



Annual Coal Report 2023

October 2024

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Contacts

EIA prepared this publication. You can request general information about the data in this report by emailing the [coal data team](#).

You can contact the Office of Stakeholder Outreach and Communications' customer inquiry line with questions about coal statistics at 202-586-8800 or by [email](#).

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. We publish 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 our Form EIA-7A, *Annual Survey of Coal Production and Preparation*. Consumption and stocks are based on our survey forms.

This report is our 48th 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 2023 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

We've made no publication changes in this issue of the *Annual Coal Report*; however, this publication reflects a minor change to the population of mines that report on the Form EIA-7A, *Annual Summary of Coal Production and Preparation*, which now collects information from mines with a total annual production of 50,000 or more short tons of coal. Final data for 2023 reflect this shift in population of reporting facilities.

Production

In 2023, U.S. coal production decreased 2.7% to 577.9 million short tons (MMst) from 2022, while the number of producing mines increased to 560 mines from 548 mines in 2022. Coal production in basins east of the Mississippi river increased 1.3%, and production decreased 5.5% in basins west of the Mississippi river.

The Appalachian region's coal production in 2023 was 165.4 MMst, an increase of 3.0% from 2022. West Virginia's production increased 1.3% to 84.6 MMst, Eastern Kentucky's production increased 2.6% to 12.4 MMst, and Pennsylvania's production increased 7.3% to 42.6 MMst.

Coal production in the Interior region was 93.5 MMst, a decrease of 4.9% from 2022. Production in Indiana increased 0.9% to 23.8 MMst, production in Illinois decreased 1.7% to 36.9 MMst, and production in Western Kentucky decreased 3.0% to 15.9 MMst. Production in the rest of the Interior region decreased 18.7% to 16.9 MMst.

Coal production in the Western region in 2023 decreased 4.8% to 318.7 MMst. Production in Wyoming, the largest coal-producing state in the region, decreased by 3.1% to 237.3 MMst. Other large producing states in this region include North Dakota, where production decreased by 9.9% to 24.1 MMst; Colorado, where production decreased by 3.3% to 12.4 MMst; and Montana, where production increased by 3.0% to 29.1 MMst.

Disposition of coal during 2023 totaled 577.2 MMst, of which 511.1 MMst was marketed as thermal coal and 66.1 MMst was marketed as metallurgical coal. Of the metallurgical coal dispositions, 51.1 MMst was exported, and 15.0 MMst was sold to domestic customers.

Productive capacity

Productive capacity is the maximum amount of coal that can be produced annually as reported by mining companies. In 2023, the collective productive capacity of U.S. coal mines decreased 2.8% to 847 MMst. States with a decrease in reported productive capacity include New Mexico (-46.5% to 10.6 MMst) and Utah (-21.1% to 14.2 MMst). Major producing states that reported an increase in productive capacity include West Virginia (2.8% to 114.4 MMst), Indiana (3.2% to 30.2 MMst), and Pennsylvania (2.3% to 50.4 MMst).

The overall capacity utilization across all mines decreased to 67.8% in 2023 from 68.0% in 2022. 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 4.6% to 11,200 MMst at the end of 2023 from 11,737 MMst at the end of 2021. Although declines were reported for most states, increases were reported for Kentucky and Texas, and West Virginia maintained

its reserves. Recoverable reserves increased in 2023 by 11.7% to 391 MMst in Kentucky and rose 22.3% to 336 MMst in Texas. West Virginia 2023 coal reserves rose by 1 short ton (<0.05%) to 1,810 MMst.

Employment

The average number of employees at U.S. coal mines in 2023 increased from 2022 by 1,894 to 45,476 employees. The average number of employees at underground mines increased by 1,410 employees, and average employment at surface mines increased by 509 employees. The average number of employees performing refuse coal recovery in 2023 declined by 25.

Total U.S. productivity as measured by average production per employee hour decreased by 7.4% to 5.66 short tons per employee hour. Average productivity decreased 6.6% to 3.38 tons per employee hour at underground mines and decreased 6.6% to 9.70 tons per employee hour at surface mines during 2023, as compared with 2022.

Consumption

U.S. coal consumption in 2023 was 425.9 MMst, a decrease of 17.4% from 2022. Coal consumption in the electric power sector decreased by 85.6 MMst to 387.2 MMst. Coal consumption in the industrial, coke, and commercial and institutional sectors was 38.7 MMst in 2023, a 9.4% decrease from 2022.

