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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 44th 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 2019 and previous years are final.

The Office of Energy Production, Conversion, & Delivery 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.

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Executive Summary

Publication changes

There are no publication changes in this issue of the *Annual Coal Report*.

Production

In 2019, U.S. coal production decreased 6.6% to 706.3 million short tons (MMst) from the 2018 level, while the number of producing mines also decreased to 669 mines from 679 mines in 2018. Coal production in basins east of the Mississippi river decreased 4.6% while production declined 7.9% in basins west of the Mississippi river.

The Appalachian region's coal production in 2019 was 193,205 MMst, a decrease of 3.5% from 2018. West Virginia's production decreased 2.2% to 93.3 MMst, Pennsylvania's production increased 0.3% to 50.1 MMst, and Eastern Kentucky's production decreased 18.6% to 13.8 MMst.

Coal production in the Interior region was 127.6 MMst, a decrease of 6.8% from the 2018 level. Production in Illinois decreased 7.5% to 45.9 MMst, production in Indiana decreased 8.8% to 31.6 MMst, and production in Western Kentucky decreased 1.9% to 22.2 MMst. Production in the rest of the Interior region decreased 7.2% to 28.0 MMst, led by a production decrease in Texas of 6.1% to 23.3 MMst.

Coal production in the Western region in 2019 decreased 8.0% to 385 MMst. Production in Wyoming, the largest coal-producing state in the region, decreased by 9.0% to 276.9 MMst. Other large producing states in the basin include Montana, where production decreased by 10.7% to 34.5 MMst; Colorado, where production decreased by 8.3% to 12.9 MMst; and Utah, where production increased by 5.8% to 14.4 MMst.

Disposition of coal during 2019 totaled 698.8 MMst, of which 628.0 MMst was marketed as thermal coal and 70.7 MMst was marketed as metallurgical coal. Of the metallurgical coal dispositions, 52.9 MMst was exported, and 17.8 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 2019, the collective productive capacity of U.S. coal mines decreased 1.1% to 1,009.5 MMst. Major producing states that reported a decrease in productive capacity include Indiana (-10.4% to 42.7 MMst), Pennsylvania (-9.0% to 55.9 MMst), and West Virginia (-3.8% to 116.4 MMst). States with an increase in reported productive capacity include Wyoming (+0.7% to 439.3 MMst), Illinois (+21.1% to 67.4 MMst), and Colorado (+13.7% to 21.3 MMst).

The overall capacity utilization across all mines decreased to 69.8% in 2019 from 73.9% in 2018. 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 14,151 MMst at the end of 2019 from 15,216 MMst at the end of 2018. Large producing states that reported an increase in recoverable reserves include Colorado and Pennsylvania.

Employment

The average number of employees at U.S. coal mines in 2019 decreased by 779 from 2018 to 52,804 employees. The average number of employees at underground mines decreased by 131 employees, and average employment at surface mines decreased by 644 employees.

Total U.S. productivity as measured by average production per employee hour decreased by 4.7% to 5.9 short tons per employee hour. Productivity decreased by 2.2% in the Appalachian region to 2.79 tons per employee hour and by 6.7% in the Powder River Basin to 25.71 tons per employee hour.

Consumption

U.S. coal consumption in 2019 was 586.5 MMst, a decline of 14.8% from 2018. Coal consumption in the electric power sector decreased by 98.6 MMst to 538.6 MMst. Coal consumption in the industrial, coke, and commercial and institutional sectors was 47.9 MMst in 2019, a 5.8% decrease from the 2018 level.

Exports

Exports decreased by 22.5 MMst in 2019 to 93.8 MMst. Europe was the largest destination of U.S. exports, amounting to 33.4 MMst. Steam coal exports accounted for 40.1 MMst (43.6%) of the total, and metallurgical coal accounted for 52.9 MMst (56.4%).

Stocks

U.S. coal stocks in 2019 ended at 165.7 MMst, 27.2% higher than at the same time in 2018. Stocks in the electric power sector increased by 25.3 MMst to 128.5 MMst at the end of 2019. Coal stocks held by the other industrial, coke, and commercial sectors, as well as producers and distributors, increased 10.2 MMst to 37.2 MMst at the end of 2019 compared with the end of 2018.

Sales price

The total average sales price of coal from U.S. mines in 2019 increased by 0.2% from the 2018 level to \$36.07 per short ton. The average sales price of thermal coal in 2019 increased by 1.9% from the 2018 level to \$27.54 per short ton, but the average sales price of metallurgical coal in 2019 decreased by 3.2% from the 2018 level to \$139.78 per short ton. The average sales price of coal from surface mines increased by 2.6% to \$22.47, but it decreased by 2.8% from underground mines to \$58.68 per short ton. The average sales prices of coal by rank are as follows:

- Average sales price of bituminous coal was \$58.93 per short ton in 2019, a 0.8% decrease from the 2018 level
- Average sales price of subbituminous coal was \$14.01 per short ton in 2019, a 2.7% increase from the 2018 level
- Average sales price of lignite coal was \$19.86 per short ton in 2019, a 1.7% decrease from the 2018 level
- Average sales price of anthracite coal was \$102.22 per short ton in 2019, a 2.3% increase from the 2019 level

Table ES1. Coal Production, 1949-2019

(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
2018	357,226,100	340,007,405	57,037,552	1,896,038	275,361,378	480,805,717	310,662,897	445,504,198	756,167,095
2019	338,954,766	311,551,673	53,191,887	2,610,937	267,372,934	438,936,329	296,045,637	410,263,626	706,309,263

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, 1949-2019

 (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	10.94	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
2018	3.68	10.36	3.50	3.07	3.40	5.64	17.38	14.92	6.24
2019	3.60	9.88	3.39	2.91	3.27	5.78	16.89	14.43	5.95

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, 1949-2019

(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	1,212	-1,153	-21	11,815
2018	13,806	117	1,151	-1,034	-204	12,976
2019	12,870	116	967	-852	86	11,932

(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- 2019

(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
2018	59.43	13.64	20.21	99.97	35.99
2019	58.93	14.01	19.86	102.22	36.07

* = 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, 2001-2019

(dollars per short ton)

Year	Exports			Imports		
	Metallurgical Coal	Non-Metallurgical	Coke	Metallurgical Coal	Non-Metallurgical	Coke
2001	41.63	31.88	81.07	45.21	32.53	75.48
2002	45.41	34.51	80.56	44.90	33.93	75.35
2003	44.55	26.94	96.34	47.83	30.24	86.52
2004	63.63	42.03	81.42	54.27	36.06	179.24
2005	81.56	47.64	84.15	101.31	43.35	221.13
2006	90.81	46.25	79.08	109.36	46.15	156.44
2007	88.99	47.90	90.76	96.05	45.31	194.49
2008	134.62	57.35	107.42	117.18	56.75	465.15
2009	117.73	73.63	103.46	115.93	61.40	268.37
2010	145.44	65.54	167.25	180.42	62.47	331.70
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	137.32	57.14	231.46	212.16	66.04	176.36
2018	140.55	63.36	261.07	200.18	67.04	264.46
2019	137.44	63.76	279.95	191.54	66.18	305.93

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, 2019 and 2018

(thousand short tons)

Coal-Producing State and Region ¹	2019		2018		Percent Change	
	Number of Mines	Production	Number of Mines	Production	Number of Mines	Production
Alabama	29	14,124	30	14,783	-3.3	-4.5
Underground	7	11,980	7	12,199	-	-1.8
Surface	22	2,144	23	2,584	-4.4	-17.0
Alaska	1	975	1	902	-	8.1
Surface	1	975	1	902	-	8.1
Arizona	1	3,843	1	6,550	-	-41.3
Surface	1	3,843	1	6,550	-	-41.3
Colorado	6	12,868	6	14,026	-	-8.3
Underground	4	9,316	4	10,414	-	-10.6
Surface	2	3,552	2	3,611	-	-1.6
Illinois	21	45,853	18	49,563	16.7	-7.5
Underground	10	42,411	9	46,072	11.1	-8.0
Surface	11	3,442	9	3,491	22.2	-1.4
Indiana	17	31,559	18	34,598	-5.6	-8.8
Underground	6	16,956	6	17,356	-	-2.3
Surface	11	14,603	12	17,242	-8.3	-15.3
Kentucky Total	136	36,006	145	39,567	-6.2	-9.0
Underground	55	28,747	60	30,964	-8.3	-7.2
Surface	81	7,259	85	8,603	-4.7	-15.6
Kentucky (East)	124	13,766	132	16,908	-6.1	-18.6
Underground	47	7,053	53	8,976	-11.3	-21.4
Surface	77	6,712	79	7,932	-2.5	-15.4
Kentucky (West)	12	22,240	13	22,659	-7.7	-1.9
Underground	8	21,694	7	21,988	14.3	-1.3
Surface	4	546	6	672	-33.3	-18.6
Louisiana	2	1,538	2	1,483	-	3.7
Surface	2	1,538	2	1,483	-	3.7
Maryland	12	1,471	14	1,298	-14.3	13.3
Underground	1	635	2	436	-50.0	45.7
Surface	11	836	12	862	-8.3	-3.1
Mississippi	1	2,697	1	2,940	-	-8.3
Surface	1	2,697	1	2,940	-	-8.3
Missouri	1	189	1	259	-	-26.9
Surface	1	189	1	259	-	-26.9
Montana	6	34,468	6	38,610	-	-10.7
Underground	1	7,019	1	7,566	-	-7.2
Surface	5	27,448	5	31,044	-	-11.6
New Mexico	3	14,536	3	10,792	-	34.7
Underground	1	3,776	1	1,848	-	104.3
Surface	2	10,760	2	8,944	-	20.3
North Dakota	5	26,997	5	29,643	-	-8.9
Surface	5	26,997	5	29,643	-	-8.9
Ohio	15	7,779	16	8,993	-6.3	-13.5
Underground	5	6,332	5	6,518	-	-2.9
Surface	10	1,447	11	2,475	-9.1	-41.5
Oklahoma	3	227	5	610	-40.0	-62.7
Underground	-	-	1	206	-	-
Surface	3	227	4	404	-25.0	-43.7
Pennsylvania Total	149	50,053	151	49,883	-1.3	0.3
Underground	37	44,588	39	44,634	-5.1	-0.1
Surface	112	5,464	112	5,248	-	4.1
Pennsylvania (Anthracite)	52	2,585	50	1,811	4.0	42.8
Underground	9	63	9	72	-	-11.9
Surface	43	2,522	41	1,739	4.9	45.0
Pennsylvania (Bituminous)	97	47,467	101	48,072	-4.0	-1.3
Underground	28	44,525	30	44,563	-6.7	-0.1

Coal-Producing State and Region¹	2019		2018		Percent Change	
	Number of Mines	Production	Number of Mines	Production	Number of Mines	Production
Surface	69	2,942	71	3,509	-2.8	-16.2
Tennessee	3	436	4	232	-25.0	87.9
Underground	1	314	1	174	-	80.4
Surface	2	122	3	58	-33.3	110.1
Texas	8	23,307	9	24,823	-11.1	-6.1
Surface	8	23,307	9	24,823	-11.1	-6.1
Utah	8	14,405	8	13,619	-	5.8
Underground	7	14,165	7	13,125	-	7.9
Surface	1	240	1	494	-	-51.4
Virginia	53	12,297	51	12,715	3.9	-3.3
Underground	20	8,716	23	9,432	-13.0	-7.6
Surface	33	3,582	28	3,283	17.9	9.1
West Virginia Total	162	93,279	155	95,365	4.5	-2.2
Underground	70	70,224	69	72,206	1.5	-2.7
Surface	92	23,055	86	23,159	7.0	-0.5
West Virginia (Northern)	16	47,078	15	46,115	6.7	2.1
Underground	10	46,349	11	45,482	-9.1	1.9
Surface	6	729	4	633	50.0	15.1
West Virginia (Southern)	146	46,201	140	49,250	4.3	-6.2
Underground	60	23,875	58	26,724	3.5	-10.7
Surface	86	22,326	82	22,526	4.9	-0.9
Wyoming	16	276,912	16	304,188	-	-9.0
Underground	1	2,194	1	2,210	-	-0.8
Surface	15	274,718	15	301,977	-	-9.0
Appalachia Total	547	193,205	553	200,177	-1.1	-3.5
Underground	188	149,842	199	154,575	-5.5	-3.1
Surface	359	43,363	354	45,601	1.4	-4.9
Appalachia Central	326	72,700	327	79,105	-0.3	-8.1
Underground	128	39,957	135	45,306	-5.2	-11.8
Surface	198	32,742	192	33,799	3.1	-3.1
Appalachia Northern	192	106,381	196	106,289	-2.0	0.1
Underground	53	97,905	57	97,070	-7.0	0.9
Surface	139	8,476	139	9,219	-	-8.1
Appalachia Southern	29	14,124	30	14,783	-3.3	-4.5
Underground	7	11,980	7	12,199	-	-1.8
Surface	22	2,144	23	2,584	-4.4	-17.0
Interior Region Total	65	127,610	67	136,935	-3.0	-6.8
Underground	24	81,061	23	85,622	4.4	-5.3
Surface	41	46,549	44	51,313	-6.8	-9.3
Illinois Basin	50	99,652	49	106,821	2.0	-6.7
Underground	24	81,061	22	85,416	9.1	-5.1
Surface	26	18,591	27	21,405	-3.7	-13.2
Other Interior	15	27,958	18	30,114	-16.7	-7.2
Underground	-	-	1	206	-	-
Surface	15	27,958	17	29,908	-11.8	-6.5
Western Region Total	46	385,003	46	418,329	-	-8.0
Underground	14	36,470	14	35,164	-	3.7
Surface	32	348,533	32	383,165	-	-9.0
Powder River Basin	16	294,173	16	324,211	-	-9.3
Surface	16	294,173	16	324,211	-	-9.3
Uinta Basin	12	26,376	12	26,535	-	-0.6
Underground	10	22,823	10	22,923	-	-0.4
Surface	2	3,552	2	3,611	-	-1.6
Other Western	18	64,454	18	67,583	-	-4.6
Underground	4	13,646	4	12,241	-	11.5
Surface	14	50,807	14	55,342	-	-8.2
East of Mississippi River	598	295,554	603	309,937	-0.8	-4.6
West of Mississippi River	60	410,264	63	445,504	-4.8	-7.9
U.S. Subtotal	658	705,818	666	755,442	-1.2	-6.6
Refuse Recovery	11	492	13	726	-15.4	-32.2
U.S. Total	669	706,309	679	756,167	-1.5	-6.6

- = 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, 2019

(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	11,980	22	2,144	29	14,124
De Kalb	-	-	1	3	1	3
Jefferson	3	7,813	8	1,087	11	8,900
Marion	-	-	1	77	1	77
Shelby	1	2	1	11	2	13
Tuscaloosa	1	2,221	3	263	4	2,485
Walker	2	1,944	8	702	10	2,646
Alaska	-	-	1	975	1	975
Denali	-	-	1	975	1	975
Arizona	-	-	1	3,843	1	3,843
Navajo	-	-	1	3,843	1	3,843
Colorado	4	9,316	2	3,552	6	12,868
Gunnison	1	4,079	-	-	1	4,079
La Plata	1	658	-	-	1	658
Moffat	-	-	2	3,552	2	3,552
Rio Blanco	1	2,035	-	-	1	2,035
Routt	1	2,544	-	-	1	2,544
Illinois	10	42,411	11	3,442	21	45,853
Franklin	1	12,794	-	-	1	12,794
Gallatin	-	-	1	119	1	119
Hamilton	1	5,889	-	-	1	5,889
Macoupin	1	1,770	-	-	1	1,770
Montgomery	1	191	-	-	1	191
Perry	1	4,095	3	373	4	4,468
Randolph	1	3,034	2	169	3	3,203
Saline	1	1,417	4	1,524	5	2,940
Sangamon	1	1,608	-	-	1	1,608
Wabash	-	-	1	1,256	1	1,256
Washington	1	6,440	-	-	1	6,440
Williamson	1	5,174	-	-	1	5,174
Indiana	6	16,956	11	14,603	17	31,559
Clay	-	-	1	272	1	272
Daviess	-	-	2	2,063	2	2,063
Dubois	-	-	2	1,169	2	1,169
Gibson	3	9,006	1	1,143	4	10,150
Knox	2	6,464	-	-	2	6,464
Pike	-	-	1	363	1	363
Sullivan	1	1,485	1	6,817	2	8,302
Warrick	-	-	3	2,774	3	2,774
Kentucky	55	28,747	81	7,259	136	36,006
Bell	3	437	5	274	8	711
Boyd	-	-	1	97	1	97
Breathitt	-	-	1	27	1	27
Daviess	-	-	2	284	2	284
Floyd	7	1,027	-	-	7	1,027
Harlan	8	1,396	6	646	14	2,042
Hopkins	1	3,665	-	-	1	3,665
Johnson	-	-	3	545	3	545
Knott	2	269	7	514	9	783
Knox	1	78	5	203	6	282
Lawrence	-	-	3	33	3	33
Lee	-	-	1	14	1	14
Leslie	2	382	3	796	5	1,178
Letcher	1	79	3	58	4	136
Magoffin	-	-	3	302	3	302
Martin	-	-	3	492	3	492

