mines in the State. The largest decline at a mine in Pennsylvania was 1.8 million short tons at Consol Energy's Blacksville No.2 mine which was idled for a period of time during the year. (This mine is classified by the Mine Safety and Health Administration as a West Virginia mine which is where the mine first produced coal. EIA classifies it as a Pennsylvania mine because the mine has progressed north from its opening portal and the coal that is currently being mined is under the State of Pennsylvania.) There was also a decrease in production of 1.3 million short tons at Consol Energy's Mine 84 as it was placed into nonproducing status during the latter part of 2009. Decreases in coal production of 0.8 million short tons and 0.5 million short tons for the year at Alpha Natural Resources' Emerald No. 1 and Cumberland mines respectively, also contributed to the decline in coal production experienced in Pennsylvania in 2009.

Coal production in Virginia decreased in 2009 by 4.2 million short tons to a total of 20.5 million short tons, a decline of 17.0 percent and its lowest level since the mid-1950's. Four mines accounted for over 40 percent of the decrease in coal production for the year in the State. Consol Energy's Buchanan mine had the largest decrease of any mine in the State, a drop of

Table 2. U.S. Coal Production by Coal-Producing Region and State, 2005 - 2009

(Million Short Tons)

Coal-Producing Region and State	2005	2006	2007	2008	2009	Percent Change 2008 - 2009
Appalachia Total	396.7	391.2	377.8	390.2	339.3	-13.1
Alabama	21.3	18.8	19.3	20.6	18.8	-8.9
Kentucky, Eastern	93.3	93.6	87.1	90.3	73.4	-18.7
Maryland	5.2	5.1	2.3	2.9	2.3	-19.4
Ohio	24.7	22.7	22.6	26.3	27.4	4.5
Pennsylvania Total	67.5	66.0	65.0	65.4	58.1	-11.2
Anthracite	1.6	1.5	1.6	1.7	1.7	1.7
Bituminous	65.8	64.5	63.5	63.7	56.4	-11.6
Tennessee	3.2	2.8	2.7	2.3	2.1	-10.0
Virginia	27.7	29.7	25.3	24.7	20.5	-17.0
West Virginia Total	153.6	152.4	153.5	157.8	136.7	-13.4
Northern	42.6	42.4	42.2	41.1	38.7	-5.9
Southern	111.0	110.0	111.3	116.7	98.0	-16.0
Interior Total	149.2	151.4	146.7	146.6	146.8	0.2
Arkansas	*	*	0.1	0.1	*	-93.3
Illinois	32.0	32.7	32.4	32.9	33.8	2.6
Indiana	34.5	35.1	35.0	35.9	36.6	1.8
Kansas	0.2	0.4	0.4	0.2	0.2	-19.4
Kentucky, Western	26.4	27.2	28.2	30.1	32.7	8.8
Louisiana	4.2	4.1	3.1	3.8	3.7	-4.8
Mississippi	3.6	3.8	3.5	2.8	3.4	21.1
Missouri	0.6	0.4	0.2	0.2	0.5	83.1
Oklahoma	1.9	2.0	1.6	1.5	1.0	-34.7
Texas	45.9	45.5	41.9	39.0	35.1	-10.1
Western Total	585.0	619.4	621.0	633.6	584.5	-7.7
Alaska	1.5	1.4	1.3	1.5	1.8	25.0
Arizona	12.1	8.2	8.0	8.0	7.5	-6.9
Colorado	38.5	36.3	36.4	32.0	28.3	-11.7
Montana	40.4	41.8	43.4	44.8	39.5	-11.8
New Mexico	28.5	25.9	24.5	25.6	25.1	-2.0
North Dakota	30.0	30.4	29.6	29.6	29.9	1.1
Utah	24.5	26.0	24.3	24.4	21.7	-10.9
Washington	5.3	2.6	-	-	-	-
Wyoming	404.3	446.7	453.6	467.6	430.7	-7.9
Refuse Recovery	0.7	0.8	1.2	1.4	2.1	52.5
U.S. Total	1,131.5	1,162.7	1,146.6	1,171.8	1,072.8	-8.5

* Less than 50 thousand short tons.
Sources: Energy Information Administration, Annual Coal Report 2006, DOE/EIA-0584(2006)(Washington, DC, November 2007); Energy Information Administration, Annual Coal Report 2008, DOE/EIA-0584(2008)(Washington, DC, February 2010); and Quarterly Coal Report, October-December 2009, DOE/EIA-0121(2009/Q4)(Washington, DC, April 2010).

0.7 million short tons as a result of a short-term idling to help balance supply with the lower demand due to the economic downturn. The other three mines were A & G Coal Corporation's Sigmon Strip No. 23, Sawmill Hollow No. 1 mine and Guest Mountain Mining's Mine No. 3, which had decreases in production of 0.5 million short tons, 0.3 million short tons, and 0.4 million short tons, respectively. However, there were increases in coal production at two mines that began operating during 2008 and increased production by 0.3 million and 0.4 million

short tons in 2009, while one new 2009 mine produced 0.4 million short tons.

In 2009 coal production in Alabama totaled 18.8 million short tons, 8.9 percent lower than the 2008 level. Although there was an increase of 0.5 million short tons at Jim Walter Resources' No 7 mine, decreases at most of the other mines in the State brought overall production down for the year. Declines of 0.5 million short tons that occurred at Drummond Company's Shoal Creek mine and Jim Walter Resources' No. 4 mine were the largest for

the State. Declines in total coal production in 2009 were experienced by Maryland and Tennessee which ended the year at 2.3 million short tons and 2.1 million short tons, respectively.

Interior Region

Coal production in the Interior Region in 2009 was 146.8 million short tons, comparable to the 2008 production level and the only one of the three major U.S. coal supply regions not to have a decrease for the year. While the total coal production for the region was basically unchanged, that was not the case when it came to the respective States' production levels in 2009. Three of the four largest coal-producing States (Illinois, Indiana, and Western Kentucky) in the region had increased levels of production levels in 2009 when compared to 2008. The other large coal-producing State in the Interior Region, Texas, had a decrease in its production level which resulted in it falling from the number one coal-producing State in the Interior Region to number two.

Western Kentucky had the largest increase in coal production in the Interior Region in 2009, increasing by 2.6 million short tons to reach a total of 32.7 million short tons. This is the fifth year in a row that Western Kentucky experienced growth in coal production and the 2009 increase of 8.8 percent was primarily a result of the opening of four new mines during the year. The opening of Armstrong Coal's Parkway and Eastfork mines, as well as River View Coal's River View mine and Oxford Mining's K O mine together added 2.3 million short tons of coal to the annual total.