Exports

Exports increased by 14.2 MMst in 2023 to 100.2 MMst. Exports to Europe accounted for 28% of 2023 U.S. exports, 27.8 MMst. Steam coal exports accounted for 49% (49.1 MMst) of the total, and metallurgical coal accounted for 51% (51.1 MMst).

Stocks

U.S. coal stocks in 2023 ended the year at 163.2 MMst, 42.7% more than at the same time in 2022. Stocks in the electric power sector increased by 44.5 MMst to 133.7 MMst at the end of 2023. Coal stocks held by the other industrial, coke, and commercial sectors, as well as producers and distributors, increased 4.3 MMst to 29.4 MMst at the end of 2023 compared with the end of 2022.

Sales price

The total average sales price of coal from U.S. mines in 2023 decreased by 0.8% from 2022 to \$54.04 per short ton. The average sales price of thermal coal in 2023 increased by 8.8% from 2022 to \$37.60 per short ton, and the average sales price of metallurgical coal in 2023 decreased by 19.2% from 2022 to \$212.30 per short ton. The average sales price of coal from surface mines increased by 2.0% to \$29.26 per short ton, and the average sales price of coal from underground mines decreased by 1.7% to \$94.82 per short ton. The average sales prices of coal by rank are as follows:

- Average sales price of bituminous coal was \$96.23 per short ton in 2023, a 1.8% decrease from 2022.
- Average sales price of subbituminous coal was \$17.56 per short ton in 2023, a 6.1% increase from 2022.
- Average sales price of lignite coal was \$22.25 per short ton in 2023, a 2.1% increase from 2022.
- Average sales price of anthracite coal was \$165.88 per short ton in 2023, a 7.0% increase from 2022.

Table ES1. Coal Production, 1949-2023

(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
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

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	
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
2020	237,916,151	245,781,202	49,364,584	2,372,417	195,529,788	339,904,566	209,010,932	326,423,422	535,434,354
2021	259,900,584	268,055,363	47,364,090	2,111,241	220,597,113	356,834,165	231,355,004	346,076,274	577,431,278
2022	270,525,699	273,617,557	47,526,121	2,485,905	222,143,003	372,012,279	241,914,630	352,240,652	594,155,282
2023	263,087,152	271,074,448	40,875,507	2,916,910	217,930,281	360,023,736	245,000,655	332,953,362	577,954,017

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, 1949-2023

(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
2020	3.60	10.24	3.43	2.78	3.28	5.09	16.37	13.71	6.12
2021	4.03	11.38	3.85	2.81	3.61	5.66	18.94	15.64	6.71
2022	3.62	10.39	3.47	2.58	3.25	5.14	18.52	15.37	6.11
2023	3.35	9.70	3.27	2.46	3.07	4.22	17.98	14.81	5.66

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, 1949-2023

(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		Net Imports ¹	Stock Change ²	Consumption ³
		Imports	Exports			
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
2020	10,353	162	683	-522	41	9,791
2021	12,545	117	2,083	-1,966	-129	10,708
2022	11,394	67	2,318	-2,251	-51	9,194
2023	11,236	206	1,514	-1,308	-152	10,080

(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- 2023

(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
2020	50.05	14.43	22.16	90.68	31.41
2021	61.68	14.18	20.10	107.08	36.45
2022	97.96	16.55	21.79	155.03	54.46
2023	96.23	17.56	22.25	165.88	54.04

* = 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, 2001-2023

(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
2020	104.55	62.51	261.83	136.71	67.40	253.56
2021	159.28	64.73	252.35	169.47	77.05	268.19
2022	284.49	115.20	342.00	157.83	104.57	508.41
2023	207.22	100.38	392.77	266.58	118.48	460.77

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, 2023 and 2022

(thousand short tons)

