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Preface

The *Annual Coal Report* (ACR) provides information about U.S. coal production, number of mines, productive capacity, recoverable reserves, employment, productivity, consumption, stocks, and prices to a wide audience, including Congress, federal and state agencies, the coal industry, and the general public. EIA publishes this report to fulfill data collection and dissemination responsibilities under the Federal Energy Administration Act of 1974 (Public Law 93-275), as amended.

Coal production, number of mines, employment, and productivity are based on the U.S. Department of Labor's Mine Safety and Health Administration's Form 7000-2, *Quarterly Mine Employment and Coal Production Report*. Productive capacity, recoverable reserves, and prices are based on EIA's Form EIA-7A, *Annual Survey of Coal Production and Preparation*. Consumption and stocks are based on EIA survey forms.

This report is EIA's 42nd annual report on the coal industry, and it continues the series formerly included in the *Minerals Yearbook*, which the U.S. Bureau of Mines previously published. All data for 2017 and previous years are final.

The Office of Electricity, Renewables, and Uranium Statistics acknowledges the cooperation of the respondents in supplying the information published in the *Annual Coal Report*, and we appreciate the valuable assistance of state coal mining agencies and the U.S. Department of Labor, Mine Safety and Health Administration.

Contents

Contacts iii

Preface iv

Executive Summary viii

Coal Production 1

Productive Capacity 17

Recoverable Reserves 21

Employment..... 26

Productivity..... 33

Domestic Markets..... 42

Average Mine Sales Price..... 48

Average Consumer Prices 58

Imports and Exports..... 61

Tables

ES-1. Coal production, 1949–2017	xi
ES-2. Coal mining productivity, 1949–2017	xiii
ES-3. Coke overview, 1949–2017	xv
ES-4. Nominal coal prices, 1949–2017	xvii
ES-5. Average price of U.S. exports and imports, 2011–2017	xix
1. Coal production and number of mines by state and mine type, 2017 and 2016	2
2. Coal production and number of mines by state, county, and mine type, 2017	5
3. Underground coal production by state and mining method, 2017	9
4. Coal production by coalbed thickness and mine type, 2017	10
5. Coal production and coalbed thickness by major coalbeds and mine type, 2017	11
6. Coal production and number of mines by state and coal rank, 2017	12
7. Coal production by state, mine type, and union status, 2017	13
8. Coal disposition by state, 2017	14
9. Major U.S. coal mines, 2017	15
10. Major U.S. coal producers, 2017	16
11. Productive capacity of coal mines by state, 2017 and 2016	18
12. Capacity utilization of coal mines by state, 2017 and 2016	19
13. Productive capacity and capacity utilization of underground coal mines by state and mining method, 2017	20
14. Recoverable coal reserves at producing mines by state, 2017 and 2016	22
15. Recoverable coal reserves at producing mines, estimated recoverable reserves, and demonstrated reserve base by mining method, 2017	23
16. Recoverable coal reserves at producing underground coal mines by state and mining method, 2017	24
17. Recoverable coal reserves at producing U.S. mines by mine production range and mine type, 2017	25
18. Average number of employees by state and mine type, 2017 and 2016	27
18.1. Average number of employees and number of mines by state and coal type, 2017	28
19. Average number of employees at underground and surface mines by state and mine production range, 2017	29
20. Average number of employees at underground and surface mines by state and union status, 2017	32
21. Coal productivity by state and mine type, 2017 and 2016	34
22. Underground coal mining productivity by state and mining method, 2017	37
23. Coal mining productivity by state, mine type, and mine production range, 2017	38
24. Coal mining productivity by state, mine type, and union status, 2017	41
25. Intentionally left blank	43
26. U.S. coal consumption by end use sector, census division, and state, 2017 and 2016	44
27. Year-end coal stocks by sector, census division, and state, 2017 and 2016	46
28. Average sales price of coal by state and mine type, 2017 and 2016	49
29. Average sales price of coal by state and underground mining method, 2017	50

30. Average sales price of coal by state, county, and number of mines, 2017	51
31. Average sales price of coal by state and coal rank, 2017.....	54
32. Average sales price of coal by mine production range and mine type, 2017	55
33. Average sales price of U.S. coal by state and disposition, 2017	56
33.1. Average sales price of U.S. coal by use and disposition, 2014–2017.....	57
34. Average price of coal delivered to end use sector by census division and state, 2017 and 2016	59
35. Coal imports by country of origin, 2000–2017.....	62
36. Coal exports by country of destination, 1960–2017	63

Executive Summary

Publication changes

This issue of the *Annual Coal Report* (ACR) introduces nine new tables and revises four tables. Tables ES-1 through ES-4 provide historical summary data previously published in the *Annual Energy Review* (AER) until its discontinuation in 2011.

Table ES-1 presents coal production by rank, mining method, and location since 1949. Table ES-2 presents tons of coal produced per employee hour by mining method and location since 1949. Table ES-3 presents production, trade, stocks, and consumption of coke since 1949. Table ES-4 presents nominal coal prices by rank since 1949.

Table ES-5 is a new table presenting the average export and import prices of metallurgical coal, non-metallurgical coal, and coke since 2011. A new section, *Imports and Exports*, reinstates previous AER tables with Table 35, which presents coal imports by country of origin since 2011, and Table 36, which presents coal exports by country of destination since 1960.

Table 18.1 is a new table presenting a breakout of the number of mines and average number of employees by production of metallurgical or non-metallurgical coal. Mines that produce both types of coal are included in both columns.

Table 33.1 is a new table presenting a breakout of coal sales prices for metallurgical and non-metallurgical coal at a national level since 2014.

Changes in our 2017 data collection removed average recovery percentages from the data collected on the Form EIA-7A, *Annual Survey of Coal Production and Preparation*, requiring modification of Tables 14, 16, and 17 to remove the average recovery percentage.

Finally, Table 8 now presents coal disposition with a breakout between metallurgical and non-metallurgical coal.

Production

In 2017, U.S. coal production increased 6.4% to 774.6 million short tons (MMst) from 2016 levels. Production in all three regions—the Western, Interior, and Appalachian—increased in 2017. The higher production in 2017 came from fewer mines than the previous year because the number of producing mines in the United States decreased to 680 mines from 710 mines in 2016. Some mines produce both thermal and metallurgical coal. In 2017, 214 mines produced metallurgical coal, and 578 mines produced thermal coal.

The Appalachian region's coal production in 2017 was 197.8 MMst, an increase of 10.1% from 2016. West Virginia's production increased 16.3% to 92.7 MMst, Pennsylvania's production increased 6.8% to 47.2 MMst, and Eastern Kentucky's production increased 8.4% to 18.2 MMst.

Coal production in the Interior region was 145.2 MMst, an increase of 0.9% from 2016 levels. Production in Illinois increased 11.0% to 48.2 MMst, production in Indiana increased 9.4% to 21.5 MMst, and production in Western Kentucky decreased 9.5% to 23.5 MMst. Production in the rest of the Interior region decreased 8.2% to 41.9 MMst.

Coal production in the Western region in 2017 increased 6.7% to 430.9 MMst. Production in Wyoming, the largest coal-producing state in the region, increased by 6.6% to 334.4 MMst. Other large, producing states in the basin include: Montana, where production increased by 9.0% to 35.2 MMst; Colorado, where production increased by 19.1% to 15.0 MMst; and Utah, where production increased by 2.6% to 14.3 MMst.

Disposition of coal during 2017 amounted to 774.6 MMst, of which 700.3 MMst was marketed as thermal coal, and 74.3 MMst was marketed as metallurgical coal. Of the metallurgical coal dispositions, 55.3 MMst was exported and 19.0 MMst was sold to domestic customers.

Productive capacity

Productive capacity is the maximum amount of coal that can be produced annually as reported by mining companies. In 2017, the collective productive capacity of U.S. coal mines decreased 0.9% to 1,058.6 MMst. Major producing states that reported an increase in productive capacity include Alabama (+30% to 16.9 MMst), Colorado (+6.0% to 19.2 MMst), Eastern Kentucky (+8.1% to 28.0 MMst), Pennsylvania (+4.7% to 59.5 MMst), Utah (+8.0% to 21.2 MMst) Virginia (+9.2% to 17.5), and West Virginia (+13.3% to 130.0 MMst).

Capacity utilization at both underground mines and surface mines increased in 2017 from 2016 levels. The overall capacity utilization across all mines increased to 73.0% in 2017 from 68.0% in 2016. Capacity utilization is measured as the ratio of annual production to the annual productive capacity of mines.

Recoverable reserves

Total U.S. recoverable coal reserves that are technologically and economically feasible to extract as reported by producers fell to 16,102 MMst at the end of 2017 from 16,956 MMst at the end of 2016. Large, producing states that reported an increase in recoverable reserves include West Virginia, Alabama, and Utah.

Employment

The average number of employees at U.S. coal mines in 2017 increased by 1,256 from 2016—the year that recorded the lowest average number of mine employees since EIA began collecting data in 1978—to 53,051 employees. The average number of employees at underground mines rose by 1,481 employees, and average employment at surface mines decreased by 181 employees. West Virginia, Alabama, and Pennsylvania had the largest increases in the average number of employees in 2017, increasing by 1,661 (14.4%) employees, 476 employees (31.5%), and 256 (4.9%) employees, respectively.

Total U.S. productivity as measured by average production per employee hour decreased by 0.9% to 6.55 short tons per employee hour. Productivity decreased in the Appalachian region by 5.3% to 2.9 tons per employee hour. Productivity increased 6.3% in the Illinois Basin to 5.2 tons per employee hour and 5.6% in the Western region to 17.3 tons per employee.

Consumption

U.S. coal consumption in 2017 was 716.9 MMst, a decline of 1.9% from 2016. Coal consumption in the electric power sector decreased by 13.8 MMst to 664.8 MMst. Coal consumption in the industrial, coke, and commercial and institutional sectors was 52.2 MMst in 2017, a 0.6% decrease from the 2016 level.

Exports

Exports increased by 36.7 MMst in 2017 to 97.0 MMst, a level last reached in 2014. Steam coal exports accounted for 41.7 MMst (43%) of the total, and metallurgical coal accounted for 55.3 MMst (57%).

Stocks

U.S. coal stocks in 2017 ended at 167.0 MMst, 13.7% lower than at the same time in 2016. Stocks in the electric power sector declined by 24.8 MMst to 137.7 MMst at the end of 2017. Coal stocks held by the other industrial, coke, and commercial sectors, as well as producers and distributors, decreased by 1.7 MMst to 29.3 MMst at the end of 2017 compared with the end of 2016.

Sales price

The total average sales price of coal from U.S. mines in 2017 increased by 10.3% from 2016 levels to \$33.72 per short ton. The average sales price of thermal coal in 2017 decreased by 3.0% from 2016 levels to \$26.53 per short ton, but the average sales price of metallurgical coal in 2017 increased 61.76% from 2016 levels to \$132.82 per short ton. The average sales price of coal from surface mines and underground mines increased by 2.3% and 16.3%, respectively, to \$20.95 and \$56.99 per short ton. Average sales price of coal by rank are

- Average sales price of bituminous coal was \$55.60 per short ton in 2017, a 14.9% increase from the 2016 level
- Average sales price of subbituminous coal was \$14.29 per short ton in 2017, a 3.6% decrease from the 2016 level
- Average sales price of lignite coal was \$19.51 per short ton in 2017, a 2.4% decline from the 2016 level
- Average sales price of Anthracite coal was \$93.17 per short ton in 2017, a 4.6% decline from the 2016 level

Table ES1. Coal Production, 1949-2017

(short tons)

Year	Rank				Mining Method		Location		Total ¹
	Bituminous Coal ¹	Subbituminous Coal	Lignite	Anthracite ¹	Underground	Surface ¹	East of Mississippi River ¹	West of Mississippi River ¹	
1949	437,868,000	-	-	42,702,000	358,854,000	121,716,000	444,199,000	36,371,000	480,570,000
1950	516,311,000	-	-	44,077,000	421,000,000	139,388,000	524,374,000	36,014,000	560,388,000
1951	533,665,000	-	-	42,670,000	442,184,000	134,151,000	541,703,000	34,632,000	576,335,000
1952	466,841,000	-	-	40,583,000	381,173,000	126,251,000	474,755,000	32,669,000	507,424,000
1953	457,290,000	-	-	30,949,000	367,444,000	120,795,000	457,652,000	30,587,000	488,239,000
1954	391,706,000	-	-	29,083,000	305,964,000	114,825,000	395,413,000	25,376,000	420,789,000
1955	464,633,000	-	-	26,205,000	357,964,000	132,874,000	464,218,000	26,620,000	490,838,000
1956	500,874,000	-	-	28,900,000	380,829,000	148,945,000	504,001,000	25,773,000	529,774,000
1957	492,704,000	-	-	25,338,000	373,565,000	144,477,000	493,377,000	24,665,000	518,042,000
1958	410,446,000	-	-	21,171,000	297,583,000	134,034,000	411,315,000	20,302,000	431,617,000
1959	412,028,000	-	-	20,649,000	292,849,000	139,828,000	412,351,000	20,326,000	432,677,000
1960	415,512,000	-	-	18,817,000	292,584,000	141,745,000	413,033,000	21,296,000	434,329,000
1961	402,977,000	-	-	17,446,000	279,551,000	140,872,000	398,642,000	21,781,000	420,423,000
1962	422,149,000	-	-	16,894,000	287,939,000	151,104,000	417,629,000	21,414,000	439,043,000
1963	458,928,000	-	-	18,267,000	308,971,000	168,224,000	453,485,000	23,710,000	477,195,000
1964	486,998,000	-	-	17,184,000	327,697,000	176,485,000	478,494,000	25,688,000	504,182,000
1965	512,088,000	-	-	14,866,000	337,958,000	188,996,000	499,529,000	27,425,000	526,954,000
1966	533,881,000	-	-	12,941,000	342,612,000	204,210,000	518,773,000	28,049,000	546,822,000
1967	552,626,000	-	-	12,256,000	352,391,000	212,491,000	535,973,000	28,909,000	564,882,000
1968	545,245,000	-	-	11,461,000	346,592,000	210,114,000	526,991,000	29,715,000	556,706,000
1969	547,172,000	8,321,000	5,012,000	10,473,000	349,238,000	221,740,000	537,677,000	33,301,000	570,978,000
1970	578,469,000	16,423,000	8,040,000	9,729,000	340,530,000	272,131,000	567,758,000	44,903,000	612,661,000
1971	521,344,000	22,151,000	8,697,000	8,727,000	277,175,000	283,744,000	509,925,000	50,994,000	560,919,000
1972	556,842,000	27,547,000	10,997,000	7,106,000	305,046,000	297,446,000	538,157,000	64,335,000	602,492,000
1973	543,532,000	33,933,000	14,273,000	6,830,000	300,080,000	298,488,000	522,131,000	76,437,000	598,568,000
1974	545,689,000	42,240,000	15,477,000	6,617,000	277,966,000	332,057,000	518,118,000	91,905,000	610,023,000
1975	577,522,000	51,099,000	19,817,000	6,203,000	293,467,000	361,174,000	543,707,000	110,934,000	654,641,000
1976	588,364,000	64,841,000	25,480,000	6,228,000	295,464,000	389,449,000	548,831,000	136,082,000	684,913,000
1977	580,991,000	82,115,000	28,238,000	5,861,000	266,591,000	430,614,000	533,267,000	163,938,000	697,205,000
1978	534,020,000	96,757,000	34,350,000	5,037,000	242,772,000	427,392,000	487,178,000	182,986,000	670,164,000
1979	612,279,000	121,475,000	42,545,000	4,835,000	320,891,000	460,243,000	559,704,000	221,430,000	781,134,000
1980	628,769,000	147,715,000	47,160,000	6,056,000	337,508,000	492,192,000	578,688,000	251,012,000	829,700,000
1981	607,986,000	159,693,000	50,673,000	5,423,000	316,496,000	507,279,000	553,862,000	269,914,000	823,775,000
1982	620,166,000	160,946,000	52,411,000	4,589,000	339,152,000	498,960,000	564,259,000	273,853,000	838,112,000
1983	568,609,000	151,044,000	58,349,000	4,089,000	300,379,000	481,713,000	507,395,000	274,696,000	782,091,000
1984	649,489,000	179,200,000	63,070,000	4,161,735	352,050,000	543,870,000	587,620,000	308,301,000	895,920,767
1985	613,851,000	192,657,000	72,422,000	4,708,375	350,800,000	532,838,000	558,730,000	324,908,000	883,638,117
1986	620,059,000	189,610,000	76,354,000	4,291,951	360,438,000	529,877,000	564,427,000	325,887,000	890,314,708
1987	636,609,000	200,165,000	78,427,000	3,560,459	372,874,000	545,888,000	581,929,000	336,833,000	918,762,162
1988	638,105,000	223,504,000	85,101,000	3,554,509	382,156,000	568,109,000	579,565,000	370,700,000	950,265,278
1989	659,771,000	231,171,000	86,439,000	3,347,996	393,835,000	586,893,000	599,015,000	381,714,000	980,728,790
1990	693,206,000	244,274,000	88,090,000	3,506,247	424,546,000	604,529,000	630,218,000	398,858,000	1,029,075,527
1991	650,700,000	255,325,000	86,514,000	3,445,080	407,225,000	588,759,000	591,294,000	404,690,000	995,983,881
1992	651,842,000	252,158,000	90,062,000	3,482,861	407,239,000	590,306,000	588,575,000	408,970,000	997,544,933
1993	576,652,000	274,901,000	89,549,000	4,322,263	351,053,000	594,371,000	516,219,000	429,205,000	945,424,286
1994	640,260,000	300,517,000	88,081,000	4,646,032	399,103,000	634,401,000	566,289,000	467,216,000	1,033,504,293
1995	613,764,679	327,997,855	86,499,740	4,711,498	396,249,022	636,724,750	544,245,706	488,728,066	1,032,973,772
1996	630,741,292	340,290,580	88,055,815	4,767,826	409,848,871	654,006,642	563,667,655	500,187,858	1,063,855,513
1997	653,827,506	345,071,099	86,341,244	4,691,939	420,657,474	669,274,314	579,369,281	510,562,507	1,089,931,788
1998	640,586,262	385,930,397	85,766,784	5,251,724	417,727,882	699,807,285	570,575,604	546,959,563	1,117,535,167
1999	601,731,551	406,714,233	87,217,912	4,767,752	391,789,870	708,641,558	529,594,228	570,837,200	1,100,431,428
2000	574,275,630	409,203,124	85,560,584	4,572,223	373,658,726	699,952,835	507,517,246	566,094,315	1,073,611,561
2001	611,291,051	434,414,339	80,043,399	1,940,017	380,626,833	747,061,973	528,777,761	598,911,045	1,127,688,806
2002	572,103,243	438,353,294	82,459,406	1,367,118	357,384,967	736,898,094	492,915,076	601,367,985	1,094,283,061
2003	541,475,747	442,618,093	86,366,464	1,292,269	352,784,686	718,967,887	469,246,727	602,505,846	1,071,752,573

Year	Rank				Mining Method		Location		Total ¹
	Bituminous Coal ¹	Subbituminous Coal	Lignite	Anthracite ¹	Underground	Surface ¹	East of Mississippi River ¹	West of Mississippi River ¹	
2004	561,484,652	465,368,953	83,539,698	1,705,567	367,557,255	744,541,615	484,795,840	627,303,030	1,112,098,870
2005	571,177,133	474,675,461	83,941,728	1,703,777	368,611,500	762,886,599	493,801,042	637,697,057	1,131,498,099
2006	561,631,018	515,332,638	84,248,267	1,537,736	359,021,815	803,727,844	490,797,869	671,951,790	1,162,749,659
2007	542,757,594	523,724,347	78,584,915	1,568,489	351,789,934	794,845,411	478,161,383	668,473,962	1,146,635,345
2008	555,267,210	539,145,383	75,683,638	1,712,438	357,079,371	814,729,298	493,342,095	678,466,574	1,171,808,669
2009	504,101,778	496,421,871	72,478,549	1,921,194	332,061,582	742,861,810	449,593,554	625,329,838	1,074,923,392
2010	489,532,051	514,829,513	78,230,494	1,776,090	337,154,614	747,213,534	446,196,808	638,171,340	1,084,368,148
2011	525,995,943	486,295,739	81,101,129	2,234,725	345,605,509	750,022,027	456,446,210	639,181,326	1,095,627,536
2012	485,363,301	449,799,910	78,927,292	2,367,915	342,386,637	674,071,781	423,475,610	592,982,808	1,016,458,418
2013	471,182,631	434,287,168	77,228,703	2,143,277	341,684,553	643,157,226	407,340,833	577,500,946	984,841,779
2014	479,990,818	438,623,717	79,487,116	1,947,107	354,703,991	645,344,767	409,520,451	590,528,307	1,000,048,758
2015	404,426,770	419,514,932	70,857,085	2,141,776	306,821,302	590,119,261	348,977,735	547,962,828	896,940,563
2016	325,147,260	330,242,617	71,309,951	1,664,670	252,106,254	476,258,244	281,627,159	446,737,339	728,364,498
2017	353,519,714	351,502,385	67,674,760	1,912,498	273,128,860	501,480,497	304,429,935	470,179,422	774,609,357

¹ Beginning in 2001, includes a small amount of refuse recovery.

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

Web Page: For related information, see <http://www.eia.gov/coal/>.

Sources: 1949-1975 Bureau of Mines, Minerals Yearbook, 'Coal Bituminous and Lignite' and 'Coal Pennsylvania Anthracite' chapters. 1976 U.S. Energy Information Administration (EIA), Energy Data Reports, Coal Bituminous and Lignite in 1976 and Coal Pennsylvania Anthracite 1976. 1977 and 1978 EIA, Energy Data Reports, Bituminous Coal and Lignite Production and Mine Operations 1977. 1978, Coal Pennsylvania Anthracite 1977. 1978, and Coal Production, annual reports. 1979 and 1980 EIA, Energy Data Reports, Weekly Coal Report and Coal Production, annual reports. 1981-1988 EIA, Weekly Coal Production and Coal Production, annual reports. 1989-2000 EIA, Coal Industry Annual, annual reports. 2001-2010 EIA, Annual Coal Report, annual reports. 2011 EIA, Quarterly Coal Report October-December 2011 (April 2012), Table 1. EIA, Form EIA-7A, 'Coal Production Report'. and U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, 'Quarterly Mine Employment and Coal Production Report'.