Coal production in 2009 in Illinois increased by 2.6 percent to end the year at a total of 33.8 million short tons. Although there was almost a 1 million short ton drop in coal production at Peabody Energy's Vermillion Grove mine which was idled during the first part of the year and a decrease of 0.5 million short tons at Knight Hawk Coal's Creek Paum mine, the increase in production of 1.0 million short tons by American Coal Company's Galatia mine and an increase of 0.6 million short tons by Knight Hawk Coal's Prairie Eagle mine offset those losses. An increase in coal production in 2009 of 0.4 million short tons by Mach Mining's Mach No. 1 mine combined with the opening of Knight Hawk Coal's Prairie Eagle South mine and the restart of MaRyan Mining's Shay No 1 mine (formerly Monterey Coal Company No. 1 mine) accounted for most of Illinois's increased production level.

Indiana produced a total of 36.6 million short tons in 2009, an increase of only 1.8 percent or 0.7 million

short tons, but that was enough to vault it to the position of the largest coal-producing State in the Interior Region. Although there were large decreases in production at several mines including a drop of 1.8 million short tons by United Minerals' Discovery mine and a drop of 0.6 million short tons at both Vigo Coal's Cypress Creek mine and Solar Sources' Craney mine, increases in production at four mines in Indiana as well as production at two new mines resulted in the increase in coal production for 2009. The four mines that had the higher production totals in 2009 were: United Minerals' West 61 mine higher by 1.3 million short tons; Sunrise Coal's Carlisle mine higher by 0.7 million short tons; and both Peabody Energy's Francisco mine and Little Sandy Coal Company's Antioch mine higher by 0.5 million short tons.

Texas coal is lignite, the lowest rank of coal with the lowest amount of energy (or Btus) and the vast majority of the coal is used in the electric power sector, primarily at mine-mouth facilities. The amount of Texas-produced lignite consumed by the electric power sector in the State in 2009 dropped by 16.2 percent while the total amount of coal consumed in the electric power sector in Texas declined by only 6.3 percent. The discrepancy is due to the fact that the amount of subbituminous coal consumed for power production decreased only slightly by 0.2 percent. Total coal production in Texas for 2009 was 35.1 million short tons, a decrease of 10.1 percent. Eight of the twelve mines in Texas had declines in coal production in 2009, with three of those mines accounting for the majority of the decrease. The three mines are Luminant Mining's Winfield South Strip and Tatum Strip, and Westmoreland Coal Company's Jewett mine, down by 2.1, 1.4, and 0.9 million short tons, respectively. On a positive note for Texas, Luminant Mining's Kosse mine began production in the second quarter of 2009, producing 0.9 million short tons.

The other States in the Interior Region (Arkansas, Kansas, Louisiana, Mississippi, Missouri, and Oklahoma), which together produced 8.7 million short tons of coal, accounted for a total of 5.9 percent of the entire region's production in 2009. Of these States, only Mississippi and Missouri had increases in their coal production from their prior year levels.

Western Region

Although the Western Region is the largest coal-producing region in the U.S., in 2009 coal production declined by 7.7 percent to a total of 584.5 million short tons and ended a five year increasing

production trend. The decrease of 49.1 million short tons resulted in a production level comparable to what was produced in 2005. Only two of the eight States in the Western Region (Alaska and North Dakota) had an increase in coal production for the year.

Of all the coal-producing States in the Western Region, Alaska, with one mine, the Usibelli mine, has the smallest level of production. However, in 2009, it had the largest increase in production, 370 thousand short tons, or 25.0 percent and ended the year with a total of 1.8 million short tons. North Dakota produced 29.9 million short tons of coal in 2009, an increase of 318 thousand short tons or 1.1 percent. There are four mines in North Dakota and in 2009 two of the mines, Falkirk Mining's Falkirk mine and Coteau Property's Freedom mine, had increased production levels that were more than enough to offset the declines experienced at the other two mines, Westmoreland Coal's Beulah mine and BNI Coal's Center mine.

Wyoming, the largest coal-producing State in the nation, a position it has held for two decades, continues to dominate the U.S. coal production picture. In 2009, coal production in Wyoming fell for the first time in 17 years. Total coal production in Wyoming in 2009 was 430.7 million short tons, a decrease of 37.0 million short tons, or 7.9 percent, but its share of U.S. total production still grew slightly. As an illustration of how much Wyoming dominated the U.S. coal supply in 2009, it accounted for 73.7 percent of the Western Region production total; was 91.4 million short tons more than the entire Appalachian Region; was almost three times the Interior Region; and was more than 40 percent of the total U.S. coal production for the year. Although overall Wyoming coal production decreased in 2009, there were five mines that had at least some level of production increase. The largest increase in coal production at any mine in Wyoming was achieved by Alpha Natural Resources' Eagle Butte mine which produced 21.5 million short tons, an increase of 1.0 million short tons or 5.1 percent over the 2008 level. Peabody Energy's North Antelope Rochelle mine was again the largest coal mine in Wyoming and the U.S. in 2009, producing a total of 98.3 million short tons, an increase of 0.7 million short tons or 0.7 percent. This one mine produced more coal than any other State in the nation but two, West Virginia and Kentucky. The other three mines in Wyoming that had higher production in 2009 increased by a combined total of less than 203 thousand short tons. During the second half of 2009, Arch Coal closed on its purchase of the Jacobs Ranch mine from Rio Tinto and subsumed it into the adjacent Black Thunder

mine. If this had been counted as one mine for the entire year, it would have had the largest decline in coal production of any Wyoming mine, a drop of 20.6 million short tons. It also would have been the largest mine in the U.S. with a total of 110.1 million short tons, down from the 2008 level of 130.7 million short tons. Other Wyoming mines that had decreases in 2009 coal production of at least 1 million short tons were: Peabody Energy's Caballo mine down 8.0 million short tons; Peabody Energy's Rawhide mine down 2.6 million short tons; Cloud Peak Energy's Antelope mine down 1.8 million short tons; and Arch Coal's Coal Creek mine down 1.7 million short tons.