Coal-Producing State and Region ¹	2023		2022		Percent Change	
	Number of Mines	Production	Number of Mines	Production	Number of Mines	Production
Alabama	20	12,043	22	10,408	-9.1	15.7
Underground	7	11,130	6	9,121	16.7	22.0
Surface	13	913	16	1,287	-18.8	-29.0
Alaska	1	1,009	1	1,014	-	-0.5
Surface	1	1,009	1	1,014	-	-0.5
Colorado	9	12,371	10	12,793	-10.0	-3.3
Underground	5	7,443	5	8,378	-	-11.2
Surface	4	4,928	5	4,415	-20.0	11.6
Illinois	14	36,865	14	37,488	-	-1.7
Underground	8	36,092	8	36,611	-	-1.4
Surface	6	773	6	877	-	-11.9
Indiana	17	23,782	14	23,573	21.4	0.9
Underground	4	13,728	4	13,366	-	2.7
Surface	13	10,054	10	10,207	30.0	-1.5
Kentucky Total	112	28,346	111	28,527	0.9	-0.6
Underground	47	21,564	44	22,487	6.8	-4.1
Surface	65	6,783	67	6,040	-3.0	12.3
Kentucky (East)	108	12,413	108	12,097	-	2.6
Underground	43	5,631	41	6,057	4.9	-7.0
Surface	65	6,783	67	6,040	-3.0	12.3
Kentucky (West)	4	15,933	3	16,430	33.3	-3.0
Underground	4	15,933	3	16,430	33.3	-3.0
Louisiana	1	289	1	307	-	-6.0
Surface	1	289	1	307	-	-6.0
Maryland	12	1,280	14	1,509	-14.3	-15.2
Underground	1	398	1	298	-	33.3
Surface	11	882	13	1,210	-15.4	-27.1
Mississippi	1	2,685	1	3,369	-	-20.3
Surface	1	2,685	1	3,369	-	-20.3
Missouri	1	140	1	74	-	90.0
Surface	1	140	1	74	-	90.0
Montana	4	29,072	5	28,233	-20.0	3.0
Underground	1	7,581	1	7,431	-	2.0
Surface	3	21,491	4	20,802	-25.0	3.3
New Mexico	2	7,987	3	10,550	-33.3	-24.3
Underground	-	-	1	1,597	-	-
Surface	2	7,987	2	8,953	-	-10.8
North Dakota	4	24,087	5	26,731	-20.0	-9.9
Surface	4	24,087	5	26,731	-20.0	-9.9
Ohio	9	1,947	10	2,492	-10.0	-21.9
Underground	2	712	3	1,298	-33.3	-45.1
Surface	7	1,235	7	1,195	-	3.4
Oklahoma	1	2	1	2	-	2.9
Surface	1	2	1	2	-	2.9
Pennsylvania Total	113	42,647	108	39,701	4.6	7.4
Underground	29	37,466	28	35,188	3.6	6.5
Surface	84	5,181	80	4,514	5.0	14.8
Pennsylvania (Anthracite)	41	2,847	36	2,357	13.9	20.8
Underground	5	57	6	52	-16.7	9.5
Surface	36	2,789	30	2,304	20.0	21.1
Pennsylvania (Bituminous)	72	39,801	72	37,345	-	6.6
Underground	24	37,409	22	35,135	9.1	6.5
Surface	48	2,392	50	2,209	-4.0	8.2
Tennessee	-	-	1	-	-	-
Surface	-	-	1	-	-	-
Texas	4	13,815	4	17,084	-	-19.1