Coal-Producing State and County	Underground		Surface		Total	
	Number of Mines	Production	Number of Mines	Production	Number of Mines	Production
McLean	2	1,233	-	-	2	1,233
Morgan	-	-	2	90	2	90
Muhlenberg	2	2,173	-	-	2	2,173
Ohio	1	2,008	2	263	3	2,270
Perry	4	1,181	6	1,564	10	2,744
Pike	19	2,205	17	690	36	2,896
Union	1	11,342	-	-	1	11,342
Webster	1	1,273	-	-	1	1,273
Whitley	-	-	8	367	8	367
Louisiana	-	-	2	1,538	2	1,538
De Soto	-	-	1	1,354	1	1,354
Natchitoches	-	-	1	183	1	183
Maryland	1	635	11	836	12	1,471
Allegany	-	-	8	784	8	784
Garrett	1	635	3	52	4	687
Mississippi	-	-	1	2,697	1	2,697
Choctaw	-	-	1	2,697	1	2,697
Missouri	-	-	1	189	1	189
Bates	-	-	1	189	1	189
Montana	1	7,019	5	27,448	6	34,468
Big Horn	-	-	3	18,700	3	18,700
Musselshell	1	7,019	-	-	1	7,019
Richland	-	-	1	292	1	292
Rosebud	-	-	1	8,456	1	8,456
New Mexico	1	3,776	2	10,760	3	14,536
Mckinley	-	-	1	5,496	1	5,496
San Juan	1	3,776	1	5,264	2	9,040
North Dakota	-	-	5	26,997	5	26,997
McLean	-	-	1	7,421	1	7,421
Mercer	-	-	3	15,617	3	15,617
Oliver	-	-	1	3,959	1	3,959
Ohio	5	6,332	10	1,447	15	7,779
Belmont	-	-	1	317	1	317
Harrison	2	791	3	616	5	1,406
Jackson	-	-	1	1	1	1
Monroe	1	4,735	-	-	1	4,735
Noble	-	-	1	425	1	425
Perry	1	578	1	65	2	642
Stark	-	-	1	20	1	20
Tuscarawas	1	229	1	-	2	230
Vinton	-	-	1	2	1	2
Oklahoma	-	-	3	227	3	227
Craig	-	-	1	178	1	178
Latimer	-	-	1	49	1	49
Okmulgee	-	-	1	1	1	1
Pennsylvania	37	44,588	112	5,464	149	50,053
Armstrong	4	574	-	-	4	574
Bedford	-	-	2	209	2	209
Butler	-	-	1	53	1	53
Cambria	2	687	7	356	9	1,043
Carbon	-	-	1	442	1	442
Clarion	-	-	2	41	2	41
Clearfield	2	290	23	859	25	1,149
Columbia	-	-	1	58	1	58
Dauphin	1	8	-	-	1	8
Elk	-	-	1	-	1	-
Fayette	-	-	3	12	3	12
Greene	4	28,306	-	-	4	28,306
Indiana	7	2,185	5	33	12	2,218
Jefferson	1	204	6	136	7	340
Lackawanna	-	-	1	-	1	-

Coal-Producing State and County	Underground		Surface		Total	
	Number of Mines	Production	Number of Mines	Production	Number of Mines	Production
Luzerne	-	-	5	375	5	375
Lycoming	-	-	1	120	1	120
Mercer	-	-	1	10	1	10
Northumberland	3	10	10	291	13	302
Schuylkill	5	45	25	1,355	30	1,400
Somerset	6	2,115	14	976	20	3,091
Washington	1	10,043	1	32	2	10,076
Westmoreland	1	120	2	106	3	227
Tennessee	1	314	2	122	3	436
Claiborne	1	314	2	122	3	436
Texas	-	-	8	23,307	8	23,307
Atascosa	-	-	1	3,004	1	3,004
Harrison	-	-	2	3,325	2	3,325
Limestone	-	-	1	9,594	1	9,594
Maverick	-	-	1	1,638	1	1,638
Panola	-	-	1	925	1	925
Robertson	-	-	1	2,157	1	2,157
Rusk	-	-	1	2,664	1	2,664
Utah	7	14,165	1	240	8	14,405
Carbon	3	8,047	-	-	3	8,047
Emery	3	1,745	-	-	3	1,745
Kane	-	-	1	240	1	240
Sevier	1	4,374	-	-	1	4,374
Virginia	20	8,716	33	3,582	53	12,297
Buchanan	8	5,600	10	1,007	18	6,606
Dickenson	6	2,455	3	1,058	9	3,513
Russell	-	-	3	46	3	46
Tazewell	1	1	3	222	4	223
Wise	5	659	14	1,250	19	1,909
West Virginia	70	70,224	92	23,055	162	93,279
Barbour	1	1,107	-	-	1	1,107
Boone	4	2,284	11	1,995	15	4,279
Fayette	3	1,016	7	1,659	10	2,674
Greenbrier	1	198	7	750	8	948
Kanawha	5	4,066	3	1,494	8	5,560
Logan	13	5,951	15	5,522	28	11,473
Marion	2	12,772	1	234	3	13,006
Marshall	2	18,319	-	-	2	18,319
Mcdowell	15	1,902	17	1,866	32	3,768
Mercer	-	-	2	268	2	268
Mineral	-	-	1	3	1	3
Mingo	4	1,864	7	2,868	11	4,733
Monongalia	-	-	2	18	2	18
Nicholas	1	560	6	462	7	1,021
Ohio	1	7,330	-	-	1	7,330
Raleigh	8	3,928	5	2,699	13	6,627
Randolph	2	471	-	-	2	471
Taylor	1	4,275	-	-	1	4,275
Tucker	1	2,075	-	-	1	2,075
Wayne	-	-	1	4	1	4
Webster	-	-	2	474	2	474
Wyoming	6	2,106	5	2,740	11	4,846
Wyoming	1	2,194	15	274,718	16	276,912
Campbell	-	-	11	243,773	11	243,773
Converse	-	-	1	23,243	1	23,243
Lincoln	-	-	1	3,067	1	3,067
Sweetwater	1	2,194	2	4,634	3	6,828
U.S. Subtotal	226	267,373	432	438,445	658	705,818
Refuse Recovery	-	-	-	-	11	492
U.S. Total	226	267,373	432	438,445	669	706,309

- = 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, 2019

(thousand short tons)

Coal-Producing State and Region ¹	Continuous	Conventional and Other ²	Longwall	Total
Alabama	2,287	2	9,690	11,980
Colorado	1,804	-	7,512	9,316
Illinois	20,055	885	21,472	42,411
Indiana	16,956	-	-	16,956
Kentucky Total	28,403	344	-	28,747
Kentucky (East)	6,710	344	-	7,053
Kentucky (West)	21,694	-	-	21,694
Maryland	635	-	-	635
Montana	491	-	6,528	7,019
New Mexico	189	-	3,587	3,776
Ohio	2,023	-	4,309	6,332
Pennsylvania Total	9,009	64	35,516	44,588
Pennsylvania (Anthracite)	-	63	-	63
Pennsylvania (Bituminous)	9,009	1	35,516	44,525
Tennessee	314	-	-	314
Utah	4,110	-	10,055	14,165
Virginia	3,758	17	4,940	8,716
West Virginia Total	27,235	965	42,023	70,224
West Virginia (Northern)	6,134	-	40,215	46,349
West Virginia (Southern)	21,101	965	1,809	23,875
Wyoming	197	-	1,996	2,194
Appalachia Total	51,971	1,392	96,478	149,842
Appalachia Central	31,882	1,326	6,749	39,957
Appalachia Northern	17,802	64	80,039	97,905
Appalachia Southern	2,287	2	9,690	11,980
Interior Region Total	58,704	885	21,472	81,061
Illinois Basin	58,704	885	21,472	81,061
Western Region Total	6,792	-	29,678	36,470
Uinta Basin	5,256	-	17,567	22,823
Other Western	1,535	-	12,111	13,646
East of Mississippi River	110,676	2,277	117,950	230,903
West of Mississippi River	6,792	-	29,678	36,470
U.S. Total	117,467	2,277	147,628	267,373

- = No data reported.

¹ For a definition of coal producing regions, see the Glossary.² Mines that: 1. produce coal using shortwall, scoop loading, hand loading, or other methods, or 2. produce less than 25,000 short tons, which are not required to provide data.

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 3.1 Surface Coal Production by State and Mining Method, 2019

(thousand short tons)

Coal-Producing State and Region ¹	Contour Strip	Area	Open Pit	Mountaintop Mining	Other ²	Total
Alabama	1,684	-	277	-	183	2,144
Alaska	487	-	487	-	-	975
Arizona	3,843	-	-	-	-	3,843
Colorado	1,954	-	1,598	-	-	3,552
Illinois	-	2,697	-	-	745	3,442
Indiana	-	195	14,081	-	327	14,603
Kentucky Total	3,017	1,912	261	184	1,885	7,259
Kentucky (East)	3,017	1,662	-	184	1,849	6,712
Kentucky (West)	-	249	261	-	36	546
Louisiana	-	1,538	-	-	-	1,538
Maryland	360	398	-	-	78	836
Mississippi	2,697	-	-	-	-	2,697
Missouri	189	-	-	-	-	189
Montana	15,058	8,748	3,642	-	-	27,448
New Mexico	5,496	-	5,264	-	-	10,760
North Dakota	23,038	-	3,959	-	-	26,997
Ohio	425	839	-	-	183	1,447
Oklahoma	227	-	-	-	1	227
Pennsylvania Total	1,681	-	3,274	-	510	5,464
Pennsylvania (Anthracite)	904	-	1,479	-	140	2,522
Pennsylvania (Bituminous)	778	-	1,795	-	370	2,942
Tennessee	93	-	-	-	29	122
Texas	4,777	13,183	5,346	-	-	23,307
Utah	-	-	240	-	-	240
Virginia	2,024	607	-	-	951	3,582
West Virginia Total	9,168	7,693	-	2,105	4,089	23,055
West Virginia (Northern)	590	-	-	-	139	729
West Virginia (Southern)	8,579	7,693	-	2,105	3,950	22,326
Wyoming	135,738	2,308	136,672	-	-	274,718
Appalachia Total	18,454	11,199	3,551	2,289	7,871	43,363
Appalachia Central	13,713	9,962	-	2,289	6,778	32,742
Appalachia Northern	3,056	1,237	3,274	-	909	8,476
Appalachia Southern	1,684	-	277	-	183	2,144
Interior Region Total	7,891	17,861	19,688	-	1,109	46,549
Illinois Basin	-	3,141	14,342	-	1,108	18,591
Other Interior	7,891	14,721	5,346	-	1	27,958
Western Region Total	185,614	11,056	151,863	-	-	348,533
Powder River Basin	148,470	8,456	137,247	-	-	294,173
Uinta Basin	1,954	-	1,598	-	-	3,552
Other Western	35,190	2,600	13,018	-	-	50,807
East of Mississippi River	21,151	14,339	17,893	2,289	8,979	64,651
West of Mississippi River	190,807	25,777	157,209	-	1	373,794
U.S. Total	211,959	40,116	175,101	2,289	8,980	438,445

- = No data reported.

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

² Mines that: 1. produce coal using auger, highwall mine, or punch, or 2. produce less than 25,000 short tons, which are not required to provide data.

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, 2019

(thousand short tons)

Coal Thickness (inches)	Underground	Surface	Total
Under 7	-	235	235
7 - Under 13	-	1,401	1,401
13 - Under 19	266	3,265	3,531
19 - Under 25	255	7,273	7,528
25 - Under 31	2,328	9,227	11,556
31 - Under 37	9,522	8,568	18,090
37 - Under 43	11,049	9,623	20,672
43 - Under 49	11,800	12,103	23,903
49 - Under 55	13,971	5,782	19,754
55 - Under 61	28,922	4,372	33,294
61 - Under 67	14,684	6,895	21,580
67 - Under 73	54,646	3,601	58,247
73 - Under 79	35,612	2,811	38,423
79 - Under 85	29,940	3,442	33,382
85 - Under 91	21,533	2,986	24,520
91 - Under 97	4,680	1,345	6,025
97 - Under 103	-	2,664	2,664
103 - Under 109	9,563	3,617	13,180
109 - Under 115	3,714	8,581	12,295
115 - 120	8,689	5,728	14,417
Over 120	5,995	333,529	339,524
Unknown *	201	1,397	2,090
U.S. Total	267,373	438,445	706,309

- = 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, 2019

Coalbed ID Number ¹ Coalbed Name		Production (thousand short tons)			Thickness (inches)		
		Underground	Surface	Total	Average ²	Low	High
1699	Wyodak	-	245,284	245,284	772	160	940
0212	Pittsburgh	54,373	480	54,853	79	36	108
0484	Herrin (Illinois No. 6)	48,814	1,461	50,275	71	45	79
0489	No. 9	30,073	5,903	35,976	63	36	84
0036	Pittsburgh	27,133	654	27,787	75	48	84
1701	Smith	-	17,208	17,208	926	876	975
1569	Beulah-Zap	-	15,617	15,617	198	114	210
1696	Anderson-Dietz 1-Dietz 2	-	14,296	14,296	884	500	960
0280	Blue Creek	11,460	384	11,843	52	12	68
1570	Hagel	-	11,063	11,063	123	112	144
1808	Rosebud	-	10,365	10,365	259	186	276
0084	Lower Kittanning	7,102	1,455	8,557	67	19	120
0344	Pocahontas No. 3	8,118	-	8,118	58	34	66
0204	Mammoth	7,019	-	7,019	108	108	108
0111	Coalburg	251	6,541	6,792	77	5	126
0176	Eagle	5,193	1,027	6,220	44	20	84
0071	Upper Freeport	5,478	159	5,636	55	11	72
0151	Upper Elkhorn No. 3	3,784	1,418	5,203	45	15	74
1003	Menefee Formation	658	4,396	5,054	111	72	117
1488	Fruitland No. 8	3,776	1,263	5,039	147	104	162
0168	Lower Elkhorn	3,356	1,423	4,779	46	11	96
1787	Roland	-	4,525	4,525	390	386	398
1495	Deadman Zone (D3,d4,d5,d2	2,194	2,326	4,520	125	108	144
1847	Upper Hiawatha	4,374	-	4,374	96	96	96
0103	Stockton-Lewiston	2,387	1,882	4,268	74	12	94
Major Coalbeds Total		225,542	349,131	574,673	427	5	975
Other Coalbeds		41,630	87,917	129,547	85	1	692
Unknown *		201	1,397	2,090	NA	NA	NA
U.S. Total		267,373	438,445	706,309	363	-	975

- = 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 1495, 1699, and 1701); 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 code 1847); New Mexico (coalbed code 1003); Colorado (coalbed code 1756); West Virginia (coalbed codes 157, 176); Kentucky (coalbed code 151). 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, 2019

(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	29	14,124	-	-	-	-	-	-	29	14,124
Alaska	-	-	1	975	-	-	-	-	1	975
Arizona	1	3,843	-	-	-	-	-	-	1	3,843
Colorado	4	9,316	2	3,552	-	-	-	-	6	12,868
Illinois	21	45,853	-	-	-	-	-	-	21	45,853
Indiana	17	31,559	-	-	-	-	-	-	17	31,559
Kentucky Total	136	36,006	-	-	-	-	-	-	136	36,006
Kentucky (East)	124	13,766	-	-	-	-	-	-	124	13,766
Kentucky (West)	12	22,240	-	-	-	-	-	-	12	22,240
Louisiana	-	-	-	-	2	1,538	-	-	2	1,538
Maryland	12	1,471	-	-	-	-	-	-	12	1,471
Mississippi	-	-	-	-	1	2,697	-	-	1	2,697
Missouri	1	189	-	-	-	-	-	-	1	189
Montana	1	7,019	4	27,157	1	292	-	-	6	34,468
New Mexico	2	9,271	1	5,264	-	-	-	-	3	14,536
North Dakota	-	-	-	-	5	26,997	-	-	5	26,997
Ohio	15	7,779	-	-	-	-	-	-	15	7,779
Oklahoma	3	227	-	-	-	-	-	-	3	227
Pennsylvania Total	97	47,467	-	-	-	-	52	2,585	149	50,053
Pennsylvania (Anthracite)	-	-	-	-	-	-	52	2,585	52	2,585
Pennsylvania (Bituminous)	97	47,467	-	-	-	-	-	-	97	47,467
Tennessee	3	436	-	-	-	-	-	-	3	436
Texas	1	1,638	-	-	7	21,668	-	-	8	23,307
Utah	8	14,405	-	-	-	-	-	-	8	14,405
Virginia	53	12,297	-	-	-	-	-	-	53	12,297
West Virginia Total	162	93,279	-	-	-	-	-	-	162	93,279
West Virginia (Northern)	16	47,078	-	-	-	-	-	-	16	47,078
West Virginia (Southern)	146	46,201	-	-	-	-	-	-	146	46,201
Wyoming	1	2,308	15	274,604	-	-	-	-	16	276,912
Appalachia Total	495	190,620	-	-	-	-	52	2,585	547	193,205
Appalachia Central	326	72,700	-	-	-	-	-	-	326	72,700
Appalachia Northern	140	103,796	-	-	-	-	52	2,585	192	106,381
Appalachia Southern	29	14,124	-	-	-	-	-	-	29	14,124
Interior Region Total	55	101,707	-	-	10	25,903	-	-	65	127,610
Illinois Basin	50	99,652	-	-	-	-	-	-	50	99,652
Other Interior	5	2,055	-	-	10	25,903	-	-	15	27,958
Western Region Total	17	46,162	23	311,552	6	27,289	-	-	46	385,003
Powder River Basin	-	-	16	294,173	-	-	-	-	16	294,173
Uinta Basin	10	22,823	2	3,552	-	-	-	-	12	26,376
Other Western	7	23,339	5	13,826	6	27,289	-	-	18	64,454
East of Mississippi River	545	290,271	-	-	1	2,697	52	2,585	598	295,554
West of Mississippi River	22	48,217	23	311,552	15	50,495	-	-	60	410,264
U.S. Subtotal	567	338,489	23	311,552	16	53,192	52	2,585	658	705,818
Refuse Recovery	8	466	-	-	-	-	3	26	11	492
U.S. Total	575	338,955	23	311,552	16	53,192	55	2,611	669	706,309

- = 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, 2019

(thousand short tons)