In 2009, Montana, the second largest coal-producing State in the Western Region, produced a total of 39.5 million short tons, a decrease of 11.8 percent or 5.3 million short tons. Although there was an increase in production at Signal Peak Energy's Bull Mountain mine of 0.6 million short tons, the decreases in coal production at Western Energy's Rosebud mine of 2.7 million short tons and Decker Coal's Decker mine of 2.4 million short tons in 2009 accounted for the majority of the decline. Colorado, the third largest coal-producing State in the Western Region, had a decrease in coal production for 2009 of 3.8 million short tons or 11.7 percent to end the year at 28.3 million short tons. Although three of the eleven mines in the State had increases in coal production in 2009, the decrease in Colorado's total production was accounted for primarily by three mines. Bowie Resources' Bowie No. 2 mine had a decrease of 1.6 million short tons, Arch Coal's West Elk mine had a decrease of 1.4 million short tons, and Colowyo Coal's Colowyo mine had a decrease of 1.3 million short tons.

Utah was the only other State in the Western Region to have a major decrease in coal production in 2009, declining by 10.9 percent to end the year at a total of 21.7 million short tons. Only one of the eight mines in the State had an increase in production in 2009, Consol Energy's Emery mine, which had an increase of 0.2 million short tons. The majority of the decrease in coal production in 2009 in Utah was the result of the declines at two mines: Canyon Fuel's Dugout Canyon mine and West Ridge Resources' West Ridge mine, which had decreases of 0.9 and 0.7 million short tons, respectively. Total coal production in Arizona and New Mexico declined in 2009 by 0.6 and 0.5 million short tons, respectively.

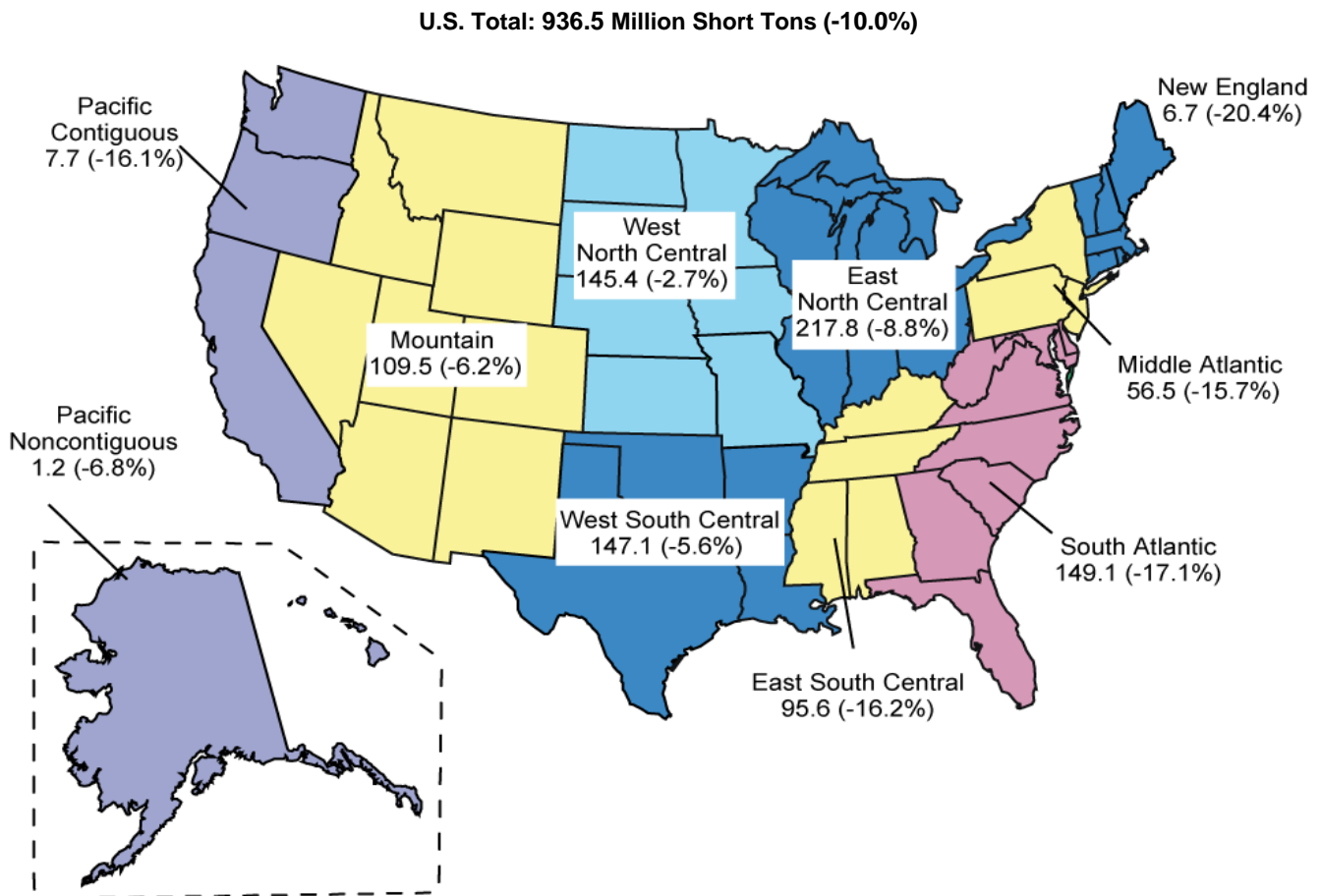
Consumption

Preliminary data shows that total coal consumption declined significantly in 2009, dropping by 10.7

percent from the 2008 level. Total U.S. coal consumption was 1,000.4 million short tons, a decrease of 120.1 million short tons, with all of the coal-consuming sectors having lower consumption for the year. Although all sectors had declines, the electric power sector (electric utilities and independent power producers), which consumes about 94 percent of all coal in the U.S., is the overriding force for determining total domestic coal consumption. In 2009, the recession's downward pressure on electricity production resulted in a large decrease in coal consumption for the sector. Coal consumption in the electric power sector decreased by 10.0 percent or 104.0 million short tons to end 2009 at 936.5 million short tons (Figure 3), while coal-based electricity generation in kilowatt hours