Coal-Producing State and Region ¹	2023		2022		Percent Change	
	Number of Mines	Production	Number of Mines	Production	Number of Mines	Production
Surface	4	13,815	4	17,084	-	-19.1
Utah	6	6,921	6	10,723	-	-35.5
Underground	5	6,854	5	10,369	-	-33.9
Surface	1	67	1	354	-	-81.2
Virginia	41	10,548	40	10,855	2.5	-2.8
Underground	10	7,693	9	7,607	11.1	1.1
Surface	31	2,855	31	3,248	-	-12.1
West Virginia Total	165	84,560	151	83,448	9.3	1.3
Underground	71	67,268	70	68,393	1.4	-1.6
Surface	94	17,292	81	15,056	16.1	14.9
West Virginia (Northern)	15	44,613	16	46,983	-6.3	-5.0
Underground	11	44,181	11	46,485	-	-5.0
Surface	4	431	5	497	-20.0	-13.3
West Virginia (Southern)	150	39,947	135	36,466	11.1	9.6
Underground	60	23,086	59	21,907	1.7	5.4
Surface	90	16,860	76	14,558	18.4	15.8
Wyoming	15	237,261	16	244,730	-6.3	-3.1
Surface	15	237,261	16	244,730	-6.3	-3.1
Appalachia Total	468	165,439	454	160,510	3.1	3.1
Underground	163	130,298	158	127,961	3.2	1.8
Surface	305	35,141	296	32,549	3.0	8.0
Appalachia Central	299	62,908	284	59,417	5.3	5.9
Underground	113	36,410	109	35,571	3.7	2.4
Surface	186	26,498	175	23,847	6.3	11.1
Appalachia Northern	149	90,487	148	90,685	0.7	-0.2
Underground	43	82,758	43	83,269	-	-0.6
Surface	106	7,729	105	7,416	1.0	4.2
Appalachia Southern	20	12,043	22	10,408	-9.1	15.7
Underground	7	11,130	6	9,121	16.7	22.0
Surface	13	913	16	1,287	-18.8	-29.0
Interior Region Total	43	93,510	39	98,325	10.3	-4.9
Underground	16	65,754	15	66,407	6.7	-1.0
Surface	27	27,756	24	31,918	12.5	-13.0
Illinois Basin	35	76,581	31	77,491	12.9	-1.2
Underground	16	65,754	15	66,407	6.7	-1.0
Surface	19	10,827	16	11,084	18.8	-2.3
Other Interior	8	16,930	8	20,834	-	-18.7
Surface	8	16,930	8	20,834	-	-18.7
Western Region Total	41	318,708	46	334,775	-10.9	-4.8
Underground	11	21,878	12	27,775	-8.3	-21.2
Surface	30	296,830	34	306,999	-11.8	-3.3
Powder River Basin	15	251,950	15	258,486	-	-2.5
Surface	15	251,950	15	258,486	-	-2.5
Uinta Basin	12	18,518	13	22,464	-7.7	-17.6
Underground	8	13,591	8	18,049	-	-24.7
Surface	4	4,928	5	4,415	-20.0	11.6
Other Western	14	48,240	18	53,825	-22.2	-10.4
Underground	3	8,288	4	9,726	-25.0	-14.8
Surface	11	39,953	14	44,099	-21.4	-9.4
East of Mississippi River	504	244,704	486	241,369	3.7	1.4
West of Mississippi River	48	332,953	53	352,241	-9.4	-5.5
U.S. Subtotal	552	577,657	539	593,610	2.4	-2.7
Refuse Recovery	8	297	9	545	-11.1	-45.6
U.S. Total	560	577,954	548	594,155	2.2	-2.7

- = 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, 2023

(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	11,130	13	913	20	12,043
De Kalb	-	-	1	8	1	8
Jefferson	3	7,832	5	399	8	8,230
Shelby	-	-	1	1	1	1
Tuscaloosa	2	2,539	4	502	6	3,041
Walker	2	759	2	3	4	763
Alaska	-	-	1	1,009	1	1,009
Denali	-	-	1	1,009	1	1,009
Colorado	5	7,443	4	4,928	9	12,371
Gunnison	1	3,131	-	-	1	3,131
La Plata	1	643	-	-	1	643
Las Animas	1	64	-	-	1	64
Moffat	-	-	4	4,928	4	4,928
Rio Blanco	1	2,405	-	-	1	2,405
Routt	1	1,201	-	-	1	1,201
Illinois	8	36,092	6	773	14	36,865
Franklin	1	5,792	-	-	1	5,792
Hamilton	1	5,624	-	-	1	5,624
Montgomery	1	3,474	-	-	1	3,474
Perry	1	4,337	1	464	2	4,802
Randolph	1	2,437	2	27	3	2,464
Saline	-	-	2	36	2	36
Sangamon	1	679	-	-	1	679
Wabash	-	-	1	246	1	246
Washington	1	6,712	-	-	1	6,712
Williamson	1	7,037	-	-	1	7,037
Indiana	4	13,728	13	10,054	17	23,782
Clay	-	-	1	37	1	37
Daviess	-	-	1	434	1	434
Gibson	2	7,343	1	285	3	7,628
Knox	2	6,385	1	89	3	6,475
Pike	-	-	3	585	3	585
Spencer	-	-	1	320	1	320
Sullivan	-	-	1	5,536	1	5,536
Warrick	-	-	4	2,768	4	2,768
Kentucky	47	21,564	65	6,783	112	28,346
Bell	2	251	8	603	10	854
Breathitt	-	-	2	191	2	191
Elliott	-	-	1	34	1	34
Floyd	4	195	3	87	7	283
Harlan	8	1,454	6	614	14	2,068
Hopkins	1	4,376	-	-	1	4,376
Jackson	-	-	1	64	1	64
Johnson	-	-	2	371	2	371
Knott	1	45	3	306	4	350
Knox	1	27	1	7	2	34
Lawrence	-	-	1	1	1	1
Leslie	1	382	1	218	2	599
Letcher	1	179	11	1,682	12	1,862
Martin	-	-	3	230	3	230
Morgan	-	-	2	73	2	73
Muhlenberg	1	1,716	-	-	1	1,716
Owsley	-	-	1	11	1	11
Perry	3	839	5	1,168	8	2,007
Pike	21	2,242	8	741	29	2,983
Union	2	9,841	-	-	2	9,841