Coal-Producing State and Region ¹	Union		Nonunion		Total	
	Underground	Surface	Underground	Surface	Underground	Surface
Alabama	11,702	-	275	2,078	11,978	2,078
Alaska	-	975	-	-	-	975
Arizona	-	3,843	-	-	-	3,843
Colorado	2,035	1,954	7,281	1,598	9,316	3,552
Illinois	-	-	42,411	3,442	42,411	3,442
Indiana	-	-	16,956	14,603	16,956	14,603
Kentucky Total	-	-	28,648	6,927	28,648	6,927
Kentucky (East)	-	-	6,955	6,406	6,955	6,406
Kentucky (West)	-	-	21,694	521	21,694	521
Louisiana	-	-	-	1,538	-	1,538
Maryland	-	-	635	795	635	795
Mississippi	-	-	-	2,697	-	2,697
Missouri	-	-	-	189	-	189
Montana	-	15,520	7,019	11,929	7,019	27,448
New Mexico	3,776	5,264	-	5,496	3,776	10,760
North Dakota	-	4,350	-	22,647	-	26,997
Ohio	-	-	6,332	1,417	6,332	1,417
Oklahoma	-	-	-	227	-	227
Pennsylvania Total	11,064	985	33,486	3,963	44,550	4,948
Pennsylvania (Anthracite)	-	985	26	1,342	26	2,327
Pennsylvania (Bituminous)	11,064	-	33,460	2,621	44,524	2,621
Tennessee	-	-	314	122	314	122
Texas	-	13,183	-	10,124	-	23,307
Utah	-	-	14,165	240	14,165	240
Virginia	-	-	8,678	3,455	8,678	3,455
West Virginia Total	31,715	1,616	38,485	21,153	70,200	22,770
West Virginia (Northern)	31,091	-	15,258	684	46,349	684
West Virginia (Southern)	624	1,616	23,226	20,470	23,850	22,086
Wyoming	2,194	5,394	-	269,325	2,194	274,718
Appalachia Total	54,482	2,602	95,159	39,390	149,641	41,992
Appalachia Central	624	1,616	39,173	30,453	39,797	32,069
Appalachia Northern	42,155	985	55,711	6,859	97,867	7,844
Appalachia Southern	11,702	-	275	2,078	11,978	2,078
Interior Region Total	-	13,183	81,061	33,340	81,061	46,523
Illinois Basin	-	-	81,061	18,566	81,061	18,566
Other Interior	-	13,183	-	14,775	-	27,958
Western Region Total	8,004	37,299	28,466	311,234	36,470	348,533
Powder River Basin	-	15,228	-	278,945	-	294,173
Uinta Basin	2,035	1,954	20,789	1,598	22,823	3,552
Other Western	5,970	20,117	7,677	30,690	13,646	50,807
East of Mississippi River	54,482	2,602	176,220	60,653	230,702	63,255
West of Mississippi River	8,004	50,482	28,466	323,311	36,470	373,793
U.S. Subtotal	62,486	53,084	204,686	383,964	267,172	437,048
Unknown *	-	-	-	-	201	1,397
U.S. Total	62,486	53,084	204,686	383,964	267,373	438,445

- = 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, 2019

(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	143	3,380	90	-	7,980	-	8,214	3,380
Alaska	-	1,000	-	-	-	-	-	1,000
Arizona	-	4,025	-	-	-	-	-	4,025
Colorado	-	4,686	-	5,573	-	163	-	10,422
Illinois	-	31,046	-	4,365	-	7,254	-	42,665
Indiana	-	16,097	-	11,620	-	-	-	27,717
Kentucky Total	2,620	29,699	284	667	50	216	2,953	30,582
Kentucky (East)	2,620	9,010	284	76	50	216	2,953	9,301
Kentucky (West)	-	20,690	-	592	-	-	-	21,281
Louisiana	-	177	-	1,200	-	-	-	1,377
Maryland	589	512	-	-	183	-	772	512
Mississippi	-	2,562	-	-	-	-	-	2,562
Missouri	-	189	-	-	-	-	-	189
Montana	-	23,059	-	7,155	-	-	-	30,214
New Mexico	-	7,759	-	5,448	-	-	-	13,207
North Dakota	-	27,153	-	-	-	-	-	27,153
Ohio	-	6,778	-	551	-	-	-	7,329
Oklahoma	-	223	-	-	-	3	-	227
Pennsylvania Total	6,211	28,588	699	3,169	764	57	7,674	31,814
Pennsylvania (Anthracite)	227	1,499	-	556	-	57	227	2,112
Pennsylvania (Bituminous)	5,985	27,089	699	2,613	764	-	7,447	29,702
Tennessee	174	93	-	-	158	-	332	93
Texas	-	2,757	-	18,298	-	1,554	-	22,608
Utah	-	11,550	-	170	-	1,228	-	12,948
Virginia	3,873	1,434	48	4	2,312	35	6,232	1,473
West Virginia Total	12,016	33,609	852	15,890	14,009	2,698	26,877	52,197
West Virginia (Northern)	712	21,143	-	15,890	4,178	351	4,890	37,384
West Virginia (Southern)	11,303	12,466	852	-	9,832	2,347	21,987	14,813
Wyoming	-	163,338	-	113,408	-	-	-	276,746
U.S. Subtotal	25,626	399,715	1,973	187,518	25,456	13,208	53,054	600,441
Adjustments ⁴	-9,783	-	-	-	-	-	-9,783	-
Other Exports *	-	-	-	-	27,460	27,642	27,460	27,642
U.S. Total **	15,844	399,715	1,973	187,518	52,916	40,849	70,732	628,082

- = No data reported.

* 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, 2019

Rank	Mine Name / Operating Company	Mine Type	State	Production (short tons)
1	North Antelope Rochelle Mine / Peabody Powder River Mining LLC	Surface	Wyoming	85,340,711
2	Black Thunder / Thunder Basin Coal Company LLC	Surface	Wyoming	71,976,643
3	Antelope Coal Mine / Navajo Transitional Energy Com	Surface	Wyoming	23,243,371
4	Buckskin Mine / Buckskin Mining Company	Surface	Wyoming	17,633,296
5	Freedom Mine / The Coteau Properties Company	Surface	North Dakota	13,514,792
6	Mc#1 Mine / M-Class Mining LLC	Underground	Illinois	12,793,896
7	Caballo Mine / Peabody Caballo Mining, LLC	Surface	Wyoming	12,595,735
8	Bailey Mine / Consol Pennsylvania Coal Company	Underground	Pennsylvania	12,218,072
9	Spring Creek Coal Company / Navajo Transitional Energy Com	Surface	Montana	11,928,834
10	Cordero Rojo Mine / Navajo Transitional Energy Com	Surface	Wyoming	11,906,683
11	Marshall County Mine / The Marshall County Coal Company	Underground	West Virginia	11,718,744
12	Eagle Butte Mine / Eagle Specialty Materials LLC	Surface	Wyoming	11,642,248
13	River View Mine / River View Coal LLC	Underground	Kentucky	11,342,348
14	Belle Ayr Mine / Eagle Specialty Materials LLC	Surface	Wyoming	10,219,206
15	Rawhide Mine / Peabody Caballo Mining, LLC	Surface	Wyoming	10,090,441
16	Enlow Fork Mine / Consol Pennsylvania Coal Company	Underground	Pennsylvania	10,043,384
17	Kosse Strip / Luminant Mining Company LLC	Surface	Texas	9,594,365
18	Rosebud Mine & Crusher/Conveyo / Westmoreland Rosebud Mining LI	Surface	Montana	8,456,480
19	Falkirk Mine / Falkirk Mining Company	Surface	North Dakota	7,421,114
20	Tunnel Ridge Mine / Tunnel Ridge, LLC	Underground	West Virginia	7,330,458
21	Bull Mountains Mine No 1 / Signal Peak Energy LLC	Underground	Montana	7,019,129
22	Bear Run Mine / Peabody Bear Run Mining LLC	Surface	Indiana	6,817,283
23	Harrison County Mine / The Harrison County Coal Company	Underground	West Virginia	6,808,868
24	Ohio County Mine / The Ohio County Coal Company	Underground	West Virginia	6,600,582
25	Cumberland Mine / Cumberland Contura, LLC	Underground	Pennsylvania	6,595,204
26	Lively Grove Mine / Prairie State Generating Company	Underground	Illinois	6,439,823
27	No 7 Mine / Warrior Met Coal Mining, LLC	Underground	Alabama	6,247,986
28	Dry Fork Mine / Western Fuels-Wyoming Inc	Surface	Wyoming	6,102,072
29	Marion County Mine / The Marion County Coal Company	Underground	West Virginia	5,962,845
30	Mine No. 1 / Hamilton County Coal, LLC	Underground	Illinois	5,889,105
31	El Segundo / El Segundo Coal Company, LLC	Surface	New Mexico	5,495,524
32	Gibson South / Gibson County Coal, LLC	Underground	Indiana	5,412,233
33	Navajo Mine / Bisti Fuels Company LLC	Surface	New Mexico	5,264,177
34	Mach #1 Mine / Mach Mining LLC	Underground	Illinois	5,174,361
35	Harvey Mine / Consol Pennsylvania Coal Company	Underground	Pennsylvania	5,023,781
36	Buchanan Mine #1 / Buchanan Minerals, LLC	Underground	Virginia	4,940,159
37	Century Mine / American Energy Corporation	Underground	Ohio	4,735,046
38	Monongalia County Mine / The Monongalia County Coal Com	Underground	Pennsylvania	4,469,056
39	Sufco / Canyon Fuel Company LLC	Underground	Utah	4,373,942
40	Leer Mine / Aci Tygart Valley	Underground	West Virginia	4,274,748
41	Oaktown Fuels Mine No. 1 / Sunrise Coal, LLC	Underground	Indiana	4,166,561
42	Prairie Eagle-Underground / Knight Hawk Coal, LLC	Underground	Illinois	4,095,032
43	West Elk Mine / Mountain Coal Company, L.L.C.	Underground	Colorado	4,079,345
Subtotal				496,997,683
All Other Mines				209,311,580
U.S. Total				706,309,263

Notes: Major mines are mines that produced more than 4 million short tons in 2019. 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, 2019

Rank	Controlling Company Name	Production (thousand short tons)	Percent of Total Production
1	Peabody Energy Corp	138,731	19.6
2	Arch Resources Inc	87,892	12.4
3	Navajo Nation	47,079	6.7
4	Murray Energy Corp	45,564	6.5
5	Alliance Resource Partners LP	40,555	5.7
6	NACCO Industries Inc	35,755	5.1
7	CONSOL Energy Inc	27,285	3.9
8	Michael T. Costello	22,840	3.2
9	Contura Energy Inc	22,317	3.2
10	Kiewit Peter Sons' Inc	20,637	2.9
11	Foresight Energy Labor LLC	19,929	2.8
12	Westmoreland Mining Holdings LLC	16,045	2.3
13	Vistra Energy	13,183	1.9
14	Blackhawk Mining LLC	12,398	1.8
15	Wolverine Fuels LLC	8,707	1.2
16	Coronado Coal LLC	8,533	1.2
17	Warrior Met Coal Intermediate Holdco LLC	8,469	1.2
18	Hallador Energy Company	8,221	1.2
19	Global Mining Group LLC	7,019	1.0
20	Prairie State Energy Campus	6,440	0.9
21	Western Fuels Assoc Inc	6,102	0.9
22	J Clifford Forrest	5,189	0.7
Subtotal		608,890	86.2
All Other Coal Producers		97,419	13.8
U.S. Total		706,309	100.0

Notes: The listed companies each produced more than 5 million short tons of coal in 2019. 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, 2019 and 2018

(thousand short tons)

Coal-Producing State	2019			2018			Percent Change		
	Underground	Surface	Total	Underground	Surface	Total	Underground	Surface	Total
Alabama	13,915	2,651	16,566	13,531	2,864	16,395	2.8	-7.4	1.0
Alaska	-	3,000	3,000	-	3,000	3,000	-	-	-
Arizona	-	3,843	3,843	-	8,500	8,500	-	-54.8	-54.8
Colorado	16,164	5,100	21,264	14,000	4,700	18,700	15.5	8.5	13.7
Illinois	61,034	6,381	67,415	48,793	6,856	55,649	25.1	-6.9	21.1
Indiana	22,700	19,970	42,670	24,600	23,023	47,623	-7.7	-13.3	-10.4
Kentucky Total	42,581	10,763	53,345	41,446	10,551	51,996	2.7	2.0	2.6
Kentucky (East)	15,031	9,963	24,995	15,546	9,729	25,274	-3.3	2.4	-1.1
Kentucky (West)	27,550	800	28,350	25,900	822	26,722	6.4	-2.7	6.1
Louisiana	-	3,385	3,385	-	2,918	2,918	-	16.0	16.0
Maryland	640	1,336	1,976	820	1,429	2,249	-22.0	-6.5	-12.1
Mississippi	-	3,600	3,600	-	3,600	3,600	-	-	-
Missouri	-	260	260	-	260	260	-	-	-
Montana	11,000	38,800	49,800	11,000	41,800	52,800	-	-7.2	-5.7
New Mexico	9,000	14,400	23,400	9,000	15,400	24,400	-	-6.5	-4.1
North Dakota	-	34,421	34,421	-	35,231	35,231	-	-2.3	-2.3
Ohio	8,131	3,109	11,240	8,310	5,071	13,380	-2.2	-38.7	-16.0
Oklahoma	-	278	278	400	609	1,009	-	-54.4	-72.4
Pennsylvania Total	48,803	7,101	55,904	52,579	8,855	61,433	-7.2	-19.8	-9.0
Pennsylvania (Anthracite)	30	3,148	3,178	43	4,149	4,193	-30.2	-24.1	-24.2
Pennsylvania (Bituminous)	48,773	3,953	52,727	52,535	4,706	57,241	-7.2	-16.0	-7.9
Tennessee	314	122	436	184	87	271	70.7	40.2	60.9
Texas	-	24,358	24,358	-	25,849	25,849	-	-5.8	-5.8
Utah	20,437	2,000	22,437	19,676	2,000	21,676	3.9	-	3.5
Virginia	9,794	4,402	14,195	11,466	5,073	16,539	-14.6	-13.2	-14.2
West Virginia Total	86,607	29,762	116,369	89,608	31,399	121,008	-3.3	-5.2	-3.8
West Virginia (Northern)	54,822	710	55,532	54,506	776	55,282	0.6	-8.5	0.5
West Virginia (Southern)	31,785	29,052	60,837	35,102	30,624	65,726	-9.5	-5.1	-7.4
Wyoming	2,400	436,900	439,300	2,300	433,752	436,052	4.3	0.7	0.7
U.S. Total	353,519	655,942	1,009,461	347,712	672,827	1,020,539	1.7	-2.5	-1.1

- = No data reported.

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, 2019 and 2018

(percent)

Coal-Producing State	2019			2018		
	Underground	Surface	Total	Underground	Surface	Total
Alabama	86.08	78.41	84.85	90.08	88.39	89.78
Alaska	-	32.49	32.49	-	30.05	30.05
Arizona	-	100.00	100.00	-	77.06	77.06
Colorado	57.64	69.65	60.52	74.39	76.84	75.00
Illinois	69.49	53.93	68.02	94.42	50.92	89.06
Indiana	74.70	73.12	73.96	70.55	74.89	72.65
Kentucky Total	67.28	64.36	66.69	74.45	78.89	75.35
Kentucky (East)	46.27	64.30	53.45	57.05	78.79	65.42
Kentucky (West)	78.74	65.14	78.36	84.89	80.05	84.75
Louisiana	-	45.43	45.43	-	50.83	50.83
Maryland	99.24	59.53	72.39	53.15	57.68	56.03
Mississippi	-	74.93	74.93	-	81.66	81.66
Missouri	-	72.80	72.80	-	99.58	99.58
Montana	63.81	70.74	69.21	68.79	74.27	73.13
New Mexico	41.96	74.72	62.12	20.53	58.08	44.23
North Dakota	-	78.43	78.43	-	84.14	84.14
Ohio	77.88	45.67	68.97	78.44	48.52	67.10
Oklahoma	-	81.54	81.54	51.55	66.29	60.44
Pennsylvania Total	91.29	71.62	88.79	84.67	55.23	80.43
Pennsylvania (Anthracite)	85.42	78.30	78.37	75.36	40.06	40.42
Pennsylvania (Bituminous)	91.29	66.31	89.42	84.68	68.60	83.36
Tennessee	99.87	100.00	99.90	94.46	48.20	79.65
Texas	-	95.69	95.69	-	96.03	96.03
Utah	69.31	12.00	64.20	66.71	24.68	62.83
Virginia	88.61	78.49	85.47	82.00	63.93	76.46
West Virginia Total	81.06	76.55	79.90	80.56	73.19	78.65
West Virginia (Northern)	84.55	96.29	84.70	83.43	79.74	83.38
West Virginia (Southern)	75.04	76.06	75.53	76.10	73.03	74.67
Wyoming	91.40	62.88	63.03	96.11	69.62	69.76
U.S. Total	75.57	66.65	69.78	79.11	71.21	73.90

- = 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, 2019

(thousand short tons)

Coal-Producing State	Continuous		Conventional and Other ¹		Longwall		Total	
	Productive Capacity	Capacity Utilization Percent	Productive Capacity	Capacity Utilization Percent	Productive Capacity	Capacity Utilization Percent	Productive Capacity	Capacity Utilization Percent
Alabama	2,598	88.03	s	-	11,317	85.63	13,915	86.08
Colorado	2,863	63.01	s	-	13,301	56.48	16,164	57.64
Illinois	34,134	58.75	1,250	70.79	25,650	83.71	61,034	69.49
Indiana	22,700	74.70	s	-	s	-	22,700	74.70
Kentucky Total	42,101	67.41	480	56.01	s	-	42,581	67.28
Kentucky (East)	14,551	45.95	480	56.01	s	-	15,031	46.27
Kentucky (West)	27,550	78.74	s	-	s	-	27,550	78.74
Maryland	640	99.24	s	-	s	-	640	99.24
Montana	770	63.81	s	-	10,230	63.81	11,000	63.81
New Mexico	450	41.96	s	-	8,550	41.96	9,000	41.96
Ohio	2,216	91.31	s	-	5,915	72.85	8,131	77.88
Pennsylvania Total	10,522	85.62	30	85.42	38,251	92.85	48,803	91.29
Pennsylvania (Anthracite)	s	-	30	85.42	s	-	30	85.42
Pennsylvania (Bituminous)	10,522	85.62	s	-	38,251	92.85	48,773	91.29
Tennessee	314	99.87	s	-	s	-	314	99.87
Utah	6,463	63.59	s	-	13,973	71.96	20,437	69.31
Virginia	4,694	79.64	s	-	5,100	96.87	9,794	88.61
West Virginia Total	35,549	76.61	1,100	85.54	49,958	84.12	86,607	81.06
West Virginia (Northern)	7,323	83.77	s	-	47,499	84.66	54,822	84.55
West Virginia (Southern)	28,226	74.76	1,100	85.54	2,459	73.55	31,785	75.04
Wyoming	216	91.40	s	-	2,184	91.40	2,400	91.40
U.S. Total	166,231	70.64	2,860	74.13	184,429	80.05	353,519	75.57

- = 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 coal using shortwall, scoop loading, hand loading, or other methods.

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.