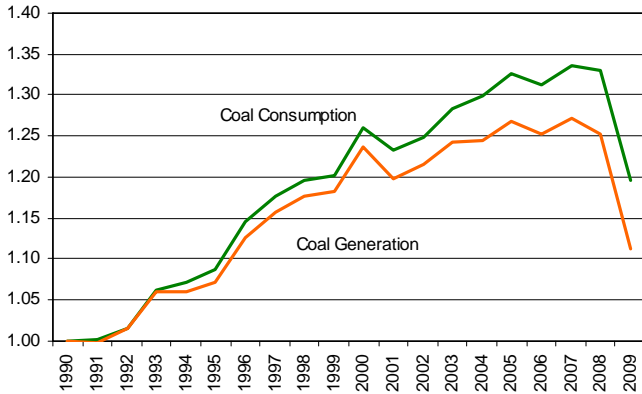
decreased at a slightly higher rate of 11.1 percent, reflecting increasing volumes of lower Btu western coals (subbituminous and lignite) to generate electricity (Figure 4.) (Note: Graph shows both tons of coal consumed in the electric power sector and the amount of coal-generated kilowatt hours indexed to 1990, i.e., values for the data were set to 1 for 1990. 1990 was the year that the Clean Air Act Amendments were passed.) Nationally, total generation in the electric power sector declined in 2009 by 4.1 percent. The decline in total generation for the year was a direct result of the large loss in generation by coal and a slight loss in generation by the nuclear sector (Figure 5). Preliminary data shows that nuclear power generation decreased in 2009 by 1.2 percent. The three other specified categories (natural gas; hydroelectric; and petroleum and other

Figure 3. Electric Power Sector Consumption of Coal by Census Region, 2009
(Million Short Tons and Percent Change from 2008)



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

Figure 4. Comparison of Coal Consumption to Coal Generation (indexed, 1990=1.00)



Sources: • 1990-1997—EIA, Form EIA-759, "Monthly Power Plant Report," and Form EIA-867, Annual Nonutility Power Producer Report. • 1998-2000—EIA, Form EIA-759, "Monthly Power Plant Report," and Form EIA-860B, "Annual Electric Generator Report—Nonutility." • 2001-2003—EIA, Form EIA-906, "Power Plant Report." • 2004-2007—EIA, Form EIA-906, "Power Plant Report," and Form-920, "Combined Heat and Power Plant Report" • 2008-2009 — EIA, Form 923, "Power Plant Operations Report."

sources¹) had increases in their respective generation levels in 2009, with natural gas generation providing the largest increase in the number of kilowatthours. The increase in electricity generation by natural gas was a result of the large decline in natural gas prices. The average wellhead price of natural gas in 2009 was \$3.71 per thousand cubic feet, a decrease of 53.4 percent from the 2008 average price of \$7.96 per thousand cubic feet.

The economy and the weather (as measured by heating and cooling degree-days) are the two factors that drive total electricity demand in the U.S. In 2009, the economy contracted as the Gross Domestic Product (GDP) of the U.S. declined by 2.4 percent from 2008. The weather was also a factor in the decline of total electricity generation in 2009. The winter weather across a large portion of the country was somewhat warmer than it was in 2008 as well as warmer than the normal 30-year average. According to preliminary data from the National Oceanic and Atmospheric Administration (NOAA), heating degree-days in 2009 were 1.0 percent lower than normal and 0.4 percent lower than 2008 for the country as a whole. Although the summer weather in 2009 was slightly warmer than normal, it was not as

¹ This category includes electric generation from petroleum liquids, petroleum coke, other gases, wood and wood wastes, municipal solid wastes, and agriculture products, other biomass, geothermal, solar thermal, solar photovoltaic, wind and miscellaneous technologies.

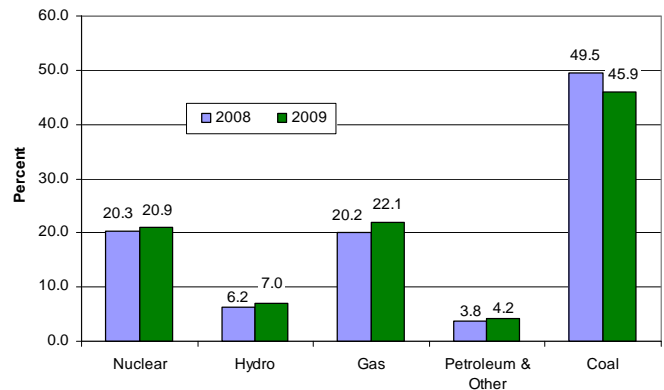
warm as it was in 2008. The summer weather in 2009 as measured in cooling degree-days was 0.2 percent higher than normal but 2.5 percent lower than the level experienced in 2008, which resulted in less need for electricity to run air-conditioners and therefore lower demand for electricity.

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 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.

In 2009, all nine Census Divisions had a decline in total electricity generation as well as a decline in coal-based generation, with a resulting large decrease in coal consumption for the electric power sector. Total coal consumption in the electric power sector fell by 104.0 million short tons in 2009, with two of the Census Divisions, the South Atlantic and the East North Central, accounting for about half of the drop.

The South Atlantic Census Division typically accounts for about 20 percent of total U.S. electricity generation, while the East North Central Census Division typically accounts for about 16 percent of the total. Coal is the primary fuel for electricity generation in both of these Census Divisions. In 2009 total generation in the South Atlantic Census

Figure 5. Share of Electric Power Sector Net Generation by Energy Source, 2008 vs. 2009



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

Division decreased by 5.6 percent (Table 3) while coal-based generation decreased by 17.7 percent. The decline in coal-based electricity generation in 2009 in the Division resulted in a decrease in coal consumption of 30.8 million short tons, down 17.1 percent to end the year at 149.1 million short tons. As a consequence of the drop in coal consumption in Division, coal stocks at power plants increased in 2009 by 48.4 percent to end the year at 39.8 million short tons. This increase of 13.0 million short tons in the division accounted for almost half of the total increase in coal stocks in the electric power sector at the national level. Both natural gas and hydroelectric generation increased in the Division in 2009. While there was a large percentage increase in hydroelectric generation of 79.3 percent for the year, it still only accounted for slightly less than 2 percent of total generation for the division. Natural gas generation in the Division increased in 2009 by 20.4 percent as some power producers took advantage of the low natural gas prices to run generators supplanting some of the need for coal-based generation. The share of natural gas generation in the Division increased to 22.5 percent in 2009, up from the 2008 level of 17.7 percent, while the share of coal-based generation in the division dropped to 46.5 percent in 2009 from the 2008 level of 53.4 percent.

In 2009, total generation in the East North Central Census Division declined by 7.8 percent, while coal-based generation declined by 8.9 percent. While there were gains in natural gas, petroleum and other, and hydroelectric generation in the Division of 5.0 percent, 16.9 percent, and 8.1 percent respectively, these three sources are a small portion of total generation in the division, together accounting for less than 7 percent of the annual generation. Coal generally accounts for about 70 percent of generation in the Division, and this makes it the single largest coal consuming Census Division for the electric power sector, usually accounting for just under one-quarter of total U.S. coal consumption in the electric power sector. The decrease in coal-based generation in the Division in 2009 resulted in a decrease in coal consumption of 20.9 million short tons, a decline of 8.8 percent.