Coal-Producing State and County	Underground		Surface		Total	
	Number of Mines	Production	Number of Mines	Production	Number of Mines	Production
Whitley	1	16	6	381	7	398
Louisiana	-	-	1	289	1	289
Natchitoches	-	-	1	289	1	289
Maryland	1	398	11	882	12	1,280
Allegany	-	-	8	831	8	831
Garrett	1	398	3	51	4	449
Mississippi	-	-	1	2,685	1	2,685
Choctaw	-	-	1	2,685	1	2,685
Missouri	-	-	1	140	1	140
Bates	-	-	1	140	1	140
Montana	1	7,581	3	21,491	4	29,072
Big Horn	-	-	2	14,491	2	14,491
Musselshell	1	7,581	-	-	1	7,581
Rosebud	-	-	1	6,999	1	6,999
New Mexico	-	-	2	7,987	2	7,987
Mckinley	-	-	1	3,390	1	3,390
San Juan	-	-	1	4,597	1	4,597
North Dakota	-	-	4	24,087	4	24,087
McLean	-	-	1	6,639	1	6,639
Mercer	-	-	2	13,547	2	13,547
Oliver	-	-	1	3,901	1	3,901
Ohio	2	712	7	1,235	9	1,947
Athens	-	-	1	53	1	53
Belmont	-	-	1	415	1	415
Harrison	2	712	3	360	5	1,072
Noble	-	-	1	385	1	385
Tuscarawas	-	-	1	23	1	23
Oklahoma	-	-	1	2	1	2
Okmulgee	-	-	1	2	1	2
Pennsylvania	29	37,466	84	5,181	113	42,647
Armstrong	2	620	1	21	3	641
Cambria	2	926	4	204	6	1,131
Carbon	-	-	1	494	1	494
Clarion	-	-	2	8	2	8
Clearfield	3	288	15	783	18	1,071
Columbia	-	-	1	93	1	93
Dauphin	1	6	-	-	1	6
Fayette	-	-	3	30	3	30
Fulton	-	-	1	81	1	81
Greene	3	23,335	-	-	3	23,335
Indiana	7	2,076	2	143	9	2,218
Jefferson	1	163	1	7	2	170
Lackawanna	-	-	1	5	1	5
Luzerne	-	-	5	240	5	240
Lycoming	-	-	1	46	1	46
Mercer	-	-	1	22	1	22
Northumberland	-	-	11	333	11	333
Schuylkill	4	52	17	1,624	21	1,676
Somerset	4	874	15	1,017	19	1,891
Washington	1	8,661	-	-	1	8,661
Westmoreland	1	466	2	30	3	496
Texas	-	-	4	13,815	4	13,815
Atascosa	-	-	1	1,790	1	1,790
Harrison	-	-	1	481	1	481
Limestone	-	-	1	9,550	1	9,550
Robertson	-	-	1	1,994	1	1,994
Utah	5	6,854	1	67	6	6,921
Carbon	1	2,786	-	-	1	2,786
Emery	3	1,377	-	-	3	1,377
Kane	-	-	1	67	1	67
Sevier	1	2,691	-	-	1	2,691