Table ES2. Coal Mining Productivity, 1949-2017(Short Tons per Employee Hour)¹

Year	Mining Method		East of the Mississippi River			West of the Mississippi River			Total ²
	Underground	Surface ²	Underground	Surface ²	Total ²	Underground	Surface ²	Total ²	
1949	0.68	1.92	NA	NA	NA	NA	NA	NA	0.72
1950	0.72	1.96	NA	NA	NA	NA	NA	NA	0.76
1951	0.76	2.00	NA	NA	NA	NA	NA	NA	0.80
1952	0.80	2.10	NA	NA	NA	NA	NA	NA	0.84
1953	0.88	2.22	NA	NA	NA	NA	NA	NA	0.93
1954	1.00	2.48	NA	NA	NA	NA	NA	NA	1.08
1955	1.04	2.65	NA	NA	NA	NA	NA	NA	1.14
1956	1.08	2.67	NA	NA	NA	NA	NA	NA	1.19
1957	1.11	2.73	NA	NA	NA	NA	NA	NA	1.23
1958	1.17	2.73	NA	NA	NA	NA	NA	NA	1.31
1959	1.26	2.87	NA	NA	NA	NA	NA	NA	1.43
1960	1.33	2.91	NA	NA	NA	NA	NA	NA	1.52
1961	1.43	3.16	NA	NA	NA	NA	NA	NA	1.64
1962	1.50	3.40	NA	NA	NA	NA	NA	NA	1.74
1963	1.60	3.66	NA	NA	NA	NA	NA	NA	1.87
1964	1.72	3.76	NA	NA	NA	NA	NA	NA	1.99
1965	1.75	4.10	NA	NA	NA	NA	NA	NA	2.09
1966	1.83	4.28	NA	NA	NA	NA	NA	NA	2.23
1967	1.88	4.48	NA	NA	NA	NA	NA	NA	2.31
1968	1.93	4.33	NA	NA	NA	NA	NA	NA	2.35
1969	1.95	4.50	NA	NA	NA	NA	NA	NA	2.41
1970	1.72	4.53	NA	NA	NA	NA	NA	NA	2.30
1971	1.50	4.49	NA	NA	NA	NA	NA	NA	2.19
1972	1.49	4.54	NA	NA	NA	NA	NA	NA	2.18
1973	1.46	4.58	NA	NA	NA	NA	NA	NA	2.16
1974	1.41	4.74	NA	NA	NA	NA	NA	NA	2.31
1975	1.19	3.26	NA	NA	NA	NA	NA	NA	1.81
1976	1.14	3.25	NA	NA	NA	NA	NA	NA	1.78
1977	1.09	3.16	NA	NA	NA	NA	NA	NA	1.80
1978	1.04	3.03	NA	NA	NA	NA	NA	NA	1.77
1979	1.13	3.08	NA	NA	NA	NA	NA	NA	1.81
1980	1.20	3.21	NA	NA	NA	NA	NA	NA	1.93
1981	1.29	3.42	NA	NA	NA	NA	NA	NA	2.10
1982	1.37	3.36	NA	NA	NA	NA	NA	NA	2.11
1983	1.61	3.81	NA	NA	NA	NA	NA	NA	2.50
1984	1.72	4.03	1.69	2.56	1.98	2.49	8.15	7.07	2.64
1985	1.78	4.24	1.75	2.52	2.00	2.45	8.61	7.40	2.74
1986	2.00	4.60	1.96	2.75	2.21	2.80	9.02	7.90	3.01
1987	2.20	4.98	2.16	2.97	2.42	3.39	9.86	8.73	3.30
1988	2.38	5.32	2.32	2.99	2.54	3.55	10.73	9.38	3.55
1989	2.46	5.61	2.39	3.13	2.63	3.92	11.86	10.21	3.70
1990	2.54	5.94	2.46	3.32	2.73	4.01	12.26	10.41	3.83
1991	2.69	6.38	2.59	3.49	2.86	4.53	12.36	10.79	4.09
1992	2.93	6.59	2.82	3.61	3.07	4.85	12.49	11.03	4.36
1993	2.95	7.23	2.81	3.74	3.11	5.18	13.94	12.14	4.70
1994	3.19	7.67	3.02	3.85	3.28	5.93	15.19	13.22	4.98
1995	3.39	8.48	3.19	4.03	3.45	6.32	16.23	14.18	5.38
1996	3.57	9.05	3.36	4.25	3.63	7.03	17.89	15.66	5.69
1997	3.83	9.46	3.63	4.49	3.89	6.82	18.63	16.04	6.04
1998	3.90	9.58	3.69	4.31	3.89	6.76	18.82	16.27	6.20
1999	3.99	10.39	3.74	4.48	3.97	7.45	19.57	17.18	6.61
2000	4.15	11.01	3.89	4.82	4.18	7.66	20.04	17.62	6.99
2001	4.02	10.58	3.71	4.53	3.98	8.39	20.63	18.32	6.82
2002	3.98	10.36	3.67	4.22	3.86	7.80	20.67	18.06	6.80
2003	4.04	10.75	3.68	4.18	3.85	8.33	21.42	18.67	6.95
2004	3.96	10.55	3.59	3.95	3.72	8.22	22.04	19.00	6.80
2005	3.62	10.03	3.28	3.75	3.44	7.48	21.98	18.50	6.36

Year	Mining Method		East of the Mississippi River			West of the Mississippi River			Total ²
	Underground	Surface ²	Underground	Surface ²	Total ²	Underground	Surface ²	Total ²	
2006	3.37	10.18	3.06	3.74	3.29	6.62	22.26	18.33	6.26
2007	3.34	10.24	3.03	3.74	3.27	6.52	22.35	18.23	6.27
2008	3.15	9.81	2.87	3.58	3.12	6.07	21.85	17.77	5.96
2009	2.99	9.22	2.74	3.33	2.94	5.51	19.85	16.15	5.61
2010	2.89	9.46	2.66	3.24	2.84	5.54	20.25	16.60	5.55
2011	2.72	8.97	2.49	3.04	2.67	5.25	19.59	15.93	5.19
2012	2.84	8.97	2.58	2.99	2.70	5.65	18.15	15.03	5.19
2013	3.07	9.69	2.80	3.16	2.89	6.09	18.35	15.39	5.53
2014	3.35	10.42	3.07	3.27	3.12	6.47	18.86	15.96	5.95
2015	3.45	10.95	3.24	3.24	3.24	5.74	18.20	15.51	6.28
2016	3.83	10.73	3.68	3.22	3.57	5.18	16.54	14.20	6.61
2017	3.77	10.92	3.55	3.16	3.46	6.10	17.91	15.49	6.55

NA=Not available.

1 Data through 1973 for bituminous coal, subbituminous coal, and lignite, and data through 1978 for anthracite, were originally reported in short tons per employee day these data were converted to short tons per employee hour by assuming an eight-hour day. Through 1997, other data were calculated by dividing total production by total labor hours worked by all mine employees except office workers; beginning in 1998, the calculation also includes office workers.

2 Beginning in 2001, includes a small amount of refuse recovery.

3 Through 1978, data for anthracite are not available by mining method, but are included in 'Total'.

Note: Web Page: For related information, see <http://www.eia.gov/coal/>.

Sources: 1949-1975 Bureau of Mines, Minerals Yearbook, 'Coal Bituminous and Lignite' and 'Coal Pennsylvania Anthracite' chapters. 1976 U.S. Energy Information Administration (EIA), Energy Data Reports, Coal Bituminous and Lignite in 1976 and Coal Pennsylvania Anthracite 1976. 1977 and 1978 EIA, Energy Data Reports, Bituminous Coal and Lignite Production and Mine Operations 1977. 1978 and Coal Pennsylvania Anthracite 1977. 1978. 1979 EIA, Energy Data Report, Coal Production 1979. 1980-1988 EIA, Coal Production, annual reports. 1989-2000 EIA, Coal Industry Annual, annual reports. 2001-2010 EIA, Annual Coal Report, annual reports. 2011 EIA, Form EIA-7A, 'Coal Production Report,' and U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, 'Quarterly Mine Employment and Coal Production Report'.

Table ES-3 Coke Overview, 1949-2017

(Thousand Short Tons)

Year	Production	Trade			Stock Change ²	Consumption ³
		Imports	Exports	Net Imports ¹		
1949	63,637	279	548	-269	176	63,192
1950	72,718	438	398	40	-659	73,417
1951	79,331	162	1,027	-865	372	78,094
1952	68,254	313	792	-479	419	67,356
1953	78,837	157	520	-363	778	77,696
1954	59,662	116	388	-272	269	59,121
1955	75,302	126	531	-405	-1,248	76,145
1956	74,483	131	656	-525	634	73,324
1957	75,951	118	822	-704	814	74,433
1958	53,604	122	393	-271	675	52,658
1959	55,864	123	460	-337	859	54,668
1960	57,229	126	353	-227	56	56,946
1961	51,711	127	445	-318	-696	52,089
1962	51,910	142	364	-222	-135	51,823
1963	54,278	153	451	-298	-1,022	55,002
1964	62,145	103	524	-421	-913	62,637
1965	66,854	90	834	-744	731	65,379
1966	67,402	96	1,102	-1,006	376	66,020
1967	64,580	92	710	-618	2,390	61,572
1968	63,653	94	792	-698	517	62,438
1969	64,757	173	1,629	-1,456	-2,865	66,166
1970	66,525	153	2,478	-2,325	993	63,207
1971	57,436	174	1,509	-1,335	-588	56,689
1972	60,507	185	1,232	-1,047	-586	60,046
1973	64,325	1,094	1,395	-301	-1,741	65,765
1974	61,581	3,540	1,278	2,262	-249	64,092
1975	57,207	1,819	1,273	546	4,061	53,692
1976	58,333	1,311	1,315	-4	1,495	56,834
1977	53,509	1,829	1,241	588	-47	54,144
1978	49,009	5,722	693	5,029	-2,910	56,948
1979	52,943	3,974	1,440	2,534	1,651	53,826
1980	46,132	659	2,071	-1,412	3,442	41,278
1981	42,786	527	1,170	-643	-1,903	44,046
1982	28,115	120	993	-873	1,466	25,776
1983	25,808	35	665	-630	-4,672	29,850
1984	30,399	582	1,045	-463	199	29,737
1985	28,438	578	1,122	-544	-1,163	29,057
1986	24,917	329	1,004	-675	-486	24,728
1987	26,304	922	574	348	-1,002	27,654
1988	28,945	2,688	1,093	1,595	519	30,021
1989	28,045	2,311	1,085	1,226	337	28,934
1990	27,617	765	572	193	-1	27,811
1991	24,046	1,183	792	391	189	24,248
1992	23,410	2,098	702	1,396	-224	25,030
1993	23,182	2,155	1,062	1,093	-422	24,697
1994	22,686	3,338	986	2,352	-525	25,563
1995	23,749	3,820	1,358	2,462	366	25,845
1996	23,075	2,542	1,622	920	21	23,974
1997	22,116	3,139	1,266	1,873	-29	24,018
1998	20,041	3,834	1,129	2,705	-362	23,108
1999	20,016	3,224	898	2,326	-80	22,422
2000	20,808	3,781	1,146	2,635	201	23,242
2001	18,949	2,526	1,346	1,180	-73	20,202
2002	16,778	3,242	792	2,450	-375	19,603
2003	17,173	2,759	722	2,037	-227	19,436
2004	16,909	6,873	1,319	5,555	-28	22,492
2005	16,719	3,529	1,747	1,782	263	18,239

Year	Production	Trade			Stock Change ²	Consumption ³
		Imports	Exports	Net Imports ¹		
2006	16,404	4,068	1,616	2,451	71	18,784
2007	16,201	2,460	1,444	1,016	-52	17,270
2008	15,646	3,603	1,959	1,644	284	17,006
2009	11,143	347	1,307	-960	-140	10,323
2010	15,022	1,214	1,463	-249	-74	14,847
2011	15,420	1,418	970	448	43	15,825
2012	15,172	1,135	974	161	-139	15,472
2013	15,320	138	840	-703	266	14,351
2014	15,154	77	946	-869	-75	14,359
2015	13,755	140	857	-717	-90	13,128
2016	11,855	229	1,000	-772	-128	11,212
2017	12,948	58	1,209	-1,151	-21	11,818

(s)=Less than 0.05 million short tons.

1 Net imports equal imports minus exports. Minus sign indicates exports are greater than imports.

2 Producer and distributor stocks at end of year. A negative value indicates a decrease in stocks; a positive value indicates an increase.

3 'Consumption' is calculated as the sum of production and imports minus exports and stock change.

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

Web Page: For related information, see <http://www.eia.gov/coal/>.

Sources: 1949-1975 Bureau of Mines, Minerals Yearbook, 'Coke and Coal Chemicals' chapter. 1976-1980 U.S. Energy Information Administration (EIA), Energy Data Report, Coke and Coal Chemicals, annual reports. 1981-2004 EIA, Quarterly Coal Report (QCR) October-December, quarterly reports. 2005 forward EIA, QCR October-December 2011 (April 2012), Table ES-2.

Table ES-4 Nominal²Coal Prices, 1949- 2017

(dollars per short ton)

Year	Bituminous	Subbituminous	Lignite ¹	Anthracite	Total
1949	4.90	*	2.37	8.90	5.24
1950	4.86	*	2.41	9.34	5.19
1951	4.94	*	2.44	9.94	5.29
1952	4.92	*	2.39	9.58	5.27
1953	4.94	*	2.38	9.87	5.23
1954	4.54	*	2.43	8.76	4.81
1955	4.51	*	2.38	8.00	4.69
1956	4.83	*	2.39	8.33	5.01
1957	5.09	*	2.35	9.11	5.28
1958	4.87	*	2.35	9.14	5.07
1959	4.79	*	2.25	8.55	4.95
1960	4.71	*	2.29	8.01	4.83
1961	4.60	*	2.24	8.26	4.73
1962	4.50	*	2.23	7.99	4.62
1963	4.40	*	2.17	8.64	4.55
1964	4.46	*	2.14	8.93	4.60
1965	4.45	*	2.13	8.51	4.55
1966	4.56	*	1.98	8.08	4.62
1967	4.64	*	1.92	8.15	4.69
1968	4.70	*	1.79	8.78	4.75
1969	5.02	*	1.86	9.91	5.08
1970	6.30	*	1.86	11.03	6.34
1971	7.13	*	1.93	12.08	7.15
1972	7.78	*	2.04	12.40	7.72
1973	8.71	*	2.09	13.65	8.59
1974	16.01	*	2.19	22.19	15.82
1975	19.79	*	3.17	32.26	19.35
1976	20.11	*	3.74	33.92	19.56
1977	20.59	*	4.03	34.86	19.95
1978	22.64	*	5.68	35.25	21.86
1979	27.31	9.55	6.48	41.06	23.75
1980	29.17	11.08	7.60	42.51	24.65
1981	31.51	12.18	8.85	44.28	26.40
1982	32.15	13.37	9.79	49.85	27.25
1983	31.11	13.03	9.91	52.29	25.98
1984	30.63	12.41	10.45	48.22	25.61
1985	30.78	12.57	10.68	45.80	25.20
1986	28.84	12.26	10.64	44.12	23.79
1987	28.19	11.32	10.85	43.65	23.07
1988	27.66	10.45	10.06	44.16	22.07
1989	27.40	10.16	9.91	42.93	21.82
1990	27.43	9.70	10.13	39.40	21.76
1991	27.49	9.68	10.89	36.34	21.49
1992	26.78	9.68	10.81	34.24	21.03
1993	26.15	9.33	11.11	32.94	19.85
1994	25.68	8.37	10.77	36.07	19.41
1995	25.56	8.10	10.83	39.78	18.83
1996	25.17	7.87	10.92	36.78	18.50
1997	24.64	7.42	10.91	35.12	18.14
1998	24.87	6.96	11.08	42.91	17.67
1999	23.92	6.87	11.04	35.13	16.63
2000	24.15	7.12	11.41	40.90	16.78
2001	25.67	7.00	13.29	47.67	17.58
2002	26.54	7.64	12.52	47.78	17.89
2003	26.77	8.11	12.20	49.87	17.92
2004	30.75	8.51	12.59	43.52	20.07
2005	36.70	8.93	13.26	47.70	23.34
2006	39.61	10.12	13.83	51.68	24.63

Year	Bituminous	Subbituminous	Lignite ¹	Anthracite	Total
2007	41.24	11.21	14.99	58.92	25.82
2008	51.39	12.31	16.50	60.76	31.25
2009	55.44	13.35	17.26	57.10	33.24
2010	60.88	14.11	18.76	59.51	35.61
2011	68.50	14.07	18.77	75.70	41.01
2012	66.04	15.34	19.60	80.21	39.95
2013	60.61	14.86	19.96	87.82	37.24
2014	55.99	14.72	19.44	90.98	34.83
2015	51.55	14.63	22.09	97.91	31.81
2016	48.24	14.83	19.98	97.61	30.57
2017	55.60	14.29	19.51	93.17	33.72

* = Through 1978, subbituminous coal is included in 'Bituminous Coal'.

1 Because of withholding to protect company confidentiality, lignite prices exclude Texas for 1955- 1977 and Montana for 1974 1978. As a result, lignite prices for 1974-1977 are for North Dakota only.

2 See 'Nominal Dollars' in Glossary.

Notes: Prices are free-on-board (F.O.B.) rail/barge prices, which are the F.O.B. prices of coal at the point of first sale, excluding freight or shipping and insurance costs. Prices are for open market and captive coal sales; see 'Captive Coal,' 'Free on Board (F.O.B.),' and 'Open Market Coal' in Glossary.

Web Page: For related information, see <http://www.eia.gov/coal/>.

Sources: 1949-1975 Bureau of Mines (BOM), Minerals Yearbook. 1976 U.S. Energy Information Administration (EIA), Energy Data Report, Coal Bituminous and Lignite in 1976, and BOM, Minerals Yearbook. 1977 and 1978 EIA, Energy Data Reports, Bituminous Coal and Lignite Production and Mine Operations, and Coal Pennsylvania Anthracite. 1979 EIA, Coal Production, and Energy Data Report, Coal Pennsylvania Anthracite. 1980-1992 EIA, Coal Production, annual reports. 1993-2000 EIA, Coal Industry Annual, annual reports and unpublished revisions. 2001-2010 EIA, Annual Coal Report, annual reports. 2011 EIA, Form EIA-7A, 'Coal Production Report,' and U.S. Department of Labor, Mine Safety and Health Administration, Form 7000-2, 'Quarterly Mine Employment and Coal Production Report.'

Table ES5. Average Price of U.S. Coal Exports and Imports, 2011-2017

(dollars per short ton)

Year	Exports			Imports		
	Metallurgical Coal	Non-Metallurgical	Coke	Metallurgical Coal	Non-Metallurgical	Coke
2011	185.99	80.42	216.92	263.48	81.11	389.50
2012	152.23	76.16	214.58	186.63	84.27	338.16
2013	115.50	69.23	220.88	148.59	75.41	212.10
2014	99.49	67.05	246.53	105.11	76.83	117.18
2015	89.31	56.44	230.04	96.50	67.16	146.42
2016	84.48	50.76	216.88	73.98	64.86	143.27
2017	134.55	58.29	231.22	212.16	66.08	176.38

Notes: Exports: Average price is based on the free alongside ship (f.a.s.) value. Imports: Average price is based on the customs import value. Customs import value is the price paid for merchandise when sold for exportation to the United States, excluding U.S. import duties, freight, insurance, and other charges incurred in bringing the merchandise to the United States. Total may not equal sum of components because of independent rounding.

Sources: Exports: U.S. Department of Commerce, Bureau of the Census, 'Monthly Report EM 545;' and Imports: U.S. Department of Commerce, Bureau of the Census, 'Monthly Report IM 145.'

Coal Production

Table 1. Coal Production and Number of Mines by State and Mine Type, 2017 and 2016

(thousand short tons)

Coal-Producing State and Region ¹	2017		2016		Percent Change	
	Number of Mines	Production	Number of Mines	Production	Number of Mines	Production
Alabama	30	12,861	30	9,643	-	33.4
Underground	7	10,491	7	7,434	-	41.1
Surface	23	2,370	23	2,209	-	7.3
Alaska	1	959	1	932	-	2.9
Surface	1	959	1	932	-	2.9
Arizona	1	6,221	1	5,423	-	14.7
Surface	1	6,221	1	5,423	-	14.7
Arkansas	3	43	3	49	-	-13.5
Underground	1	24	1	37	-	-35.0
Surface	2	19	2	13	-	49.2
Colorado	7	15,047	8	12,634	-12.5	19.1
Underground	4	11,118	5	8,785	-20.0	26.6
Surface	3	3,929	3	3,849	-	2.1
Illinois	18	48,204	21	43,422	-14.3	11.0
Underground	10	44,906	12	41,257	-16.7	8.8
Surface	8	3,298	9	2,165	-11.1	52.4
Indiana	18	31,472	20	28,767	-10.0	9.4
Underground	4	14,396	8	12,263	-50.0	17.4
Surface	14	17,076	12	16,503	16.7	3.5
Kansas	-	-	1	27	-	-
Surface	-	-	1	27	-	-
Kentucky Total	151	41,784	158	42,868	-4.4	-2.5
Underground	58	31,512	60	32,711	-3.3	-3.7
Surface	93	10,273	98	10,157	-5.1	1.1
Kentucky (East)	138	18,179	142	16,772	-2.8	8.4
Underground	51	9,959	51	9,654	-	3.2
Surface	87	8,220	91	7,118	-4.4	15.5
Kentucky (West)	13	23,606	16	26,096	-18.8	-9.5
Underground	7	21,553	9	23,057	-22.2	-6.5
Surface	6	2,053	7	3,039	-14.3	-32.5
Louisiana	2	2,079	2	2,798	-	-25.7
Surface	2	2,079	2	2,798	-	-25.7
Maryland	14	1,808	17	1,616	-17.7	11.9
Underground	2	744	2	709	-	5.0
Surface	12	1,064	15	907	-20.0	17.3
Mississippi	2	2,604	2	2,870	-	-9.3
Surface	2	2,604	2	2,870	-	-9.3
Missouri	1	244	1	234	-	4.5
Surface	1	244	1	234	-	4.5
Montana	6	35,232	6	32,336	-	9.0
Underground	1	5,884	1	5,609	-	4.9
Surface	5	29,348	5	26,727	-	9.8
New Mexico	3	13,844	3	13,341	-	3.8
Underground	1	5,327	1	4,331	-	23.0
Surface	2	8,516	2	9,010	-	-5.5
North Dakota	5	28,788	5	28,121	-	2.4
Surface	5	28,788	5	28,121	-	2.4
Ohio	18	9,489	19	12,564	-5.3	-24.5
Underground	7	6,801	9	9,297	-22.2	-26.9
Surface	11	2,688	10	3,267	10.0	-17.7
Oklahoma	5	561	4	654	25.0	-14.2
Underground	1	319	1	384	-	-16.8
Surface	4	242	3	271	33.3	-10.5
Pennsylvania Total	153	49,085	172	45,720	-11.1	7.4
Underground	39	43,589	41	41,386	-4.9	5.3
Surface	114	5,497	131	4,334	-13.0	26.8

Coal-Producing State and Region¹	2017		2016		Percent Change	
	Number of Mines	Production	Number of Mines	Production	Number of Mines	Production
Pennsylvania (Anthracite)	57	1,867	53	1,500	7.6	24.5
Underground	10	79	10	91	-	-13.5
Surface	47	1,788	43	1,409	9.3	26.9
Pennsylvania (Bituminous)	96	47,219	119	44,220	-19.3	6.8
Underground	29	43,510	31	41,295	-6.5	5.4
Surface	67	3,709	88	2,925	-23.9	26.8
Tennessee	6	431	6	644	-	-33.1
Underground	3	329	4	423	-25.0	-22.2
Surface	3	102	2	221	50.0	-53.8
Texas	10	36,382	14	39,001	-28.6	-6.7
Surface	10	36,382	14	39,001	-28.6	-6.7
Utah	8	14,326	8	13,966	-	2.6
Underground	7	13,602	7	13,297	-	2.3
Surface	1	724	1	669	-	8.2
Virginia	52	13,202	54	12,910	-3.7	2.3
Underground	25	9,820	25	8,971	-	9.5
Surface	27	3,382	29	3,939	-6.9	-14.1
West Virginia Total	140	92,791	123	79,757	13.8	16.3
Underground	66	72,552	68	64,045	-2.9	13.3
Surface	74	20,239	55	15,713	34.6	28.8
West Virginia (Northern)	15	46,754	16	43,524	-6.3	7.4
Underground	11	46,608	13	43,293	-15.4	7.7
Surface	4	147	3	231	33.3	-36.6
West Virginia (Southern)	125	46,037	107	36,233	16.8	27.1
Underground	55	25,944	55	20,752	-	25.0
Surface	70	20,092	52	15,481	34.6	29.8
Wyoming	17	316,454	16	297,218	6.3	6.5
Underground	1	1,716	1	1,167	-	47.0
Surface	16	314,739	15	296,051	6.7	6.3
Appalachia Total	551	197,846	563	179,626	-2.1	10.1
Underground	200	154,285	207	141,919	-3.4	8.7
Surface	351	43,561	356	37,707	-1.4	15.5
Appalachia Central	321	77,848	309	66,558	3.9	17.0
Underground	134	46,053	135	39,800	-0.7	15.7
Surface	187	31,796	174	26,759	7.5	18.8
Appalachia Northern	200	107,137	224	103,424	-10.7	3.6
Underground	59	97,741	65	94,685	-9.2	3.2
Surface	141	9,396	159	8,739	-11.3	7.5
Appalachia Southern	30	12,861	30	9,643	-	33.4
Underground	7	10,491	7	7,434	-	41.1
Surface	23	2,370	23	2,209	-	7.3
Interior Region Total	72	145,194	84	143,917	-14.3	0.9
Underground	23	81,198	31	76,998	-25.8	5.5
Surface	49	63,997	53	66,919	-7.6	-4.4
Illinois Basin	49	103,282	57	98,285	-14.0	5.1
Underground	21	80,855	29	76,578	-27.6	5.6
Surface	28	22,427	28	21,707	-	3.3
Other Interior	23	41,913	27	45,632	-14.8	-8.2
Underground	2	343	2	420	-	-18.4
Surface	21	41,570	25	45,212	-16.0	-8.1
Western Region Total	48	430,870	48	403,971	-	6.7
Underground	14	37,646	15	33,189	-6.7	13.4
Surface	34	393,224	33	370,782	3.0	6.1
Powder River Basin	16	334,366	16	313,752	-	6.6
Surface	16	334,366	16	313,752	-	6.6
Uinta Basin	12	28,068	12	25,077	-	11.9
Underground	10	24,173	10	21,416	-	12.9
Surface	2	3,896	2	3,661	-	6.4
Other Western	20	68,436	20	65,142	-	5.1
Underground	4	13,474	5	11,774	-20.0	14.4
Surface	16	54,962	15	53,368	6.7	3.0

Coal-Producing State and Region ¹	2017		2016		Percent Change	
	Number of Mines	Production	Number of Mines	Production	Number of Mines	Production
East of Mississippi River	602	303,731	622	280,780	-3.2	8.2
West of Mississippi River	69	470,179	73	446,734	-5.5	5.3
U.S. Subtotal	671	773,911	695	727,514	-3.5	6.4
Refuse Recovery	9	699	15	851	-40.0	-17.9
U.S. Total	680	774,609	710	728,364	-4.2	6.4

- = No data reported.