Table 13.1 Productive Capacity and Capacity Utilization of Surface Coal Mines by State and Mining Method, 2019

(thousand short tons)

Coal-Producing State	Contour Strip		Area		Open Pit		Mountaintop Mining		Other ¹		Total	
	Productive Capacity	Capacity Utilization Percent	Productive Capacity	Capacity Utilization Percent	Productive Capacity	Capacity Utilization Percent	Productive Capacity	Capacity Utilization Percent	Productive Capacity	Capacity Utilization Percent	Productive Capacity	Capacity Utilization Percent
Alabama	2,195	76.71	-	-	280	98.90	-	-	175	67.05	2,651	78.41
Alaska	1,500	32.49	-	-	1,500	32.49	-	-	-	-	3,000	32.49
Arizona	3,843	100.00	-	-	-	-	-	-	-	-	3,843	100.00
Colorado	2,300	84.97	-	-	2,800	57.07	-	-	-	-	5,100	69.65
Illinois	-	-	5,445	49.53	-	-	-	-	937	79.49	6,381	53.93
Indiana	-	-	1,074	18.12	17,604	79.99	-	-	1,292	25.34	19,970	73.12
Kentucky Total	4,728	63.82	2,306	82.88	288	90.69	184	100.00	3,257	47.69	10,763	64.36
Kentucky (East)	4,728	63.82	1,806	92.04	-	-	184	100.00	3,245	47.53	9,963	64.30
Kentucky (West)	-	-	500	49.81	288	90.69	-	-	12	90.69	800	65.14
Louisiana	-	-	3,385	45.43	-	-	-	-	-	-	3,385	45.43
Maryland	749	48.10	550	72.40	-	-	-	-	37	99.24	1,336	59.53
Mississippi	3,600	74.93	-	-	-	-	-	-	-	-	3,600	74.93
Missouri	260	72.80	-	-	-	-	-	-	-	-	260	72.80
Montana	23,500	64.08	10,400	84.12	4,900	74.33	-	-	-	-	38,800	70.74
New Mexico	5,500	99.92	-	-	8,900	59.15	-	-	-	-	14,400	74.72
North Dakota	29,421	78.30	-	-	5,000	79.17	-	-	-	-	34,421	78.43
Ohio	600	70.88	1,973	42.51	-	-	-	-	536	29.09	3,109	45.67
Oklahoma	278	81.54	-	-	-	-	-	-	-	-	278	81.54
Pennsylvania Total	2,428	69.23	-	-	4,493	72.86	-	-	180	72.93	7,101	71.62
Pennsylvania (Anthracite)	1,177	76.79	-	-	1,864	79.35	-	-	107	76.51	3,148	78.30
Pennsylvania (Bituminous)	1,252	62.12	-	-	2,629	68.26	-	-	72	67.62	3,953	66.31
Tennessee	93	100.00	-	-	-	-	-	-	29	100.00	122	100.00
Texas	5,539	86.25	13,183	100.00	5,636	94.86	-	-	-	-	24,358	95.69
Utah	-	-	-	-	2,000	12.00	-	-	-	-	2,000	12.00
Virginia	2,662	76.03	648	93.57	-	-	-	-	1,091	75.52	4,402	78.49
West Virginia Total	12,179	75.28	8,212	93.68	-	-	2,993	70.33	6,378	59.81	29,762	76.55
West Virginia (Northern)	610	96.71	-	-	-	-	-	-	100	93.72	710	96.29
West Virginia (Southern)	11,569	74.15	8,212	93.68	-	-	2,993	70.33	6,278	59.27	29,052	76.06
Wyoming	252,200	53.82	5,000	46.16	179,700	76.06	-	-	-	-	436,900	62.88
U.S. Total	353,576	59.95	52,176	76.89	233,101	75.12	3,177	72.05	13,913	55.59	655,942	66.65

- = No data reported.

¹ Mines that: 1. produce coal using auger, highwall mine, or punch.

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. Mines reporting multiple mining methods are assigned to the mining method with the greatest percentage of production reported.

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, 2019 and 2018

(million short tons)

Coal-Producing State	2019	2018	Percent Change Recoverable Coal Reserves
	Recoverable Coal Reserves	Recoverable Coal Reserves	
Alabama	204	215	-4.8
Alaska	48	49	-2.0
Arizona	193	197	-2.0
Colorado	237	217	8.8
Illinois	1,900	2,094	-9.3
Indiana	446	481	-7.3
Kentucky Total	699	711	-1.7
Kentucky (East)	272	337	-19.3
Kentucky (West)	427	374	14.2
Louisiana	30	41	-26.8
Maryland	8	13	-39.1
Mississippi	108	111	-2.4
Missouri	s	s	88.5
Montana	778	818	-4.8
New Mexico	82	147	-43.9
North Dakota	928	960	-3.3
Ohio	85	86	-0.8
Oklahoma	s	7	-98.3
Pennsylvania Total	1,070	1,064	0.5
Pennsylvania (Anthracite)	118	161	-26.9
Pennsylvania (Bituminous)	952	903	5.4
Tennessee	9	9	-3.4
Texas	345	375	-7.9
Utah	180	182	-0.9
Virginia	175	184	-4.6
West Virginia Total	1,436	1,730	-17.0
West Virginia (Northern)	776	806	-3.7
West Virginia (Southern)	660	924	-28.6
Wyoming	5,189	5,525	-6.1
U.S. Total	14,151	15,216	-7.0

- = 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, 2019

(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	190	346	687	14	2,211	3,103	204	2,557	3,791
Alaska	-	2,335	5,423	48	479	661	48	2,813	6,084
Arizona	-	-	-	193	-	-	193	-	-
Arkansas	-	126	271	-	101	144	-	227	415
Colorado	122	5,698	10,858	115	3,740	4,754	237	9,438	15,612
Georgia	-	1	2	-	1	2	-	2	4
Idaho	-	2	4	-	-	-	-	2	4
Illinois	1,880	27,585	86,841	20	10,023	16,468	1,900	37,608	103,309
Indiana	192	3,451	8,333	253	225	385	446	3,676	8,718
Iowa	-	807	1,732	-	320	457	-	1,127	2,189
Kansas	-	-	-	-	679	970	-	679	970
Kentucky Total	623	6,690	15,581	76	7,191	12,452	699	13,881	28,032
Kentucky (East)	206	261	468	66	4,973	8,905	272	5,234	9,373
Kentucky (West)	417	6,428	15,113	10	2,218	3,547	427	8,647	18,660
Louisiana	-	-	-	30	272	367	30	272	367
Maryland	3	304	555	5	26	39	8	330	594
Michigan	-	55	123	-	3	5	-	58	128
Mississippi	-	-	-	108	-	-	108	-	-
Missouri	-	689	1,479	s	3,153	4,504	-	3,843	5,984
Montana	205	35,856	70,826	573	38,512	47,651	778	74,368	118,478
New Mexico	5	2,729	6,000	78	4,000	5,719	82	6,729	11,719
North Carolina	-	5	11	-	-	-	-	5	11
North Dakota	-	-	-	928	6,521	8,548	928	6,521	8,548
Ohio	82	7,549	17,158	4	3,693	5,642	85	11,242	22,800
Oklahoma	-	569	1,221	s	218	312	-	787	1,533
Oregon	-	6	15	-	2	3	-	9	17
Pennsylvania Total	924	9,999	21,890	145	956	4,101	1,070	10,955	25,991
Pennsylvania (Anthracite)	s	340	3,840	117	416	3,325	118	756	7,165
Pennsylvania (Bituminous)	924	9,659	18,050	28	540	776	952	10,200	18,826
South Dakota	-	-	-	-	277	366	-	277	366
Tennessee	9	271	494	s	170	251	9	441	745
Texas	-	-	-	345	9,021	11,719	345	9,021	11,719
Utah	179	2,265	4,621	1	207	262	180	2,473	4,883
Virginia	152	438	780	23	291	454	175	729	1,235
Washington	-	674	1,332	-	6	8	-	681	1,340
West Virginia Total	1,161	14,400	26,981	275	1,932	3,062	1,436	16,331	30,042
West Virginia (Northern)	770	NA	NA	6	NA	NA	776	NA	NA
West Virginia (Southern)	392	NA	NA	268	NA	NA	660	NA	NA
Wyoming	3	22,907	42,420	5,185	12,067	14,575	5,189	34,974	56,995
U.S. Total	5,730	145,757	325,637	8,421	106,300	146,986	14,151	252,057	472,623

- = 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, 2020.' 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, 2019. 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, 2019

(million short tons)

Coal-Producing State	Continuous	Conventional and Other ¹	Longwall	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	44	s	146	190
Colorado	18	s	104	122
Illinois	783	36	1,061	1,880
Indiana	192	s	s	192
Kentucky Total	603	20	s	623
Kentucky (East)	186	20	s	206
Kentucky (West)	417	s	s	417
Maryland	3	s	s	3
Montana	14	s	191	205
New Mexico	s	s	5	5
Ohio	54	s	28	82
Pennsylvania Total	143	s	781	924
Pennsylvania (Anthracite)	s	s	s	s
Pennsylvania (Bituminous)	143	s	781	924
Tennessee	9	s	s	9
Utah	55	s	123	179
Virginia	47	s	105	152
West Virginia Total	481	33	647	1,161
West Virginia (Northern)	135	s	634	770
West Virginia (Southern)	345	33	13	392
Wyoming	s	s	3	3
U.S. Total	2,447	90	3,193	5,730

- = 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 coal using shortwall, scoop loading, hand loading, or other methods.

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 16.1 Recoverable Coal Reserves at Producing Surface Coal Mines by State and Mining Method, 2019

(million short tons)

Coal-Producing State	Contour Strip	Area	Open Pit	Mountaintop Mining	Other ¹	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	Recoverable Coal Reserves at Producing Mines	Recoverable Coal Reserves at Producing Mines
Alabama	14	-	s	-	s	14
Alaska	24	-	24	-	-	48
Arizona	193	-	-	-	-	193
Colorado	16	-	99	-	-	115
Illinois	-	19	-	-	1	20
Indiana	-	1	250	-	2	253
Kentucky Total	29	21	1	s	26	76
Kentucky (East)	29	12	-	s	26	66
Kentucky (West)	-	9	1	-	s	10
Louisiana	-	30	-	-	-	30
Maryland	1	3	-	-	s	5
Mississippi	108	-	-	-	-	108
Missouri	s	-	-	-	-	s
Montana	226	226	121	-	-	573
New Mexico	20	-	57	-	-	78
North Dakota	852	-	76	-	-	928
Ohio	2	1	-	-	1	4
Oklahoma	s	-	-	-	-	s
Pennsylvania Total	55	-	91	-	s	145
Pennsylvania (Anthracite)	43	-	75	-	s	117
Pennsylvania (Bituminous)	12	-	16	-	s	28
Tennessee	s	-	-	-	s	s
Texas	122	145	79	-	-	345
Utah	-	-	1	-	-	1
Virginia	17	3	-	-	4	23
West Virginia Total	127	98	-	28	22	275
West Virginia (Northern)	5	-	-	-	2	6
West Virginia (Southern)	122	98	-	28	20	268
Wyoming	2,126	54	3,005	-	-	5,185
U.S. Total	3,933	601	3,804	28	55	8,421

- = No data reported.

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

¹ Mines that: 1. produce coal using auger, highwall mine, or punch.

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. Mines reporting multiple mining methods are assigned to the mining method with the greatest percentage of production reported.

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, 2019

(million short tons)

Mine Production Range (thousand short tons)	Underground	Surface	Total
	Recoverable Coal Reserves	Recoverable Coal Reserves	Recoverable Coal Reserves
Over 1,000	4,580	7,907	12,487
Over 500 to 1,000	198	108	305
Over 200 to 500	251	244	496
Over 100 to 200	607	75	682
Over 50 to 100	70	43	113
Over 10 to 50	24	44	68
10 or Under	-	1	1
U.S. Total	5,730	8,421	14,151

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, 2019 and 2018

Coal-Producing State and Region ¹	2019			2018			Percent Change		
	Underground	Surface	Total	Underground	Surface	Total	Underground	Surface	Total
Alabama	2,371	559	2,930	2,340	564	2,904	1.3	-0.9	0.9
Alaska	-	101	101	-	99	99	-	2.0	2.0
Arizona	-	243	243	-	416	416	-	-41.6	-41.6
Colorado	858	414	1,272	830	428	1,258	3.4	-3.3	1.1
Illinois	2,776	329	3,105	2,729	350	3,079	1.7	-6.0	0.8
Indiana	1,646	1,285	2,931	1,464	1,459	2,923	12.4	-11.9	0.3
Kentucky Total	4,827	1,430	6,257	4,929	1,573	6,502	-2.1	-9.1	-3.8
Kentucky (East)	2,432	1,368	3,800	2,623	1,498	4,121	-7.3	-8.7	-7.8
Kentucky (West)	2,395	62	2,457	2,306	75	2,381	3.9	-17.3	3.2
Louisiana	-	242	242	-	322	322	-	-24.8	-24.8
Maryland	138	122	260	171	135	306	-19.3	-9.6	-15.0
Mississippi	-	194	194	-	199	199	-	-2.5	-2.5
Missouri	-	14	14	-	16	16	-	-12.5	-12.5
Montana	274	1,028	1,302	264	1,047	1,311	3.8	-1.8	-0.7
New Mexico	271	655	926	313	592	905	-13.4	10.6	2.3
North Dakota	-	1,241	1,241	-	1,249	1,249	-	-0.6	-0.6
Ohio	688	295	983	691	431	1,122	-0.4	-31.6	-12.4
Oklahoma	-	56	56	75	69	144	-100.0	-18.8	-61.1
Pennsylvania Total	3,886	1,546	5,432	3,854	1,531	5,385	0.8	1.0	0.9
Pennsylvania (Anthracite)	68	848	916	78	822	900	-12.8	3.2	1.8
Pennsylvania (Bituminous)	3,818	698	4,516	3,776	709	4,485	1.1	-1.6	0.7
Tennessee	86	27	113	55	35	90	56.4	-22.9	25.6
Texas	-	1,531	1,531	-	1,646	1,646	-	-7.0	-7.0
Utah	1,397	49	1,446	1,314	49	1,363	6.3	-	6.1
Virginia	1,883	865	2,748	2,047	683	2,730	-8.0	26.6	0.7
West Virginia Total	10,647	3,341	13,988	10,767	3,195	13,962	-1.1	4.6	0.2
West Virginia (Northern)	4,130	158	4,288	4,042	89	4,131	2.2	77.5	3.8
West Virginia (Southern)	6,517	3,183	9,700	6,725	3,106	9,831	-3.1	2.5	-1.3
Wyoming	133	5,266	5,399	169	5,389	5,558	-21.3	-2.3	-2.9
Appalachia Total	22,131	8,123	30,254	22,548	8,072	30,620	-1.8	0.6	-1.2
Appalachia Central	10,918	5,443	16,361	11,450	5,322	16,772	-4.6	2.3	-2.5
Appalachia Northern	8,842	2,121	10,963	8,758	2,186	10,944	1.0	-3.0	0.2
Appalachia Southern	2,371	559	2,930	2,340	564	2,904	1.3	-0.9	0.9
Interior Region Total	6,817	3,713	10,530	6,574	4,136	10,710	3.7	-10.2	-1.7
Illinois Basin	6,817	1,676	8,493	6,499	1,884	8,383	4.9	-11.0	1.3
Other Interior	-	2,037	2,037	75	2,252	2,327	-100.0	-9.5	-12.5
Western Region Total	2,933	8,997	11,930	2,890	9,269	12,159	1.5	-2.9	-1.9
Powder River Basin	-	5,628	5,628	-	5,740	5,740	-	-2.0	-2.0
Uinta Basin	2,167	437	2,604	2,061	449	2,510	5.1	-2.7	3.7
Other Western	766	2,932	3,698	829	3,080	3,909	-7.6	-4.8	-5.4
East of Mississippi River	28,948	9,993	38,941	29,047	10,155	39,202	-0.3	-1.6	-0.7
West of Mississippi River	2,933	10,840	13,773	2,965	11,322	14,287	-1.1	-4.3	-3.6
U.S. Subtotal	31,881	20,833	52,714	32,012	21,477	53,489	-0.4	-3.0	-1.4
Refuse Recovery	-	-	90	-	-	94	-	-	-4.3
U.S. Total	31,881	20,833	52,804	32,012	21,477	53,583	-0.4	-3.0	-1.5

- = 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, 2019

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	9	25	29	2,023	791	2,814
Alaska	-	1	1	-	101	101
Arizona	-	1	1	-	243	243
Colorado	-	6	6	-	1,272	1,272
Illinois	-	22	22	-	2,947	2,947
Indiana	-	17	17	-	2,807	2,807
Kentucky Total	29	122	139	836	4,595	5,431
Kentucky (East)	29	110	127	836	2,382	3,218
Kentucky (West)	-	12	12	-	2,213	2,213
Louisiana	-	2	2	-	242	242
Maryland	2	10	12	140	83	223
Mississippi	-	1	1	-	194	194
Missouri	-	1	1	-	14	14
Montana	-	6	6	-	1,292	1,292
New Mexico	-	3	3	-	926	926
North Dakota	-	5	5	-	1,241	1,241
Ohio	-	15	15	-	928	928
Oklahoma	-	3	3	-	56	56
Pennsylvania Total	47	124	152	1,396	3,472	4,868
Pennsylvania (Anthracite)	4	51	55	45	484	529
Pennsylvania (Bituminous)	43	73	97	1,351	2,988	4,339
Tennessee	2	1	3	71	15	86
Texas	-	8	8	-	1,531	1,531
Utah	-	8	8	-	1,354	1,354
Virginia	27	43	55	1,828	641	2,469
West Virginia Total	92	119	164	6,773	5,743	12,516
West Virginia (Northern)	6	14	16	936	3,168	4,104
West Virginia (Southern)	86	105	148	5,838	2,574	8,412
Wyoming	-	16	16	-	5,399	5,399
Appalachia Total	208	447	557	13,067	14,055	27,122
Appalachia Central	144	259	333	8,572	5,613	14,185
Appalachia Northern	55	163	195	2,472	7,651	10,123
Appalachia Southern	9	25	29	2,023	791	2,814
Interior Region Total	-	66	66	-	10,004	10,004
Illinois Basin	-	51	51	-	7,967	7,967
Other Interior	-	15	15	-	2,037	2,037
Western Region Total	-	46	46	-	11,828	11,828
Powder River Basin	-	16	16	-	5,618	5,618
Uinta Basin	-	12	12	-	2,512	2,512
Other Western	-	18	18	-	3,698	3,698
East of Mississippi River	208	499	609	13,067	22,216	35,283
West of Mississippi River	-	60	60	-	13,671	13,671
U.S. Total	208	559	669	13,067	35,887	48,954