In the East South Central Census Division coal is the dominant fuel for generation. In 2009 total generation in the Division decreased by 5.5 percent, while coal-based generation declined at a much higher rate of 19.0 percent. The petroleum and other category was the only other category to show a decrease in generation in 2009 in the division. The decline in coal generation in the Division resulted in

Table 3. Electric Power Sector Net Generation, 2008-2009
(Million Kilowatthours)

Census Division and Fuel	2008	2009	Percent Change
New England			
Coal	18,574	15,225	-18.0
Hydroelectric	7,704	8,383	8.8
Natural Gas	48,215	48,065	-0.3
Nuclear	35,547	36,231	1.9
Other (1)	10,373	9,094	-12.3
Total	120,414	116,997	-2.8
Middle Atlantic			
Coal	144,107	122,077	-15.3
Hydroelectric	27,928	29,886	7.0
Natural Gas	81,575	91,350	12.0
Nuclear	154,062	154,540	0.3
Other (1)	12,941	13,150	1.6
Total	420,613	411,004	-2.3
East North Central			
Coal	456,001	415,214	-8.9
Hydroelectric	2,838	3,069	8.1
Natural Gas	23,552	24,739	5.0
Nuclear	156,305	143,522	-8.2
Other (1)	9,904	11,582	16.9
Total	648,598	598,126	-7.8
West North Central			
Coal	231,980	226,066	-2.5
Hydroelectric	8,624	10,007	16.0
Natural Gas	13,304	10,013	-24.7
Nuclear	45,634	45,523	-0.2
Other (1)	14,678	20,716	41.1
Total	314,219	312,325	-0.6
South Atlantic			
Coal	417,623	343,604	-17.7
Hydroelectric	7,090	12,710	79.3
Natural Gas	138,207	166,383	20.4
Nuclear	197,973	196,778	-0.6
Other (1)	21,683	19,179	-11.5
Total	782,576	738,655	-5.6
East South Central			
Coal	238,479	193,216	-19.0
Hydroelectric	12,961	23,939	84.7
Natural Gas	42,931	55,135	28.4
Nuclear	75,419	77,677	3.0
Other (1)	3,635	2,763	-24.0
Total	373,425	352,729	-5.5
West South Central			
Coal	233,072	220,819	-5.3
Hydroelectric	10,455	10,678	2.1
Natural Gas	226,188	224,512	-0.7
Nuclear	70,266	73,450	4.5
Other (1)	24,363	27,423	12.6
Total	564,345	556,883	-1.3
Mountain			
Coal	212,268	199,306	-6.1
Hydroelectric	32,099	31,414	-2.1
Natural Gas	92,520	90,753	-1.9
Nuclear	29,250	30,662	4.8

Table 3. Electric Power Sector Net Generation, 2008-2009
(Million Kilowatthours)

Census Division and Fuel	2008	2009	Percent Change
Other (1)	9,568	11,175	16.8
Total	375,705	363,309	-3.3
Pacific			
Coal	16,733	14,098	-15.7
Hydroelectric	137,108	135,769	-1.0
Natural Gas	135,880	129,994	-4.3
Nuclear	41,752	38,369	-8.1
Other (1)	42,979	44,046	2.5
Total	374,453	362,277	-3.3
Total U.S.			
Coal	1,968,838	1,749,626	-11.1
Hydroelectric	246,807	265,856	7.7
Natural Gas	802,372	840,946	4.8
Nuclear	806,208	796,751	-1.2
Other (1)	150,124	159,126	6.0
Total	3,974,349	3,812,305	-4.1

(1) Other fuel: Includes petroleum, other gases, and renewables.
Notes: Totals may not equal sum of components due to independent rounding.
Electric power sector data for 2009 is preliminary.
Source: Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

a decrease of 18.5 million short tons of coal consumption to a level of 95.6 million short tons, a drop of 16.2 percent from the 2008 level. Coal stocks held by power plants in the Division increased in 2009 by 6.0 million short tons to end the year at 20.9 million short tons. Generation by natural gas in the Division increased its share in 2009 to 15.6 percent from the 11.5 percent it represented in 2008.

Total generation in the Middle Atlantic Census Division in 2009 decreased by 2.3 percent, with coal-based generation being the only category to show a decline for the year. The decrease in coal generation in the Division was 15.3 percent which resulted in coal's share of the Division's generation to drop to 29.7 percent from the 34.3 percent it represented in 2008. Coal consumption in the electric power sector in the Division in 2009 declined by 10.5 million short tons, or 15.7 percent. Natural gas generation was the category that had the largest percent increase in 2009 in the Division, increasing by 12.0 percent, while hydroelectric generation increased by 7.0 percent, petroleum and other generation increased by 1.6 percent, and nuclear generation increased by 0.3 percent in 2009.

In the West South Central Census Division coal competes with natural gas as the primary source for electric power generation, with each accounting for about 40 percent of the Division's generation. Total generation in 2009 in the electric power sector in the Division decreased by 1.3 percent, while coal-based generation declined at a higher rate of 5.3 percent and

natural gas generation declined at a lower rate of 0.7 percent. Total coal consumption in 2009 for the electric power sector in the Division decreased by 8.7 million short tons, or 5.6 percent, ending the year at a total of 147.1 million short tons.

Over half of the electricity generated in the Mountain Census Division is derived from coal. In 2009 total generation in the Division declined by 3.3 percent, with coal-based generation declining by 6.1 percent. The two sources of increased generation in the Division in 2009 were nuclear, increasing by 4.8 percent, and petroleum and other sources, increasing by 16.8 percent. Total coal consumption in the electric power sector in the Division decreased in 2009, ending the year at 109.5 million short tons, a decline of 7.2 million short tons.