1 For a definition of coal producing regions, see the Glossary.

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

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

Table 2. Coal Production and Number of Mines by State, County, and Mine Type, 2017

(thousand short tons)

Coal-Producing State and County	Underground		Surface		Total	
	Number of Mines	Production	Number of Mines	Production	Number of Mines	Production
Alabama	7	10,491	23	2,370	30	12,861
Bibb	-	-	1	88	1	88
Franklin	-	-	1	7	1	7
Jefferson	3	6,466	6	967	9	7,433
Shelby	1	4	1	123	2	127
Tuscaloosa	1	1,849	2	232	3	2,081
Walker	2	2,172	11	925	13	3,097
Winston	-	-	1	27	1	27
Alaska	-	-	1	959	1	959
Denali	-	-	1	959	1	959
Arizona	-	-	1	6,221	1	6,221
Navajo	-	-	1	6,221	1	6,221
Arkansas	1	24	2	19	3	43
Sebastian	1	24	2	19	3	43
Colorado	4	11,118	3	3,929	7	15,047
Gunnison	1	4,821	-	-	1	4,821
La Plata	1	547	-	-	1	547
Moffat	-	-	2	3,896	2	3,896
Montrose	-	-	1	33	1	33
Rio Blanco	1	1,907	-	-	1	1,907
Routt	1	3,843	-	-	1	3,843
Illinois	10	44,906	8	3,298	18	48,204
Franklin	1	12,812	-	-	1	12,812
Gallatin	-	-	1	373	1	373
Hamilton	1	6,129	-	-	1	6,129
Macoupin	1	2,032	-	-	1	2,032
Perry	1	3,610	3	436	4	4,046
Randolph	1	2,499	2	603	3	3,102
Saline	2	3,670	1	882	3	4,552
Sangamon	1	1,615	-	-	1	1,615
Wabash	-	-	1	1,005	1	1,005
Washington	1	6,202	-	-	1	6,202
Williamson	1	6,336	-	-	1	6,336
Indiana	4	14,396	14	17,076	18	31,472
Clay	-	-	1	381	1	381
Daviess	-	-	2	1,372	2	1,372
Dubois	-	-	2	1,477	2	1,477
Gibson	2	8,165	1	1,951	3	10,116
Knox	2	6,231	-	-	2	6,231
Pike	-	-	2	223	2	223
Sullivan	-	-	2	7,435	2	7,435
Warrick	-	-	4	4,237	4	4,237
Kentucky	58	31,512	93	10,273	151	41,784
Bell	4	745	7	456	11	1,201
Breathitt	-	-	1	26	1	26
Daviess	-	-	3	223	3	223
Elliott	-	-	1	1	1	1
Floyd	5	1,116	3	249	8	1,365
Harlan	9	2,063	6	1,417	15	3,479
Hopkins	1	3,576	-	-	1	3,576
Johnson	-	-	4	716	4	716
Knott	1	141	1	226	2	368
Knox	2	41	5	252	7	292
Laurel	-	-	1	2	1	2
Lawrence	-	-	3	60	3	60
Leslie	2	636	3	411	5	1,047

Coal-Producing State and County	Underground		Surface		Total	
	Number of Mines	Production	Number of Mines	Production	Number of Mines	Production
Letcher	1	34	3	35	4	69
Magoffin	-	-	2	101	2	101
Martin	1	333	-	-	1	333
McLean	1	1,313	-	-	1	1,313
Morgan	-	-	1	47	1	47
Muhlenberg	2	2,771	1	6	3	2,777
Ohio	1	2,302	2	1,824	3	4,126
Perry	4	1,756	9	2,342	13	4,098
Pike	21	3,000	24	1,449	45	4,449
Union	1	8,962	-	-	1	8,962
Webster	1	2,629	-	-	1	2,629
Whitley	1	94	13	431	14	525
Louisiana	-	-	2	2,079	2	2,079
De Soto	-	-	1	1,744	1	1,744
Natchitoches	-	-	1	335	1	335
Maryland	2	744	12	1,064	14	1,808
Allegany	1	219	8	917	9	1,136
Garrett	1	526	4	147	5	673
Mississippi	-	-	2	2,604	2	2,604
Choctaw	-	-	1	2,374	1	2,374
Kemper	-	-	1	230	1	230
Missouri	-	-	1	244	1	244
Bates	-	-	1	244	1	244
Montana	1	5,884	5	29,348	6	35,232
Big Horn	-	-	3	20,458	3	20,458
Musselshell	1	5,884	-	-	1	5,884
Richland	-	-	1	260	1	260
Rosebud	-	-	1	8,630	1	8,630
New Mexico	1	5,327	2	8,516	3	13,844
Mckinley	-	-	1	4,855	1	4,855
San Juan	1	5,327	1	3,661	2	8,989
North Dakota	-	-	5	28,788	5	28,788
McLean	-	-	1	7,219	1	7,219
Mercer	-	-	3	17,280	3	17,280
Oliver	-	-	1	4,288	1	4,288
Ohio	7	6,801	11	2,688	18	9,489
Belmont	-	-	1	395	1	395
Harrison	2	519	2	1,154	4	1,674
Jefferson	2	8	-	-	2	8
Monroe	1	5,677	-	-	1	5,677
Noble	-	-	1	455	1	455
Perry	1	592	1	235	2	827
Stark	-	-	1	32	1	32
Tuscarawas	1	4	2	178	3	182
Vinton	-	-	3	237	3	237
Oklahoma	1	319	4	242	5	561
Craig	-	-	1	53	1	53
Le Flore	1	319	1	74	2	393
Nowata	-	-	1	114	1	114
Okmulgee	-	-	1	1	1	1
Pennsylvania	39	43,589	114	5,497	153	49,085
Allegheny	-	-	1	14	1	14
Armstrong	5	631	1	50	6	681
Bedford	-	-	1	93	1	93
Butler	-	-	1	323	1	323
Cambria	2	546	6	528	8	1,075
Clarion	-	-	1	6	1	6
Clearfield	2	235	18	1,065	20	1,300
Columbia	-	-	1	39	1	39
Dauphin	1	13	-	-	1	13
Fayette	-	-	3	5	3	5

Coal-Producing State and County	Underground		Surface		Total	
	Number of Mines	Production	Number of Mines	Production	Number of Mines	Production
Greene	5	29,253	2	34	7	29,287
Indiana	7	2,033	8	78	15	2,112
Jefferson	1	202	5	241	6	443
Lackawanna	-	-	2	1	2	1
Luzerne	-	-	8	163	8	163
Lycoming	-	-	1	202	1	202
Mercer	-	-	1	91	1	91
Northumberland	3	12	9	305	12	317
Schuylkill	6	53	27	1,280	33	1,333
Somerset	6	1,428	13	744	19	2,172
Washington	1	9,180	1	1	2	9,182
Westmoreland	-	-	4	235	4	235
Tennessee	3	329	3	102	6	431
Campbell	-	-	1	10	1	10
Claiborne	3	329	2	92	5	421
Texas	-	-	10	36,382	10	36,382
Atascosa	-	-	1	3,071	1	3,071
Freestone	-	-	1	1,226	1	1,226
Harrison	-	-	2	4,079	2	4,079
Lee	-	-	1	7,186	1	7,186
Limestone	-	-	1	10,997	1	10,997
Maverick	-	-	1	2,437	1	2,437
Panola	-	-	1	2,345	1	2,345
Robertson	-	-	1	1,992	1	1,992
Rusk	-	-	1	3,048	1	3,048
Utah	7	13,602	1	724	8	14,326
Carbon	3	6,630	-	-	3	6,630
Emery	3	1,088	-	-	3	1,088
Kane	-	-	1	724	1	724
Sevier	1	5,884	-	-	1	5,884
Virginia	25	9,820	27	3,382	52	13,202
Buchanan	12	6,524	11	1,406	23	7,931
Dickenson	8	2,442	3	916	11	3,358
Russell	-	-	2	262	2	262
Tazewell	-	-	3	144	3	144
Wise	5	854	8	654	13	1,507
West Virginia	66	72,552	74	20,239	140	92,791
Barbour	1	1,463	-	-	1	1,463
Boone	4	2,528	7	2,456	11	4,984
Fayette	3	1,293	5	1,852	8	3,146
Grant	-	-	1	4	1	4
Greenbrier	1	125	9	665	10	790
Kanawha	5	4,696	4	1,561	9	6,258
Logan	10	5,669	9	4,214	19	9,884
Marion	2	13,246	2	122	4	13,368
Marshall	2	17,700	-	-	2	17,700
Mcdowell	15	1,630	12	2,188	27	3,818
Mercer	-	-	1	138	1	138
Mingo	3	2,177	8	3,176	11	5,353
Monongalia	2	1,378	1	20	3	1,398
Nicholas	1	517	-	-	1	517
Ohio	1	6,988	-	-	1	6,988
Raleigh	7	3,934	6	2,213	13	6,146
Taylor	1	3,381	-	-	1	3,381
Tucker	1	2,114	-	-	1	2,114
Upshur	1	336	-	-	1	336
Wayne	-	-	1	16	1	16
Wyoming	6	3,375	8	1,613	14	4,987
Wyoming	1	1,716	16	314,739	17	316,454
Campbell	-	-	11	276,774	11	276,774
Converse	-	-	1	28,504	1	28,504

Coal-Producing State and County	Underground		Surface		Total	
	Number of Mines	Production	Number of Mines	Production	Number of Mines	Production
Lincoln	-	-	2	4,409	2	4,409
Sweetwater	1	1,716	2	5,051	3	6,767
U.S. Subtotal	237	273,129	434	500,782	671	773,911
Refuse Recovery	-	-	-	-	9	699
U.S. Total	237	273,129	434	500,782	680	774,609

- = No data reported.

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

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

Table 3. Underground Coal Production by State and Mining Method, 2017

(thousand short tons)

Coal-Producing State and Region ¹	Continuous ²	Conventional and Other ³	Longwall ⁴	Total
Alabama	291	4	10,196	10,491
Arkansas	-	24	-	24
Colorado	547	-	10,571	11,118
Illinois	15,390	2,032	27,484	44,906
Indiana	14,396	-	-	14,396
Kentucky Total	31,304	208	-	31,512
Kentucky (East)	9,751	208	-	9,959
Kentucky (West)	21,553	-	-	21,553
Maryland	744	-	-	744
Montana	-	-	5,884	5,884
New Mexico	-	-	5,327	5,327
Ohio	1,112	12	5,677	6,801
Oklahoma	319	-	-	319
Pennsylvania Total	6,740	80	36,769	43,589
Pennsylvania (Anthracite)	35	43	-	79
Pennsylvania (Bituminous)	6,704	37	36,769	43,510
Tennessee	311	19	-	329
Utah	1,714	-	11,888	13,602
Virginia	4,392	75	5,353	9,820
West Virginia Total	22,964	434	49,153	72,552
West Virginia (Northern)	2,074	-	44,534	46,608
West Virginia (Southern)	20,890	434	4,620	25,944
Wyoming	-	-	1,716	1,716
Appalachia Total	46,305	831	107,148	154,285
Appalachia Central	35,345	736	9,972	46,053
Appalachia Northern	10,670	92	86,979	97,741
Appalachia Southern	291	4	10,196	10,491
Interior Region Total	51,658	2,056	27,484	81,198
Illinois Basin	51,339	2,032	27,484	80,855
Other Interior	319	24	-	343
Western Region Total	2,261	-	35,386	37,646
Uinta Basin	1,714	-	22,459	24,173
Other Western	547	-	12,927	13,474
East of Mississippi River	97,644	2,863	134,632	235,139
West of Mississippi River	2,580	24	35,386	37,990
U.S. Total	100,224	2,887	170,018	273,129

- = No data reported.

¹ For a definition of coal producing regions, see the Glossary.² Mines that produce greater than 50 percent of their coal by continuous mining methods.³ Mines that: 1. produce greater than 50 percent of their coal by conventional mining methods, 2. produce coal using shortwall, scoop loading, hand loading, or other methods, 3. have a 50/50 percent continuous/conventional split in mining methods, or 4. produce less than 25,000 short tons, which are not required to provide data.⁴ Mines that have any production from the longwall mining method. A typical longwall mining operation uses 80 percent longwall mining and 20 percent continuous mining.

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

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

Table 4. Coal Production by Coalbed Thickness and Mine Type, 2017

(thousand short tons)

Coal Thickness (inches)	Underground	Surface	Total
Under 7	-	64	64
7 - Under 13	374	2,016	2,390
13 - Under 19	685	5,731	6,416
19 - Under 25	261	10,199	10,461
25 - Under 31	1,363	7,296	8,658
31 - Under 37	11,199	11,116	22,315
37 - Under 43	10,843	8,651	19,495
43 - Under 49	9,423	13,339	22,762
49 - Under 55	15,654	5,938	21,593
55 - Under 61	30,089	3,825	33,914
61 - Under 67	11,112	9,100	20,212
67 - Under 73	35,018	5,732	40,750
73 - Under 79	56,381	6,458	62,839
79 - Under 85	22,685	1,454	24,139
85 - Under 91	25,421	5,354	30,775
91 - Under 97	8,315	1,381	9,696
97 - Under 103	-	4,794	4,794
103 - Under 109	9,727	2,727	12,453
109 - Under 115	1,844	8,224	10,068
115 - 120	15,316	447	15,763
Over 120	7,043	385,621	392,664
Unknown *	376	1,313	2,387
U.S. Total	273,129	500,782	774,609

- = No data reported.

* Includes mines with production of less than 25,000 short tons, which are not required to provide data, and refuse recovery.

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

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

Table 5. Coal Production and Coalbed Thickness by Major Coalbeds and Mine Type, 2017

Coalbed ID Number ¹ Coalbed Name	Production (thousand short tons)			Thickness (inches)		
	Underground	Surface	Total	Average ²	Low	High
1699 Wyodak	-	287,681	287,681	747	160	862
0212 Pittsburgh	54,833	358	55,191	80	36	108
0484 Herrin (Illinois No. 6)	50,451	1,669	52,120	74	43	86
0489 No. 9	29,152	7,907	37,059	66	24	80
0036 Pittsburgh	26,650	1,366	28,016	74	18	96
1569 Beulah-Zap	-	17,280	17,280	197	114	210
1696 Anderson-Dietz 1-Dietz 2	-	15,429	15,429	879	500	960
1570 Hagel	-	11,164	11,164	123	112	144
1808 Rosebud	-	10,560	10,560	260	186	276
0280 Blue Creek	9,801	161	9,962	52	16	64
0344 Pocahontas No. 3	9,469	-	9,469	60	35	71
1787 Roland	-	8,803	8,803	477	395	495
1701 Smith	-	8,794	8,794	880	880	880
0084 Lower Kittanning	5,604	1,744	7,349	64	10	89
0176 Eagle	5,547	930	6,477	43	4	114
1847 Upper Hiawatha	5,884	-	5,884	120	120	120
0204 Mammoth	5,884	-	5,884	108	108	108
0168 Lower Elkhorn	4,378	1,402	5,780	43	10	60
1488 Fruitland No. 8	5,327	439	5,767	161	149	162
0111 Coalburg	439	5,028	5,467	81	12	126
0071 Upper Freeport	4,450	544	4,994	62	12	91
1756 E	4,821	-	4,821	120	120	120
0103 Stockton-Lewiston	2,341	2,394	4,735	69	10	105
0151 Upper Elkhorn No. 3	3,088	1,456	4,544	45	12	115
1003 Menefee Formation	547	3,933	4,479	77	72	78
Major Coalbeds Total	228,667	389,042	617,709	433	4	960
Other Coalbeds	44,086	110,427	154,513	93	4	592
Unknown *	376	1,313	2,387	NA	NA	NA
U.S. Total	273,129	500,782	774,609	364	-	960

- = No data reported.

NA = Not Available.

* Includes mines with production of less than 25,000 short tons, which are not required to provide data, and refuse recovery.

1 The coalbed ID number is a unique code assigned by EIA to each correlated coalbed or to coal-bearing geologic formations, coal groups, or coal zones. See Coalbed name discussion in note below.

2 Average thickness is the bed thickness weighted by bed production.

Notes: This table lists the top 25 producing coalbeds. The category 'Other Coalbeds' includes all coalbeds from which less than 4.0 million short tons were produced during the year. In some regions, coalbeds are characteristically discontinuous or uncorrelatable from one location to another, and production is identified by the geological formations, coal groups, or coal zones of the native rock where the coalbeds occur. These types of coalbeds are found primarily in the Rocky Mountain States and even in the Gulf Coast lignite belt. Coalbeds of these types are also included in 'Other Coalbeds,' even though production may exceed 4.0 million short tons. Totals may not equal sum of components due to independent rounding. The coalbed name given is the name most commonly used in the State having the greatest production from that coalbed. The States having greatest production for each coalbed are Wyoming (coalbed codes 1699, 1701,1787); West Virginia (coalbed codes 212,84,111,168,103,71); Illinois (coalbed code 484); Indiana (coalbed code 489); Pennsylvania (coalbed code 36);North Dakota (coalbed codes 1569,1570);Montana (coalbed codes 1696, 1808,204);Virginia (coalbed code 344);Alabama (coalbed code 280), Utah(coalbed codes 1847,1830); New Mexico (coalbed codes 1488,1003);Colorado (coalbed codes 1756).In some other States where these are major producing beds, the following alternative coalbed names are also used: coalbed code 484 (Kentucky, Kentucky No 11), coalbed code 489 (Indiana, Indiana No 5), coalbed code 36 (Pennsylvania/Ohio, Pittsburgh No. 8), coalbed code 111 (Kentucky, Hazard No 6)

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

Table 6. Coal Production and Number of Mines by State and Coal Rank, 2017

(thousand short tons)

Coal-Producing State and Region ¹	Bituminous		Subbituminous		Lignite		Anthracite		Total	
	Number of Mines	Production	Number of Mines	Production	Number of Mines	Production	Number of Mines	Production	Number of Mines	Production
Alabama	30	12,861	-	-	-	-	-	-	30	12,861
Alaska	-	-	1	959	-	-	-	-	1	959
Arizona	1	6,221	-	-	-	-	-	-	1	6,221
Arkansas	3	43	-	-	-	-	-	-	3	43
Colorado	5	11,151	2	3,896	-	-	-	-	7	15,047
Illinois	18	48,204	-	-	-	-	-	-	18	48,204
Indiana	18	31,472	-	-	-	-	-	-	18	31,472
Kentucky Total	151	41,784	-	-	-	-	-	-	151	41,784
Kentucky (East)	138	18,179	-	-	-	-	-	-	138	18,179
Kentucky (West)	13	23,606	-	-	-	-	-	-	13	23,606
Louisiana	-	-	-	-	2	2,079	-	-	2	2,079
Maryland	14	1,808	-	-	-	-	-	-	14	1,808
Mississippi	-	-	-	-	2	2,604	-	-	2	2,604
Missouri	1	244	-	-	-	-	-	-	1	244
Montana	1	5,884	4	29,088	1	260	-	-	6	35,232
New Mexico	2	10,182	1	3,661	-	-	-	-	3	13,844
North Dakota	-	-	-	-	5	28,788	-	-	5	28,788
Ohio	18	9,489	-	-	-	-	-	-	18	9,489
Oklahoma	5	561	-	-	-	-	-	-	5	561
Pennsylvania Total	96	47,219	-	-	-	-	57	1,867	153	49,085
Pennsylvania (Anthracite)	-	-	-	-	-	-	57	1,867	57	1,867
Pennsylvania (Bituminous)	96	47,219	-	-	-	-	-	-	96	47,219
Tennessee	6	431	-	-	-	-	-	-	6	431
Texas	1	2,437	-	-	9	33,945	-	-	10	36,382
Utah	8	14,326	-	-	-	-	-	-	8	14,326
Virginia	52	13,202	-	-	-	-	-	-	52	13,202
West Virginia Total	140	92,791	-	-	-	-	-	-	140	92,791
West Virginia (Northern)	15	46,754	-	-	-	-	-	-	15	46,754
West Virginia (Southern)	125	46,037	-	-	-	-	-	-	125	46,037
Wyoming	1	2,556	16	313,899	-	-	-	-	17	316,454
Appalachia Total	494	195,979	-	-	-	-	57	1,867	551	197,846
Appalachia Central	321	77,848	-	-	-	-	-	-	321	77,848
Appalachia Northern	143	105,270	-	-	-	-	57	1,867	200	107,137
Appalachia Southern	30	12,861	-	-	-	-	-	-	30	12,861
Interior Region Total	59	106,567	-	-	13	38,627	-	-	72	145,194
Illinois Basin	49	103,282	-	-	-	-	-	-	49	103,282
Other Interior	10	3,286	-	-	13	38,627	-	-	23	41,913
Western Region Total	18	50,320	24	351,502	6	29,048	-	-	48	430,870
Powder River Basin	-	-	16	334,366	-	-	-	-	16	334,366
Uinta Basin	10	24,173	2	3,896	-	-	-	-	12	28,068
Other Western	8	26,147	6	13,241	6	29,048	-	-	20	68,436
East of Mississippi River	543	299,261	-	-	2	2,604	57	1,867	602	303,731
West of Mississippi River	28	53,606	24	351,502	17	65,071	-	-	69	470,179
U.S. Subtotal	571	352,867	24	351,502	19	67,675	57	1,867	671	773,911
Refuse Recovery	5	653	-	-	-	-	4	46	9	699
U.S. Total	576	353,520	24	351,502	19	67,675	61	1,912	680	774,609

- = No data reported.

¹ For a definition of coal producing regions, see Glossary.

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

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

Table 7. Coal Production by State, Mine Type, and Union Status, 2017

(thousand short tons)

Coal-Producing State and Region ¹	Union		Nonunion		Total	
	Underground	Surface	Underground	Surface	Underground	Surface
Alabama	10,196	-	291	2,339	10,487	2,339
Alaska	-	959	-	-	-	959
Arizona	-	6,221	-	-	-	6,221
Colorado	1,907	1,610	9,211	2,319	11,118	3,929
Illinois	-	-	44,906	3,298	44,906	3,298
Indiana	-	-	14,396	17,074	14,396	17,074
Kentucky Total	-	-	31,445	9,934	31,445	9,934
Kentucky (East)	-	-	9,892	7,887	9,892	7,887
Kentucky (West)	-	-	21,553	2,047	21,553	2,047
Louisiana	-	-	-	2,079	-	2,079
Maryland	-	-	744	1,048	744	1,048
Mississippi	-	-	-	2,604	-	2,604
Missouri	-	-	-	244	-	244
Montana	-	16,622	5,884	12,726	5,884	29,348
New Mexico	5,327	3,661	-	4,855	5,327	8,516
North Dakota	-	4,732	-	24,056	-	28,788
Ohio	-	-	6,789	2,684	6,789	2,684
Oklahoma	-	-	319	241	319	241
Pennsylvania Total	10,660	916	32,814	4,024	43,473	4,940
Pennsylvania (Anthracite)	-	916	-	675	-	1,591
Pennsylvania (Bituminous)	10,660	-	32,814	3,349	43,473	3,349
Tennessee	-	-	311	92	311	92
Texas	-	24,803	-	11,579	-	36,382
Utah	-	-	13,602	724	13,602	724
Virginia	-	-	9,745	3,320	9,745	3,320
West Virginia Total	34,145	926	38,346	19,040	72,492	19,966
West Virginia (Northern)	32,050	-	14,558	110	46,608	110
West Virginia (Southern)	2,095	926	23,789	18,930	25,884	19,856
Wyoming	1,716	6,720	-	308,019	1,716	314,739
Appalachia Total	55,001	1,842	98,932	40,434	153,933	42,276
Appalachia Central	2,095	926	43,737	30,229	45,832	31,155
Appalachia Northern	42,710	916	54,904	7,866	97,614	8,783
Appalachia Southern	10,196	-	291	2,339	10,487	2,339
Interior Region Total	-	24,803	81,174	39,166	81,174	63,969
Illinois Basin	-	-	80,855	22,419	80,855	22,419
Other Interior	-	24,803	319	16,747	319	41,550
Western Region Total	8,950	40,526	28,696	352,698	37,646	393,224
Powder River Basin	-	16,362	-	318,004	-	334,366
Uinta Basin	1,907	1,577	22,266	2,319	24,173	3,896
Other Western	7,043	22,587	6,430	32,375	13,474	54,962
East of Mississippi River	55,001	1,842	179,786	65,457	234,788	67,299
West of Mississippi River	8,950	65,328	29,016	366,841	37,966	432,170
U.S. Subtotal	63,951	67,171	208,802	432,298	272,753	499,469
Unknown *	-	-	-	-	376	1,313
U.S. Total	63,951	67,171	208,802	432,298	273,129	500,782

- = No data reported.

* Includes mines with production of less than 25,000 short tons, which are not required to provide data.

¹ For a definition of coal producing regions, see Glossary.

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

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

Table 8. Coal Disposition by State, 2017

(thousand short tons)

Coal-Producing State	Open Market Sales ¹		Captive Sales / Transactions ²		Exports ³		Total	
	Metallurgical	Non-Metallurgical	Metallurgical	Non-Metallurgical	Metallurgical	Non-Metallurgical	Metallurgical	Non-Metallurgical
Alabama	1,191	1,838	130	-	9,675	-	10,996	1,838
Alaska	-	873	-	-	-	-	-	873
Arizona	-	6,242	-	-	-	-	-	6,242
Colorado	-	6,134	-	5,912	-	1,964	-	14,010
Illinois	-	34,699	-	3,967	-	7,325	-	45,992
Indiana	-	17,477	-	12,416	-	-	-	29,892
Kentucky Total	4,673	32,248	158	40	462	1,818	5,292	34,106
Kentucky (East)	4,673	10,315	158	40	462	1,664	5,292	12,019
Kentucky (West)	-	21,933	-	-	-	154	-	22,087
Louisiana	-	2,102	-	-	-	-	-	2,102
Maryland	741	733	-	-	156	-	897	733
Mississippi	-	2,417	-	427	-	s	-	2,845
Missouri	-	244	-	-	-	-	-	244
Montana	-	23,644	-	6,450	-	4,347	-	34,440
New Mexico	-	9,767	-	5,066	-	-	-	14,833
North Dakota	-	24,490	-	4,612	-	-	-	29,102
Ohio	-	6,738	-	1,728	-	724	-	9,190
Oklahoma	-	632	-	-	-	-	-	632
Pennsylvania Total	5,164	30,199	314	2,175	874	1,237	6,352	33,611
Pennsylvania (Anthracite)	223	1,313	-	216	-	61	223	1,590
Pennsylvania (Bituminous)	4,940	28,886	314	1,959	874	1,176	6,129	32,021
Tennessee	35	290	-	-	80	-	114	290
Texas	-	4,791	-	28,958	-	2,393	-	36,142
Utah	-	11,616	-	292	-	2,754	-	14,662
Virginia	4,896	1,307	210	s	6,425	96	11,532	1,404
West Virginia Total	11,538	42,362	1,399	9,003	12,627	8,399	25,564	59,765
West Virginia (Northern)	1,224	27,874	-	9,003	2,866	4,311	4,090	41,188
West Virginia (Southern)	10,315	14,489	1,399	-	9,761	4,089	21,474	18,577
Wyoming	-	188,378	-	128,318	-	-	-	316,697
U.S. Subtotal	28,238	449,222	2,211	209,365	30,299	31,059	60,747	689,646
Adjustments ⁴	-11,421	-	-	-	-	-	-11,421	-
Other Exports *	-	-	-	-	24,956	10,640	24,956	10,640
U.S. Total **	16,817	449,222	2,211	209,365	55,255	41,699	74,282	700,286

- = No data reported.

s = Value is less than 0.5 of the table metric.