- = 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, 2019

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	2,184	-	209	205	68	103	45	116	2,930
Underground	2,183	-	41	-	22	-	39	86	2,371
Surface	1	-	168	205	46	103	6	30	559
Alaska	-	101	-	-	-	-	-	-	101
Surface	-	101	-	-	-	-	-	-	101
Arizona	243	-	-	-	-	-	-	-	243
Surface	243	-	-	-	-	-	-	-	243
Colorado	1,184	88	-	-	-	-	-	-	1,272
Underground	770	88	-	-	-	-	-	-	858
Surface	414	-	-	-	-	-	-	-	414
Illinois	2,786	-	33	90	10	15	6	165	3,105
Underground	2,576	-	-	50	-	-	-	150	2,776
Surface	210	-	33	40	10	15	6	15	329
Indiana	2,612	76	64	55	-	-	-	108	2,931
Underground	1,523	-	-	-	-	-	-	108	1,646
Surface	1,089	76	64	55	-	-	-	-	1,285
Kentucky Total	2,197	380	743	847	709	396	120	797	6,257
Underground	2,067	380	455	651	492	150	5	585	4,827
Surface	130	-	288	196	217	246	115	212	1,430
Kentucky (East)	311	252	611	788	709	388	120	553	3,800
Underground	181	252	362	592	492	150	5	356	2,432
Surface	130	-	249	196	217	238	115	197	1,368
Kentucky (West)	1,886	128	132	59	-	8	-	244	2,457
Underground	1,886	128	93	59	-	-	-	229	2,395
Surface	-	-	39	-	-	8	-	15	62
Louisiana	212	-	-	30	-	-	-	-	242
Surface	212	-	-	30	-	-	-	-	242
Maryland	-	101	53	14	-	46	9	37	260
Underground	-	101	-	-	-	-	-	37	138
Surface	-	-	53	14	-	46	9	-	122
Mississippi	194	-	-	-	-	-	-	-	194
Surface	194	-	-	-	-	-	-	-	194
Missouri	-	-	-	14	-	-	-	-	14
Surface	-	-	-	14	-	-	-	-	14
Montana	1,279	-	13	-	-	-	-	10	1,302
Underground	274	-	-	-	-	-	-	-	274
Surface	1,005	-	13	-	-	-	-	10	1,028
New Mexico	926	-	-	-	-	-	-	-	926
Underground	271	-	-	-	-	-	-	-	271
Surface	655	-	-	-	-	-	-	-	655
North Dakota	1,212	-	29	-	-	-	-	-	1,241
Surface	1,212	-	29	-	-	-	-	-	1,241
Ohio	367	241	260	-	20	8	32	55	983
Underground	367	241	48	-	-	-	-	32	688
Surface	-	-	212	-	20	8	32	23	295
Oklahoma	-	-	-	44	-	11	1	-	56
Surface	-	-	-	44	-	11	1	-	56
Pennsylvania Total	2,718	243	687	435	275	267	227	515	5,432
Underground	2,718	243	429	182	93	17	48	133	3,886
Surface	-	-	258	253	182	250	179	382	1,546
Pennsylvania (Anthracite)	-	-	167	63	67	102	114	363	916
Underground	-	-	-	-	-	7	39	22	68
Surface	-	-	167	63	67	95	75	341	848
Pennsylvania (Bituminous)	2,718	243	520	372	208	165	113	152	4,516
Underground	2,718	243	429	182	93	10	9	111	3,818
Surface	-	-	91	190	115	155	104	41	698
Tennessee	-	-	69	-	15	2	-	27	113

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		
Underground	-	-	69	-	-	-	-	17	86
Surface	-	-	-	-	15	2	-	10	27
Texas	1,445	59	-	27	-	-	-	-	1,531
Surface	1,445	59	-	27	-	-	-	-	1,531
Utah	1,047	149	158	-	-	-	-	81	1,446
Underground	1,047	149	132	-	-	-	-	69	1,397
Surface	-	-	26	-	-	-	-	12	49
Virginia	925	126	616	218	178	325	63	297	2,748
Underground	925	-	355	72	160	148	7	216	1,883
Surface	-	126	261	146	18	177	56	81	865
West Virginia Total	6,053	1,942	2,913	944	284	315	55	1,482	13,988
Underground	5,231	1,507	1,974	640	120	113	-	1,062	10,647
Surface	822	435	939	304	164	202	55	420	3,341
West Virginia (Northern)	3,845	-	224	-	19	9	7	184	4,288
Underground	3,845	-	146	-	19	-	-	120	4,130
Surface	-	-	78	-	-	9	7	64	158
West Virginia (Southern)	2,208	1,942	2,689	944	265	306	48	1,298	9,700
Underground	1,386	1,507	1,828	640	101	113	-	942	6,517
Surface	822	435	861	304	164	193	48	356	3,183
Wyoming	5,399	-	-	-	-	-	-	-	5,399
Underground	133	-	-	-	-	-	-	-	133
Surface	5,266	-	-	-	-	-	-	-	5,266
Appalachia Total	12,558	2,905	5,418	2,604	1,549	1,454	551	3,082	30,254
Underground	11,605	2,344	3,278	1,486	887	428	99	1,939	22,131
Surface	953	561	2,140	1,118	662	1,026	452	1,143	8,123
Appalachia Central	3,444	2,320	3,985	1,950	1,167	1,021	231	2,175	16,361
Underground	2,492	1,759	2,614	1,304	753	411	12	1,531	10,918
Surface	952	561	1,371	646	414	610	219	644	5,443
Appalachia Northern	6,930	585	1,224	449	314	330	275	791	10,963
Underground	6,930	585	623	182	112	17	48	322	8,842
Surface	-	-	601	267	202	313	227	469	2,121
Appalachia Southern	2,184	-	209	205	68	103	45	116	2,930
Underground	2,183	-	41	-	22	-	39	86	2,371
Surface	1	-	168	205	46	103	6	30	559
Interior Region Total	9,135	263	229	319	10	34	7	517	10,530
Underground	5,985	128	93	109	-	-	-	487	6,817
Surface	3,150	135	136	210	10	34	7	30	3,713
Illinois Basin	7,284	204	229	204	10	23	6	517	8,493
Underground	5,985	128	93	109	-	-	-	487	6,817
Surface	1,299	76	136	95	10	23	6	30	1,676
Other Interior	1,851	59	-	115	-	11	1	-	2,037
Surface	1,851	59	-	115	-	11	1	-	2,037
Western Region Total	11,290	338	200	-	-	-	-	91	11,930
Underground	2,495	237	132	-	-	-	-	69	2,933
Surface	8,795	101	68	-	-	-	-	22	8,997
Powder River Basin	5,618	-	-	-	-	-	-	10	5,628
Surface	5,618	-	-	-	-	-	-	10	5,628
Uinta Basin	2,231	149	132	-	-	-	-	81	2,604
Underground	1,817	149	132	-	-	-	-	69	2,167
Surface	414	-	-	-	-	-	-	12	437
Other Western	3,441	189	68	-	-	-	-	-	3,698
Underground	678	88	-	-	-	-	-	-	766
Surface	2,763	101	68	-	-	-	-	-	2,932
East of Mississippi River	20,036	3,109	5,647	2,808	1,559	1,477	557	3,599	38,941
Underground	17,590	2,472	3,371	1,595	887	428	99	2,426	28,948
Surface	2,446	637	2,276	1,213	672	1,049	458	1,173	9,993
West of Mississippi River	12,947	397	200	115	-	11	1	91	13,773
Underground	2,495	237	132	-	-	-	-	69	2,933
Surface	10,452	160	68	115	-	11	1	22	10,840
U.S. Subtotal	32,983	3,506	5,847	2,923	1,559	1,488	558	3,690	52,714
Underground	20,085	2,709	3,503	1,595	887	428	99	2,495	31,881

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		
Surface	12,898	797	2,344	1,328	672	1,060	459	1,195	20,833
Refuse Recovery	-	-	-	10	19	59	2	-	90
U.S. Total	32,983	3,506	5,847	2,933	1,578	1,547	560	3,690	52,804

- = 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, 2019

Coal-Producing State and Region ¹	Union		Nonunion	
	Underground	Surface	Underground	Surface
Alabama	2,241	1	91	528
Alaska	-	101	-	-
Arizona	-	243	-	-
Colorado	169	191	689	223
Illinois	-	-	2,776	330
Indiana	-	-	1,631	1,284
Kentucky Total	6	7	4,690	1,218
Kentucky (East)	6	7	2,295	1,164
Kentucky (West)	-	-	2,395	54
Louisiana	-	-	-	242
Maryland	-	-	138	97
Mississippi	-	-	-	194
Missouri	-	-	-	14
Montana	-	747	274	281
New Mexico	271	379	-	276
North Dakota	-	204	-	1,037
Ohio	-	-	688	283
Oklahoma	-	-	-	55
Pennsylvania Total	1,125	274	2,690	1,035
Pennsylvania (Anthracite)	-	274	29	507
Pennsylvania (Bituminous)	1,125	-	2,661	528
Tennessee	-	-	86	27
Texas	-	572	-	959
Utah	-	-	1,397	38
Virginia	58	4	1,786	739
West Virginia Total	2,755	95	7,884	3,066
West Virginia (Northern)	2,357	16	1,773	126
West Virginia (Southern)	398	79	6,111	2,940
Wyoming	133	491	-	4,775
Appalachia Total	6,185	381	15,658	6,939
Appalachia Central	462	90	10,278	4,870
Appalachia Northern	3,482	290	5,289	1,541
Appalachia Southern	2,241	1	91	528
Interior Region Total	-	572	6,802	3,132
Illinois Basin	-	-	6,802	1,668
Other Interior	-	572	-	1,464
Western Region Total	573	2,356	2,360	6,630
Powder River Basin	-	734	-	4,894
Uinta Basin	169	191	1,998	235
Other Western	404	1,431	362	1,501
East of Mississippi River	6,185	381	22,460	8,801
West of Mississippi River	573	2,928	2,360	7,900
U.S. Total	6,758	3,309	24,820	16,701

- = 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, 2019 and 2018

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		
	2019	2018	Percent Change	2019	2018	Percent Change	2019	2018	Percent Change
Alabama	39	39	-	2,930	2,904	0.9	1.95	2.15	-9.2
Underground	12	11	9.1	2,371	2,340	1.3	1.99	2.20	-9.6
Surface	27	28	-3.6	559	564	-0.9	1.78	1.95	-8.8
Alaska	1	1	-	101	99	2.0	5.14	4.89	5.0
Surface	1	1	-	101	99	2.0	5.14	4.89	5.0
Arizona	1	1	-	243	416	-41.6	7.86	6.53	20.3
Surface	1	1	-	243	416	-41.6	7.86	6.53	20.3
Colorado	6	6	-	1,272	1,258	1.1	4.87	5.25	-7.4
Underground	4	4	-	858	830	3.4	5.12	5.77	-11.3
Surface	2	2	-	414	428	-3.3	4.31	4.18	3.1
Illinois	28	26	7.7	3,105	3,079	0.8	6.44	6.82	-5.6
Underground	15	14	7.1	2,776	2,729	1.7	6.71	7.16	-6.3
Surface	13	12	8.3	329	350	-6.0	4.29	4.21	2.0
Indiana	22	21	4.8	2,931	2,923	0.3	4.38	4.80	-8.7
Underground	10	9	11.1	1,646	1,464	12.4	4.11	4.56	-10.0
Surface	12	12	-	1,285	1,459	-11.9	4.74	5.06	-6.2
Kentucky Total	203	210	-3.3	6,257	6,502	-3.8	2.52	2.55	-1.1
Underground	90	92	-2.2	4,827	4,929	-2.1	2.57	2.58	-0.5
Surface	113	118	-4.2	1,430	1,573	-9.1	2.35	2.44	-3.7
Kentucky (East)	182	190	-4.2	3,800	4,121	-7.8	1.70	1.79	-5.2
Underground	76	80	-5.0	2,432	2,623	-7.3	1.37	1.48	-7.5
Surface	106	110	-3.6	1,368	1,498	-8.7	2.28	2.36	-3.5
Kentucky (West)	21	20	5.0	2,457	2,381	3.2	3.59	3.71	-3.2
Underground	14	12	16.7	2,395	2,306	3.9	3.59	3.71	-3.1
Surface	7	8	-12.5	62	75	-17.3	3.59	3.85	-6.8
Louisiana	2	2	-	242	322	-24.8	3.29	2.04	60.9
Surface	2	2	-	242	322	-24.8	3.29	2.04	60.9
Maryland	13	15	-13.3	260	306	-15.0	2.47	2.23	11.0
Underground	2	3	-33.3	138	171	-19.3	1.94	1.27	52.4
Surface	11	12	-8.3	122	135	-9.6	3.14	3.60	-13.0
Mississippi	1	1	-	194	199	-2.5	6.67	6.99	-4.7
Surface	1	1	-	194	199	-2.5	6.67	6.99	-4.7
Missouri	1	1	-	14	16	-12.5	6.41	7.08	-9.5
Surface	1	1	-	14	16	-12.5	6.41	7.08	-9.5
Montana	7	7	-	1,302	1,311	-0.7	13.29	14.46	-8.1
Underground	1	1	-	274	264	3.8	11.42	12.51	-8.7
Surface	6	6	-	1,028	1,047	-1.8	13.87	15.03	-7.7
New Mexico	3	3	-	926	905	2.3	7.56	6.16	22.8
Underground	1	1	-	271	313	-13.4	7.19	3.69	95.1
Surface	2	2	-	655	592	10.6	7.70	7.14	7.8
North Dakota	5	6	-16.7	1,241	1,249	-0.6	11.16	12.31	-9.3
Surface	5	6	-16.7	1,241	1,249	-0.6	11.16	12.31	-9.3
Ohio	23	24	-4.2	983	1,122	-12.4	3.65	3.66	-0.3
Underground	9	9	-	688	691	-0.4	4.12	4.14	-0.6
Surface	14	15	-6.7	295	431	-31.6	2.43	2.80	-13.0
Oklahoma	3	5	-40.0	56	144	-61.1	1.91	1.84	3.9
Underground	-	1	-	-	75	-	-	1.17	-
Surface	3	4	-25.0	56	69	-18.8	1.91	2.60	-26.6
Pennsylvania Total	200	201	-0.5	5,432	5,385	0.9	4.14	4.20	-1.3
Underground	54	56	-3.6	3,886	3,854	0.8	4.94	5.06	-2.4
Surface	146	145	0.7	1,546	1,531	1.0	1.79	1.72	4.2
Pennsylvania (Anthracite)	85	85	-	916	900	1.8	1.43	1.03	38.5
Underground	17	17	-	68	78	-12.8	0.55	0.59	-5.4
Surface	68	68	-	848	822	3.2	1.49	1.07	39.7
Pennsylvania (Bituminous)	115	116	-0.9	4,516	4,485	0.7	4.62	4.74	-2.7
Underground	37	39	-5.1	3,818	3,776	1.1	4.99	5.12	-2.5

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		
	2019	2018	Percent Change	2019	2018	Percent Change	2019	2018	Percent Change
Surface	78	77	1.3	698	709	-1.6	2.16	2.46	-12.1
Tennessee	7	6	16.7	113	90	25.6	1.60	1.23	30.1
Underground	3	2	50.0	86	55	56.4	1.51	1.25	20.4
Surface	4	4	-	27	35	-22.9	1.90	1.17	63.0
Texas	8	9	-11.1	1,531	1,646	-7.0	6.89	6.73	2.3
Surface	8	9	-11.1	1,531	1,646	-7.0	6.89	6.73	2.3
Utah	14	14	-	1,446	1,363	6.1	4.46	4.57	-2.6
Underground	11	11	-	1,397	1,314	6.3	4.58	4.62	-1.0
Surface	3	3	-	49	49	-	1.74	3.55	-51.0
Virginia	74	68	8.8	2,748	2,730	0.7	2.07	2.07	0.3
Underground	32	33	-3.0	1,883	2,047	-8.0	2.14	2.02	6.2
Surface	42	35	20.0	865	683	26.6	1.92	2.22	-13.5
West Virginia Total	241	229	5.2	13,988	13,962	0.2	2.83	2.92	-3.1
Underground	110	109	0.9	10,647	10,767	-1.1	2.79	2.87	-2.9
Surface	131	120	9.2	3,341	3,195	4.6	2.95	3.08	-3.9
West Virginia (Northern)	24	23	4.3	4,288	4,131	3.8	4.67	4.76	-1.9
Underground	15	17	-11.8	4,130	4,042	2.2	4.73	4.79	-1.3
Surface	9	6	50.0	158	89	77.5	2.49	3.12	-20.3
West Virginia (Southern)	217	206	5.3	9,700	9,831	-1.3	2.02	2.14	-5.9
Underground	95	92	3.3	6,517	6,725	-3.1	1.55	1.71	-9.1
Surface	122	114	7.0	3,183	3,106	2.5	2.97	3.07	-3.3
Wyoming	16	16	-	5,399	5,558	-2.9	25.30	26.63	-5.0
Underground	1	1	-	133	169	-21.3	8.59	6.40	34.2
Surface	15	15	-	5,266	5,389	-2.3	25.70	27.27	-5.7
Appalachia Total	779	772	0.9	30,254	30,620	-1.2	2.79	2.85	-2.2
Underground	298	303	-1.7	22,131	22,548	-1.8	2.91	2.95	-1.6
Surface	481	469	2.6	8,123	8,072	0.6	2.44	2.55	-4.2
Appalachia Central	480	470	2.1	16,361	16,772	-2.5	1.95	2.04	-4.3
Underground	206	207	-0.5	10,918	11,450	-4.6	1.61	1.71	-5.7
Surface	274	263	4.2	5,443	5,322	2.3	2.64	2.77	-4.5
Appalachia Northern	260	263	-1.1	10,963	10,944	0.2	4.27	4.32	-1.1
Underground	80	85	-5.9	8,842	8,758	1.0	4.73	4.80	-1.4
Surface	180	178	1.1	2,121	2,186	-3.0	2.01	2.10	-4.2
Appalachia Southern	39	39	-	2,930	2,904	0.9	1.95	2.15	-9.2
Underground	12	11	9.1	2,371	2,340	1.3	1.99	2.20	-9.6
Surface	27	28	-3.6	559	564	-0.9	1.78	1.95	-8.8
Interior Region Total	86	85	1.2	10,530	10,710	-1.7	5.12	5.31	-3.6
Underground	39	36	8.3	6,817	6,574	3.7	4.92	5.24	-6.1
Surface	47	49	-4.1	3,713	4,136	-10.2	5.52	5.44	1.5
Illinois Basin	71	67	6.0	8,493	8,383	1.3	4.86	5.19	-6.4
Underground	39	35	11.4	6,817	6,499	4.9	4.92	5.28	-6.9
Surface	32	32	-	1,676	1,884	-11.0	4.61	4.85	-5.0
Other Interior	15	18	-16.7	2,037	2,327	-12.5	6.35	5.79	9.6
Underground	-	1	-	-	75	-	-	1.17	-
Surface	15	17	-11.8	2,037	2,252	-9.5	6.35	5.95	6.7
Western Region Total	53	54	-1.9	11,930	12,159	-1.9	15.76	16.67	-5.5
Underground	18	18	-	2,933	2,890	1.5	5.78	5.77	0.2
Surface	35	36	-2.8	8,997	9,269	-2.9	19.23	20.17	-4.7
Powder River Basin	17	17	-	5,628	5,740	-2.0	25.71	27.57	-6.7
Surface	17	17	-	5,628	5,740	-2.0	25.71	27.57	-6.7
Uinta Basin	18	18	-	2,604	2,510	3.7	4.72	4.93	-4.4
Underground	14	14	-	2,167	2,061	5.1	4.84	5.14	-5.7
Surface	4	4	-	437	449	-2.7	4.05	3.95	2.6
Other Western	18	19	-5.3	3,698	3,909	-5.4	8.70	8.50	2.4
Underground	4	4	-	766	829	-7.6	8.55	7.50	14.0
Surface	14	15	-6.7	2,932	3,080	-4.8	8.74	8.76	-0.2
East of Mississippi River	851	840	1.3	38,941	39,202	-0.7	3.27	3.40	-3.6
Underground	337	338	-0.3	28,948	29,047	-0.3	3.39	3.50	-3.1
Surface	514	502	2.4	9,993	10,155	-1.6	2.91	3.07	-5.4
West of Mississippi River	67	71	-5.6	13,773	14,287	-3.6	14.43	14.92	-3.3