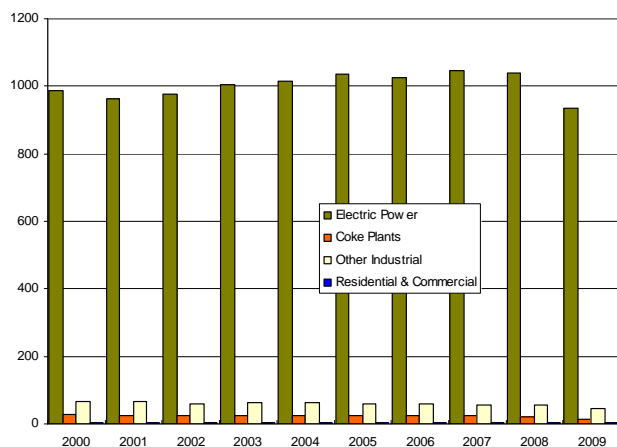
In the West North Central Census Division coal is the dominant source for electric power generation accounting for about three-fourths of the Division's generation. Total generation in 2009 in the electric power sector in the Division declined by 0.6 percent, the smallest decline of any of the nine Census Divisions. Coal-based generation in the Division decreased by 2.5 percent in 2009, with natural gas generation the only other category to have a decline in generation in the division. Total coal consumption in 2009 for the electric power sector in the Division decreased by 4.0 million short tons, or 2.7 percent, ending the year at a total of 145.4 million short tons.

Total electric power sector generation in the New England Census Division declined in 2009 by 2.8 percent, while coal-based generation declined by 18.0 percent. However, coal accounts for less than one-sixth of total generation in the Division and in 2009 total coal consumption for electricity generation decreased by 1.7 million short tons, ending the year at a total of 6.7 million short tons.

Total generation in the Pacific Census Division in 2009 decreased by 3.3 percent, while coal-based generation decreased by 15.7 percent. Coal accounts for less than five percent of total generation in the Division and in 2009 total coal consumption for electricity generation declined by 14.9 percent to end the year at 8.9 million short tons.

Coal consumption in the non-electric power sector (comprised of other industrial, coking coal, and the commercial and institutional sectors) declined for the fifth year in a row in 2009 (Figure 6). Coal consumption at coke plants decreased by 6.7 million short tons to end the year at 15.3 million short tons, a decline of 30.6 percent. The decline in U.S. coke production in 2009 was a result of the economic downturn in the year when several steel plants idled

Figure 6. Coal Consumption by Sector, 2000-2009
(Million Short Tons)



Source: Energy Information Administration, Monthly Energy Review, March 2010, DOE/EIA-0035(2010/03) (Washington, DC, April 2010).

production for extended periods of time in response to the world-wide drop in demand for their products.

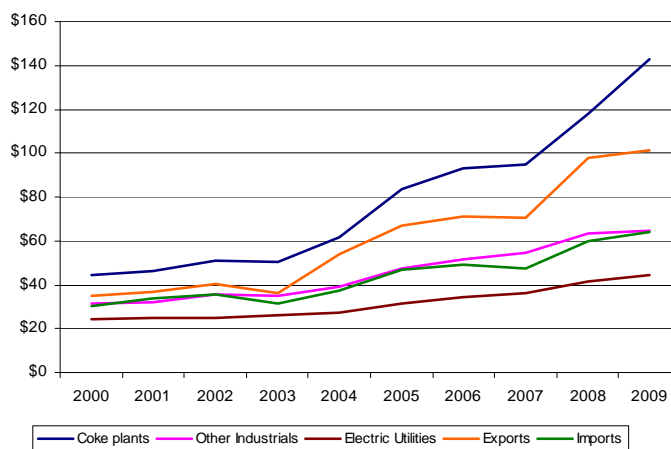
In 2009 the manufacturing sector in the U.S. declined as a consequence of the recession and as a result, coal consumption in the other industrial sector decreased by 9.0 million short tons to end the year at 45.4 million short tons, a drop of 16.6 percent. Within the manufacturing economic sector of the North American Industry Classification System (NAICS) all of the manufacturing subsectors showed lower coal consumption for 2009. All of the five major coal-consuming manufacturing subsectors had large decreases in coal consumption for 2009. The declines ranged from 0.7 million short tons in the food manufacturing segment to 3.7 million short tons in the nonmetallic mineral products segment. Also contributing to the overall decline in consumption for the other industrial sector were decreases of 1.2 million short tons by the primary metal manufacturing segment; 1.4 million short tons for the chemical manufacturing segment; and 1.5 million short tons for the paper manufacturing segment. Coal consumption in the commercial and institutional sector decreased somewhat in 2009, ending the year at 3.2 million short tons.

Coal Prices

Although it was a down year for coal production and consumption in 2009, domestic coal prices continued to increase, rising for the sixth consecutive year. The primary reason that domestic coal prices continued to

climb was that a number of coal contracts were signed in 2008 during the dramatic rise of spot coal prices that affected the contract prices. The majority of coal sold in the electric power sector is through long-term contracts (covering a time period of one year or longer), in conjunction with spot purchases to supplement the demand. As contracts expire and are renegotiated the prevailing spot price influences the contract price. According to preliminary data for 2009, coal prices at electric utilities (a subset of the electric power sector) increased for a ninth consecutive year, to \$44.72 per short ton, an increase of 8.2 percent over the 2008 price. Coal prices at independent power producers for 2009 increased to \$39.72 per short ton, an increase of 1.9 percent. The average delivered price of coal to the other industrial sector increased by 2.3 percent to an average price of \$64.87 per short ton in 2009. In 2009 the delivered price of coal to U.S. coke plants increased by 21.1 percent to reach an average price of \$143.04 per short ton (Figure 7). The average delivered price of coal to the commercial and institutional sector increased in 2009 by 12.5 percent to \$97.28 per short ton. [Data on commercial and institutional coal prices have only been available since 2008.]

Figure 7. Delivered Coal Prices, 2000-2009
(Nominal Dollars per Short Ton)



Sources: Energy Information Administration, Quarterly Coal Report, October-December 2009, DOE/EIA-0121(2009/Q4) (Washington, DC April 2010); Coal Industry Annual, DOE/EIA-0584, various issues; and Annual Coal Report, DOE/EIA-0584(2003), various issues; Electric Power Monthly, March 2010, DOE/EIA-0226 (2010/03), (Washington, DC); and U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545" and "Monthly Report IM 145."

Exports and Imports

Exports. Total U.S. coal exports for 2009 were 59.1 million short tons, about the same level as in 2007 and a decrease of 22.4 million short tons from the 2008 level, or 27.5 percent (Figure 8). The average price of U.S. coal exports in 2009 was \$101.44 per short ton, an increase of 3.8 percent.

Metallurgical coal exports declined in 2009 to end the year at 37.3 million short tons, a decrease of 12.4 percent. In 2009, the average price of U.S. metallurgical coal exports decreased by 12.5 percent to a level of \$117.73 per short ton, a drop of \$16.89 per short ton from the 2008 level.