* Estimated quantity of coal exported by coal brokers, coal traders and coal terminals reported on the EIA-8A, 'Annual Survey of Coal Stocks and Coal Exports'.

** Excludes mines producing less than 25,000 short tons, which are not required to provide data, and refuse recovery.

1 Open market sales include all coal sold on the open market to other coal companies or consumers; excludes exports.

2 Captive sales transactions include all coal used by the producing company or sold to affiliate or parent companies; excludes exports.

3 State level total and U.S. subtotal include the quantity of coal exported by coal mines only.

4 Adjustments reflect differences in source data. State-level data are sourced from the EIA-7A, 'Annual Survey of Coal Production and Preparation'. Adjustments are estimated using coal consumed for coke production from the EIA-3, 'Quarterly Survey of Industrial, Commercial, & Institutional Users' and metallurgical coal imports from the U.S. Department of Commerce, Bureau of the Census, 'Monthly Report IM 145.' US Total Exports are sourced from U.S. Department of Commerce, Bureau of the Census, 'Monthly Report EM 545.'

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

Table 9. Major U.S. Coal Mines, 2017

Rank	Mine Name / Operating Company	Mine Type	State	Production (short tons)
1	North Antelope Rochelle Mine / Peabody Powder River Mining LLC	Surface	Wyoming	101,595,323
2	Black Thunder / Thunder Basin Coal Company LLC	Surface	Wyoming	70,513,365
3	Antelope Coal Mine / Antelope Coal LLC	Surface	Wyoming	28,503,504
4	Eagle Butte Mine / Blackjewel LLC	Surface	Wyoming	17,264,483
5	Cordero Rojo Mine / Cordero Mining LLC	Surface	Wyoming	16,393,569
6	Belle Ayr Mine / Blackjewel LLC	Surface	Wyoming	15,826,344
7	Freedom Mine / The Coteau Properties Company	Surface	North Dakota	14,716,777
8	Buckskin Mine / Buckskin Mining Company	Surface	Wyoming	14,517,853
9	Mc#1 Mine / M-Class Mining LLC	Underground	Illinois	12,812,197
10	Spring Creek Coal Company / Spring Creek Coal LLC	Surface	Montana	12,725,656
11	Bailey Mine / Consol Pennsylvania Coal Company	Underground	Pennsylvania	12,123,618
12	Marshall County Mine / The Marshall County Coal Company	Underground	West Virginia	11,653,535
13	Caballo Mine / Peabody Caballo Mining, LLC	Surface	Wyoming	11,125,949
14	Kosse Strip / Luminant Mining Company LLC	Surface	Texas	10,997,088
15	Rawhide Mine / Peabody Caballo Mining, LLC	Surface	Wyoming	10,346,144
16	Enlow Fork Mine / Consol Pennsylvania Coal Company	Underground	Pennsylvania	9,180,468
17	Coal Creek Mine / Thunder Basin Coal Company LLC	Surface	Wyoming	8,963,048
18	River View Mine / River View Coal LLC	Underground	Kentucky	8,961,616
19	Rosebud Mine&crusher/Conveyor / Western Energy Company	Surface	Montana	8,630,002
20	Bear Run Mine / Peabody Bear Run Mining LLC	Surface	Indiana	7,271,178
21	Falkirk Mine / Falkirk Mining Company	Surface	North Dakota	7,219,086
22	Three Oaks / Luminant Mining Company LLC	Surface	Texas	7,186,478
23	Harrison County Mine / The Harrison County Coal Company	Underground	West Virginia	7,131,341
24	Tunnel Ridge Mine / Tunnel Ridge, LLC	Underground	West Virginia	6,988,112
25	Cumberland Mine / Cumberland Contura, LLC	Underground	Pennsylvania	6,769,916
26	Mach #1 Mine / Mach Mining LLC	Underground	Illinois	6,335,835
27	Kayenta Mine / Peabody Western Coal Company	Surface	Arizona	6,221,392
28	Lively Grove Mine / Prairie State Generating Company	Underground	Illinois	6,202,216
29	Mine No. 1 / Hamilton County Coal, LLC	Underground	Illinois	6,129,347
30	Marion County Mine / The Marion County Coal Company	Underground	West Virginia	6,114,799
31	Ohio County Mine / The Ohio County Coal Company	Underground	West Virginia	6,046,582
32	Dry Fork Mine / Western Fuels-Wyoming Inc	Surface	Wyoming	6,045,618
33	Gibson South / Gibson County Coal, LLC	Underground	Indiana	5,955,676
34	Sufco / Canyon Fuel Company LLC	Underground	Utah	5,883,975
35	Bull Mountains Mine No 1 / Signal Peak Energy LLC	Underground	Montana	5,883,820
36	Century Mine / American Energy Corporation	Underground	Ohio	5,676,639
37	Buchanan Mine #1 / Buchanan Minerals, LLC	Underground	Virginia	5,352,731
38	San Juan Mine 1 / San Juan Coal Company	Underground	New Mexico	5,327,442
39	No 7 Mine / Warrior Met Coal Mining, LLC	Underground	Alabama	4,864,828
40	El Segundo / El Segundo Coal Company, LLC	Surface	New Mexico	4,855,010
41	West Elk Mine / Mountain Coal Company, L.L.C.	Underground	Colorado	4,821,281
42	Harvey Mine / Consol Pennsylvania Coal Company	Underground	Pennsylvania	4,805,028
43	Skyline Mine #3 / Canyon Fuel Company LLC	Underground	Utah	4,374,500
44	Center Mine / Bni Coal, Ltd	Surface	North Dakota	4,288,404
45	Kemmerer Mine / Westmoreland Kemmerer, LLC	Surface	Wyoming	4,224,426
46	Wyodak Mine / Black Hills Energy	Surface	Wyoming	4,182,800
47	Decker Mine / Decker Coal Company	Surface	Montana	4,158,338
Subtotal				557,167,337
All Other Mines				217,442,020
U.S. Total				774,609,357

Notes: Major mines are mines that produced more than 4 million short tons in 2017. Company listed indicates the firm operating the mine.

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

Table 10. Major U.S. Coal Producers, 2017

Rank	Controlling Company Name	Production (thousand short tons)	Percent of Total Production
1	Peabody Energy Corp	156,728	20.2
2	Arch Coal Inc	100,298	12.9
3	Cloud Peak Energy	57,623	7.4
4	Murray Energy Corp	45,869	5.9
5	Alliance Resource Partners LP	37,809	4.9
6	Revelation Energy LLC/Blackjewel LLC	37,247	4.8
7	NACCO Industries Inc	37,172	4.8
8	CONSOL Energy Inc	26,109	3.4
9	Westmoreland Coal Company	25,053	3.2
10	Vistra Energy	24,803	3.2
11	Foresight Energy Labor LLC	21,180	2.7
12	Kiewit Peter Sons' Inc	19,581	2.5
13	Alpha Natural Resources	13,306	1.7
14	Blackhawk Mining LLC	13,088	1.7
15	Bowie Resource Partners LLC	10,885	1.4
16	Contura Energy Inc	10,449	1.3
17	Coronado Coal LLC	8,668	1.1
18	Warrior Met Coal Intermediate Holdco LLC	6,714	0.9
19	Hallador Energy Company	6,612	0.9
20	Prairie State Energy Campus	6,202	0.8
21	Western Fuels Assoc Inc	6,046	0.8
22	Global Mining Group LLC	5,884	0.8
23	Western Kentucky CONSOLIDated Resources LLC	5,377	0.7
Subtotal		682,701	88.1
All Other Coal Producers		91,908	11.9
U.S. Total		774,609	100.0

Notes: The listed companies each produced more than 5 million short tons of coal in 2017. A controlling company of a mine is defined as the company 'controlling the coal, particularly the sale of the coal.' Most often, but not always, this is the owner of the mine.

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

Productive Capacity

Table 11. Productive Capacity of Coal Mines by State, 2017 and 2016

(thousand short tons)

Coal-Producing State	2017			2016			Percent Change		
	Underground	Surface	Total	Underground	Surface	Total	Underground	Surface	Total
Alabama	13,466	3,454	16,920	10,079	2,933	13,012	33.6	17.8	30.0
Alaska	-	3,000	3,000	-	3,000	3,000	-	-	-
Arizona	-	8,500	8,500	-	8,500	8,500	-	-	-
Arkansas	-	-	-	275	-	275	-	-	-
Colorado	14,000	5,160	19,160	12,913	5,160	18,073	8.4	-	6.0
Illinois	50,115	6,990	57,105	56,871	6,820	63,691	-11.9	2.5	-10.3
Indiana	14,893	21,208	36,101	15,173	21,210	36,383	-1.8	s	-0.8
Kansas	-	-	-	-	27	27	-	-	-
Kentucky Total	41,784	15,020	56,803	43,950	15,620	59,570	-4.9	-3.8	-4.6
Kentucky (East)	16,542	11,454	27,996	14,111	11,785	25,896	17.2	-2.8	8.1
Kentucky (West)	25,242	3,566	28,807	29,839	3,836	33,675	-15.4	-7.0	-14.5
Louisiana	-	3,885	3,885	-	4,285	4,285	-	-9.3	-9.3
Maryland	840	1,634	2,474	1,000	1,629	2,629	-16.0	0.3	-5.9
Mississippi	-	8,300	8,300	-	8,700	8,700	-	-4.6	-4.6
Missouri	-	248	248	-	248	248	-	-	-
Montana	10,000	41,800	51,800	10,000	41,900	51,900	-	-0.2	-0.2
New Mexico	9,000	18,900	27,900	9,000	18,900	27,900	-	-	-
North Dakota	-	35,000	35,000	-	34,500	34,500	-	1.4	1.4
Ohio	8,210	7,721	15,931	11,231	9,916	21,147	-26.9	-22.1	-24.7
Oklahoma	500	580	1,080	500	493	993	-	17.6	8.8
Pennsylvania Total	51,274	8,212	59,487	49,563	7,255	56,818	3.5	13.2	4.7
Pennsylvania (Anthracite)	76	3,560	3,636	89	3,839	3,929	-14.6	-7.3	-7.5
Pennsylvania (Bituminous)	51,199	4,652	55,851	49,474	3,416	52,890	3.5	36.2	5.6
Tennessee	394	92	486	594	315	909	-33.7	-70.8	-46.5
Texas	-	36,783	36,783	-	40,478	40,478	-	-9.1	-9.1
Utah	19,158	2,000	21,158	17,594	2,000	19,594	8.9	-	8.0
Virginia	12,570	4,964	17,534	10,664	5,397	16,061	17.9	-8.0	9.2
West Virginia Total	95,276	34,738	130,014	87,753	27,042	114,795	8.6	28.5	13.3
West Virginia (Northern)	58,718	230	58,948	57,919	1,230	59,149	1.4	-81.3	-0.3
West Virginia (Southern)	36,558	34,508	71,066	29,834	25,812	55,646	22.5	33.7	27.7
Wyoming	2,300	446,614	448,914	2,200	462,317	464,517	4.5	-3.4	-3.4
U.S. Total	343,780	714,802	1,058,583	339,361	728,645	1,068,006	1.3	-1.9	-0.9

- = No data reported.

s = Absolute percentage less than 0.05 or value is less than 0.5 of the table metric.

Notes: Productive capacity is the maximum amount of coal that can be produced annually as reported by mining companies on Form EIA-7A, 'Annual Survey of Coal Production and Preparation.' Excluding refuse recovery and mines producing less than 25,000 short tons, which are not required to provide data. Totals may not equal sum of components because of independent rounding.

Source: U.S. Energy Information Administration Form EIA-7A, 'Annual Survey of Coal Production and Preparation.'

Table 12. Capacity Utilization of Coal Mines by State, 2017 and 2016

(percent)

Coal-Producing State	2017			2016		
	Underground	Surface	Total	Underground	Surface	Total
Alabama	77.88	67.72	75.80	73.72	71.69	73.26
Alaska	-	31.97	31.97	-	31.07	31.07
Arizona	-	73.19	73.19	-	63.80	63.80
Arkansas	-	-	-	13.37	-	13.37
Colorado	79.41	76.14	78.53	68.03	74.59	69.91
Illinois	89.61	47.19	84.41	72.54	31.70	68.17
Indiana	96.66	80.51	87.17	80.79	77.80	79.05
Kansas	-	-	-	-	99.21	99.21
Kentucky Total	75.26	66.29	72.89	74.18	62.26	71.05
Kentucky (East)	59.80	69.06	63.59	67.63	56.88	62.74
Kentucky (West)	85.39	57.41	81.92	77.27	78.80	77.45
Louisiana	-	53.50	53.50	-	65.29	65.29
Maryland	88.63	64.14	72.45	70.88	53.59	60.17
Mississippi	-	31.37	31.37	-	32.99	32.99
Missouri	-	98.53	98.53	-	94.31	94.31
Montana	58.84	70.21	68.02	56.09	63.79	62.30
New Mexico	59.19	45.06	49.62	48.12	47.67	47.82
North Dakota	-	82.25	82.25	-	81.51	81.51
Ohio	82.69	32.69	58.46	82.41	32.89	59.19
Oklahoma	63.85	41.52	51.86	76.73	54.66	65.77
Pennsylvania Total	84.89	61.82	81.71	83.32	52.53	79.39
Pennsylvania (Anthracite)	70.66	48.08	48.55	50.51	34.95	35.30
Pennsylvania (Bituminous)	84.91	72.34	83.86	83.38	72.29	82.66
Tennessee	78.87	100.00	82.86	69.15	70.06	69.47
Texas	-	98.91	98.91	-	96.35	96.35
Utah	71.00	36.20	67.71	75.58	33.45	71.28
Virginia	77.52	66.89	74.51	83.20	71.30	79.20
West Virginia Total	76.09	57.47	71.11	72.82	57.53	69.22
West Virginia (Northern)	79.38	47.76	79.25	74.75	17.20	73.55
West Virginia (Southern)	70.80	57.54	64.36	69.09	59.45	64.62
Wyoming	74.60	70.47	70.49	53.06	64.04	63.98
U.S. Total	79.36	69.88	72.95	74.14	65.06	67.94

- = No data reported.

Notes: Capacity utilization is the ratio of annual production to annual productive capacity. Excludes refuse recovery and mines producing less than 25,000 short tons, which are not required to provide data. Totals may not equal sum of components because of independent rounding.

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

Table 13. Productive Capacity and Capacity Utilization of Underground Coal Mines by State and Mining Method, 2017

(thousand short tons)

Coal-Producing State	Continuous ¹		Conventional and Other ²		Longwall ³		Total	
	Productive Capacity	Capacity Utilization Percent	Productive Capacity	Capacity Utilization Percent	Productive Capacity	Capacity Utilization Percent	Productive Capacity	Capacity Utilization Percent
Alabama	355	81.90	-	-	13,111	77.77	13,466	77.88
Colorado	1,000	54.66	-	-	13,000	81.32	14,000	79.41
Illinois	17,599	87.45	2,300	88.34	30,216	90.96	50,115	89.61
Indiana	14,893	96.66	-	-	-	-	14,893	96.66
Kentucky Total	41,424	75.57	360	39.19	-	-	41,784	75.26
Kentucky (East)	16,182	60.26	360	39.19	-	-	16,542	59.80
Kentucky (West)	25,242	85.39	-	-	-	-	25,242	85.39
Maryland	840	88.63	-	-	-	-	840	88.63
Montana	-	-	-	-	10,000	58.84	10,000	58.84
New Mexico	-	-	-	-	9,000	59.19	9,000	59.19
Ohio	1,710	65.02	-	-	6,500	87.33	8,210	82.69
Oklahoma	500	63.85	-	-	-	-	500	63.85
Pennsylvania Total	10,021	67.26	30	60.19	41,224	89.19	51,274	84.89
Pennsylvania (Anthracite)	46	77.54	30	60.19	-	-	76	70.66
Pennsylvania (Bituminous)	9,975	67.21	-	-	41,224	89.19	51,199	84.91
Tennessee	394	78.87	-	-	-	-	394	78.87
Utah	3,258	52.61	-	-	15,900	74.77	19,158	71.00
Virginia	7,217	60.85	-	-	5,353	100.00	12,570	77.52
West Virginia Total	31,265	73.45	1,200	31.17	62,810	78.26	95,276	76.09
West Virginia (Northern)	2,418	85.77	-	-	56,300	79.10	58,718	79.38
West Virginia (Southern)	28,847	72.42	1,200	31.17	6,510	70.96	36,558	70.80
Wyoming	-	-	-	-	2,300	74.60	2,300	74.60
U.S. Total	130,476	76.81	3,890	65.94	209,414	81.19	343,780	79.36

- = No data reported.

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

2 Mines that produce greater than 50 percent of their coal by conventional methods or mines that produce coal using shortwall, scoop loading, hand loading, or other methods or a 50/50 percent continuous/conventional split in mining method.

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

Notes: Productive capacity is the maximum amount of coal that can be produced annually. Capacity utilization is the ratio of total production to annual productive capacity. Excludes refuse recovery and mines producing less than 25,000 short tons, which are not required to provide data. Totals may not equal sum of components because of independent rounding.

Sources: U.S. Energy Information Administration Form EIA-7A, 'Annual Survey of Coal Production and Preparation,' for productive capacity, and U.S. Department of Labor, Mine Safety and Health Administration Form 7000-2, 'Quarterly Mines Employment and Coal Production Report,' for annual production.

Recoverable Reserves

Table 14. Recoverable Coal Reserves at Producing Mines by State, 2017 and 2016

(million short tons)

Coal-Producing State	2017	2016	Percent Change Recoverable Coal Reserves
	Recoverable Coal Reserves	Recoverable Coal Reserves	
Alabama	243	213	14.3
Alaska	50	51	-1.9
Arizona	197	203	-3.2
Arkansas	-	25	-
Colorado	253	291	-13.0
Illinois	1,236	1,529	-19.1
Indiana	456	564	-19.1
Kansas	-	s	-
Kentucky Total	1,048	1,077	-2.7
Kentucky (East)	669	666	0.5
Kentucky (West)	379	411	-7.9
Louisiana	86	88	-2.7
Maryland	13	13	1.9
Mississippi	689	691	-0.4
Missouri	s	s	-3.3
Montana	778	823	-5.4
New Mexico	201	211	-4.8
North Dakota	980	1,024	-4.3
Ohio	91	231	-60.7
Oklahoma	8	7	7.3
Pennsylvania Total	1,121	1,225	-8.5
Pennsylvania (Anthracite)	141	140	0.5
Pennsylvania (Bituminous)	980	1,084	-9.6
Tennessee	10	1	NM
Texas	536	582	-7.9
Utah	176	112	56.3
Virginia	223	215	4.0
West Virginia Total	1,833	1,561	17.4
West Virginia (Northern)	866	881	-1.7
West Virginia (Southern)	967	680	42.2
Wyoming	5,873	6,220	-5.6
U.S. Total	16,101	16,956	-5.0

- = No data reported.

s = Absolute percentage less than 0.05 or value is less than 0.5 of the table metric.

Notes: Recoverable reserves represent the quantity of coal that can be recovered (i.e. mined) from existing coal reserves at reporting mines. Excludes refuse recovery and mines producing less than 25,000 short tons, which are not required to provide data. Totals may not equal sum of components because of independent rounding.

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

Table 15. Recoverable Coal Reserves at Producing Mines, Estimated Recoverable Reserves, and Demonstrated Reserve Base by Mining Method, 2017

(million short tons)

Coal-Resource State	Underground - Minable Coal			Surface - Minable Coal			Total		
	Recoverable Reserves at Producing Mines	Estimated Recoverable Reserves	Demonstrated Reserve Base	Recoverable Reserves at Producing Mines	Estimated Recoverable Reserves	Demonstrated Reserve Base	Recoverable Reserves at Producing Mines	Estimated Recoverable Reserves	Demonstrated Reserve Base
Alabama	218	371	736	25	2,215	3,109	243	2,586	3,845
Alaska	-	2,335	5,423	50	480	664	50	2,815	6,087
Arizona	-	-	-	197	-	-	197	-	-
Arkansas	-	126	271	-	101	144	-	227	415
Colorado	147	5,723	10,906	107	3,740	4,754	253	9,464	15,660
Georgia	-	1	2	-	1	2	-	2	4
Idaho	-	2	4	-	-	-	-	2	4
Illinois	1,212	27,641	87,018	25	10,028	16,477	1,236	37,669	103,495
Indiana	175	3,480	8,402	282	248	424	457	3,728	8,826
Iowa	-	807	1,732	-	320	457	-	1,127	2,189
Kansas	-	-	-	-	679	970	-	679	970
Kentucky Total	565	6,745	15,700	483	7,202	12,472	1,048	13,947	28,172
Kentucky (East)	216	279	500	453	4,983	8,924	669	5,262	9,423
Kentucky (West)	349	6,466	15,200	30	2,219	3,548	379	8,685	18,749
Louisiana	-	-	-	86	275	371	86	275	371
Maryland	7	305	557	6	28	41	13	333	598
Michigan	-	55	123	-	3	5	-	58	128
Mississippi	-	-	-	689	-	-	689	-	-
Missouri	-	689	1,479	s	3,154	4,505	-	3,843	5,984
Montana	222	35,871	70,856	556	38,572	47,725	778	74,443	118,580
New Mexico	11	2,735	6,011	190	4,018	5,744	201	6,753	11,755
North Carolina	-	5	11	-	-	-	-	5	11
North Dakota	-	-	-	980	6,575	8,619	980	6,575	8,619
Ohio	83	7,560	17,183	8	3,697	5,647	91	11,256	22,831
Oklahoma	7	569	1,221	1	219	313	8	788	1,534
Oregon	-	6	15	-	2	3	-	9	17
Pennsylvania Total	953	10,094	22,068	168	963	4,114	1,121	11,057	26,182
Pennsylvania (Anthracite)	1	340	3,840	141	417	3,330	141	757	7,171
Pennsylvania (Bituminous)	952	9,755	18,228	28	546	784	980	10,301	19,012
South Dakota	-	-	-	-	277	366	-	277	366
Tennessee	10	271	495	s	170	251	10	441	746
Texas	-	-	-	536	9,064	11,775	536	9,064	11,775
Utah	174	2,292	4,675	1	208	263	176	2,500	4,938
Virginia	173	459	817	50	296	463	223	755	1,279
Washington	-	674	1,332	-	6	8	-	681	1,340
West Virginia Total	1,257	14,552	27,265	576	1,968	3,120	1,833	16,520	30,385
West Virginia (Northern)	862	NA	NA	4	NA	NA	866	NA	NA
West Virginia (Southern)	395	NA	NA	572	NA	NA	967	NA	NA
Wyoming	6	22,911	42,429	5,867	12,664	15,296	5,873	35,576	57,724
U.S. Total	5,220	146,279	326,731	10,882	107,176	148,100	16,102	253,455	474,831

- = No data reported.

NA = Not Available.

s = Value is less than 0.5 of the table metric.

Notes: Recoverable coal reserves at producing mines represent the quantity of coal that can be recovered (i.e. mined) from existing coal reserves at reporting mines. EIA's estimated recoverable reserves include the coal in the demonstrated reserve base considered recoverable after excluding coal estimated to be unavailable due to land use restrictions, and after applying assumed mining recovery rates. This estimate does not include any specific economic feasibility criteria. The effective date for the demonstrated reserve base, as customarily worded, is 'Remaining as of January 1, 2018.' These data are contemporaneous with the Recoverable Reserves at Producing Mines, customarily presented as of the end of the reporting year's mining, that is in this case, December 31, 2017. The demonstrated reserve base includes publicly available data on coal mapped to measured and indicated degrees of accuracy and found at depths and in coalbed thicknesses considered technologically minable at the time of determinations; see Glossary for criteria. All reserve expressions exclude silt, culm, refuse bank, slurry dam, and dredge operations. Reserves at Producing Mines exclude mines producing less than 25,000 short tons, which are not required to provide reserves data.

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

Table 16. Recoverable Coal Reserves at Producing Underground Coal Mines by State and Mining Method, 2017

(million short tons)

Coal-Producing State	Continuous ¹	Conventional and Other ²	Longwall ³	Total
	Recoverable Coal Reserves at Producing Mines	Recoverable Coal Reserves at Producing Mines	Recoverable Coal Reserves at Producing Mines	Recoverable Coal Reserves at Producing Mines
Alabama	31	-	187	218
Colorado	6	-	140	147
Illinois	386	63	763	1,212
Indiana	174	-	-	174
Kentucky Total	545	20	-	565
Kentucky (East)	196	20	-	216
Kentucky (West)	349	-	-	349
Maryland	7	-	-	7
Montana	-	-	222	222
New Mexico	-	-	11	11
Ohio	43	-	40	83
Oklahoma	7	-	-	7
Pennsylvania Total	111	s	842	953
Pennsylvania (Anthracite)	s	s	-	1
Pennsylvania (Bituminous)	111	-	842	952
Tennessee	10	-	-	10
Utah	37	-	137	174
Virginia	69	-	104	173
West Virginia Total	380	1	876	1,257
West Virginia (Northern)	55	-	807	862
West Virginia (Southern)	325	1	69	395
Wyoming	-	-	6	6
U.S. Total	1,806	84	3,329	5,219

- = No data reported.

s = Absolute percentage less than 0.05 or value is less than 0.5 of the table metric.