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		
	2019	2018	Percent Change	2019	2018	Percent Change	2019	2018	Percent Change
Underground	18	19	-5.3	2,933	2,965	-1.1	5.78	5.64	2.5
Surface	49	52	-5.8	10,840	11,322	-4.3	16.89	17.38	-2.8
U.S. Subtotal	918	911	0.8	52,714	53,489	-1.4	5.95	6.24	-4.7
Underground	355	357	-0.6	31,881	32,012	-0.4	3.60	3.68	-2.3
Surface	563	554	1.6	20,833	21,477	-3.0	9.88	10.36	-4.6
Refuse Recovery	19	21	-9.5	90	94	-4.3	4.36	4.56	-4.3
U.S. Total	937	932	0.5	52,804	53,583	-1.5	5.94	6.23	-4.7

- = 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, 2019

(short tons produced per employee hour)

Coal-Producing State, Region ¹ and Mine Type	Continuous	Conventional and Other ²	Longwall	Total
Alabama	2.19	-	2.07	2.02
Colorado	4.35	-	5.35	5.12
Illinois	5.40	1.84	10.09	6.71
Indiana	4.41	-	-	4.11
Kentucky Total	3.00	0.17	-	2.59
Kentucky (East)	1.69	0.25	-	1.38
Kentucky (West)	3.95	-	-	3.59
Maryland	2.62	-	-	1.94
Montana	11.42	-	11.42	11.42
New Mexico	7.19	-	7.19	7.19
Ohio	2.79	-	5.56	4.12
Pennsylvania Total	3.26	0.7	6.08	4.97
Pennsylvania (Anthracite)	-	0.47	-	0.47
Pennsylvania (Bituminous)	3.26	-	6.08	4.99
Tennessee	1.91	-	-	1.51
Utah	4.07	-	5.16	4.58
Virginia	1.70	-	3.56	2.17
West Virginia Total	1.99	0.31	4.98	2.79
West Virginia (Northern)	2.76	-	5.52	4.73
West Virginia (Southern)	1.84	0.34	1.58	1.55
Wyoming	8.59	-	8.59	8.59
Appalachia Total	2.09	0.23	4.57	2.92
Appalachia Central	1.79	0.28	2.67	1.62
Appalachia Northern	2.99	0.3	5.76	4.74
Appalachia Southern	2.19	-	2.07	2.02
Interior Region Total	4.50	0.68	10.09	4.92
Illinois Basin	4.50	0.68	10.09	4.92
Western Region Total	4.47	-	6.37	5.78
Uinta Basin	4.29	-	5.24	4.84
Other Western	5.24	-	9.30	8.55
East of Mississippi River	2.92	0.32	5.08	3.41
West of Mississippi River	4.47	-	6.37	5.78
U.S. Total	2.98	0.32	5.29	3.61

- = No data reported.

¹ For a definition of coal producing regions, see the Glossary.² Mines that produce coal using shortwall, scoop loading, hand loading, or other methods.

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 22.1. Surface Coal Mining Productivity By State and Mining Method, 2019

(short tons produced per employee hour)

Coal-Producing State and Region ¹	Contour Strip	Area	Open Pit	Mountaintop Mining	Other ²	Total
Alabama	1.79	-	1.83	-	1.65	1.78
Alaska	5.14	-	5.14	-	-	5.14
Arizona	7.86	-	-	-	-	7.86
Colorado	5.12	-	3.60	-	-	4.31
Illinois	-	4.25	-	-	4.45	4.29
Indiana	-	3.25	4.80	-	3.69	4.74
Kentucky Total	2.39	4.18	4.33	3.88	1.49	2.35
Kentucky (East)	2.39	4.02	-	3.88	1.52	2.28
Kentucky (West)	-	5.83	4.33	-	0.73	3.59
Louisiana	-	3.29	-	-	-	3.29
Maryland	2.72	5.56	-	-	1.24	3.14
Mississippi	6.67	-	-	-	-	6.67
Missouri	6.41	-	-	-	-	6.41
Montana	18.23	11.73	9.31	-	s	13.87
New Mexico	9.79	-	6.30	-	-	7.70
North Dakota	11.03	-	11.94	-	-	11.16
Ohio	3.66	2.90	-	-	0.96	2.43
Oklahoma	1.91	-	-	-	1.10	1.91
Pennsylvania Total	2.29	-	2.99	-	0.42	1.79
Pennsylvania (Anthracite)	2.25	-	3.71	-	0.16	1.49
Pennsylvania (Bituminous)	2.35	-	2.58	-	1.11	2.16
Tennessee	2.49	-	-	-	1.08	1.90
Texas	4.28	10.61	5.22	-	-	6.89
Utah	-	-	2.78	-	s	1.74
Virginia	2.16	2.03	-	-	1.52	1.92
West Virginia Total	3.29	3.18	-	4.19	1.95	2.95
West Virginia (Northern)	3.80	-	-	-	1.01	2.49
West Virginia (Southern)	3.26	3.18	-	4.19	2.01	2.97
Wyoming	23.86	7.72	29.06	-	-	25.70
Appalachia Total	2.66	3.21	2.85	4.16	1.42	2.44
Appalachia Central	2.82	3.18	-	4.16	1.77	2.64
Appalachia Northern	2.69	3.43	2.99	-	0.56	2.01
Appalachia Southern	1.79	-	1.83	-	1.65	1.78
Interior Basin Total	4.73	7.30	4.90	-	3.63	5.52
Illinois Basin	-	4.26	4.80	-	3.63	4.61
Interior	4.73	8.61	5.22	-	1.10	6.35
Western Total	18.32	10.58	22.06	-	s	19.23
Powder River Basin	24.41	11.74	29.71	-	s	25.71
Uinta Region	5.12	-	3.60	-	s	4.05
Western	9.60	8.02	7.14	-	-	8.74
East of Mississippi River	2.88	3.39	4.22	4.16	1.53	2.91
West of Mississippi River	16.75	9.36	19.87	-	0.1	16.89
U.S. Total	11.31	5.75	14.41	4.16	1.51	9.88

- = No data reported.

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

¹ For a definition of coal producing regions, see the Glossary.² Mines that: 1. produce coal using auger, highwall mine, or punch.

Notes: For each State, stand alone preparation plant hours are distributed across mining methods by the proportion of surface 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, 2019

(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	2.10	-	1.80	1.85	2.23	1.73	0.13	1.95
Underground	2.10	-	2.07	-	1.45	-	0.2	1.99
Surface	-	-	1.74	1.85	2.70	1.73	4.01	1.78
Alaska	-	5.14	-	-	-	-	-	5.14
Surface	-	5.14	-	-	-	-	-	5.14
Arizona	7.86	-	-	-	-	-	-	7.86
Surface	7.86	-	-	-	-	-	-	7.86
Colorado	5.00	3.28	-	-	-	-	-	4.87
Underground	5.35	3.28	-	-	-	-	-	5.12
Surface	4.31	-	-	-	-	-	-	4.31
Illinois	6.91	-	8.88	2.98	2.26	2.82	-	6.44
Underground	7.17	-	-	1.82	-	-	-	6.71
Surface	4.14	-	8.88	4.43	2.26	2.82	-	4.29
Indiana	4.63	3.49	4.32	3.33	-	-	-	4.38
Underground	4.41	-	-	-	-	-	-	4.11
Surface	4.95	3.49	4.32	3.33	-	-	-	4.74
Kentucky Total	4.05	2.52	2.36	1.73	1.82	1.39	0.75	2.52
Underground	4.05	2.52	1.73	1.14	1.62	0.83	0.15	2.57
Surface	3.94	-	3.24	3.23	2.24	1.69	0.80	2.35
Kentucky (East)	3.05	2.46	2.29	1.76	1.82	1.38	0.75	1.70
Underground	2.35	2.46	1.74	1.10	1.62	0.83	0.15	1.37
Surface	3.94	-	2.98	3.23	2.24	1.69	0.80	2.28
Kentucky (West)	4.21	2.66	2.74	1.44	-	1.57	-	3.59
Underground	4.21	2.66	1.66	1.44	-	-	-	3.59
Surface	-	-	4.94	-	-	1.57	-	3.59
Louisiana	3.38	-	-	2.75	-	-	-	3.29
Surface	3.38	-	-	2.75	-	-	-	3.29
Maryland	-	2.62	3.87	4.21	-	2.02	0.50	2.47
Underground	-	2.62	-	-	-	-	-	1.94
Surface	-	-	3.87	4.21	-	2.02	0.50	3.14
Mississippi	6.67	-	-	-	-	-	-	6.67
Surface	6.67	-	-	-	-	-	-	6.67
Missouri	-	-	-	6.41	-	-	-	6.41
Surface	-	-	-	6.41	-	-	-	6.41
Montana	13.39	-	11.72	-	-	-	-	13.29
Underground	11.42	-	-	-	-	-	-	11.42
Surface	14.02	-	11.72	-	-	-	-	13.87
New Mexico	7.56	-	-	-	-	-	-	7.56
Underground	7.19	-	-	-	-	-	-	7.19
Surface	7.70	-	-	-	-	-	-	7.70
North Dakota	11.23	-	7.59	-	-	-	-	11.16
Surface	11.23	-	7.59	-	-	-	-	11.16
Ohio	5.56	2.14	3.44	-	1.72	1.32	0.15	3.65
Underground	5.56	2.14	4.68	-	-	-	-	4.12
Surface	-	-	3.12	-	1.72	1.32	0.15	2.43
Oklahoma	-	-	-	1.89	-	2.02	1.10	1.91
Surface	-	-	-	1.89	-	2.02	1.10	1.91
Pennsylvania Total	6.06	4.27	2.90	2.19	1.84	2.08	0.94	4.14
Underground	6.06	4.27	2.41	1.71	1.53	2.66	0.61	4.94
Surface	-	-	3.81	2.52	2.01	2.05	1.05	1.79
Pennsylvania (Anthracite)	-	-	4.17	3.28	1.61	1.81	0.62	1.43
Underground	-	-	-	-	-	2.09	0.63	0.55
Surface	-	-	4.17	3.28	1.61	1.79	0.62	1.49
Pennsylvania (Bituminous)	6.06	4.27	2.53	2.03	1.91	2.27	1.43	4.62
Underground	6.06	4.27	2.41	1.71	1.53	3.13	0.23	4.99
Surface	-	-	3.15	2.31	2.26	2.23	1.46	2.16

Coal-Producing State, Region¹ and Mine Type	Mine Production Range (thousand short tons)							Total²
	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	
Tennessee	-	-	1.91	-	2.49	13.12	-	1.60
Underground	-	-	1.91	-	-	-	-	1.51
Surface	-	-	-	-	2.49	13.12	-	1.90
Texas	6.86	9.64	-	3.58	-	-	-	6.89
Surface	6.86	9.64	-	3.58	-	-	-	6.89
Utah	5.17	3.90	2.80	-	-	-	-	4.46
Underground	5.17	3.90	2.81	-	-	-	-	4.58
Surface	-	-	2.78	-	-	-	-	1.74
Virginia	3.01	2.28	2.01	2.25	1.46	0.95	0.86	2.07
Underground	3.01	-	1.60	1.80	1.44	0.93	0.10	2.14
Surface	-	2.28	2.56	2.43	1.52	0.97	1.29	1.92
West Virginia Total	4.21	2.49	1.99	1.86	2.16	1.18	1.35	2.83
Underground	4.20	2.12	1.57	1.29	1.43	1.20	-	2.79
Surface	4.27	3.71	2.89	2.95	2.77	1.17	1.35	2.95
West Virginia (Northern)	5.04	-	2.12	-	1.26	5.61	1.53	4.67
Underground	5.04	-	1.17	-	1.26	-	-	4.73
Surface	-	-	4.22	-	-	5.61	1.53	2.49
West Virginia (Southern)	2.85	2.49	1.98	1.86	2.24	1.13	1.32	2.02
Underground	1.97	2.12	1.60	1.29	1.47	1.20	-	1.55
Surface	4.27	3.71	2.78	2.95	2.77	1.09	1.32	2.97
Wyoming	25.30	-	-	-	-	-	-	25.30
Underground	8.59	-	-	-	-	-	-	8.59
Surface	25.70	-	-	-	-	-	-	25.70
Appalachia Total	4.13	2.61	2.21	1.93	1.88	1.42	0.71	2.79
Underground	4.12	2.42	1.76	1.30	1.55	1.04	0.24	2.91
Surface	4.22	3.40	2.91	2.64	2.29	1.58	0.91	2.44
Appalachia Central	2.91	2.48	2.03	1.86	1.89	1.18	0.88	1.95
Underground	2.37	2.17	1.63	1.24	1.57	0.97	0.12	1.61
Surface	4.22	3.40	2.78	2.92	2.40	1.30	0.99	2.64
Appalachia Northern	5.46	3.19	2.91	2.25	1.79	2.09	0.79	4.27
Underground	5.46	3.19	2.28	1.71	1.49	2.66	0.61	4.73
Surface	-	-	3.64	2.61	1.98	2.06	0.84	2.01
Appalachia Southern	2.10	-	1.80	1.85	2.23	1.73	0.13	1.95
Underground	2.10	-	2.07	-	1.45	-	0.2	1.99
Surface	-	-	1.74	1.85	2.70	1.73	4.01	1.78
Interior Region Total	5.56	3.97	4.03	2.77	2.26	2.24	0.5	5.12
Underground	5.46	2.66	1.66	1.61	-	-	-	4.92
Surface	5.76	5.30	5.57	3.38	2.26	2.24	0.5	5.52
Illinois Basin	5.35	3.00	4.03	2.63	2.26	2.36	-	4.86
Underground	5.46	2.66	1.66	1.61	-	-	-	4.92
Surface	4.81	3.49	5.57	3.76	2.26	2.36	-	4.61
Other Interior	6.49	9.64	-	3.04	-	2.02	1.10	6.35
Surface	6.49	9.64	-	3.04	-	2.02	1.10	6.35
Western Region Total	16.50	4.05	3.82	-	-	-	-	15.76
Underground	6.31	3.67	2.81	-	-	-	-	5.78
Surface	19.58	5.14	5.67	-	-	-	-	19.23
Powder River Basin	25.75	-	-	-	-	-	-	25.71
Surface	25.75	-	-	-	-	-	-	25.71
Uinta Basin	5.08	3.90	2.81	-	-	-	-	4.72
Underground	5.24	3.90	2.81	-	-	-	-	4.84
Surface	4.31	-	-	-	-	-	-	4.05
Other Western	9.03	4.18	5.67	-	-	-	-	8.70
Underground	9.31	3.28	-	-	-	-	-	8.55
Surface	8.96	5.14	5.67	-	-	-	-	8.74
East of Mississippi River	4.60	2.64	2.28	1.98	1.89	1.44	0.70	3.27
Underground	4.58	2.43	1.76	1.32	1.55	1.04	0.24	3.39
Surface	4.69	3.41	3.07	2.72	2.29	1.59	0.89	2.91
West of Mississippi River	15.14	4.70	3.82	3.04	-	2.02	1.10	14.43
Underground	6.31	3.67	2.81	-	-	-	-	5.78
Surface	17.34	6.65	5.67	3.04	-	2.02	1.10	16.89
U.S. Subtotal	8.34	2.84	2.33	2.02	1.89	1.44	0.70	5.95

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	
Underground	4.77	2.53	1.79	1.32	1.55	1.04	0.24	3.60
Surface	14.58	3.89	3.14	2.74	2.29	1.60	0.89	9.88
Refuse Recovery	-	-	-	12.31	5.68	2.32	0.12	4.36
U.S. Total	8.34	2.84	2.33	2.04	1.93	1.47	0.69	5.94