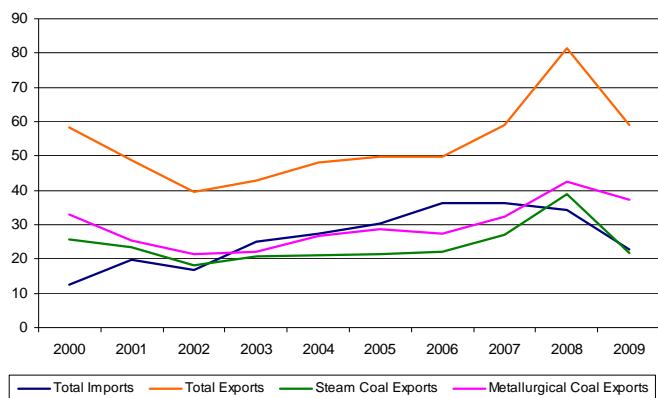
As it has traditionally been in the past, Europe is the major destination of U.S. metallurgical coal and in 2009 it accounted for almost 53 percent of the total metallurgical coal exports. Europe was the destination for 19.7 million short tons in 2009, a decrease of 22.8 percent from 2008. In 2009, the Netherlands was the primary destination of U.S. metallurgical coal exports with a total of 2.9 million short tons, a decline of 0.5 million short tons. (Note: Some ports in the Netherlands serve as transshipment points for coal being sent to other countries and the coal exports shipped there may move to other destinations.) The average price per short ton to the Netherlands decreased 4.1 percent in 2009, from \$117.81 to \$112.92. France, Italy, Belgium, and the United Kingdom were also key European destinations of U.S. metallurgical coal in 2009. U.S. metallurgical coal exports to France totaled 2.1 million short tons in 2009, about the same level as the

prior year, while the average price per ton declined somewhat, from \$114.74 in 2008 to \$112.29 in 2009. Italy received a total of 2.1 million short tons, 26.9 percent less than the 2008 total, while the average price of metallurgical coal exports to Italy was up from \$110.27 per short ton to \$116.13 per short ton in 2009. Both Belgium and the United Kingdom each received 2.0 million short tons of U.S. metallurgical coal in 2009; that total was an increase of 10.8 percent for Belgium and a decrease of 2.7 percent for the United Kingdom. The percentage decreases in the average price per short ton of those metallurgical coal exports were 0.6 and 12.3 percent respectively, with the average price per short ton for metallurgical coal to Belgium at \$115.15 and the price for the United Kingdom at \$106.19 in 2009. Other major European destinations for U.S. metallurgical coal in 2009 were Germany, Spain, and Turkey, with each receiving over 1 million short tons of coal. The average price of metallurgical coal exports to these major destinations ranged from \$99.75 per short ton for Germany, \$117.70 per short ton for Spain, and \$114.61 per short ton for Turkey.

Total U.S. metallurgical coal exports to countries in North America decreased in 2009, while shipments to South America increased, with the primary destinations being Canada and Brazil. Canada received 2.4 million short tons of metallurgical coal from the U.S., a decrease of 33.6 percent from the 2008 level, while shipments to Brazil totaled 7.4 million short tons, an increase of 23.0 percent. The average price of metallurgical coal in 2009 decreased to both countries with the price to Canada at \$90.57 per short ton, while the price to Brazil was \$120.90 per short ton, representing declines of 0.5 and 15.7 percent respectively.

The Asian market accounted for almost 15 percent of U.S. metallurgical coal exports in 2009. Total metallurgical coal exports to Asia totaled 5.6 million short tons in 2009, an increase of 32.2 percent from 2008, as the U.S. helped to meet the increasing demand in several of the Asian nations. India was the major Asian destination of U.S. metallurgical coal exports in 2009, with a total of 2.1 million short tons, an increase of 29.9 percent. The average price of metallurgical coal exports to India decreased in 2009 by 22.9 percent to a level of \$167.87 per short ton. South Korea was the second largest Asian destination of U.S. metallurgical coal exports in 2009 receiving 1.7 million short tons, 61.1 percent more than it received in 2008, while the average price declined by 35.3 percent to \$107.17 per short ton. In 2009, the U.S. exported 1.0 million short tons of metallurgical coal to China, a country that had not received U.S. metallurgical coal since 2004. The average price of

Figure 8. U.S. Coal Export and Imports, 2000-2009
(Million Short Tons)



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

metallurgical coal to China was \$111.32 per short ton.

Metallurgical coal exports to countries in Africa decreased in 2009 from 2.0 million short tons to 1.1 million short tons. The majority of the metallurgical coal exports to Africa went to Egypt. Total U.S. metallurgical coal exports to Egypt in 2009 were 0.6 million short tons with an average price of \$117.61 per short ton, a decrease in price of 43.9 percent from 2008.

Total U.S. steam coal exports decreased in 2009 for the first time in six years as the economic downturn took hold in many of the world's economies. In 2009, steam coal exports declined by 44.0 percent to a level of 21.8 million short tons, while the average price per ton increased by 28.4 percent to \$73.63 per short ton. Canada is the single largest market for all U.S. steam coal exports. In 2009, Canada received 8.2 million short tons of steam coal exports, a drop of 11.2 million short tons and accounted for 37.6 percent of all of 2009 steam coal exports. The average price of steam coal exports to Canada increased by 62.6 percent in 2009 to \$58.54 per short ton. (Note: The steam coal exports to Canada contain some tonnage of U.S. steam coal exports to countries in Asia. This is due to the fact that there are currently no major coal-exporting facilities on the U.S. west coast. Some coal producers shipped steam coal by rail to coal-export terminals in British Columbia that were then loaded to ships for further transport to Asian buyers.)

Europe is the second largest market for U.S. steam coal exports due to the declining coal production in many of the countries combined with the proximity of the major eastern U.S. coal ports. Total steam coal exports to Europe declined in 2009 to 10.4 million short tons, a decrease of 29.9 percent from 2008. The average price of steam coal to Europe rose in 2009 by 14.3 percent, increasing to a level of \$85.64 per short ton. The largest European destination for U.S. steam coal exports in 2009 was the Netherlands which received a total of 3.0 million short tons, a drop of 18.3 percent from the prior year. The average price of steam coal exports to the Netherlands in 2009 increased 4.6 percent to a level of \$75.09 per short ton. One-quarter of the decline in U.S. steam coal exports to Europe was accounted for by one country: the United Kingdom. Total U.S. steam coal exports to the U.K. in 2009 were 2.6 million short tons, a decrease of 30.2 percent. The average price of steam coal exports to the U.K. in 2009 was \$65.00 per short ton, just slightly above the 2008 price of \$62.53. The other major European destination for U.S. steam coal was France with a total of 1.2 million short tons at an

average price of \$138.60 per short ton, a price increase of 49.2 percent over the 2008 level.