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

2 Mines that produce greater than 50 percent of their coal by conventional methods or mines that produce coal using shortwall, scoop loading, hand loading, or other methods or a 50/50 percent continuous/conventional split in mining method.

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

Notes: Recoverable coal reserves at producing mines represent the quantity of coal that can be recovered (i.e. mined) from existing coal reserves at reporting mines. Excludes mines producing less than 25,000 short tons, which are not required to provide data and refuse recovery.

Sources: U.S. Energy Information Administration Form EIA-7A, 'Annual Survey of Coal Production and Preparation,' and U.S. Department of Labor, Mine Safety and Health Administration Form 7000-2, 'Quarterly Mines Employment and Coal Production Report.'

Table 17. Recoverable Coal Reserves at Producing U.S. Mines by Mine Production Range and Mine Type, 2017

(million short tons)

Mine Production Range (thousand short tons)	Underground	Surface	Total
	Recoverable Coal Reserves	Recoverable Coal Reserves	Recoverable Coal Reserves
Over 1,000	4,504	9,073	13,577
Over 500 to 1,000	288	120	409
Over 200 to 500	215	1,176	1,391
Over 100 to 200	130	390	520
Over 50 to 100	45	67	112
Over 10 to 50	37	56	94
10 or Under	s	-	s
U.S. Total	5,219	10,882	16,101

s = Absolute percentage less than 0.05 or value is less than 0.5 of the table metric.

Note: Recoverable coal reserves at producing mines represent the quantity of coal that can be recovered (i.e. mined) from existing coal reserves at reporting mines.

Sources: U.S. Energy Information Administration Form EIA-7A, 'Annual Survey of Coal Production and Preparation,' and U.S. Department of Labor, Mine Safety and Health Administration Form 7000-2, 'Quarterly Mines Employment and Coal Production Report.'

Employment

Table 18. Average Number of Employees by State and Mine Type, 2017 and 2016

Coal-Producing State and Region ¹	2017			2016			Percent Change		
	Underground	Surface	Total	Underground	Surface	Total	Underground	Surface	Total
Alabama	2,055	545	2,600	1,544	580	2,124	33.1	-6.0	22.4
Alaska	-	102	102	-	110	110	-	-7.3	-7.3
Arizona	-	402	402	-	385	385	-	4.4	4.4
Arkansas	61	10	71	56	11	67	8.9	-9.1	6.0
Colorado	808	445	1,253	912	419	1,331	-11.4	6.2	-5.9
Illinois	2,858	277	3,135	2,995	224	3,219	-4.6	23.7	-2.6
Indiana	1,312	1,478	2,790	1,442	1,377	2,819	-9.0	7.3	-1.0
Kansas	-	-	-	-	7	7	-	-	-
Kentucky Total	4,913	1,684	6,597	5,020	1,709	6,729	-2.1	-1.5	-2.0
Kentucky (East)	2,638	1,472	4,110	2,551	1,458	4,009	3.4	1.0	2.5
Kentucky (West)	2,275	212	2,487	2,469	251	2,720	-7.9	-15.5	-8.6
Louisiana	-	325	325	-	305	305	-	6.6	6.6
Maryland	172	131	303	174	161	335	-1.1	-18.6	-9.6
Mississippi	-	380	380	-	338	338	-	12.4	12.4
Missouri	-	15	15	-	19	19	-	-21.1	-21.1
Montana	252	894	1,146	237	920	1,157	6.3	-2.8	-1.0
New Mexico	349	580	929	404	619	1,023	-13.6	-6.3	-9.2
North Dakota	-	1,255	1,255	-	1,257	1,257	-	-0.2	-0.2
Ohio	693	393	1,086	976	490	1,466	-29.0	-19.8	-25.9
Oklahoma	84	102	186	76	76	152	10.5	34.2	22.4
Pennsylvania Total	3,919	1,539	5,458	3,638	1,564	5,202	7.7	-1.6	4.9
Pennsylvania (Anthracite)	82	832	914	90	862	952	-8.9	-3.5	-4.0
Pennsylvania (Bituminous)	3,837	707	4,544	3,548	702	4,250	8.1	0.7	6.9
Tennessee	99	49	148	136	42	178	-27.2	16.7	-16.9
Texas	-	1,993	1,993	-	2,561	2,561	-	-22.2	-22.2
Utah	1,191	49	1,240	1,129	49	1,178	5.5	-	5.3
Virginia	1,984	676	2,660	1,729	688	2,417	14.7	-1.7	10.1
West Virginia Total	10,507	2,715	13,222	9,259	2,302	11,561	13.5	17.9	14.4
West Virginia (Northern)	4,212	34	4,246	4,075	73	4,148	3.4	-53.4	2.4
West Virginia (Southern)	6,295	2,681	8,976	5,184	2,229	7,413	21.4	20.3	21.1
Wyoming	230	5,470	5,700	279	5,477	5,756	-17.6	-0.1	-1.0
Appalachia Total	22,067	7,520	29,587	20,007	7,285	27,292	10.3	3.2	8.4
Appalachia Central	11,016	4,878	15,894	9,600	4,417	14,017	14.8	10.4	13.4
Appalachia Northern	8,996	2,097	11,093	8,863	2,288	11,151	1.5	-8.3	-0.5
Appalachia Southern	2,055	545	2,600	1,544	580	2,124	33.1	-6.0	22.4
Interior Region Total	6,590	4,792	11,382	7,038	5,169	12,207	-6.4	-7.3	-6.8
Illinois Basin	6,445	1,967	8,412	6,906	1,852	8,758	-6.7	6.2	-4.0
Other Interior	145	2,825	2,970	132	3,317	3,449	9.8	-14.8	-13.9
Western Region Total	2,830	9,197	12,027	2,961	9,236	12,197	-4.4	-0.4	-1.4
Powder River Basin	-	5,657	5,657	-	5,692	5,692	-	-0.6	-0.6
Uinta Basin	1,917	442	2,359	1,931	413	2,344	-0.7	7.0	0.6
Other Western	913	3,098	4,011	1,030	3,131	4,161	-11.4	-1.1	-3.6
East of Mississippi River	28,512	9,867	38,379	26,913	9,475	36,388	5.9	4.1	5.5
West of Mississippi River	2,975	11,642	14,617	3,093	12,215	15,308	-3.8	-4.7	-4.5
U.S. Subtotal	31,487	21,509	52,996	30,006	21,690	51,696	4.9	-0.8	2.5
Refuse Recovery	-	-	55	-	-	99	-	-	-44.4
U.S. Total	31,487	21,509	53,051	30,006	21,690	51,795	4.9	-0.8	2.4

- = No data reported.

¹ For a definition of coal producing regions, see the Glossary.

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

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

Table 18.1. Average Number of Employees and Number of Mines by State and Coal Type, 2017

Coal-Producing State ¹	Number of Mines			Average Number of Employees		
	Metallurgical ²	Non-Metallurgical ²	Total ³	Metallurgical ²	Non-Metallurgical ²	Total ³
Alabama	12	20	30	2,129	376	2,505
Alaska	-	1	1	-	102	102
Arizona	-	1	1	-	402	402
Arkansas	-	3	3	-	71	71
Colorado	-	7	7	-	1,253	1,253
Illinois	-	19	19	-	2,917	2,917
Indiana	-	18	18	-	2,651	2,651
Kentucky Total	40	128	152	1,088	4,632	5,720
Kentucky (East)	40	115	139	1,088	2,371	3,459
Kentucky (West)	-	13	13	-	2,261	2,261
Louisiana	-	2	2	-	325	325
Maryland	5	10	14	181	86	267
Mississippi	-	2	2	-	380	380
Missouri	-	1	1	-	15	15
Montana	-	6	6	-	1,136	1,136
New Mexico	-	3	3	-	929	929
North Dakota	-	5	5	-	1,255	1,255
Ohio	-	18	18	-	1,001	1,001
Oklahoma	-	5	5	-	186	186
Pennsylvania Total	42	141	157	1,016	3,902	4,918
Pennsylvania (Anthracite)	5	57	61	49	491	540
Pennsylvania (Bituminous)	37	84	96	967	3,411	4,378
Tennessee	3	5	6	30	95	125
Texas	-	10	10	-	1,993	1,993
Utah	-	8	8	-	1,142	1,142
Virginia	36	35	54	2,022	363	2,385
West Virginia Total	76	113	141	6,131	5,788	11,919
West Virginia (Northern)	4	14	15	837	3,228	4,065
West Virginia (Southern)	72	99	126	5,294	2,560	7,854
Wyoming	-	17	17	-	5,700	5,700
Appalachia Total	214	457	559	12,596	13,983	26,579
Appalachia Central	151	254	325	8,433	5,390	13,823
Appalachia Northern	51	183	204	2,034	8,217	10,251
Appalachia Southern	12	20	30	2,129	376	2,505
Interior Region Total	-	73	73	-	10,799	10,799
Illinois Basin	-	50	50	-	7,829	7,829
Other Interior	-	23	23	-	2,970	2,970
Western Region Total	-	48	48	-	11,919	11,919
Powder River Basin	-	16	16	-	5,647	5,647
Uinta Basin	-	12	12	-	2,261	2,261
Other Western	-	20	20	-	4,011	4,011
East of Mississippi River	214	509	611	12,596	22,192	34,788
West of Mississippi River	-	69	69	-	14,509	14,509
U.S. Total	214	578	680	12,596	36,701	49,297

- = No data reported.

¹ For a definition of coal producing regions, see the Glossary.

² Some mines produce both metallurgical and non-metallurgical.

³ Total may not equal the sum, as some mines produced both metallurgical and non-metallurgical.

Note: Excludes mines producing less than 25,000 tons per year, which are not required to provide data.

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

Table 19. Average Number of Employees at Underground and Surface Mines by State and Mine Production Range, 2017

Coal-Producing State, Region ¹ and Mine Type	Mine Production Range (thousand short tons)								Total Number of Employees
	Above 1,000	Above 500 to 1,000	Above 200 to 500	Above 100 to 200	Above 50 to 100	Above 10 to 50	Above 0 to 10	Zero ²	
Alabama	1,911	-	208	159	128	55	44	95	2,600
Underground	1,909	-	-	37	19	-	23	67	2,055
Surface	2	-	208	122	109	55	21	28	545
Alaska	-	102	-	-	-	-	-	-	102
Surface	-	102	-	-	-	-	-	-	102
Arizona	402	-	-	-	-	-	-	-	402
Surface	402	-	-	-	-	-	-	-	402
Arkansas	-	-	-	-	-	69	2	-	71
Underground	-	-	-	-	-	61	-	-	61
Surface	-	-	-	-	-	8	2	-	10
Colorado	1,147	82	-	-	-	24	-	-	1,253
Underground	726	82	-	-	-	-	-	-	808
Surface	421	-	-	-	-	24	-	-	445
Illinois	2,713	74	86	30	6	-	-	226	3,135
Underground	2,657	-	-	-	-	-	-	201	2,858
Surface	56	74	86	30	6	-	-	25	277
Indiana	2,508	-	89	23	26	-	5	139	2,790
Underground	1,205	-	-	-	-	-	-	107	1,312
Surface	1,303	-	89	23	26	-	5	32	1,478
Kentucky Total	2,436	338	1,600	451	352	413	128	825	6,597
Underground	2,271	218	1,212	263	176	154	51	560	4,913
Surface	165	120	388	188	176	259	77	265	1,684
Kentucky (East)	275	268	1,600	436	352	406	120	599	4,110
Underground	186	218	1,212	263	176	154	51	370	2,638
Surface	89	50	388	173	176	252	69	229	1,472
Kentucky (West)	2,161	70	-	15	-	7	8	226	2,487
Underground	2,085	-	-	-	-	-	-	190	2,275
Surface	76	70	-	15	-	7	8	36	212
Louisiana	292	-	33	-	-	-	-	-	325
Surface	292	-	33	-	-	-	-	-	325
Maryland	-	100	82	9	39	29	8	36	303
Underground	-	100	36	-	-	-	-	36	172
Surface	-	-	46	9	39	29	8	-	131
Mississippi	208	-	172	-	-	-	-	-	380
Surface	208	-	172	-	-	-	-	-	380
Missouri	-	-	15	-	-	-	-	-	15
Surface	-	-	15	-	-	-	-	-	15
Montana	1,122	-	14	-	-	-	-	10	1,146
Underground	252	-	-	-	-	-	-	-	252
Surface	870	-	14	-	-	-	-	10	894
New Mexico	929	-	-	-	-	-	-	-	929
Underground	349	-	-	-	-	-	-	-	349
Surface	580	-	-	-	-	-	-	-	580
North Dakota	1,229	-	26	-	-	-	-	-	1,255
Surface	1,229	-	26	-	-	-	-	-	1,255
Ohio	357	263	251	63	23	10	34	85	1,086
Underground	357	151	92	12	-	-	26	55	693
Surface	-	112	159	51	23	10	8	30	393
Oklahoma	-	-	84	42	58	-	2	-	186
Underground	-	-	84	-	-	-	-	-	84
Surface	-	-	-	42	58	-	2	-	102
Pennsylvania Total	2,993	216	537	358	177	416	204	506	5,458
Underground	2,993	216	296	106	53	69	46	128	3,919
Surface	-	-	241	252	124	347	158	378	1,539
Pennsylvania (Anthracite)	-	-	79	86	48	170	140	352	914
Underground	-	-	-	-	-	30	30	22	82
Surface	-	-	79	86	48	140	110	330	832

Coal-Producing State, Region ¹ and Mine Type	Mine Production Range (thousand short tons)							Zero ²	Total Number of Employees
	Above 1,000	Above 500 to 1,000	Above 200 to 500	Above 100 to 200	Above 50 to 100	Above 10 to 50	Above 0 to 10		
Pennsylvania (Bituminous)	2,993	216	458	272	129	246	64	154	4,544
Underground	2,993	216	296	106	53	39	16	106	3,837
Surface	-	-	162	166	76	207	48	48	707
Tennessee	-	-	43	28	12	32	10	23	148
Underground	-	-	43	28	-	14	-	14	99
Surface	-	-	-	-	12	18	10	9	49
Texas	1,960	-	33	-	-	-	-	-	1,993
Surface	1,960	-	33	-	-	-	-	-	1,993
Utah	881	195	-	66	-	-	-	87	1,240
Underground	881	167	-	66	-	-	-	77	1,191
Surface	-	28	-	-	-	-	-	10	49
Virginia	901	257	477	373	85	237	31	299	2,660
Underground	901	133	294	191	75	140	18	232	1,984
Surface	-	124	183	182	10	97	13	67	676
West Virginia Total	6,563	2,344	1,758	689	187	317	57	1,307	13,222
Underground	5,588	1,916	1,453	400	55	120	12	963	10,507
Surface	975	428	305	289	132	197	45	344	2,715
West Virginia (Northern)	3,851	-	199	6	-	6	3	181	4,246
Underground	3,851	-	199	-	-	-	-	162	4,212
Surface	-	-	-	6	-	6	3	19	34
West Virginia (Southern)	2,712	2,344	1,559	683	187	311	54	1,126	8,976
Underground	1,737	1,916	1,254	400	55	120	12	801	6,295
Surface	975	428	305	283	132	191	42	325	2,681
Wyoming	5,689	-	-	11	-	-	-	-	5,700
Underground	230	-	-	-	-	-	-	-	230
Surface	5,459	-	-	11	-	-	-	-	5,470
Appalachia Total	13,000	3,448	4,956	2,115	1,003	1,502	508	2,950	29,587
Underground	11,934	2,734	3,426	1,037	378	497	176	1,865	22,067
Surface	1,066	714	1,530	1,078	625	1,005	332	1,085	7,520
Appalachia Central	3,888	2,869	3,679	1,520	636	986	215	2,047	15,894
Underground	2,824	2,267	2,803	882	306	428	81	1,417	11,016
Surface	1,064	602	876	638	330	558	134	630	4,878
Appalachia Northern	7,201	579	1,069	436	239	461	249	808	11,093
Underground	7,201	467	623	118	53	69	72	381	8,996
Surface	-	112	446	318	186	392	177	427	2,097
Appalachia Southern	1,911	-	208	159	128	55	44	95	2,600
Underground	1,909	-	-	37	19	-	23	67	2,055
Surface	2	-	208	122	109	55	21	28	545
Interior Region Total	9,842	144	512	110	90	76	17	591	11,382
Underground	5,947	-	84	-	-	61	-	498	6,590
Surface	3,895	144	428	110	90	15	17	93	4,792
Illinois Basin	7,382	144	175	68	32	7	13	591	8,412
Underground	5,947	-	-	-	-	-	-	498	6,445
Surface	1,435	144	175	68	32	7	13	93	1,967
Other Interior	2,460	-	337	42	58	69	4	-	2,970
Underground	-	-	84	-	-	61	-	-	145
Surface	2,460	-	253	42	58	8	4	-	2,825
Western Region Total	11,399	379	40	77	-	24	-	97	12,027
Underground	2,438	249	-	66	-	-	-	77	2,830
Surface	8,961	130	40	11	-	24	-	20	9,197
Powder River Basin	5,647	-	-	-	-	-	-	10	5,657
Surface	5,647	-	-	-	-	-	-	10	5,657
Uinta Basin	2,028	167	-	66	-	-	-	87	2,359
Underground	1,607	167	-	66	-	-	-	77	1,917
Surface	421	-	-	-	-	-	-	10	442
Other Western	3,724	212	40	11	-	24	-	-	4,011
Underground	831	82	-	-	-	-	-	-	913
Surface	2,893	130	40	11	-	24	-	-	3,098
East of Mississippi River	20,590	3,592	5,303	2,183	1,035	1,509	521	3,541	38,379
Underground	17,881	2,734	3,426	1,037	378	497	176	2,363	28,512
Surface	2,709	858	1,877	1,146	657	1,012	345	1,178	9,867

Coal-Producing State, Region ¹ and Mine Type	Mine Production Range (thousand short tons)							Zero ²	Total Number of Employees
	Above 1,000	Above 500 to 1,000	Above 200 to 500	Above 100 to 200	Above 50 to 100	Above 10 to 50	Above 0 to 10		
West of Mississippi River	13,651	379	205	119	58	93	4	97	14,617
Underground	2,438	249	84	66	-	61	-	77	2,975
Surface	11,213	130	121	53	58	32	4	20	11,642
U.S. Subtotal	34,241	3,971	5,508	2,302	1,093	1,602	525	3,638	52,996
Underground	20,319	2,983	3,510	1,103	378	558	176	2,440	31,487
Surface	13,922	988	1,998	1,199	715	1,044	349	1,198	21,509
Refuse Recovery	-	-	15	-	8	26	6	-	55
U.S. Total	34,241	3,971	5,523	2,302	1,101	1,628	531	3,638	53,051

- = No data reported.

1 For a definition of coal producing regions, see the Glossary.

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

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

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

Table 20. Average Number of Employees at Underground and Surface Mines by State and Union Status, 2017

Coal-Producing State and Region ¹	Union		Nonunion	
	Underground	Surface	Underground	Surface
Alabama	1,958	2	74	513
Alaska	-	102	-	-
Arizona	-	402	-	-
Colorado	159	208	649	237
Illinois	-	8	2,858	277
Indiana	-	-	1,312	1,473
Kentucky Total	8	8	4,804	1,455
Kentucky (East)	8	8	2,529	1,251
Kentucky (West)	-	-	2,275	204
Louisiana	-	-	-	325
Maryland	-	-	172	123
Mississippi	-	-	-	380
Missouri	-	-	-	15
Montana	-	633	252	261
New Mexico	349	342	-	238
North Dakota	-	200	-	1,055
Ohio	24	-	643	374
Oklahoma	-	-	84	100
Pennsylvania Total	1,104	262	2,742	1,047
Pennsylvania (Anthracite)	-	255	52	454
Pennsylvania (Bituminous)	1,104	7	2,690	593
Tennessee	-	-	85	39
Texas	-	1,069	-	924
Utah	-	-	1,191	38
Virginia	58	3	1,869	618
West Virginia Total	3,285	80	7,166	2,458
West Virginia (Northern)	2,489	-	1,723	25
West Virginia (Southern)	796	80	5,443	2,433
Wyoming	230	510	-	4,960
Appalachia Total	6,437	355	15,280	6,423
Appalachia Central	862	91	9,926	4,341
Appalachia Northern	3,617	262	5,280	1,569
Appalachia Southern	1,958	2	74	513
Interior Region Total	-	1,077	6,529	3,698
Illinois Basin	-	8	6,445	1,954
Other Interior	-	1,069	84	1,744
Western Region Total	738	2,397	2,092	6,789
Powder River Basin	-	619	-	5,038
Uinta Basin	159	184	1,758	247
Other Western	579	1,594	334	1,504
East of Mississippi River	6,437	363	21,725	8,757
West of Mississippi River	738	3,466	2,176	8,153
U.S. Total	7,175	3,829	23,901	16,910

- = No data reported.

1 For a definition of coal producing regions, see the Glossary.

Notes: Includes all employees at preparation plants and tipplers not co-located with a mine. Includes all employees engaged in production, preparation, processing, development, maintenance, repair shop, or yard work at mining operations, including office workers. Excludes mines producing less than 25,000 short tons and preparation plants with less than 5,000 employee hours per year, which are not required to provide data.

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

Productivity

Table 21. Coal Productivity by State and Mine Type, 2017 and 2016

Coal-Producing State, Region ¹ and Mine Type	Number of Mining Operations ²			Number of Employees ³			Average Production per Employee Hour (short tons) ⁴		
	2017	2016	Percent Change	2017	2016	Percent Change	2017	2016	Percent Change
Alabama	37	37	-	2,600	2,124	22.4	2.15	2.12	1.7
Underground	10	11	-9.1	2,055	1,544	33.1	2.21	2.21	0.1
Surface	27	26	3.8	545	580	-6.0	1.94	1.87	3.9
Alaska	1	1	-	102	110	-7.3	5.24	4.51	16.1
Surface	1	1	-	102	110	-7.3	5.24	4.51	16.1
Arizona	1	1	-	402	385	4.4	6.64	5.96	11.4
Surface	1	1	-	402	385	4.4	6.64	5.96	11.4
Arkansas	3	3	-	71	67	6.0	0.50	0.38	33.8
Underground	1	1	-	61	56	8.9	0.36	0.35	2.3
Surface	2	2	-	10	11	-9.1	1.04	0.48	115.8
Colorado	7	8	-12.5	1,253	1,331	-5.9	5.69	4.49	27.0
Underground	4	5	-20.0	808	912	-11.4	6.45	4.46	44.5
Surface	3	3	-	445	419	6.2	4.28	4.54	-5.7
Illinois	27	29	-6.9	3,135	3,219	-2.6	6.54	5.89	10.9
Underground	16	17	-5.9	2,858	2,995	-4.6	6.72	6.01	11.9
Surface	11	12	-8.3	277	224	23.7	4.74	4.32	9.7
Indiana	23	26	-11.5	2,790	2,819	-1.0	4.75	4.46	6.4
Underground	8	12	-33.3	1,312	1,442	-9.0	4.50	3.75	20.0
Surface	15	14	7.1	1,478	1,377	7.3	4.98	5.20	-4.2
Kansas	-	1	-	-	7	-	-	20.19	-
Surface	-	1	-	-	7	-	-	20.19	-
Kentucky Total	214	232	-7.8	6,597	6,729	-2.0	2.73	2.94	-7.1
Underground	91	99	-8.1	4,913	5,020	-2.1	2.69	2.88	-6.6
Surface	123	133	-7.5	1,684	1,709	-1.5	2.88	3.17	-9.1
Kentucky (East)	193	207	-6.8	4,110	4,009	2.5	1.94	2.03	-4.7
Underground	79	84	-6.0	2,638	2,551	3.4	1.59	1.73	-7.8
Surface	114	123	-7.3	1,472	1,458	1.0	2.62	2.67	-1.8
Kentucky (West)	21	25	-16.0	2,487	2,720	-8.6	4.00	4.13	-3.2
Underground	12	15	-20.0	2,275	2,469	-7.9	3.94	3.99	-1.4
Surface	9	10	-10.0	212	251	-15.5	4.79	5.64	-15.0
Louisiana	2	2	-	325	305	6.6	2.67	3.86	-30.9
Surface	2	2	-	325	305	6.6	2.67	3.86	-30.9
Maryland	15	18	-16.7	303	335	-9.6	2.58	2.30	12.3
Underground	3	3	-	172	174	-1.1	1.86	1.92	-3.1
Surface	12	15	-20.0	131	161	-18.6	3.54	2.72	30.3
Mississippi	2	2	-	380	338	12.4	4.04	4.76	-15.1
Surface	2	2	-	380	338	12.4	4.04	4.76	-15.1
Missouri	1	1	-	15	19	-21.1	7.45	5.45	36.8
Surface	1	1	-	15	19	-21.1	7.45	5.45	36.8
Montana	7	7	-	1,146	1,157	-1.0	14.70	14.26	3.1
Underground	1	1	-	252	237	6.3	10.41	11.09	-6.1
Surface	6	6	-	894	920	-2.8	16.03	15.17	5.7
New Mexico	3	3	-	929	1,023	-9.2	7.46	6.68	11.6
Underground	1	1	-	349	404	-13.6	8.59	5.82	47.5
Surface	2	2	-	580	619	-6.3	6.89	7.19	-4.2
North Dakota	5	5	-	1,255	1,257	-0.2	12.07	11.80	2.3
Surface	5	5	-	1,255	1,257	-0.2	12.07	11.80	2.3
Ohio	26	26	-	1,086	1,466	-25.9	4.07	4.15	-1.9
Underground	11	12	-8.3	693	976	-29.0	4.43	4.57	-3.1
Surface	15	14	7.1	393	490	-19.8	3.37	3.28	2.7
Oklahoma	5	4	25.0	186	152	22.4	1.68	1.71	-2.0
Underground	1	1	-	84	76	10.5	1.59	1.86	-14.6
Surface	4	3	33.3	102	76	34.2	1.81	1.54	18.0
Pennsylvania Total	211	228	-7.5	5,458	5,202	4.9	4.07	4.26	-4.6
Underground	58	62	-6.5	3,919	3,638	7.7	4.84	5.25	-7.7
Surface	153	166	-7.8	1,539	1,564	-1.6	1.79	1.53	17.3