- = 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, 2019

(short tons produced per employee hour)

Coal-Producing State and Region ¹	Union		Nonunion	
	Underground	Surface	Underground	Surface
Alabama	2.05	-	1.27	1.78
Alaska	-	5.14	-	-
Arizona	-	7.86	-	-
Colorado	5.69	5.12	4.98	3.60
Illinois	-	-	6.71	4.36
Indiana	-	-	4.15	4.75
Kentucky Total	-	-	2.62	2.55
Kentucky (East)	-	-	1.42	2.48
Kentucky (West)	-	-	3.59	3.82
Louisiana	-	-	-	3.29
Maryland	-	-	1.94	3.50
Mississippi	-	-	-	6.67
Missouri	-	-	-	6.41
Montana	-	10.92	11.42	21.43
New Mexico	7.19	6.30	-	9.79
North Dakota	-	11.35	-	11.12
Ohio	-	-	4.12	2.46
Oklahoma	-	-	-	1.91
Pennsylvania Total	4.45	1.71	5.21	1.90
Pennsylvania (Anthracite)	-	1.71	0.47	1.45
Pennsylvania (Bituminous)	4.45	-	5.25	2.29
Tennessee	-	-	1.51	1.90
Texas	-	10.61	-	4.73
Utah	-	-	4.58	2.08
Virginia	-	-	2.24	2.00
West Virginia Total	4.88	6.37	2.06	2.90
West Virginia (Northern)	5.59	-	3.60	2.81
West Virginia (Southern)	0.67	7.49	1.61	2.90
Wyoming	8.59	5.96	-	27.52
Appalachian Total	3.67	3.07	2.63	2.50
Appalachia Central	0.58	6.95	1.67	2.66
Appalachia Northern	5.24	1.61	4.45	2.18
Appalachia Southern	2.05	-	1.27	1.78
Interior Region Total	-	10.61	4.93	4.65
Illinois Basin	-	-	4.93	4.64
Other Interior	-	10.61	-	4.67
Western Region Total	7.03	8.10	5.51	23.06
Powder River Basin	-	10.90	-	27.78
Uinta Basin	5.69	5.12	4.77	3.38
Other Western	7.65	7.11	9.42	10.29
East of Mississippi River	3.67	3.07	3.35	3.01
West of Mississippi River	7.03	8.63	5.51	19.89
U.S. Total	3.91	7.93	3.54	10.53

- = 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, 2019 and 2018

(thousand short tons)

Census Division and State	2019				2018				Total		
	Electric Power ¹	Other Industrial	Coke	Commercial and Institutional	Electric Power ¹	Other Industrial	Coke	Commercial and Institutional	2019	2018	Percent Change
	-	-	-	-	-	-	-	-	-	-	-
New England	276	21	-	-	577	25	-	-	297	602	-50.6
Connecticut	48	-	-	-	221	-	-	-	48	221	-78.5
Maine	69	18	-	-	62	21	-	-	88	83	5.0
Massachusetts	-	3	-	-	s	4	-	-	3	4	-29.9
New Hampshire	159	-	-	-	294	-	-	-	159	294	-45.7
Rhode Island	s	-	-	-	s	-	-	-	s	s	-
Middle Atlantic	20,197	845	5,505	12	24,423	856	5,731	14	26,559	31,024	-14.4
New Jersey	530	-	-	-	648	-	-	-	530	648	-18.3
New York	187	349	-	-	272	281	83	-	536	635	-15.7
Pennsylvania	19,480	496	5,505	12	23,503	576	5,648	14	25,494	29,740	-14.3
East North Central	115,719	6,084	9,772	169	143,476	6,361	9,694	195	131,744	159,726	-17.5
Illinois	29,152	2,488	993	87	35,493	2,560	942	112	32,721	39,107	-16.3
Indiana	30,999	1,792	3,867	61	39,144	1,773	3,813	63	36,719	44,792	-18.0
Michigan	21,278	553	1,365	-	24,238	621	1,419	-	23,196	26,277	-11.7
Ohio	19,595	439	3,548	-	25,121	508	3,520	-	23,583	29,149	-19.1
Wisconsin	14,694	812	-	20	19,480	900	-	20	15,526	20,400	-23.9
West North Central	103,854	11,258	-	165	119,317	12,349	-	181	115,278	131,847	-12.6
Iowa	12,787	2,326	-	99	16,230	2,399	-	104	15,212	18,734	-18.8
Kansas	11,535	80	-	-	13,176	117	-	-	11,615	13,293	-12.6
Minnesota	10,599	995	-	5	13,813	1,076	-	6	11,600	14,895	-22.1
Missouri	32,764	822	-	9	37,060	838	-	12	33,595	37,911	-11.4
Nebraska	13,149	1,007	-	-	14,443	1,138	-	-	14,156	15,581	-9.2
North Dakota	21,329	5,810	-	53	23,102	6,599	-	58	27,192	29,760	-8.6
South Dakota	1,690	218	-	-	1,493	181	-	-	1,908	1,674	14.0
South Atlantic	70,542	2,515	1,711	80	86,597	2,853	1,671	107	74,848	91,228	-18.0
Delaware	85	-	-	-	167	-	-	-	85	167	-48.9
District of Columbia	-	-	-	s	-	-	-	1	s	1	-87.3
Florida	9,533	417	-	-	13,365	514	-	-	9,950	13,880	-28.3
Georgia	13,552	312	-	-	16,953	336	-	-	13,863	17,289	-19.8
Maryland	2,676	471	-	-	4,481	540	-	-	3,147	5,021	-37.3
North Carolina	12,352	361	-	58	12,599	398	-	78	12,771	13,075	-2.3
South Carolina	6,474	161	-	-	8,282	200	-	-	6,635	8,482	-21.8
Virginia	1,973	457	1,038	22	4,939	494	1,032	27	3,489	6,491	-46.3
West Virginia	23,897	337	673	-	25,811	371	639	-	24,907	26,821	-7.1
East South Central	52,607	2,741	978	6	59,666	3,111	1,242	5	56,332	64,024	-12.0
Alabama	14,245	803	978	-	16,235	932	1,242	-	16,026	18,408	-12.9
Kentucky	25,168	689	-	6	28,567	767	-	5	25,862	29,339	-11.9
Mississippi	3,833	19	-	-	4,506	-	-	-	3,852	4,506	-14.5
Tennessee	9,362	1,230	-	-	10,359	1,412	-	-	10,592	11,771	-10.0
West South Central	87,566	1,122	-	-	111,004	1,305	-	-	88,688	112,308	-21.0
Arkansas	13,763	172	-	-	17,452	175	-	-	13,935	17,627	-20.9
Louisiana	5,287	205	-	-	8,111	245	-	-	5,492	8,356	-34.3
Oklahoma	5,206	241	-	-	9,541	356	-	-	5,446	9,897	-45.0
Texas	63,311	503	-	-	75,899	530	-	-	63,814	76,429	-16.5
Mountain	80,074	3,054	-	8	86,195	3,146	-	11	83,136	89,352	-7.0
Arizona	12,875	282	-	-	16,814	280	-	-	13,157	17,094	-23.0
Colorado	14,515	187	-	s	15,266	179	-	s	14,703	15,445	-4.8
Idaho	-	101	-	-	-	122	-	-	101	122	-16.8
Montana	9,275	197	-	2	8,733	235	-	3	9,474	8,972	5.6
Nevada	1,551	286	-	-	1,412	295	-	-	1,837	1,707	7.6
New Mexico	8,148	60	-	-	7,262	73	-	-	8,208	7,335	11.9
Utah	11,891	382	-	-	12,332	378	-	-	12,272	12,710	-3.4
Wyoming	21,818	1,559	-	6	24,378	1,583	-	8	23,384	25,969	-10.0
Pacific	7,766	1,455	-	435	5,962	1,574	-	458	9,656	7,994	20.8

Census Division and State	2019				2018				Total		
	Electric Power ¹	Other Industrial	Coke	Commercial and Institutional	Electric Power ¹	Other Industrial	Coke	Commercial and Institutional	2019	2018	Percent Change
Alaska	745	1	-	435	702	1	-	458	1,182	1,161	1.8
California	s	1,323	-	-	s	1,438	-	-	1,323	1,438	-8.0
Hawaii	717	-	-	-	734	-	-	-	717	734	-2.4
Oregon	1,499	52	-	-	898	61	-	-	1,551	958	61.9
Washington	4,804	79	-	-	3,628	74	-	-	4,883	3,702	31.9
U.S. Total	538,601	29,095	17,967	876	637,217	31,580	18,337	972	586,539	688,105	-14.8

- = 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, 2019 and 2018

(thousand short tons)

Census Division and State	2019					2018					Total		
	Electric Power ¹	Other Industrial	Commercial and Institutional		Producer and Distributor	Electric Power ¹	Other Industrial	Commercial and Institutional		Producer and Distributor	2019	2018	Percent Change
			Coke					Coke					
	-	-	-	-	319	-	-	-	-	-	319	-	-
New England	465	1	-	-	-	605	5	-	-	-	466	610	-23.7
Connecticut	w	-	-	-	-	w	-	-	-	-	w	w	38.7
Maine	s	1	-	-	-	s	1	-	-	-	1	1	-29.4
Massachusetts	-	s	-	-	-	s	4	-	-	-	s	4	-100.0
New Hampshire	w	-	-	-	-	w	-	-	-	-	w	w	-18.3
Rhode Island	s	-	-	-	-	w	-	-	-	-	s	w	w
Middle Atlantic	4,858	234	446	37	820	3,888	248	444	42	585	6,396	5,207	22.8
New Jersey	w	-	-	-	-	w	-	-	-	-	w	w	16.1
New York	w	78	-	-	-	w	91	-	-	-	w	w	-42.1
Pennsylvania	4,673	156	446	37	820	3,638	157	444	42	585	6,133	4,866	26.1
East North Central	28,377	839	1,371	21	4,604	21,289	790	1,015	31	2,811	35,213	25,936	35.8
Illinois	4,385	119	174	17	1,935	5,209	139	102	19	1,120	6,630	6,589	0.6
Indiana	8,900	312	279	1	1,877	6,033	269	170	9	918	11,370	7,398	53.7
Michigan	4,998	233	522	-	71	4,438	237	382	-	113	5,824	5,170	12.7
Ohio	6,698	25	396	-	342	2,797	19	361	-	173	7,461	3,351	122.7
Wisconsin	3,397	149	-	3	379	2,812	126	-	3	487	3,928	3,428	14.6
West North Central	22,809	522	-	36	2,181	21,125	567	-	35	2,382	25,548	24,109	6.0
Iowa	4,660	163	-	17	41	3,798	117	-	15	48	4,881	3,978	22.7
Kansas	3,227	19	-	-	-	3,465	10	-	-	-	3,246	3,475	-6.6
Minnesota	3,743	35	-	7	44	2,748	95	-	5	18	3,829	2,867	33.6
Missouri	7,070	66	-	1	-	7,177	87	-	1	-	7,137	7,265	-1.8
Nebraska	2,597	44	-	-	-	2,218	78	-	-	-	2,641	2,296	15.0
North Dakota	w	155	-	11	2,096	w	148	-	14	2,315	w	w	-12.0
South Dakota	w	40	-	-	-	w	31	-	-	-	w	w	15.8
South Atlantic	23,249	463	229	46	8,873	16,777	396	151	41	5,610	32,860	22,975	43.0
Delaware	w	-	-	-	-	w	-	-	-	-	w	w	2.3
District of Columbia	-	-	-	3	-	-	-	-	3	-	3	3	-6.1
Florida	2,742	97	-	-	-	3,026	92	-	-	-	2,839	3,118	-9.0
Georgia	5,045	103	-	-	-	3,194	59	-	-	-	5,148	3,252	58.3
Maryland	1,723	9	-	-	779	1,536	14	-	-	851	2,511	2,400	4.6
North Carolina	3,776	53	-	33	-	2,961	39	-	23	-	3,862	3,022	27.8
South Carolina	2,398	55	-	-	-	1,850	72	-	-	-	2,452	1,922	27.6
Virginia	w	60	75	10	2,724	582	57	42	15	1,091	w	1,787	w
West Virginia	6,321	86	154	-	5,370	w	65	110	-	3,668	11,931	w	w
East South Central	12,845	201	286	7	2,528	9,721	206	197	8	2,028	15,867	12,159	30.5
Alabama	w	70	286	-	722	w	84	197	-	839	w	w	21.3
Kentucky	6,582	33	-	7	1,169	4,881	36	-	8	681	7,790	5,606	39.0
Mississippi	w	4	-	-	613	w	-	-	-	499	w	w	41.9
Tennessee	2,868	94	-	-	24	2,417	86	-	-	9	2,986	2,512	18.9
West South Central	18,248	324	-	-	2,603	13,146	392	-	-	1,672	21,175	15,210	39.2
Arkansas	3,611	30	-	-	-	2,297	46	-	-	-	3,641	2,343	55.4
Louisiana	2,588	6	-	-	818	1,867	9	-	-	727	3,412	2,603	31.1
Oklahoma	2,578	108	-	-	16	2,988	84	-	-	15	2,701	3,086	-12.5
Texas	9,471	180	-	-	1,770	5,994	253	-	-	930	11,421	7,177	59.1
Mountain	16,487	539	-	3	9,494	15,685	539	-	3	6,361	26,523	22,588	17.4
Arizona	3,325	32	-	-	-	2,525	35	-	-	183	3,357	2,742	22.4
Colorado	3,581	28	-	1	1,435	3,964	29	-	1	1,275	5,044	5,269	-4.3
Idaho	-	223	-	-	-	-	244	-	-	-	223	244	-8.9
Montana	w	51	-	2	838	w	45	-	2	714	w	w	-5.4
Nevada	w	34	-	-	-	w	36	-	-	-	w	w	51.8
New Mexico	w	4	-	-	3,917	w	2	-	-	2,755	w	w	30.6
Utah	2,866	57	-	-	1,896	3,252	42	-	-	239	4,819	3,533	36.4
Wyoming	4,644	110	-	s	1,408	3,783	107	-	s	1,195	6,162	5,085	21.2
Pacific	1,186	136	-	97	217	999	116	-	87	243	1,636	1,445	13.2

Census Division and State	2019					2018					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	2019	2018	Percent Change
Alaska	w	-	-	97	217	w	-	-	87	243	w	w	4.2
California	s	122	-	-	-	s	103	-	-	-	122	103	18.6
Hawaii	w	-	-	-	-	w	-	-	-	-	w	w	-30.3
Oregon	w	6	-	-	-	w	7	-	-	-	w	w	25.8
Washington	w	7	-	-	-	w	5	-	-	-	w	w	18.5
U.S. Total	128,525	3,258	2,333	246	31,320	103,235	3,258	1,807	247	21,692	165,683	130,239	27.2

- = 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, 2019 and 2018

(dollars per short ton)

Coal-Producing State	2019			2018			Percent Change		
	Underground	Surface	Total	Underground	Surface	Total	Underground	Surface	Total
Alabama	146.47	81.27	137.26	170.55	79.21	154.35	-14.1	2.6	-11.1
Alaska	-	w	w	-	w	w	-	w	w
Arizona	-	w	w	-	w	w	-	w	w
Colorado	w	w	44.21	w	w	43.30	w	w	2.1
Illinois	36.38	42.22	36.84	39.21	40.30	39.29	-7.2	4.8	-6.2
Indiana	39.03	42.79	40.80	38.76	42.86	40.85	0.7	-0.2	-0.1
Kentucky Total	50.26	58.36	51.89	51.68	71.40	55.95	-2.8	-18.3	-7.3
Kentucky (East)	w	w	67.09	70.71	73.85	72.19	w	w	-7.1
Kentucky (West)	w	w	42.57	43.92	36.92	43.75	w	w	-2.7
Louisiana	-	w	w	-	w	w	-	w	w
Maryland	w	w	77.28	w	w	68.17	w	w	13.4
Mississippi	-	w	w	-	w	w	-	w	w
Missouri	-	w	w	-	w	w	-	w	w
Montana	w	w	21.66	w	w	20.15	w	w	7.5
New Mexico	w	w	39.71	w	w	39.78	w	w	-0.2
North Dakota	-	18.93	18.93	-	17.47	17.47	-	8.4	8.4
Ohio	40.66	36.62	39.88	44.16	36.53	42.21	-7.9	0.3	-5.5
Oklahoma	-	w	w	w	w	49.88	w	w	w
Pennsylvania Total	54.36	81.28	57.11	55.67	77.32	57.91	-2.4	5.1	-1.4
Pennsylvania (Anthracite)	w	w	102.22	w	w	99.97	w	w	2.3
Pennsylvania (Bituminous)	w	w	54.88	w	w	56.28	w	w	-2.5
Tennessee	w	w	66.42	w	w	90.97	w	w	-27.0
Texas	-	16.90	16.90	-	19.03	19.03	-	-11.2	-11.2
Utah	w	w	37.95	w	w	36.31	w	w	4.5
Virginia	97.66	99.12	98.06	104.87	100.60	103.77	-6.9	-1.5	-5.5
West Virginia Total	72.48	73.39	72.70	72.98	70.99	72.51	-0.7	3.4	0.3
West Virginia (Northern)	w	w	55.03	w	w	58.21	w	w	-5.5
West Virginia (Southern)	w	w	91.13	w	w	85.91	w	w	6.1
Wyoming	w	w	12.63	w	w	12.68	w	w	-0.4
U.S. Total	58.68	22.47	36.07	60.38	21.90	35.99	-2.8	2.6	0.2

- = 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 29. Average Sales Price of Coal by State and Underground Mining Method, 2019

(dollars per short ton)

Coal-Producing State	Continuous	Conventional and Other ¹	Longwall	Total
Alabama	142.61	-	147.37	146.47
Colorado	w	-	w	w
Illinois	31.31	w	w	36.38
Indiana	39.03	-	-	39.03
Kentucky Total	w	w	-	50.26
Kentucky (East)	w	w	-	w
Kentucky (West)	w	-	-	w
Maryland	w	-	-	w
Montana	w	-	w	w
New Mexico	w	-	w	w
Ohio	w	-	w	40.66
Pennsylvania Total	w	w	46.02	54.36
Pennsylvania (Anthracite)	-	w	-	w
Pennsylvania (Bituminous)	86.98	-	46.02	w
Tennessee	w	-	-	w
Utah	w	-	w	w
Virginia	w	-	w	97.66
West Virginia Total	w	w	54.55	72.48
West Virginia (Northern)	75.74	-	w	w
West Virginia (Southern)	102.76	w	w	w
Wyoming	w	-	w	w
U.S. Total	62.53	107.48	54.95	58.68

- = No data reported.

w = Data withheld to avoid disclosure.