U.S. steam coal exports to the African continent declined by 61.9 percent in 2009, to a total of 0.7 million short tons. The majority of the decrease in steam coal exports to Africa is attributable to one country, Morocco. Total steam coal exports to Morocco in 2009 were 695 thousand short tons, down by 60.2 percent. The average price of steam coal exports to Morocco in 2009 was \$77.13 per short ton, a decrease of 8.3 percent from 2008.

The total amount of steam coal exports to South America (the primary source of coal imports for the U.S.) declined in 2009 to 0.7 million short tons, or 43.6 percent. The majority of the South American steam coal exports went to Chile with a total of 680 thousand short tons. The average price of steam coal exports to South America decreased to \$57.38 per short ton from the 2008 level of \$74.40 per short ton, while the average price to Chile increased to \$54.86 per short ton from \$47.93 per short ton.

Steam coal exports to Asia in 2009 were 0.9 million short tons, just slightly below the 2008 level of 1.1 million short tons. South Korea was the primary Asian destination of U.S. steam coal exports in 2009 with a total of 432 thousand short tons, almost double the 2008 level. The average price of U.S. steam coal exports to South Korea was \$46.26 per short ton, a decrease of 26.6 percent from the 2008 price. The two other primary Asian destinations of U.S. steam coal exports were Japan and China, with totals of 219 thousand short tons and 158 thousand short tons respectively. The average price per short ton for Japan in 2009 was \$103.28 per short ton and for China was \$72.37 per short ton.

U.S. coke exports decreased in 2009 by 33.3 percent to a total of 1.3 million short tons. The majority of the coke exports went to Mexico which accounted for 39.0 percent of all U.S. coke exports with 509 thousand short tons, while Canada was a close second accounting for 32.1 percent with 419 thousand short tons. The average price of coke exports in 2009 was \$103.46 per short ton, a decrease of 3.7 percent over the 2008 price.

Imports. Coal imports are part of the overall picture of the coal industry in the U.S. but they represent a small portion of the domestic coal consumption, averaging about 3 percent of total U.S. coal consumption in a year. In 2009, U.S. coal imports decreased substantially, dropping to a level not seen since early in the decade. Total coal imports were 22.6 million short tons, a decline of 33.8 percent, or 11.6 million short tons. The average price of

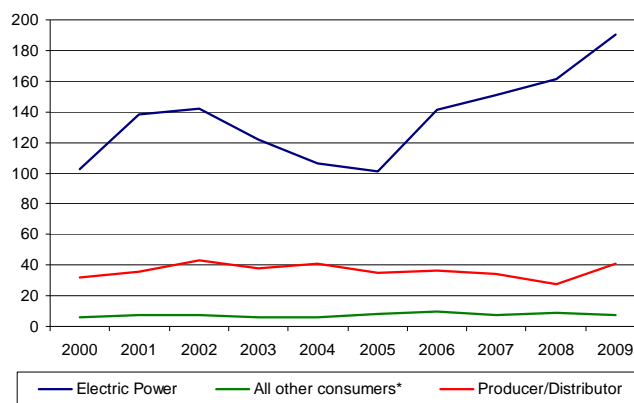
imported coal increased by 6.8 percent, to a level of \$63.91 per short ton. Colombia, which has dominated the U.S. coal import market for many years, accounted for over three-fourths of all 2009 coal imports. The U.S. imported 17.8 million short tons of coal from Colombia in 2009, a drop of 8.5 million short tons, or 32.3 percent. The average price of Colombian coal into the U.S. was \$60.66 per short ton, an increase of 6.4 percent over 2008. In 2009, total coal imports from Indonesia, the second largest supplier of coal imports, were 2.1 million short tons, a decrease of 1.3 million short tons, while the average price increased by 37.3 percent to \$51.74 per ton. Coal imports from Venezuela declined by 43.9 percent to 1.3 million short tons, while the price of the coal imports increased by 8.5 percent. Canada was another major source of U.S. coal imports in 2009 with a total of 1.3 million short tons, a decline of 0.7 million short tons. These four countries accounted for over 99 percent of total U.S. coal imports, the same share as in 2008. Although most coal imports are used for electric generation, metallurgical coal imports were 1.0 million short tons in 2009, almost all of them from Canada.

U.S. coke imports practically disappeared in 2009, dropping by 90.4 percent to end the year at 0.3 million short tons. Due to the almost worldwide recession during most of 2009, the average price of U.S. coke imports fell by 42.3 percent to a level of \$268.37 per short ton.

Coal Stocks

Total coal stocks at the end of 2009 were 238.8 million short tons, a record level and an increase of 33.7 million short tons from the prior year and surpassing the previous record level set in 1980. Estimated coal stocks held by producers and distributors were higher by 18.9 percent, as coal producers added to their stockpiles while consumers postponed some of their receipts and deferred deliveries to a future period (Figure 9). Industrial users, including coke plants, held a total of 7.1 million short tons at the end of 2009, 1.3 million short tons below the level at the start of the year. Commercial and institutional users had comparable level of coal stocks at the end of 2009 as they had in the beginning of the year with 0.5 million short tons. Coal stocks in the electric power sector increased for

Figure 9. Year-End Coal Stocks, 2000-2009
(Million Short Tons)



* All other consumers category includes coke plants, other industrial, and commercial & institutional sectors.
Sources: Energy Information Administration, Quarterly Coal Report, October-December 2009, DOE/EIA-0121(2009/Q4) (Washington, DC, April 2010); and Coal Industry Annual, DOE/EIA-0584, various issues.

a fourth consecutive year in 2009. The electric power sector ended the year with a record level of coal stocks of 190.0 million short tons, an increase of 28.4 million short tons, or 17.6 percent over the 2008 level and 7.0 million short tons higher than the previous end of year record level set in 1980.

Summary

The U.S. coal industry experienced a turbulent year in 2009. On the up side for the coal industry were higher domestic delivered prices and higher steam coal export prices. On the flip side the industry saw declining production, consumption, and exports, combined with record stock levels.

While 2009 was, for the most part, a bleak year for the U.S. coal industry, the outlook for U.S. coal in 2010 is better. Domestic coal consumption as well as metallurgical coal exports are expected to increase as the economies recover in most parts of the world. Coal prices should continue to increase at a moderate pace. As consumption increases, coal stocks should begin to decline to more traditional levels. (See Energy Information Administration's Short-Term Energy Outlook.)