Coal-Producing State, Region ¹ and Mine Type	Number of Mining Operations ²			Number of Employees ³			Average Production per Employee Hour (short tons) ⁴		
	2017	2016	Percent Change	2017	2016	Percent Change	2017	2016	Percent Change
Pennsylvania (Anthracite)	94	92	2.2	914	952	-4.0	1.07	0.83	28.6
Underground	18	21	-14.3	82	90	-8.9	0.60	0.58	4.7
Surface	76	71	7.0	832	862	-3.5	1.11	0.86	29.4
Pennsylvania (Bituminous)	117	136	-14.0	4,544	4,250	6.9	4.57	4.95	-7.7
Underground	40	41	-2.4	3,837	3,548	8.1	4.90	5.34	-8.2
Surface	77	95	-18.9	707	702	0.7	2.55	2.45	4.0
Tennessee	8	8	-	148	178	-16.9	1.51	1.84	-17.8
Underground	4	5	-20.0	99	136	-27.2	1.50	1.59	-5.7
Surface	4	3	33.3	49	42	16.7	1.56	2.64	-40.9
Texas	10	14	-28.6	1,993	2,561	-22.2	8.58	7.02	22.1
Surface	10	14	-28.6	1,993	2,561	-22.2	8.58	7.02	22.1
Utah	15	15	-	1,240	1,178	5.3	5.34	5.66	-5.7
Underground	12	12	-	1,191	1,129	5.5	5.33	5.67	-6.0
Surface	3	3	-	49	49	-	5.49	5.39	1.8
Virginia	74	76	-2.6	2,660	2,417	10.1	2.17	2.46	-11.5
Underground	37	36	2.8	1,984	1,729	14.7	2.19	2.36	-7.3
Surface	37	40	-7.5	676	688	-1.7	2.13	2.70	-21.2
West Virginia Total	213	204	4.4	13,222	11,561	14.4	3.04	3.19	-4.6
Underground	107	113	-5.3	10,507	9,259	13.5	3.00	3.19	-5.8
Surface	106	91	16.5	2,715	2,302	17.9	3.20	3.18	0.4
West Virginia (Northern)	26	28	-7.1	4,246	4,148	2.4	4.73	4.75	-0.5
Underground	19	21	-9.5	4,212	4,075	3.4	4.74	4.79	-1.2
Surface	7	7	-	34	73	-53.4	3.03	1.79	69.2
West Virginia (Southern)	187	176	6.3	8,976	7,413	21.1	2.23	2.28	-2.2
Underground	88	92	-4.3	6,295	5,184	21.4	1.81	1.88	-3.5
Surface	99	84	17.9	2,681	2,229	20.3	3.20	3.22	-0.8
Wyoming	17	17	-	5,700	5,756	-1.0	26.82	25.66	4.5
Underground	1	1	-	230	279	-17.6	3.44	1.90	80.5
Surface	16	16	-	5,470	5,477	-0.1	27.85	26.99	3.2
Appalachia Total	777	804	-3.4	29,587	27,292	8.4	2.94	3.10	-5.3
Underground	309	326	-5.2	22,067	20,007	10.3	3.04	3.27	-7.1
Surface	468	478	-2.1	7,520	7,285	3.2	2.64	2.60	1.4
Appalachia Central	462	467	-1.1	15,894	14,017	13.4	2.14	2.24	-4.4
Underground	208	217	-4.1	11,016	9,600	14.8	1.82	1.92	-5.2
Surface	254	250	1.6	4,878	4,417	10.4	2.87	2.97	-3.3
Appalachia Northern	278	300	-7.3	11,093	11,151	-0.5	4.29	4.38	-2.1
Underground	91	98	-7.1	8,996	8,863	1.5	4.71	4.90	-4.0
Surface	187	202	-7.4	2,097	2,288	-8.3	2.23	2.03	9.6
Appalachia Southern	37	37	-	2,600	2,124	22.4	2.15	2.12	1.7
Underground	10	11	-9.1	2,055	1,544	33.1	2.21	2.21	0.1
Surface	27	26	3.8	545	580	-6.0	1.94	1.87	3.9
Interior Region Total	94	107	-12.1	11,382	12,207	-6.8	5.58	5.22	6.9
Underground	38	46	-17.4	6,590	7,038	-6.4	5.20	4.75	9.5
Surface	56	61	-8.2	4,792	5,169	-7.3	6.15	5.90	4.3
Illinois Basin	71	80	-11.3	8,412	8,758	-4.0	5.19	4.88	6.3
Underground	36	44	-18.2	6,445	6,906	-6.7	5.27	4.81	9.4
Surface	35	36	-2.8	1,967	1,852	6.2	4.92	5.15	-4.4
Other Interior	23	27	-14.8	2,970	3,449	-13.9	6.85	6.13	11.7
Underground	2	2	-	145	132	9.8	1.28	1.35	-5.1
Surface	21	25	-16.0	2,825	3,317	-14.8	7.11	6.34	12.0
Western Region Total	56	57	-1.8	12,027	12,197	-1.4	17.32	16.40	5.6
Underground	19	20	-5.0	2,830	2,961	-4.4	6.32	5.37	17.5
Surface	37	37	-	9,197	9,236	-0.4	20.78	20.09	3.4
Powder River Basin	17	18	-5.6	5,657	5,692	-0.6	28.48	27.62	3.1
Surface	17	18	-5.6	5,657	5,692	-0.6	28.48	27.62	3.1
Uinta Basin	19	19	-	2,359	2,344	0.6	5.59	5.09	9.8
Underground	15	15	-	1,917	1,931	-0.7	5.90	5.24	12.5
Surface	4	4	-	442	413	7.0	4.22	4.34	-2.9
Other Western	20	20	-	4,011	4,161	-3.6	8.43	7.81	7.9
Underground	4	5	-20.0	913	1,030	-11.4	7.23	5.63	28.5

Coal-Producing State, Region ¹ and Mine Type	Number of Mining Operations ²			Number of Employees ³			Average Production per Employee Hour (short tons) ⁴		
	2017	2016	Percent Change	2017	2016	Percent Change	2017	2016	Percent Change
Surface	16	15	6.7	3,098	3,131	-1.1	8.79	8.54	2.9
East of Mississippi River	850	886	-4.1	38,379	36,388	5.5	3.46	3.57	-3.2
Underground	345	370	-6.8	28,512	26,913	5.9	3.55	3.68	-3.5
Surface	505	516	-2.1	9,867	9,475	4.1	3.16	3.22	-2.0
West of Mississippi River	77	82	-6.1	14,617	15,308	-4.5	15.49	14.20	9.1
Underground	21	22	-4.5	2,975	3,093	-3.8	6.10	5.18	17.7
Surface	56	60	-6.7	11,642	12,215	-4.7	17.91	16.54	8.3
U.S. Subtotal	927	968	-4.2	52,996	51,696	2.5	6.55	6.61	-0.9
Underground	366	392	-6.6	31,487	30,006	4.9	3.77	3.83	-1.5
Surface	561	576	-2.6	21,509	21,690	-0.8	10.92	10.73	1.8
Refuse Recovery	16	18	-11.1	55	99	-44.4	9.82	5.55	76.9
U.S. Total	943	986	-4.4	53,051	51,795	2.4	6.55	6.61	-0.9

- = No data reported.

1 For a definition of coal producing regions, see the Glossary.

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

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

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

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

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

Table 22. Underground Coal Mining Productivity by State and Mining Method, 2017

(short tons produced per employee hour)

Coal-Producing State, Region ¹ and Mine Type	Continuous ²	Conventional and Other ³	Longwall ⁴	Total
Alabama	1.71	-	2.23	2.21
Colorado	3.07	-	6.84	6.45
Illinois	4.59	6.26	9.52	6.72
Indiana	4.57	-	-	4.50
Kentucky Total	2.71	2.55	-	2.71
Kentucky (East)	1.60	2.55	-	1.61
Kentucky (West)	3.94	-	-	3.94
Maryland	1.86	-	-	1.86
Montana	-	-	10.41	10.41
New Mexico	-	-	8.59	8.59
Ohio	2.02	-	6.60	4.53
Oklahoma	1.59	-	-	1.59
Pennsylvania Total	2.43	1.00	5.99	4.88
Pennsylvania (Anthracite)	0.46	1.00	-	0.56
Pennsylvania (Bituminous)	2.49	-	5.99	4.92
Tennessee	1.52	-	-	1.52
Utah	3.27	-	5.86	5.33
Virginia	1.46	-	3.85	2.22
West Virginia Total	1.82	2.17	4.36	3.01
West Virginia (Northern)	1.57	-	5.26	4.74
West Virginia (Southern)	1.85	2.17	1.65	1.81
Wyoming	-	-	3.44	3.44
Appalachia Total	1.79	2.17	4.43	3.05
Appalachia Central	1.72	2.26	2.38	1.83
Appalachia Northern	2.12	1.00	5.63	4.73
Appalachia Southern	1.71	-	2.23	2.21
Interior Region Total	4.24	6.26	9.52	5.22
Illinois Basin	4.29	6.26	9.52	5.27
Other Interior	1.59	-	-	1.59
Western Region Total	3.22	-	6.73	6.32
Uinta Basin	3.27	-	6.28	5.90
Other Western	3.07	-	7.67	7.23
East of Mississippi River	2.58	4.49	4.97	3.57
West of Mississippi River	2.86	-	6.73	6.16
U.S. Total	2.59	4.49	5.25	3.79

- = No data reported.

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

Notes: For each State, stand alone preparation plant hours are distributed across mining methods by the proportion of underground hours for all stand alone mines. Productivity is calculated by dividing total coal production by the total direct labor hours worked by all employees engaged in production, preparation, processing, development, maintenance, repair shop, or yard work at mining operations, including office workers. Excludes mines producing less than 25,000 short tons of coal and preparation plants with less than 5,000 employee hours during the year, which are not required to provide data.

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

Table 23. Coal Mining Productivity by State, Mine Type, and Mine Production Range, 2017

(short tons produced per employee hour)

Coal-Producing State, Region ¹ and Mine Type	Mine Production Range (thousand short tons)							Total ²
	Above 1,000	Above 500 to 1,000	Above 200 to 500	Above 100 to 200	Above 50 to 100	Above 10 to 50	10 or Under	
Alabama	2.28	-	1.94	2.11	2.54	1.38	0.70	2.15
Underground	2.28	-	-	2.21	1.71	-	0.34	2.21
Surface	-	-	1.94	2.08	2.80	1.38	0.88	1.94
Alaska	-	5.24	-	-	-	-	-	5.24
Surface	-	5.24	-	-	-	-	-	5.24
Arizona	6.64	-	-	-	-	-	-	6.64
Surface	6.64	-	-	-	-	-	-	6.64
Arkansas	-	-	-	-	-	0.50	0.59	0.50
Underground	-	-	-	-	-	0.36	-	0.36
Surface	-	-	-	-	-	1.07	0.59	1.04
Colorado	5.97	3.07	-	-	-	0.80	-	5.69
Underground	6.84	3.07	-	-	-	-	-	6.45
Surface	4.45	-	-	-	-	0.80	-	4.28
Illinois	7.16	4.30	5.15	4.39	7.68	-	-	6.54
Underground	7.18	-	-	-	-	-	-	6.72
Surface	6.26	4.30	5.15	4.39	7.68	-	-	4.74
Indiana	5.00	-	3.69	5.19	2.14	-	0.18	4.75
Underground	4.79	-	-	-	-	-	-	4.50
Surface	5.21	-	3.69	5.19	2.14	-	0.18	4.98
Kentucky Total	4.20	2.76	2.18	2.37	2.15	1.88	0.78	2.73
Underground	4.14	1.76	1.76	1.97	1.66	0.97	0.37	2.69
Surface	5.12	4.90	3.41	2.88	2.72	2.52	0.98	2.88
Kentucky (East)	3.49	2.21	2.18	2.31	2.15	1.80	0.78	1.94
Underground	3.10	1.76	1.76	1.97	1.66	0.97	0.37	1.59
Surface	4.26	4.27	3.41	2.78	2.72	2.41	1.01	2.62
Kentucky (West)	4.30	5.45	-	3.97	-	6.07	0.73	4.00
Underground	4.23	-	-	-	-	-	-	3.94
Surface	6.43	5.45	-	3.97	-	6.07	0.73	4.79
Louisiana	2.47	-	4.53	-	-	-	-	2.67
Surface	2.47	-	4.53	-	-	-	-	2.67
Maryland	-	2.24	3.46	6.93	3.26	1.83	1.14	2.58
Underground	-	2.24	2.50	-	-	-	-	1.86
Surface	-	-	4.15	6.93	3.26	1.83	1.14	3.54
Mississippi	5.82	-	0.98	-	-	-	-	4.04
Surface	5.82	-	0.98	-	-	-	-	4.04
Missouri	-	-	7.45	-	-	-	-	7.45
Surface	-	-	7.45	-	-	-	-	7.45
Montana	14.87	-	10.02	-	-	-	-	14.70
Underground	10.41	-	-	-	-	-	-	10.41
Surface	16.28	-	10.02	-	-	-	-	16.03
New Mexico	7.46	-	-	-	-	-	-	7.46
Underground	8.59	-	-	-	-	-	-	8.59
Surface	6.89	-	-	-	-	-	-	6.89
North Dakota	12.11	-	9.87	-	-	-	-	12.07
Surface	12.11	-	9.87	-	-	-	-	12.07
Ohio	6.60	3.16	2.83	3.70	1.49	1.97	0.38	4.07
Underground	6.60	1.93	1.88	6.40	-	-	0.32	4.43
Surface	-	4.71	3.43	3.14	1.49	1.97	0.82	3.37
Oklahoma	-	-	1.59	1.83	1.80	-	1.47	1.68
Underground	-	-	1.59	-	-	-	-	1.59
Surface	-	-	-	1.83	1.80	-	1.47	1.81
Pennsylvania Total	5.55	4.39	3.18	2.72	2.14	1.60	0.75	4.07
Underground	5.55	4.39	2.94	2.00	1.11	1.20	0.57	4.84
Surface	-	-	3.47	3.06	2.59	1.68	0.79	1.79
Pennsylvania (Anthracite)	-	-	2.87	4.14	1.85	1.30	0.50	1.07
Underground	-	-	-	-	-	0.96	0.71	0.60

Coal-Producing State, Region ¹ and Mine Type	Mine Production Range (thousand short tons)							Total ²
	Above 1,000	Above 500 to 1,000	Above 200 to 500	Above 100 to 200	Above 50 to 100	Above 10 to 50	10 or Under	
Surface	-	-	2.87	4.14	1.85	1.37	0.46	1.11
Pennsylvania (Bituminous)	5.55	4.39	3.23	2.35	2.24	1.81	1.61	4.57
Underground	5.55	4.39	2.94	2.00	1.11	1.38	0.31	4.90
Surface	-	-	3.72	2.58	3.04	1.90	2.26	2.55
Tennessee	-	-	2.12	1.51	3.41	2.07	0.69	1.51
Underground	-	-	2.12	1.51	-	1.21	-	1.50
Surface	-	-	-	-	3.41	3.20	0.69	1.56
Texas	8.65	-	3.88	-	-	-	-	8.58
Surface	8.65	-	3.88	-	-	-	-	8.58
Utah	6.21	4.82	-	2.62	-	-	-	5.34
Underground	6.21	3.93	-	2.62	-	-	-	5.33
Surface	-	8.62	-	-	-	-	-	5.49
Virginia	3.22	1.80	2.46	1.78	1.42	1.26	0.43	2.17
Underground	3.22	1.68	1.92	1.23	1.22	1.35	0.37	2.19
Surface	-	1.92	3.31	2.33	2.74	1.18	0.56	2.13
West Virginia Total	4.17	2.46	2.23	2.03	2.82	1.30	0.86	3.04
Underground	4.18	2.14	1.95	1.32	1.75	1.14	0.89	3.00
Surface	4.10	3.82	3.47	2.79	3.23	1.38	0.86	3.20
West Virginia (Northern)	5.12	-	1.25	6.05	-	4.26	4.20	4.73
Underground	5.12	-	1.25	-	-	-	-	4.74
Surface	-	-	-	6.05	-	4.26	4.20	3.03
West Virginia (Southern)	2.88	2.46	2.37	1.98	2.82	1.24	0.81	2.23
Underground	2.15	2.14	2.08	1.32	1.75	1.14	0.89	1.81
Surface	4.10	3.82	3.47	2.71	3.23	1.30	0.81	3.20
Wyoming	26.86	-	-	7.87	-	-	-	26.82
Underground	3.44	-	-	-	-	-	-	3.44
Surface	27.90	-	-	7.87	-	-	-	27.85
Appalachia Total	4.19	2.56	2.37	2.22	2.27	1.55	0.71	2.94
Underground	4.20	2.26	1.97	1.64	1.51	1.14	0.43	3.04
Surface	4.11	3.65	3.22	2.73	2.81	1.74	0.84	2.64
Appalachia Central	3.01	2.38	2.29	2.01	2.24	1.51	0.69	2.14
Underground	2.56	2.08	1.92	1.51	1.56	1.13	0.39	1.82
Surface	4.12	3.48	3.41	2.62	2.95	1.78	0.84	2.87
Appalachia Northern	5.37	3.50	2.74	3.02	2.25	1.65	0.73	4.29
Underground	5.37	3.22	2.20	2.37	1.11	1.20	0.47	4.71
Surface	-	4.71	3.54	3.28	2.59	1.73	0.83	2.23
Appalachia Southern	2.28	-	1.94	2.11	2.54	1.38	0.70	2.15
Underground	2.28	-	-	2.21	1.71	-	0.34	2.21
Surface	-	-	1.94	2.08	2.80	1.38	0.88	1.94
Interior Region Total	6.04	4.78	3.11	3.82	2.43	1.19	0.47	5.58
Underground	5.63	-	1.59	-	-	0.36	-	5.20
Surface	6.72	4.78	3.49	3.82	2.43	3.10	0.47	6.15
Illinois Basin	5.57	4.78	4.36	4.55	2.93	6.07	0.42	5.19
Underground	5.63	-	-	-	-	-	-	5.27
Surface	5.32	4.78	4.36	4.55	2.93	6.07	0.42	4.92
Other Interior	7.60	-	2.26	1.83	1.80	0.50	1.00	6.85
Underground	-	-	1.59	-	-	0.36	-	1.28
Surface	7.60	-	2.59	1.83	1.80	1.07	1.00	7.11
Western Region Total	18.05	4.53	9.93	3.50	-	0.80	-	17.32
Underground	6.88	3.64	-	2.62	-	-	-	6.32
Surface	21.17	6.30	9.93	7.87	-	0.80	-	20.78
Powder River Basin	28.52	-	-	-	-	-	-	28.48
Surface	28.52	-	-	-	-	-	-	28.48
Uinta Basin	6.08	3.93	-	2.62	-	-	-	5.59
Underground	6.49	3.93	-	2.62	-	-	-	5.90
Surface	4.45	-	-	-	-	-	-	4.22
Other Western	8.66	5.01	9.93	7.87	-	0.80	-	8.43
Underground	7.67	3.07	-	-	-	-	-	7.23
Surface	8.95	6.30	9.93	7.87	-	0.80	-	8.79
East of Mississippi River	4.71	2.65	2.41	2.30	2.30	1.57	0.70	3.46
Underground	4.68	2.26	1.97	1.64	1.51	1.14	0.43	3.55

Coal-Producing State, Region ¹ and Mine Type	Mine Production Range (thousand short tons)							Total ²
	Above 1,000	Above 500 to 1,000	Above 200 to 500	Above 100 to 200	Above 50 to 100	Above 10 to 50	10 or Under	
Surface	4.84	3.84	3.21	2.85	2.82	1.77	0.82	3.16
West of Mississippi River	16.29	4.53	4.18	2.99	1.80	0.60	1.00	15.49
Underground	6.88	3.64	1.59	2.62	-	0.36	-	6.10
Surface	18.36	6.30	6.36	3.49	1.80	0.88	1.00	17.91
U.S. Subtotal	8.97	2.81	2.47	2.33	2.29	1.52	0.70	6.55
Underground	4.92	2.37	1.96	1.69	1.51	1.08	0.43	3.77
Surface	15.42	4.12	3.37	2.87	2.77	1.74	0.82	10.92
Refuse Recovery	-	-	17.51	-	10.98	4.74	0.66	9.82
U.S. Total	8.97	2.81	2.50	2.33	2.32	1.56	0.70	6.55

- = No data reported.

1 For a definition of coal producing regions, see the Glossary.

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

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

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

Table 24. Coal Mining Productivity by State, Mine Type, and Union Status, 2017

(short tons produced per employee hour)

Coal-Producing State and Region ¹	Union		Nonunion	
	Underground	Surface	Underground	Surface
Alabama	2.24	-	1.56	1.99
Alaska	-	5.24	-	-
Arizona	-	6.64	-	-
Colorado	5.90	3.82	6.57	4.68
Illinois	-	-	6.72	4.74
Indiana	-	-	4.50	4.99
Kentucky Total	-	-	2.71	3.03
Kentucky (East)	-	-	1.62	2.77
Kentucky (West)	-	-	3.94	4.87
Louisiana	-	-	-	2.67
Maryland	-	-	1.86	3.66
Mississippi	-	-	-	4.04
Missouri	-	-	-	7.45
Montana	-	12.62	10.41	24.79
New Mexico	8.59	4.92	-	9.87
North Dakota	-	12.61	-	11.97
Ohio	-	-	4.66	3.29
Oklahoma	-	-	1.59	1.81
Pennsylvania Total	4.34	1.78	5.10	1.83
Pennsylvania (Anthracite)	-	1.84	0.56	0.81
Pennsylvania (Bituminous)	4.34	-	5.17	2.53
Tennessee	-	-	1.52	1.81
Texas	-	11.47	-	5.57
Utah	-	-	5.33	6.73
Virginia	-	-	2.28	2.37
West Virginia Total	4.41	5.83	2.34	3.21
West Virginia (Northern)	5.45	-	3.68	2.77
West Virginia (Southern)	1.13	5.83	1.92	3.21
Wyoming	3.44	6.68	-	29.92
Appalachian Total	3.68	2.62	2.79	2.74
Appalachia Central	1.05	5.09	1.90	2.96
Appalachia Northern	5.10	1.78	4.48	2.34
Appalachia Southern	2.24	-	1.56	1.99
Interior Region Total	-	11.47	5.22	4.77
Illinois Basin	-	-	5.27	4.94
Other Interior	-	11.47	1.59	4.56
Western Region Total	6.20	8.13	6.35	25.35
Powder River Basin	-	12.67	-	30.43
Uinta Basin	5.90	4.15	5.90	4.46
Other Western	6.29	6.82	8.65	11.00
East of Mississippi River	3.68	2.62	3.54	3.29
West of Mississippi River	6.20	9.14	6.15	21.66
U.S. Total	3.91	8.56	3.76	11.74

- = No data reported.

¹ For a definition of coal producing regions, see the Glossary.

Notes: Productivity is calculated by dividing total coal production by the total direct labor hours worked by all employees engaged in production, preparation, processing, development, maintenance, repair shop, or yard work at mining operations, including office workers. Excludes mines producing less than 25,000 short tons of coal and preparation plants with less than 5,000 employee hours during the year, which are not required to provide data.