¹ Mines that produce coal using shortwall, scoop loading, hand loading, or other methods.

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 29.1. Average Sales Price of Coal by State and Surface Mining Method, 2019

(dollars per short ton)

Coal-Producing State	Contour Strip	Area	Open Pit	Mountaintop Mining	Other ¹	Total
Alabama	83.67	-	w	-	w	81.27
Alaska	w	-	w	-	-	w
Arizona	w	-	-	-	-	w
Colorado	w	-	w	-	-	w
Illinois	-	41.46	-	-	44.63	42.22
Indiana	-	w	43.10	-	w	42.79
Kentucky Total	62.78	52.68	w	w	60.83	58.36
Kentucky (East)	62.78	w	-	w	w	w
Kentucky (West)	-	w	w	-	w	w
Louisiana	-	w	-	-	-	w
Maryland	w	w	-	-	w	w
Mississippi	w	-	-	-	-	w
Missouri	w	-	-	-	-	w
Montana	w	w	w	-	-	w
New Mexico	w	-	w	-	-	w
North Dakota	w	-	w	-	-	18.93
Ohio	w	37.38	-	-	35.49	36.62
Oklahoma	w	-	-	-	-	w
Pennsylvania Total	77.21	-	82.79	-	100.04	81.28
Pennsylvania (Anthracite)	97.41	-	106.42	-	106.39	w
Pennsylvania (Bituminous)	52.98	-	67.09	-	89.45	w
Tennessee	w	-	-	-	w	w
Texas	w	w	w	-	-	16.90
Utah	-	-	w	-	-	w
Virginia	w	w	-	-	106.68	99.12
West Virginia Total	77.57	74.15	-	59.98	69.57	73.39
West Virginia (Northern)	w	-	-	-	w	w
West Virginia (Southern)	w	74.15	-	59.98	w	w
Wyoming	w	w	11.91	-	-	w
U.S. Total	21.50	36.14	18.00	59.12	66.82	22.47

- = No data reported.

w = Data withheld to avoid disclosure.

¹ Mines that: 1. produce coal using auger, highwall mine, or punch.

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. Mines reporting multiple mining methods are assigned to the mining method with the greatest percentage of production reported.

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, 2019

Coal-Producing State and County	Number of Mines	Sales (thousand short tons)	Average Sales Price (dollars per short ton)
Alabama	22	14,635	137.26
Jefferson	10	9,135	137.50
Marion	1	w	w
Tuscaloosa	3	w	w
Walker	8	2,892	135.52
Alaska	1	w	w
Denali	1	w	w
Arizona	1	w	w
Navajo	1	w	w
Colorado	6	12,674	44.21
Gunnison	1	w	w
La Plata	1	w	w
Moffat	2	w	w
Rio Blanco	1	w	w
Routt	1	w	w
Illinois	20	44,864	36.84
Franklin	1	w	w
Gallatin	1	w	w
Hamilton	1	w	w
Macoupin	1	w	w
Montgomery	1	w	w
Perry	3	w	w
Randolph	3	w	w
Saline	5	3,033	44.27
Sangamon	1	w	w
Wabash	1	w	w
Washington	1	w	w
Williamson	1	w	w
Indiana	17	30,889	40.80
Clay	1	w	w
Daviess	2	w	w
Dubois	2	w	w
Gibson	4	9,771	38.76
Knox	2	w	w
Pike	1	w	w
Sullivan	2	w	w
Warrick	3	w	w
Kentucky	94	34,810	51.89
Bell	5	767	71.79
Boyd	1	w	w
Breathitt	1	w	w
Daviess	1	w	w
Floyd	7	1,013	79.59
Harlan	11	1,890	61.78
Hopkins	1	w	w
Johnson	3	w	w
Knott	6	720	44.31
Knox	3	w	w
Leslie	5	1,150	63.38
Letcher	2	w	w
Magoffin	2	w	w
Martin	2	w	w
McLean	2	w	w
Morgan	2	w	w
Muhlenberg	2	w	w
Ohio	2	w	w
Perry	8	2,760	64.26
Pike	21	2,603	79.66

Coal-Producing State and County	Number of Mines	Sales (thousand short tons)	Average Sales Price (dollars per short ton)
Union	1	w	w
Webster	1	w	w
Whitley	5	391	109.35
Louisiana	2	w	w
De Soto	1	w	w
Natchitoches	1	w	w
Maryland	8	1,394	77.28
Allegany	6	759	43.15
Garrett	2	w	w
Mississippi	1	w	w
Choctaw	1	w	w
Missouri	1	w	w
Bates	1	w	w
Montana	6	34,692	21.66
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	27,153	18.93
Mclean	1	w	w
Mercer	3	w	w
Oliver	1	w	w
Ohio	12	7,558	39.88
Belmont	1	w	w
Harrison	4	1,412	43.13
Monroe	1	w	w
Noble	1	w	w
Perry	2	w	w
Tuscarawas	2	w	w
Vinton	1	w	w
Oklahoma	2	w	w
Craig	1	w	w
Latimer	1	w	w
Pennsylvania	80	49,525	57.11
Armstrong	3	w	w
Bedford	2	w	w
Butler	1	w	w
Cambria	6	1,045	84.73
Carbon	1	w	w
Clarion	1	w	w
Clearfield	8	1,061	92.50
Columbia	1	w	w
Greene	4	28,166	45.58
Indiana	7	2,185	98.41
Jefferson	3	w	w
Luzerne	2	w	w
Lycoming	1	w	w
Northumberland	6	278	58.77
Schuylkill	16	1,411	109.35
Somerset	14	3,125	96.60
Washington	2	w	w
Westmoreland	2	w	w
Tennessee	3	w	w
Claiborne	3	w	w
Texas	8	22,608	16.90
Atascosa	1	w	w
Harrison	2	w	w
Limestone	1	w	w
Maverick	1	w	w

Coal-Producing State and County	Number of Mines	Sales (thousand short tons)	Average Sales Price (dollars per short ton)
Panola	1	w	w
Robertson	1	w	w
Rusk	1	w	w
Utah	8	14,267	37.95
Carbon	3	w	w
Emery	3	w	w
Kane	1	w	w
Sevier	1	w	w
Virginia	37	11,489	98.06
Buchanan	13	6,100	96.63
Dickenson	8	3,399	112.03
Tazewell	2	w	w
Wise	14	1,783	75.91
West Virginia	132	90,832	72.70
Barbour	1	w	w
Boone	11	4,061	75.64
Fayette	8	2,657	85.42
Greenbrier	6	837	127.72
Kanawha	8	5,337	71.79
Logan	25	11,318	87.08
Marion	3	w	w
Marshall	2	w	w
Mcdowell	24	3,635	105.07
Mercer	2	w	w
Mingo	11	4,611	64.77
Nicholas	4	1,001	68.19
Ohio	1	w	w
Raleigh	11	6,259	125.33
Randolph	2	w	w
Taylor	1	w	w
Tucker	1	w	w
Webster	1	w	w
Wyoming	10	4,477	108.81
Wyoming	16	276,746	12.63
Campbell	11	243,639	11.22
Converse	1	w	w
Lincoln	1	w	w
Sweetwater	3	w	w
U.S. Total	485	697,146	36.07

- = 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, 2019

(dollars per short ton)

Coal-Producing State	Bituminous	Subbituminous	Lignite	Anthracite	Total
Alabama	137.26	-	-	-	137.26
Alaska	-	w	-	-	w
Arizona	w	-	-	-	w
Colorado	w	w	-	-	44.21
Illinois	36.84	-	-	-	36.84
Indiana	40.80	-	-	-	40.80
Kentucky Total	51.89	-	-	-	51.89
Kentucky (East)	67.09	-	-	-	67.09
Kentucky (West)	42.57	-	-	-	42.57
Louisiana	-	-	w	-	w
Maryland	77.28	-	-	-	77.28
Mississippi	-	-	w	-	w
Missouri	w	-	-	-	w
Montana	w	18.12	w	-	21.66
New Mexico	w	w	-	-	39.71
North Dakota	-	-	18.93	-	18.93
Ohio	39.88	-	-	-	39.88
Oklahoma	w	-	-	-	w
Pennsylvania Total	54.88	-	-	102.22	57.11
Pennsylvania (Anthracite)	-	-	-	102.22	102.22
Pennsylvania (Bituminous)	54.88	-	-	-	54.88
Tennessee	w	-	-	-	w
Texas	w	-	w	-	16.90
Utah	37.95	-	-	-	37.95
Virginia	98.06	-	-	-	98.06
West Virginia Total	72.70	-	-	-	72.70
West Virginia (Northern)	55.03	-	-	-	55.03
West Virginia (Southern)	91.13	-	-	-	91.13
Wyoming	w	w	-	-	12.63
U.S. Total	58.93	14.01	19.86	102.22	36.07

- = 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, 2019

(dollars per short ton)

Mine Production Range (thousand short tons)	Underground	Surface	Total
Over 1,000	52.95	18.14	30.67
Over 500 to 1,000	89.04	63.16	80.89
Over 200 to 500	96.80	65.92	80.21
Over 100 to 200	89.82	70.33	77.04
Over 50 to 100	81.08	70.60	75.15
50 or Under	92.80	65.76	72.19
U.S. Total	58.68	22.47	36.07

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, 2019

(dollars per short ton)

Coal-Producing State	Open Market ¹	Captive ²	Total ³
Alabama	w	w	137.26
Alaska	w	-	w
Arizona	w	-	w
Colorado	38.55	45.52	44.21
Illinois	w	w	36.84
Indiana	39.51	43.27	40.80
Kentucky Total	w	w	51.89
Kentucky (East)	w	w	67.09
Kentucky (West)	w	w	42.57
Louisiana	w	w	w
Maryland	63.64	-	77.28
Mississippi	w	-	w
Missouri	w	-	w
Montana	w	w	21.66
New Mexico	w	w	w
North Dakota	18.93	-	18.93
Ohio	w	w	39.88
Oklahoma	w	-	w
Pennsylvania Total	w	w	57.11
Pennsylvania (Anthracite)	w	w	102.22
Pennsylvania (Bituminous)	w	w	54.88
Tennessee	w	-	w
Texas	w	w	16.90
Utah	w	w	37.95
Virginia	w	w	98.06
West Virginia Total	67.30	43.95	72.70
West Virginia (Northern)	w	w	55.03
West Virginia (Southern)	w	w	91.13
Wyoming	12.48	12.85	12.63
U.S. Total	33.45	22.18	36.07

- = 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, 2014-2019

(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	160.34	40.02	133.23	26.53
2018	97.78	27.87	104.63	20.19	171.65	43.51	144.34	27.02
2019	105.58	28.83	118.34	21.17	157.88	43.37	139.78	27.54

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, 2019 and 2018

(dollars per short ton)

Census Division and State	2019				2018				Annual Percent Change			
	Electric Power ¹	Other Industrial	Commercial and Institutional		Electric Power ¹	Other Industrial	Commercial and Institutional		Electric Power ¹	Other Industrial	Commercial and Institutional	
New England	w	w	-	-	92.97	w	-	-	w	7.88	-	-
Connecticut	-	-	-	-	w	-	-	-	w	-	-	-
Maine	w	w	-	-	w	w	-	-	6.81	7.99	-	-
Massachusetts	-	w	-	-	-	w	-	-	-	-	-	-
New Hampshire	77.89	-	-	-	86.29	-	-	-	-9.73	-	-	-
Rhode Island	-	-	-	-	w	-	-	-	w	-	-	-
Middle Atlantic	w	85.97	w	112.96	w	94.64	w	105.17	-9.82	-9.16	11.67	7.41
New Jersey	w	-	-	-	w	-	-	-	s	-	-	-
New York	w	w	-	-	w	120.38	w	-	-3.49	w	w	-
Pennsylvania	w	85.23	w	112.96	w	81.33	w	105.17	-9.98	4.80	12.28	7.41
East North Central	40.24	77.98	156.47	69.11	39.85	72.56	138.28	66.83	0.98	7.47	13.15	3.41
Illinois	w	w	w	53.70	w	45.53	w	53.77	1.83	w	8.25	s
Indiana	w	107.49	w	w	w	92.15	w	w	0.9	16.65	13.32	1.97
Michigan	w	97.61	w	-	w	86.96	w	-	-0.98	12.25	5.55	-
Ohio	w	100.50	144.56	-	w	99.33	122.61	-	-1.09	1.18	17.90	-
Wisconsin	39.98	84.36	-	157.23	40.44	84.49	-	154.28	-1.14	s	-	1.91
West North Central	26.89	28.84	-	81.03	28.25	28.32	-	79.36	-4.81	1.84	-	2.10
Iowa	27.08	35.74	-	w	28.45	39.53	-	w	-4.82	-9.59	-	s
Kansas	27.61	w	-	-	29.31	w	-	-	-5.80	1.10	-	-
Minnesota	35.76	48.90	-	w	38.91	48.04	-	w	-8.10	1.79	-	11.80
Missouri	29.53	53.60	-	w	31.85	49.57	-	w	-7.28	8.13	-	0.75
Nebraska	20.97	w	-	-	21.37	27.57	-	-	-1.87	w	-	-
North Dakota	21.20	w	-	w	20.15	w	-	w	5.21	8.37	-	s
South Dakota	29.42	w	-	-	30.85	w	-	-	-4.64	-4.30	-	-
South Atlantic	60.59	101.78	w	w	61.88	99.11	w	123.18	-2.08	2.69	17.35	w
Delaware	w	-	-	-	w	-	-	-	s	-	-	-
District of Columbia	-	-	-	-	-	-	-	-	-	-	-	-
Florida	67.06	113.72	-	-	68.23	114.54	-	-	-1.71	-0.72	-	-
Georgia	52.97	106.43	-	-	53.99	102.08	-	-	-1.89	4.26	-	-
Maryland	w	w	-	-	w	w	-	-	4.48	2.64	-	-
North Carolina	w	105.01	-	w	w	96.36	-	w	-10.85	8.98	-	4.94
South Carolina	w	102.25	-	-	81.96	99.82	-	-	w	2.43	-	-
Virginia	w	99.15	w	138.52	w	92.18	w	118.12	7.44	7.56	17.16	17.27
West Virginia	51.79	141.76	w	-	w	154.38	w	-	w	-8.17	17.60	-
East South Central	w	96.16	w	w	w	87.67	w	w	-1.29	9.68	12.16	9.31
Alabama	43.27	94.64	w	-	44.08	94.89	w	-	-1.84	s	12.16	-
Kentucky	42.17	103.17	-	w	43.45	88.59	-	w	-2.95	16.46	-	9.31
Mississippi	w	w	-	-	w	-	-	-	8.44	w	-	-
Tennessee	48.32	91.56	-	-	48.42	82.48	-	-	s	11.01	-	-
West South Central	29.59	78.70	-	-	30.34	76.36	-	-	-2.47	3.06	-	-
Arkansas	w	w	-	-	w	w	-	-	s	s	-	-
Louisiana	w	w	-	-	w	w	-	-	2.98	3.59	-	-
Oklahoma	29.73	79.91	-	-	w	68.79	-	-	w	16.17	-	-
Texas	w	84.92	-	-	27.35	87.32	-	-	w	-2.75	-	-
Mountain	36.32	59.59	-	w	36.13	56.36	-	w	0.53	5.73	-	2.63
Arizona	48.95	w	-	-	47.41	w	-	-	3.25	1.18	-	-
Colorado	32.38	w	-	-	30.04	57.77	-	-	7.79	w	-	-
Idaho	-	w	-	-	-	w	-	-	-	20.02	-	-
Montana	w	50.96	-	w	w	41.29	-	w	2.50	23.42	-	4.38
Nevada	w	77.91	-	-	w	75.09	-	-	2.05	3.76	-	-
New Mexico	45.84	w	-	-	46.33	w	-	-	-1.06	5.67	-	-
Utah	43.19	57.77	-	-	44.01	53.65	-	-	-1.86	7.68	-	-
Wyoming	w	47.78	-	w	w	46.57	-	w	-3.50	2.60	-	9.43
Pacific	41.75	79.97	-	w	45.73	81.44	-	w	-8.70	-1.81	-	2.08
Alaska	50.48	-	-	w	46.75	-	-	w	7.98	-	-	2.08

Census Division and State	2019				2018				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	-	79.64	-	-	-	81.73	-	-	-	-2.56	-	-
Hawaii	w	-	-	-	w	-	-	-	-17.93	-	-	-
Oregon	39.57	w	-	-	40.43	w	-	-	-2.13	11.90	-	-
Washington	w	w	-	-	w	w	-	-	s	3.88	-	-
U.S. Total	38.53	61.37	145.85	86.34	39.08	59.01	128.75	83.86	-1.41	4.00	13.28	2.96

- = 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, 2000-2019

(Short Tons)

	Europe																		
		New Zealand	Canada	Mexico	Colombia	Venezuela	China	India	Indonesia				Ukraine	United Kingdom	Other	Total	South Africa	Other	Total
Year	Australia									Norway	Poland	Russia							
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	6,112,092	46	6,474	444	699,453	-	-	34,449	-	59	12,703	47,211	37,829	19,280	7,802,652
2018	-	-	770,364	625	4,060,581	-	28,624	-	915,188	-	-	78,908	27,377	575	2,285	109,145	47,404	24,509	5,954,155
2019	-	-	817,190	1,092	5,033,032	-	54,715	-	655,398	-	-	68,729	-	210	40,886	109,825	24,251	42,520	6,697,137

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, 1960-2019

(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	5,287	7,678	1,252	119	2,176	4,923	3,143	9,313	1,927	2,572	2,730	11,401	39,555	7,683	48,143	96,945
2018	5,724	8,516	1,094	64	1,806	3,568	3,350	12,415	1,835	2,963	4,221	12,591	43,908	10,543	60,144	116,244
2019	5,118	7,591	657	-	1,285	1,792	2,674	10,148	619	1,806	1,396	12,993	33,370	11,024	49,654	93,765

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.'