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

Domestic Markets

Table 25. Intentionally left blank

Table 26. U.S. Coal Consumption by End Use Sector, Census Division, and State, 2017 and 2016

(thousand short tons)

Census Division and State	2017				2016				Total		
	Electric Power ¹	Other Industrial	Coke	Commercial and Institutional	Electric Power ¹	Other Industrial	Coke	Commercial and Institutional	2017	2016	Percent Change
New England	897	22	-	-	1,300	21	-	-	919	1,320	-30.4
Connecticut	137	-	-	-	128	-	-	-	137	128	7.1
Maine	66	18	-	-	70	17	-	-	85	87	-2.9
Massachusetts	559	4	-	-	907	4	-	-	563	911	-38.2
New Hampshire	134	-	-	-	194	-	-	-	134	194	-30.9
Rhode Island	s	-	-	-	s	-	-	-	s	s	-
Middle Atlantic	25,257	1,160	5,347	25	28,849	1,645	4,694	39	31,789	35,227	-9.8
New Jersey	631	-	-	-	667	-	-	-	631	667	-5.5
New York	242	386	110	-	654	410	111	-	738	1,175	-37.2
Pennsylvania	24,384	774	5,238	25	27,528	1,235	4,582	39	30,420	33,385	-8.9
East North Central	143,276	6,776	9,295	180	142,670	7,011	8,947	252	159,527	158,881	0.4
Illinois	34,224	2,590	972	103	35,431	2,510	969	105	37,889	39,015	-2.9
Indiana	35,552	2,004	3,702	57	36,085	2,209	3,854	67	41,315	42,214	-2.1
Michigan	24,058	706	1,268	-	23,126	704	812	14	26,032	24,656	5.6
Ohio	28,523	561	3,353	1	29,057	707	3,313	45	32,438	33,121	-2.1
Wisconsin	20,918	915	-	20	18,972	881	-	21	21,853	19,875	10.0
West North Central	116,028	12,558	-	208	114,422	12,185	-	254	128,795	126,861	1.5
Iowa	14,478	2,412	-	122	14,289	2,485	-	130	17,011	16,904	0.6
Kansas	12,542	112	-	-	14,587	104	-	-	12,654	14,690	-13.9
Minnesota	13,359	1,201	-	8	13,686	1,055	-	10	14,568	14,752	-1.2
Missouri	39,513	898	-	25	35,594	711	-	55	40,437	36,361	11.2
Nebraska	12,570	1,173	-	-	13,056	1,113	-	-	13,743	14,169	-3.0
North Dakota	22,210	6,540	-	54	21,807	6,505	-	58	28,804	28,370	1.5
South Dakota	1,355	224	-	-	1,403	212	-	-	1,579	1,615	-2.2
South Atlantic	91,959	3,029	1,587	143	104,055	3,578	1,590	154	96,718	109,377	-11.6
Delaware	186	-	-	-	227	102	-	-	186	329	-43.3
District of Columbia	-	-	-	1	-	-	-	1	1	1	-13.2
Florida	16,852	562	-	-	17,701	500	-	-	17,414	18,202	-4.3
Georgia	16,770	335	-	-	19,272	432	-	-	17,105	19,704	-13.2
Maryland	3,780	562	-	-	5,993	554	-	-	4,342	6,547	-33.7
North Carolina	13,461	454	-	105	14,802	526	-	119	14,020	15,447	-9.2
South Carolina	7,648	251	-	-	8,683	324	-	-	7,898	9,007	-12.3
Virginia	5,275	503	1,018	37	7,828	613	1,016	34	6,833	9,491	-28.0
West Virginia	27,988	363	569	-	29,549	526	574	-	28,919	30,650	-5.7
East South Central	62,313	3,279	1,308	14	69,904	3,800	1,253	14	66,914	74,971	-10.8
Alabama	16,231	955	1,308	-	17,448	1,105	1,253	-	18,494	19,806	-6.6
Kentucky	27,671	834	-	14	32,071	782	-	14	28,519	32,867	-13.2
Mississippi	3,865	-	-	-	4,522	-	-	-	3,865	4,522	-14.5
Tennessee	14,546	1,490	-	-	15,863	1,913	-	s	16,035	17,776	-9.8
West South Central	128,018	1,542	-	-	120,933	1,732	-	-	129,560	122,665	5.6
Arkansas	15,193	198	-	-	14,066	200	-	-	15,391	14,267	7.9
Louisiana	8,398	241	-	-	8,567	267	-	-	8,638	8,834	-2.2
Oklahoma	10,940	474	-	-	12,170	591	-	-	11,413	12,761	-10.6
Texas	93,488	630	-	-	86,130	673	-	-	94,117	86,803	8.4
Mountain	91,209	3,316	-	15	90,802	3,376	-	10	94,539	94,188	0.4
Arizona	16,929	227	-	-	16,639	175	-	-	17,156	16,814	2.0
Colorado	16,628	295	-	s	16,661	285	-	1	16,924	16,947	-0.1
Idaho	-	114	-	-	-	107	-	-	114	107	6.4
Montana	8,944	252	-	2	9,328	261	-	2	9,198	9,591	-4.1
Nevada	1,097	258	-	-	1,192	285	-	-	1,356	1,478	-8.3
New Mexico	10,494	72	-	-	10,547	73	-	-	10,566	10,620	-0.5
Utah	12,438	485	-	-	12,001	575	-	-	12,923	12,576	2.8
Wyoming	24,679	1,611	-	12	24,434	1,614	-	7	26,303	26,055	1.0
Pacific	6,036	1,582	-	476	5,619	1,502	-	460	8,094	7,581	6.8
Alaska	623	1	-	476	644	1	-	460	1,101	1,105	-0.5

Census Division and State	2017				2016				Total		
	Electric Power ¹	Other Industrial	Coke	Commercial and Institutional	Electric Power ¹	Other Industrial	Coke	Commercial and Institutional	2017	2016	Percent Change
California	s	1,464	-	-	s	1,389	-	-	1,464	1,389	5.4
Hawaii	759	-	-	-	775	12	-	-	759	787	-3.6
Oregon	1,031	41	-	-	1,125	s	-	-	1,072	1,125	-4.7
Washington	3,623	76	-	-	3,075	100	-	-	3,699	3,175	16.5
U.S. Total	664,993	33,264	17,538	1,061	678,554	34,849	16,485	1,183	716,856	731,071	-1.9

- = No data reported.

NM = Not Meaningful.

s = Absolute percentage less than 0.05 or value is less than 0.5 of the table metric.

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

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

Sources: U.S. Energy Information Administration Form EIA-923, 'Power Plant Operations Report,' Form EIA-3, 'Quarterly Survey of Non-Electric Sector Coal Data,' and Form EIA-7A, 'Annual Survey of Coal Production and Preparation.' Prior to third quarter 2014, coke plant data was collected under Form EIA-5, 'Quarterly Coal Consumption and Quality Report - Coke Plants.'

Table 27. Year-End Coal Stocks by Sector, Census Division, and State, 2017 and 2016

(thousand short tons)

Census Division and State	2017					2016					Total		
	Electric Power ¹	Other Industrial	Commercial and Institutional	Producer and Distributor		Electric Power ¹	Other Industrial	Commercial and Institutional	Producer and Distributor		2017	2016	Percent Change
New England	933	5	-	-	-	1,638	5	-	-	235	937	1,878	-50.1
Connecticut	w	-	-	-	-	w	-	-	-	-	w	w	13.3
Maine	s	s	-	-	-	s	1	-	-	29	s	30	-98.7
Massachusetts	w	4	-	-	-	w	4	-	-	206	w	w	-99.3
New Hampshire	w	-	-	-	-	w	-	-	-	-	w	w	-13.0
Rhode Island	w	-	-	-	-	w	-	-	-	-	w	w	-42.9
Middle Atlantic	3,909	231	355	42	721	4,927	303	304	44	977	5,257	6,555	-19.8
New Jersey	311	-	-	-	-	783	-	-	-	-	311	783	-60.2
New York	w	78	1	-	-	w	146	6	-	-	w	w	-58.6
Pennsylvania	w	152	353	42	721	w	156	298	44	977	w	w	-11.5
East North Central	28,906	653	1,042	51	3,181	35,636	821	1,024	62	3,435	33,833	40,977	-17.4
Illinois	5,716	114	146	23	1,327	7,056	143	170	19	1,455	7,325	8,843	-17.2
Indiana	8,427	212	176	21	918	9,703	281	194	33	821	9,753	11,032	-11.6
Michigan	6,080	195	374	-	82	6,024	242	366	-	65	6,732	6,697	0.5
Ohio	5,177	23	346	5	570	8,028	26	294	6	641	6,121	8,995	-32.0
Wisconsin	3,506	110	-	3	284	4,824	129	-	3	453	3,903	5,409	-27.9
West North Central	28,193	692	-	48	2,525	31,091	684	-	62	2,938	31,459	34,775	-9.5
Iowa	6,840	144	-	28	106	8,430	127	-	35	166	7,118	8,758	-18.7
Kansas	4,116	29	-	-	-	4,588	42	-	-	-	4,145	4,631	-10.5
Minnesota	3,479	186	-	7	51	4,003	157	-	11	73	3,723	4,245	-12.3
Missouri	8,507	65	-	1	-	9,547	71	-	2	1	8,573	9,620	-10.9
Nebraska	3,352	53	-	-	-	2,985	66	-	-	-	3,404	3,052	11.6
North Dakota	w	192	-	12	2,368	w	206	-	15	2,699	w	w	0.7
South Dakota	w	23	-	-	-	w	14	-	-	-	w	w	-1.3
South Atlantic	24,031	372	177	48	4,881	26,825	363	144	63	4,328	29,508	31,723	-7.0
Delaware	w	-	-	-	-	w	1	-	-	-	w	w	15.9
District of Columbia	-	-	-	4	-	-	-	-	4	-	4	4	20.7
Florida	4,239	72	-	-	-	4,427	47	-	-	-	4,311	4,474	-3.7
Georgia	5,116	55	-	-	-	4,907	75	-	-	-	5,171	4,982	3.8
Maryland	1,512	13	-	-	314	1,535	14	-	-	412	1,838	1,961	-6.3
North Carolina	4,104	35	-	26	-	4,986	27	-	33	-	4,164	5,045	-17.5
South Carolina	4,023	68	-	-	-	5,080	68	-	-	-	4,092	5,147	-20.5
Virginia	w	69	36	18	836	1,093	85	42	26	437	w	1,684	w
West Virginia	3,829	60	141	-	3,731	w	47	102	-	3,479	7,761	w	w
East South Central	12,266	169	145	8	2,193	15,918	234	203	12	2,701	14,780	19,069	-22.5
Alabama	3,049	73	145	-	189	3,514	104	203	-	434	3,455	4,255	-18.8
Kentucky	6,063	23	-	8	687	7,945	28	-	12	683	6,780	8,668	-21.8
Mississippi	911	-	-	-	1,315	1,246	-	-	-	1,560	2,226	2,806	-20.7
Tennessee	2,244	74	-	-	2	3,214	102	-	s	23	2,320	3,340	-30.5
West South Central	19,583	413	-	-	1,787	24,799	460	-	-	989	21,783	26,248	-17.0
Arkansas	2,972	31	-	-	-	3,877	36	-	-	-	3,003	3,913	-23.3
Louisiana	2,297	5	-	-	447	2,488	8	-	-	114	2,750	2,610	5.3
Oklahoma	4,332	113	-	-	167	4,624	128	-	-	-	4,612	4,751	-2.9
Texas	9,981	264	-	-	1,172	13,811	288	-	-	875	11,418	14,973	-23.7
Mountain	18,782	554	-	3	8,459	20,154	551	-	3	9,402	27,797	30,110	-7.7
Arizona	3,015	27	-	-	359	3,544	52	-	-	380	3,400	3,975	-14.5
Colorado	4,388	19	-	1	889	4,363	54	-	s	659	5,297	5,075	4.4
Idaho	-	266	-	-	-	-	271	-	-	-	266	271	-2.0
Montana	w	56	-	2	698	w	38	-	3	1,048	w	w	-17.2
Nevada	w	30	-	-	-	w	28	-	-	-	w	w	-38.1
New Mexico	w	3	-	-	4,305	w	4	-	-	5,293	w	w	-15.2
Utah	4,589	59	-	-	537	5,279	46	-	-	382	5,185	5,706	-9.1
Wyoming	4,316	94	-	s	1,671	4,177	59	-	s	1,640	6,082	5,877	3.5
Pacific	1,119	154	-	110	254	1,489	215	-	113	304	1,636	2,122	-22.9
Alaska	w	-	-	110	254	w	-	-	113	169	w	w	9.6

Census Division and State	2017					2016					Total		
	Electric Power ¹	Other Industrial	Coke	Commercial and Institutional	Producer and Distributor	Electric Power ¹	Other Industrial	Coke	Commercial and Institutional	Producer and Distributor	2017	2016	Percent Change
California	s	125	-	-	-	s	163	-	-	135	125	298	-58.0
Hawaii	w	-	-	-	-	w	16	-	-	-	w	w	-27.6
Oregon	w	23	-	-	-	w	34	-	-	-	w	w	-29.0
Washington	w	6	-	-	-	w	2	-	-	-	w	w	-20.3
U.S. Total	137,721	3,242	1,718	310	23,999	162,476	3,637	1,675	360	25,309	166,990	193,457	-13.7

- = No data reported.

w = Data withheld to avoid disclosure.

s = Absolute percentage less than 0.05 or value is less than 0.5 of the table metric.

¹ The electric power sector (electric utilities and independent power producers) comprises electricity-only and combined-heat-and-power(CHP) plants whose primary business is to sell electricity, or electricity and heat, to the public (i.e. NAICS 22 plants). Coal stocks include waste coal.

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

Sources: U.S. Energy Information Administration Form EIA-923, 'Power Plant Operations Report,' Form EIA-3, 'Quarterly Survey of Non-Electric Sector Coal Data,' Form EIA-7A, 'Annual Survey of Coal Production and Preparation,' and Form EIA-8A, 'Annual Survey of Coal Stocks and Coal Exports.' Prior to third quarter 2014, coke plant data was collected under Form EIA-5, 'Quarterly Coal Consumption and Quality Report - Coke Plants.'

Average Mine Sales Price

Table 28. Average Sales Price of Coal by State and Mine Type, 2017 and 2016

(dollars per short ton)

Coal-Producing State	2017			2016			Percent Change		
	Underground	Surface	Total	Underground	Surface	Total	Underground	Surface	Total
Alabama	161.78	77.47	146.20	94.42	82.49	91.86	71.3	-6.1	59.2
Alaska	-	w	w	-	w	w	-	w	w
Arizona	-	w	w	-	w	w	-	w	w
Arkansas	-	-	-	w	-	w	w	-	w
Colorado	w	w	42.52	w	w	42.54	w	w	s
Illinois	37.86	38.88	37.93	39.22	38.75	39.20	-3.5	0.3	-3.2
Indiana	42.62	41.90	42.23	46.82	42.84	44.55	-9.0	-2.2	-5.2
Kansas	-	-	-	-	w	w	-	w	w
Kentucky Total	51.94	51.23	51.77	52.06	46.42	50.79	-0.2	10.4	1.9
Kentucky (East)	66.00	54.07	60.82	58.40	51.22	55.44	13.0	5.6	9.7
Kentucky (West)	45.33	40.29	44.90	49.50	35.56	47.94	-8.4	13.3	-6.3
Louisiana	-	w	w	-	w	w	-	w	w
Maryland	w	w	72.68	w	w	57.80	w	w	25.7
Mississippi	-	w	w	-	w	w	-	w	w
Missouri	-	w	w	-	w	w	-	w	w
Montana	w	w	19.31	w	w	18.84	w	w	2.5
New Mexico	w	w	34.72	w	w	33.24	w	w	4.5
North Dakota	-	17.82	17.82	-	17.95	17.95	-	-0.7	-0.7
Ohio	w	w	42.28	46.00	41.09	44.68	w	w	-5.4
Oklahoma	w	w	52.78	w	w	53.18	w	w	-0.8
Pennsylvania Total	51.96	72.63	54.08	46.18	67.64	47.98	12.5	7.4	12.7
Pennsylvania (Anthracite)	60.32	94.17	93.17	w	w	97.61	w	w	-4.6
Pennsylvania (Bituminous)	51.95	60.89	52.57	w	w	46.40	w	w	13.3
Tennessee	w	w	65.96	w	w	60.37	w	w	9.3
Texas	-	18.20	18.20	-	19.17	19.17	-	-5.1	-5.1
Utah	w	w	35.28	w	w	36.40	w	w	-3.1
Virginia	94.29	88.71	92.84	62.77	57.05	60.96	50.2	55.5	52.3
West Virginia Total	68.54	64.79	67.75	57.11	52.49	56.20	20.0	23.4	20.6
West Virginia (Northern)	w	w	54.35	w	w	52.35	w	w	3.8
West Virginia (Southern)	w	w	81.78	w	w	60.71	w	w	34.7
Wyoming	w	w	13.30	w	w	13.74	w	w	-3.2
U.S. Total	56.99	20.95	33.72	49.02	20.47	30.57	16.3	2.3	10.3

- = No data reported.

w = Data withheld to avoid disclosure.

s = Absolute percentage less than 0.05 or value is less than 0.5 of the table metric.

Notes: An average sales price is calculated by dividing the total free on board (f.o.b) rail/barge value of the coal sold by the total coal sold. Excludes mines producing less than 25,000 short tons, which are not required to provide data. Excludes silt, culm, refuse bank, slurry dam, and dredge operations. Totals may not equal sum of components because of independent rounding.

Source: U.S. Energy Information Administration Form EIA-7A, 'Annual Survey of Coal Production and Preparation.'

Table 29. Average Sales Price of Coal by State and Underground Mining Method, 2017

(dollars per short ton)

Coal-Producing State	Continuous ¹	Conventional and Other ²	Longwall ³	Total
Alabama	w	-	w	161.78
Colorado	w	-	w	w
Illinois	31.10	w	41.63	w
Indiana	42.62	-	-	42.62
Kentucky Total	w	w	-	51.94
Kentucky (East)	w	w	-	66.00
Kentucky (West)	45.33	-	-	45.33
Maryland	w	-	-	w
Montana	-	-	w	w
New Mexico	-	-	w	w
Ohio	w	-	w	w
Oklahoma	w	-	-	w
Pennsylvania Total	88.63	w	45.21	w
Pennsylvania (Anthracite)	w	w	-	60.32
Pennsylvania (Bituminous)	w	-	w	51.95
Tennessee	w	-	-	w
Utah	36.90	-	w	w
Virginia	w	-	w	94.29
West Virginia Total	92.87	w	57.10	w
West Virginia (Northern)	w	-	w	w
West Virginia (Southern)	w	w	w	w
Wyoming	-	-	w	w
U.S. Total	61.88	w	54.34	w

- = No data reported.

w = Data withheld to avoid disclosure.

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

2 Mines that produce greater than 50 percent of their coal by conventional mining methods or mines that produce coal using shortwall, scoop loading, hand loading, or other methods or a 50/50 percent continuous/conventional split in mining method.

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

Notes: An average sales price is calculated by dividing the total free on board (f.o.b.) rail/barge value of the coal sold by the total coal sold. Excludes mines producing less than 25,000 short tons, which are not required to provide data. Excludes silt, culm, refuse bank, slurry dam, and dredge operations. Totals may not equal sum of components because of independent rounding.

Source: U.S. Energy Information Administration Form EIA-7A, 'Annual Survey of Coal Production and Preparation.'

Table 30. Average Sales Price of Coal by State, County, and Number of Mines, 2017

Coal-Producing State and County	Number of Mines	Sales (thousand short tons)	Average Sales Price (dollars per short ton)
Alabama	24	12,964	146.20
Bibb	1	w	w
Jefferson	7	7,137	148.05
Shelby	1	w	w
Tuscaloosa	3	w	w
Walker	11	3,492	134.13
Winston	1	w	w
Alaska	1	w	w
Denali	1	w	w
Arizona	1	w	w
Navajo	1	w	w
Colorado	7	14,703	42.52
Gunnison	1	w	w
La Plata	1	w	w
Moffat	2	w	w
Montrose	1	w	w
Rio Blanco	1	w	w
Routt	1	w	w
Illinois	18	48,155	37.93
Franklin	1	w	w
Gallatin	1	w	w
Hamilton	1	w	w
Macoupin	1	w	w
Perry	4	w	w
Randolph	3	w	w
Saline	3	w	w
Sangamon	1	w	w
Wabash	1	w	w
Washington	1	w	w
Williamson	1	w	w
Indiana	17	31,292	42.23
Clay	1	w	w
Daviess	2	w	w
Dubois	2	w	w
Gibson	3	w	w
Knox	2	w	w
Pike	1	w	w
Sullivan	2	w	w
Warrick	4	4,221	39.18
Kentucky	110	41,415	51.77
Bell	10	1,351	65.04
Breathitt	1	w	w
Daviess	3	w	w
Floyd	8	1,384	58.44
Harlan	14	3,327	64.35
Hopkins	1	w	w
Johnson	3	w	w
Knott	2	w	w
Knox	4	297	67.21
Lawrence	1	w	w
Leslie	5	1,013	51.32
Letcher	1	w	w
Magoffin	2	w	w
Martin	1	w	w
McLean	1	w	w
Morgan	1	w	w
Muhlenberg	2	w	w
Ohio	3	w	w

Coal-Producing State and County	Number of Mines	Sales (thousand short tons)	Average Sales Price (dollars per short ton)
Perry	12	3,992	54.52
Pike	28	4,398	66.75
Union	1	w	w
Webster	1	w	w
Whitley	5	425	101.18
Louisiana	2	w	w
De Soto	1	w	w
Natchitoches	1	w	w
Maryland	12	1,803	72.68
Allegany	8	1,128	44.37
Garrett	4	w	w
Mississippi	2	w	w
Choctaw	1	w	w
Kemper	1	w	-
Missouri	1	w	w
Bates	1	w	w
Montana	6	35,614	19.31
Big Horn	3	w	w
Musselshell	1	w	w
Richland	1	w	w
Rosebud	1	w	w
New Mexico	3	w	w
Mckinley	1	w	w
San Juan	2	w	w
North Dakota	5	29,102	17.82
McLean	1	w	w
Mercer	3	w	w
Oliver	1	w	w
Ohio	12	9,190	42.28
Belmont	1	w	w
Harrison	4	1,673	41.37
Monroe	1	w	w
Noble	1	w	w
Perry	2	w	w
Stark	1	w	w
Tuscarawas	1	w	w
Vinton	1	w	w
Oklahoma	4	632	52.78
Craig	1	w	w
Le Flore	2	w	w
Nowata	1	w	w
Pennsylvania	86	48,605	54.08
Armstrong	5	681	104.57
Bedford	1	w	w
Butler	1	w	w
Cambria	4	1,022	70.05
Clearfield	13	1,204	90.26
Columbia	1	w	w
Dauphin	1	w	w
Greene	5	29,286	45.73
Indiana	5	2,003	103.26
Jefferson	4	429	67.36
Luzerne	5	193	70.29
Lycoming	1	w	w
Mercer	1	w	w
Northumberland	5	275	42.91
Schuylkill	17	1,281	105.47
Somerset	14	2,089	81.12
Washington	1	w	w
Westmoreland	2	w	w
Tennessee	4	405	65.96
Claiborne	4	405	65.96

Coal-Producing State and County	Number of Mines	Sales (thousand short tons)	Average Sales Price (dollars per short ton)
Texas	10	36,142	18.20
Atascosa	1	w	w
Freestone	1	w	w
Harrison	2	w	w
Lee	1	w	w
Limestone	1	w	w
Maverick	1	w	w
Panola	1	w	w
Robertson	1	w	w
Rusk	1	w	w
Utah	8	14,662	35.28
Carbon	3	w	w
Emery	3	w	w
Kane	1	w	w
Sevier	1	w	w
Virginia	40	13,067	92.84
Buchanan	18	7,869	87.25
Dickenson	10	3,325	116.85
Russell	1	w	w
Tazewell	2	w	w
Wise	9	1,431	77.39
West Virginia	113	91,410	67.75
Barbour	1	w	w
Boone	10	4,812	71.24
Fayette	6	3,194	76.10
Greenbrier	6	918	106.47
Kanawha	9	6,228	74.40
Logan	15	9,544	72.87
Marion	3	w	w
Marshall	2	w	w
Mcdowell	18	3,599	85.96
Mercer	1	w	w
Mingo	10	4,840	58.58
Monongalia	2	w	w
Nicholas	1	w	w
Ohio	1	w	w
Raleigh	12	6,115	114.58
Taylor	1	w	w
Tucker	1	w	w
Upshur	1	w	w
Wyoming	13	4,772	94.13
Wyoming	17	316,697	13.30
Campbell	11	276,824	11.98
Converse	1	w	w
Lincoln	2	w	w
Sweetwater	3	w	w
U.S. Total	503	772,998	33.72

- = No data reported.

w = Data withheld to avoid disclosure.

Notes: An average sales price is calculated by dividing the total free on board (f.o.b) rail/barge value of the coal sold by the total coal sold. Excludes mines producing less than 25,000 short tons, which are not required to provide data. Excludes silt, culm, refuse bank, slurry dam, and dredge operations. Totals may not equal sum of components because of independent rounding.

Source: U.S. Energy Information Administration Form EIA-7A, 'Annual Survey of Coal Production and Preparation.'

Table 31. Average Sales Price of Coal by State and Coal Rank, 2017

(dollars per short ton)

Coal-Producing State	Bituminous	Subbituminous	Lignite	Anthracite	Total
Alabama	146.20	-	-	-	146.20
Alaska	-	w	-	-	w
Arizona	w	-	-	-	w
Colorado	w	w	-	-	42.52
Illinois	37.93	-	-	-	37.93
Indiana	42.23	-	-	-	42.23
Kentucky Total	51.77	-	-	-	51.77
Kentucky (East)	60.82	-	-	-	60.82
Kentucky (West)	44.90	-	-	-	44.90
Louisiana	-	-	w	-	w
Maryland	72.68	-	-	-	72.68
Mississippi	-	-	w	-	w
Missouri	w	-	-	-	w
Montana	w	17.33	w	-	19.31
New Mexico	w	w	-	-	34.72
North Dakota	-	-	17.82	-	17.82
Ohio	42.28	-	-	-	42.28
Oklahoma	52.78	-	-	-	52.78
Pennsylvania Total	52.57	-	-	93.17	54.08
Pennsylvania (Anthracite)	-	-	-	93.17	93.17
Pennsylvania (Bituminous)	52.57	-	-	-	52.57
Tennessee	65.96	-	-	-	65.96
Texas	w	-	w	-	18.20
Utah	35.28	-	-	-	35.28
Virginia	92.84	-	-	-	92.84
West Virginia Total	67.75	-	-	-	67.75
West Virginia (Northern)	54.35	-	-	-	54.35
West Virginia (Southern)	81.78	-	-	-	81.78
Wyoming	w	w	-	-	13.30
U.S. Total	55.60	14.29	19.51	93.17	33.72

- = No data reported.

w = Data withheld to avoid disclosure.

Notes: An average sales price is calculated by dividing the total free on board (f.o.b) rail/barge value of the coal sold by the total coal sold. Excludes mines producing less than 25,000 short tons, which are not required to provide data. Excludes silt, culm, refuse bank, slurry dam, and dredge operations. Totals may not equal sum of components because of independent rounding.

Source: U.S. Energy Information Administration Form EIA-7A, 'Annual Survey of Coal Production and Preparation.'

Table 32. Average Sales Price of Coal by Mine Production Range and Mine Type, 2017

(dollars per short ton)

Mine Production Range (thousand short tons)	Underground	Surface	Total
Over 1,000	52.23	17.48	29.23
Over 500 to 1,000	91.55	62.04	80.90
Over 200 to 500	81.18	57.55	69.60
Over 100 to 200	82.93	68.46	73.29
Over 50 to 100	82.24	63.64	68.63
50 or Under	76.07	64.02	66.99
U.S. Total	56.99	20.95	33.72

Notes: An average sales price is calculated by dividing the total free on board (f.o.b) rail/barge value of the coal sold by the total coal sold. Excludes mines producing less than 25,000 short tons, which are not required to provide data. Excludes silt, culm, refuse bank, slurry dam, and dredge operations. Totals may not equal sum of components because of independent rounding.

Source: U.S. Energy Information Administration Form EIA-7A, 'Annual Survey of Coal Production and Preparation.'

Table 33. Average Sales Price of U.S. Coal by State and Disposition, 2017

(dollars per short ton)

Coal-Producing State	Open Market ¹	Captive ²	Total ³
Alabama	w	w	146.20
Alaska	w	-	w
Arizona	w	-	w
Colorado	38.70	44.26	42.52
Illinois	w	w	37.93
Indiana	42.47	42.45	42.23
Kentucky Total	51.63	71.67	51.77
Kentucky (East)	60.57	71.67	60.82
Kentucky (West)	45.53	-	44.90
Louisiana	w	-	w
Maryland	53.35	-	72.68
Mississippi	w	-	w
Missouri	w	-	w
Montana	w	w	19.31
New Mexico	w	w	w
North Dakota	w	w	17.82
Ohio	w	w	42.28
Oklahoma	52.78	-	52.78
Pennsylvania Total	w	w	54.08
Pennsylvania (Anthracite)	w	w	93.17
Pennsylvania (Bituminous)	w	w	52.57
Tennessee	58.45	-	65.96
Texas	w	w	18.20
Utah	w	w	35.28
Virginia	w	w	92.84
West Virginia Total	58.50	49.28	67.75
West Virginia (Northern)	w	w	54.35
West Virginia (Southern)	w	w	81.78
Wyoming	w	w	13.30
U.S. Total	31.80	20.60	33.72

- = No data reported.

w = Data withheld to avoid disclosure.

¹ Open market includes coal sold on the open market to other coal companies or consumers; excludes exports.² Captive includes all coal used by the producing company or sold to affiliated or parent companies; excludes exports.³ Total includes price of coal sold on the open market, captive market and exported by coal mines. Excludes price of coal exported by coal brokers, coal traders and coal terminals.

Notes: An average sales price is calculated by dividing the total free on board (f.o.b) rail/barge value of the coal sold by the total coal sold. Excludes mines producing less than 25,000 short tons, which are not required to provide data. Excludes silt, culm, refuse bank, slurry dam, and dredge operations. Totals may not equal sum of components because of independent rounding.

Source: U.S. Energy Information Administration Form EIA-7A, 'Annual Survey of Coal Production and Preparation.'

Table 33.1 Average Sales Price of U.S. Coal by Use and Disposition, 2014-2017

(dollars per short ton)

Year	Open Market Sales ¹		Captive Sales / Transactions ²		Exports ³		Total	
	Metallurgical	Non-Metallurgical	Metallurgical	Non-Metallurgical	Metallurgical	Non-Metallurgical	Metallurgical	Non-Metallurgical
2014	77.45	32.26	79.51	21.83	105.41	50.85	92.69	30.17
2015	69.38	30.40	101.21	22.15	93.45	44.76	83.54	28.50
2016	65.03	29.37	71.52	22.14	92.76	35.99	82.11	27.36
2017	88.92	28.21	86.00	19.91	159.67	40.02	132.82	26.53

1 Open market includes coal sold on the open market to other coal companies or consumers; excludes exports.

2 Captive includes all coal used by the producing company or sold to affiliated or parent companies; excludes exports.

3 Excludes price of coal exported by coal brokers, coal traders and coal terminals.

Notes: An average sales price is calculated by dividing the total free on board (f.o.b) rail/barge value of the coal sold by the total coal sold. Excludes mines producing less than 25,000 short tons, which are not required to provide data. Excludes silt, culm, refuse bank, slurry dam, and dredge operations. Totals may not equal sum of components because of independent rounding.

Source: U.S. Energy Information Administration Form EIA-7A, 'Annual Survey of Coal Production and Preparation.'

Average Consumer Prices

Table 34. Average Price of Coal Delivered to End Use Sector by Census Division and State, 2017 and 2016

(dollars per short ton)

Census Division and State	2017				2016				Annual Percent Change			
	Electric Power ¹	Other Industrial	Coke	Commercial and Institutional	Electric Power ¹	Other Industrial	Coke	Commercial and Institutional	Electric Power ¹	Other Industrial	Coke	Commercial and Institutional
New England	85.05	w	-	-	69.01	w	-	-	23.24	-3.31	-	-
Connecticut	-	-	-	-	w	-	-	-	w	-	-	-
Maine	w	w	-	-	w	w	-	-	11.49	-3.12	-	-
Massachusetts	w	w	-	-	w	w	-	-	-9.25	-	-	-
New Hampshire	99.00	-	-	-	105.55	-	-	-	-6.21	-	-	-
Rhode Island	-	-	-	-	-	-	-	-	-	-	-	-
Middle Atlantic	w	83.76	w	119.40	w	79.11	w	116.41	0.58	5.88	4.63	2.57
New Jersey	w	-	-	-	w	-	-	-	-2.21	-	-	-
New York	w	109.27	w	-	w	96.38	w	-	23.11	13.37	2.77	-
Pennsylvania	w	73.14	w	119.40	w	73.03	w	116.41	0.98	s	4.96	2.57
East North Central	40.74	71.99	133.27	66.85	42.43	69.15	104.00	75.68	-3.98	4.11	28.14	-11.67
Illinois	w	44.11	w	52.80	w	45.78	w	53.91	s	-3.65	32.49	-2.06
Indiana	w	91.57	w	w	w	85.44	w	w	-4.50	7.17	33.68	-1.61
Michigan	w	86.17	w	-	w	77.91	w	-	-4.60	10.60	85.28	-
Ohio	w	101.33	111.54	-	w	84.33	102.85	w	-6.62	20.16	8.45	w
Wisconsin	39.50	80.48	-	153.92	39.58	77.95	-	154.08	s	3.25	-	s
West North Central	29.02	30.80	-	77.97	28.63	34.50	-	71.96	1.36	-10.72	-	8.35
Iowa	29.15	42.41	-	w	28.00	43.24	-	w	4.11	-1.92	-	7.12
Kansas	29.46	w	-	-	29.26	w	-	-	0.68	25.61	-	-
Minnesota	37.11	60.31	-	w	36.50	51.13	-	w	1.67	17.95	-	29.86
Missouri	32.83	49.44	-	w	32.86	58.92	-	w	-0.9	-16.09	-	3.23
Nebraska	23.20	29.67	-	-	22.75	29.07	-	-	1.98	2.06	-	-
North Dakota	21.02	w	-	w	20.58	w	-	w	2.14	-33.00	-	0.61
South Dakota	36.34	w	-	-	37.32	w	-	-	-2.63	2.13	-	-
South Atlantic	63.07	94.46	w	108.52	64.55	90.31	w	100.45	-2.29	4.60	24.10	8.03
Delaware	w	-	-	-	w	w	-	-	s	w	-	-
District of Columbia	-	-	-	w	-	-	-	w	-	-	-	-1.34
Florida	w	100.95	-	-	w	91.76	-	-	-1.60	10.02	-	-
Georgia	55.54	93.15	-	-	56.58	97.77	-	-	-1.84	-4.73	-	-
Maryland	w	w	-	-	w	w	-	-	-7.26	-1.64	-	-
North Carolina	w	93.57	-	w	w	97.40	-	w	-4.03	-3.93	-	5.13
South Carolina	81.92	97.23	-	-	79.86	93.60	-	-	2.58	3.88	-	-
Virginia	w	91.47	w	107.58	w	85.87	w	91.40	-5.67	6.52	37.19	17.70
West Virginia	w	154.15	w	-	w	122.00	w	-	-1.91	26.35	3.73	-
East South Central	w	87.44	w	w	w	88.20	w	w	-5.06	-0.86	15.17	3.37
Alabama	42.37	93.50	w	-	45.71	88.74	w	-	-7.31	5.36	15.17	-
Kentucky	43.79	89.26	-	w	46.73	90.75	-	w	-6.29	-1.64	-	3.37
Mississippi	w	-	-	-	w	-	-	-	4.81	-	-	-
Tennessee	48.66	82.73	-	-	48.02	86.83	-	-	1.33	-4.72	-	-
West South Central	w	65.06	-	-	30.18	67.15	-	-	w	-3.11	-	-
Arkansas	w	w	-	-	w	w	-	-	-5.34	1.30	-	-
Louisiana	w	w	-	-	w	w	-	-	s	18.92	-	-
Oklahoma	w	w	-	-	w	w	-	-	-3.25	-2.32	-	-
Texas	w	73.23	-	-	27.50	81.81	-	-	w	-10.49	-	-
Mountain	34.75	53.03	-	w	34.60	52.58	-	w	s	0.86	-	-2.47
Arizona	43.39	w	-	-	41.48	w	-	-	4.60	-3.13	-	-
Colorado	32.92	54.49	-	w	34.78	69.78	-	w	-5.35	-21.91	-	3.43
Idaho	-	w	-	-	-	w	-	-	-	22.09	-	-
Montana	w	37.48	-	w	w	40.60	-	w	s	-7.68	-	-9.33
Nevada	w	71.55	-	-	w	69.87	-	-	-1.56	2.40	-	-
New Mexico	36.93	w	-	-	35.19	w	-	-	4.94	1.76	-	-
Utah	42.18	52.90	-	-	42.19	50.01	-	-	s	5.78	-	-
Wyoming	w	44.66	-	w	w	42.47	-	w	-0.55	5.16	-	1.93
Pacific	43.33	86.26	-	w	42.76	77.95	-	w	1.33	10.66	-	2.35
Alaska	43.44	-	-	w	44.11	-	-	w	-1.52	-	-	2.35

Census Division and State	2017				2016				Annual Percent Change			
	Electric Power ¹	Other Industrial	Coke	Commercial and Institutional	Electric Power ¹	Other Industrial	Coke	Commercial and Institutional	Electric Power ¹	Other Industrial	Coke	Commercial and Institutional
California	-	87.02	-	-	-	78.04	-	-	-	11.51	-	-
Hawaii	w	-	-	-	w	-	-	-	9.41	-	-	-
Oregon	40.14	w	-	-	38.90	w	-	-	3.19	0.62	-	-
Washington	w	w	-	-	w	w	-	-	s	-1.61	-	-
U.S. Total	39.09	58.67	122.14	82.97	40.39	60.34	102.00	81.11	-3.22	-2.77	19.75	2.29

- = No data reported.

w = Data withheld to avoid disclosure.

s = Value is less than 0.5 of the table metric, but value is included in any associated total.

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

Sources: U.S. Energy Information Administration Form EIA-923, 'Power Plant Operations Report,' and Form EIA-3, 'Quarterly Survey of Non-Electric Sector Coal Data.' Prior to third quarter 2014, coke plant data was collected under Form EIA-5, 'Quarterly Coal Consumption and Quality Report - Coke Plants.'

Imports and Exports

Table 35. Coal Imports by Country of Origin, 2000-2017

(Short Tons)

Year	Europe																South Africa	Other	Total
	Australia	New Zealand	Canada	Mexico	Colombia	Venezuela	China	India	Indonesia	Norway	Poland	Russia	Ukraine	United Kingdom	Other	Total			
2000	167,595	-	1,923,434	6,671	7,636,614	2,038,774	19,646	205	718,149	-	-	1,212	-	238	-	1,450	-	85	12,512,623
2001	315,870	24,178	2,571,415	8,325	11,176,191	3,335,258	109,877	1,169	882,455	15,933	514,166	219,077	-	75,704	12	824,892	440,408	97,273	19,787,299
2002	821,280	-	2,110,688	41,832	9,205,161	3,349,883	62,185	2,055	962,474	-	121,660	87,586	-	277	121	209,644	77,314	33,034	16,875,429
2003	330,337	53,484	2,099,087	-	15,479,019	4,624,916	149,904	2,000	2,104,731	-	-	68,560	-	717	152	69,429	78,264	52,951	25,043,970
2004	295,526	-	2,877,616	309	16,661,238	4,435,630	147,136	443	2,180,899	-	74,609	263,776	104,861	44,285	147,172	634,703	33,795	159,881	27,280,004
2005	230,997	42,136	2,017,435	1,343	21,215,089	3,734,056	20,094	-	2,467,977	-	76,937	393,592	34,728	839	51,994	558,090	77,044	148,082	30,460,349
2006	245,184	-	2,048,224	-	25,340,602	4,197,636	43,491	-	3,146,627	36,806	-	940,685	-	1,069	159,874	1,138,434	61,649	184,003	36,245,976
2007	65,726	51,070	1,967,271	-	26,863,901	3,425,108	50,257	214	3,663,107	35,557	-	134,591	37,527	1,870	32	209,577	-	50,648	36,346,847
2008	149,344	-	2,027,148	-	26,261,802	2,311,865	45,113	-	3,373,574	-	-	71	37,354	-	1,086	38,511	45	1,363	34,207,679
2009	151,738	-	1,287,626	6	17,787,441	1,297,214	9,364	805	2,084,271	-	-	-	19,878	33	11	19,922	-	139	22,638,515
2010	380,404	450	1,766,896	-	14,583,950	581,700	52,869	2,002	1,904,040	-	-	-	41,370	3,647	4	45,021	-	35,359	19,352,687
2011	61,745	-	1,680,490	427	9,500,387	778,887	22,128	3,759	856,038	-	331	177	124,775	-	1,969	127,252	33	58,429	13,087,606
2012	-	220	1,107,727	43	6,951,515	287,147	77,738	14,650	517,532	-	-	14,330	187,837	10	3	202,180	-	508	9,159,257
2013	22	-	1,116,076	-	6,575,927	42,428	51,944	1,356	886,920	-	-	36,395	181,116	115	1,595	219,221	-	14,126	8,906,425
2014	532	-	1,026,523	17	8,295,286	288,738	39,776	1,536	1,526,611	-	-	42,439	103,167	164	-	145,770	23	25,114	11,349,926
2015	60,994	-	1,187,655	83	8,936,034	74,175	16,099	406	890,124	-	-	-	58,802	570	93	59,465	50,773	42,296	11,318,011
2016	121,967	-	1,078,480	978	7,890,800	-	6,955	-	613,944	-	-	64,774	-	341	657	65,772	28,488	39,631	9,846,358
2017	700	-	891,734	92	6,086,612	46	6,474	444	699,453	-	-	34,449	-	59	12,703	47,211	37,829	19,280	7,777,172

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

Web Page: For related information, see <http://www.eia.gov/coal/>.

Sources: 2000 U.S. Department of Commerce, Bureau of the Census, 'Monthly Report IM 145.' 2001 forward U.S. Energy Information Administration, Quarterly Coal Report October-December, quarterly reports.

Table 36. Coal Exports by Country of Destination, 1960-2017

(Thousand Short Tons)

Year	Europe												Total	Japan	Other ³	Total
	Canada	Brazil	Belgium ¹	Denmark	France	Germany ²	Italy	Netherlands	Spain	Turkey	United Kingdom	Other ³				
1960	12,843	1,067	1,116	130	794	4,566	4,899	2,837	331	-	-	2,440	17,113	5,617	1,341	37,981
1961	12,135	994	971	80	708	4,326	4,797	2,552	228	-	-	2,026	15,688	6,614	974	36,405
1962	12,302	1,327	1,289	38	851	5,056	5,978	3,320	766	-	2	1,848	19,148	6,465	973	40,215
1963	14,557	1,161	2,651	41	2,726	5,560	7,872	5,000	1,500	-	-	2,372	27,722	6,057	938	50,435
1964	14,824	1,103	2,325	18	2,216	5,162	8,068	4,187	1,426	-	-	2,552	25,954	6,526	1,137	49,544
1965	16,304	1,213	2,246	6	2,099	4,730	8,970	3,374	1,406	-	7	2,252	25,090	7,491	934	51,032
1966	16,453	1,745	1,841	2	1,582	4,894	7,837	3,165	1,204	-	1	2,525	23,051	7,793	1,026	50,068
1967	15,757	1,736	1,422	-	2,132	4,694	5,860	2,227	1,012	-	-	2,072	19,419	12,224	987	50,123
1968	17,149	1,789	1,053	-	1,460	3,785	4,312	1,491	1,480	-	-	1,883	15,464	15,824	929	51,155
1969	17,261	1,847	943	-	2,254	3,493	3,720	1,645	1,825	-	-	1,330	15,210	21,367	1,176	56,861
1970	19,111	2,021	1,881	-	3,574	5,030	4,266	2,113	3,153	-	3	1,786	21,806	27,636	1,159	71,733
1971	18,031	1,873	765	-	3,207	2,937	2,680	1,627	2,556	-	1,669	1,127	16,568	19,717	1,115	57,304
1972	18,661	1,920	1,144	-	1,730	2,399	3,705	2,289	2,139	-	2,381	1,099	16,886	18,038	1,235	56,740
1973	16,709	1,647	1,205	-	1,971	1,633	3,322	1,820	2,234	-	941	1,310	14,436	19,190	1,605	53,587
1974	14,187	1,294	1,109	-	2,676	1,484	3,922	2,556	2,017	-	1,405	886	16,055	27,346	1,779	60,661
1975	17,279	2,008	627	-	3,622	1,989	4,504	2,110	2,691	-	1,889	1,609	19,041	25,423	2,558	66,309
1976	16,942	2,242	2,202	34	3,532	1,000	4,211	3,507	2,513	-	843	2,072	19,914	18,803	2,120	60,021
1977	17,692	2,283	1,516	99	2,106	889	4,149	1,962	1,570	-	607	2,077	14,975	15,862	3,500	54,312
1978	15,657	1,492	1,054	-	1,660	617	3,227	1,082	758	-	398	2,188	10,984	10,087	2,494	40,714
1979	19,513	2,829	3,204	163	3,866	2,556	4,985	2,011	1,351	-	1,351	4,442	23,929	15,681	4,090	66,042
1980	17,473	3,265	4,633	1,650	7,789	2,530	7,131	4,657	3,409	-	4,140	6,009	41,948	23,069	5,987	91,742
1981	18,238	2,727	4,254	3,879	9,745	4,308	10,473	6,820	6,381	569	2,341	8,243	57,013	25,856	8,707	112,541
1982	18,564	3,130	4,761	2,809	8,985	2,336	11,279	5,934	5,582	1,564	2,017	6,013	51,280	25,768	7,535	106,277
1983	17,151	3,572	2,544	1,740	4,201	1,488	8,057	4,162	3,257	1,628	1,237	4,748	33,062	17,865	6,122	77,772
1984	20,444	4,706	3,902	614	3,791	913	7,624	5,483	2,306	1,472	2,853	3,853	32,811	16,325	7,197	81,483
1985	16,393	5,862	4,427	2,159	4,481	1,078	10,252	6,327	3,456	2,196	2,676	8,054	45,106	15,372	9,947	92,680
1986	14,478	5,720	4,362	2,123	5,389	810	10,359	5,631	2,620	2,418	2,907	5,933	42,552	11,370	11,398	85,518
1987	16,227	5,830	4,578	934	2,886	477	9,537	4,093	2,454	772	2,589	5,839	34,159	11,082	12,309	79,607
1988	19,232	5,252	6,490	2,804	4,302	702	11,070	5,086	2,542	2,023	3,671	6,448	45,138	14,122	11,279	95,023
1989	16,777	5,681	7,094	3,178	6,517	745	11,240	6,076	3,339	1,686	4,513	7,216	51,604	13,846	12,907	100,815
1990	15,511	5,847	8,500	3,188	6,879	1,057	11,947	8,369	3,791	2,117	5,177	7,357	58,382	13,338	12,726	105,804
1991	11,178	7,052	7,464	4,658	9,509	1,742	11,274	9,625	4,694	2,186	6,171	8,197	65,520	12,269	12,950	108,969
1992	15,140	6,370	7,196	3,832	8,060	1,003	9,344	9,148	4,535	1,990	5,595	6,551	57,254	12,304	11,448	102,516
1993	8,889	5,197	5,229	336	3,972	508	6,918	5,562	4,064	1,605	4,111	5,270	37,575	11,878	10,980	74,519
1994	9,193	5,482	4,911	477	2,875	323	7,543	4,874	4,132	1,335	3,363	5,994	35,827	10,158	10,699	71,359
1995	9,427	6,351	4,501	2,100	3,659	1,953	9,063	7,301	4,653	2,011	4,726	8,653	48,620	11,787	12,362	88,547
1996	12,029	6,540	4,569	1,316	3,852	1,055	9,204	7,058	4,093	2,167	6,196	7,682	47,192	10,529	14,183	90,473
1997	14,975	7,455	4,319	350	3,398	870	7,019	4,825	4,134	2,092	7,185	7,139	41,331	7,974	11,810	83,545
1998	20,654	6,475	3,195	274	3,192	1,247	5,317	4,516	3,156	1,592	5,947	5,337	33,773	7,734	9,412	78,048
1999	19,826	4,442	2,073	-	2,522	573	4,014	3,432	2,472	795	3,162	3,466	22,509	4,953	6,746	58,476
2000	18,769	4,536	2,890	77	3,044	976	3,711	2,623	2,686	1,809	3,294	3,859	24,969	4,446	5,769	58,489

Europe

Year	Canada	Brazil	Belgium ¹	Denmark	France	Germany ²	Italy	Netherlands	Spain	Turkey	United Kingdom	Other ³	Total	Japan	Other ³	Total
2001	17,633	4,574	2,770	-	2,235	913	5,408	2,123	1,645	887	2,471	2,368	20,821	2,070	3,568	48,666
2002	16,686	3,538	2,371	-	1,305	958	3,077	1,650	1,914	580	1,902	1,816	15,574	1,253	2,550	39,601
2003	20,760	3,514	1,816	288	1,278	535	2,826	1,993	1,771	1,097	1,480	2,064	15,148	6	3,586	43,014
2004	17,760	4,361	1,743	74	1,103	642	2,105	2,471	1,529	1,271	1,986	2,286	15,211	4,426	6,240	47,998
2005	19,466	4,199	2,079	73	1,261	669	2,455	2,623	1,863	1,888	1,777	4,136	18,825	2,081	5,371	49,942
2006	19,889	4,534	2,166	383	1,625	1,650	3,283	2,091	1,632	1,226	2,565	4,183	20,805	332	4,087	49,647
2007	18,389	6,512	2,109	80	2,384	2,321	3,544	4,553	1,483	1,447	3,361	5,837	27,119	5	7,138	59,163
2008	22,979	6,380	3,081	385	3,469	2,531	3,197	7,004	2,383	1,915	5,763	10,577	40,306	1,733	10,122	81,519
2009	10,599	7,416	2,690	321	3,364	2,457	2,343	5,878	1,744	1,428	4,589	5,261	30,073	907	10,102	59,097
2010	11,400	7,925	2,283	80	3,165	2,663	3,308	7,306	1,947	2,532	4,391	10,532	38,208	3,164	21,019	81,716
2011	6,845	8,680	3,072	161	4,042	4,761	5,589	10,785	1,795	2,945	6,927	13,864	53,942	6,923	44,733	107,259
2012	7,211	7,954	2,650	-	4,120	5,260	8,540	13,542	2,182	5,333	12,083	12,688	66,399	5,699	51,171	125,746
2013	7,110	8,610	2,007	-	4,109	5,475	6,594	12,709	1,579	4,984	13,511	9,787	60,755	5,360	45,611	117,659
2014	6,724	8,032	1,013		2,373	4,815	5,781	12,479	1,400	4,460	9,808	10,340	52,469	4,898	35,474	97,257
2015	5,958	6,339	1,196	45	1,332	4,018	3,431	12,908	1,272	2,055	4,201	7,436	37,894	4,657	26,547	73,958
2016	5,011	6,939	1,254	61	1,340	3,503	1,910	10,159	1,396	1,487	1,064	5,207	27,381	4,555	21,591	60,271
2017	5,286	7,563	1,252	119	2,176	4,900	3,143	9,373	1,758	2,564	2,730	11,546	39,561	7,668	48,422	96,953

NA=Not Available.

- =No data reported.

¹ Through 1999, includes Luxembourg.

² Through 1990, data for Germany are for the former West Germany only. Beginning in 1991, data for Germany are for the unified Germany, i.e., the former East Germany and West Germany.

³ See source publications for data for countries included in 'Other'.

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

Sources: 1960-1988 U.S. Department of Commerce, Bureau of the Census, U.S. Exports by Schedule B Commodities, EM 522. 1989-2000 U.S. Energy Information Administration (EIA), Coal Industry Annual, annual reports. 2001 forward EIA, Quarterly Coal Report October-December, quarterly reports; and U.S. Department of Commerce, Bureau of the Census, 'Monthly Report EM 545.'