Coal-Producing State and County	Underground		Surface		Total	
	Number of Mines	Production	Number of Mines	Production	Number of Mines	Production
Virginia	10	7,693	31	2,855	41	10,548
Buchanan	3	4,322	7	1,022	10	5,343
Dickenson	3	3,006	6	846	9	3,852
Russell	-	-	2	43	2	43
Tazewell	1	190	7	616	8	806
Wise	3	175	9	329	12	504
West Virginia	71	67,268	94	17,292	165	84,560
Barbour	2	3,266	-	-	2	3,266
Boone	5	1,844	9	859	14	2,703
Clay	1	69	-	-	1	69
Fayette	2	931	11	2,162	13	3,093
Grant	-	-	1	120	1	120
Greenbrier	-	-	2	232	2	232
Kanawha	4	2,537	4	984	8	3,521
Logan	14	6,801	16	2,257	30	9,058
Marion	1	6,840	1	177	2	7,016
Marshall	2	13,864	-	-	2	13,864
Mcdowell	15	1,478	11	947	26	2,424
Mercer	1	133	2	370	3	503
Mingo	2	322	11	3,191	13	3,513
Nicholas	3	854	5	268	8	1,122
Ohio	1	7,664	-	-	1	7,664
Raleigh	6	4,233	7	2,773	13	7,007
Randolph	2	233	1	3	3	236
Taylor	1	4,444	-	-	1	4,444
Tucker	1	820	-	-	1	820
Webster	-	-	1	132	1	132
Wetzel	1	7,050	-	-	1	7,050
Wyoming	7	3,884	12	2,819	19	6,702
Wyoming	-	-	15	237,261	15	237,261
Campbell	-	-	11	211,204	11	211,204
Converse	-	-	1	19,255	1	19,255
Lincoln	-	-	1	2,479	1	2,479
Sweetwater	-	-	2	4,324	2	4,324
U.S. Subtotal	190	217,930	362	359,727	552	577,657
Refuse Recovery	-	-	-	-	8	297
U.S. Total	190	217,930	362	359,727	560	577,954

- = 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, 2023

(thousand short tons)

Coal-Producing State and Region ¹	Continuous	Conventional and Other ²	Longwall	Total
Alabama	2,659	35	8,436	11,130
Colorado	1,855	-	5,589	7,443
Illinois	16,358	-	19,735	36,092
Indiana	13,728	-	-	13,728
Kentucky Total	21,231	332	-	21,564
Kentucky (East)	5,298	332	-	5,631
Kentucky (West)	15,933	-	-	15,933
Maryland	398	-	-	398
Montana	758	-	6,823	7,581
Ohio	712	-	-	712
Pennsylvania Total	7,679	60	29,727	37,466
Pennsylvania (Anthracite)	-	57	-	57
Pennsylvania (Bituminous)	7,679	3	29,727	37,409
Utah	2,333	-	4,521	6,854
Virginia	4,509	15	3,169	7,693
West Virginia Total	27,775	59	39,434	67,268
West Virginia (Northern)	4,748	-	39,434	44,181
West Virginia (Southern)	23,027	59	-	23,086
Appalachia Total	49,031	501	80,766	130,298
Appalachia Central	32,835	407	3,169	36,410
Appalachia Northern	13,537	60	69,161	82,758
Appalachia Southern	2,659	35	8,436	11,130
Interior Region Total	46,019	-	19,735	65,754
Illinois Basin	46,019	-	19,735	65,754
Western Region Total	4,946	-	16,933	21,878
Uinta Basin	3,481	-	10,110	13,591
Other Western	1,465	-	6,823	8,288
East of Mississippi River	95,050	501	100,500	196,052
West of Mississippi River	4,946	-	16,933	21,878
U.S. Total	99,996	501	117,433	217,930

- = 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 50,000 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, 2023

(thousand short tons)

Coal-Producing State and Region ¹	Contour Strip	Area	Open Pit	Mountaintop Mining	Other ²	Total
Alabama	716	-	84	-	113	913
Alaska	504	-	504	-	-	1,009
Colorado	994	-	715	-	3,219	4,928
Illinois	-	655	-	-	118	773
Indiana	308	938	7,404	-	1,404	10,054
Kentucky Total	2,859	1,425	s	-	2,499	6,783
Kentucky (East)	2,859	1,425	s	-	2,499	6,783
Louisiana	-	289	-	-	-	289
Maryland	273	422	-	-	187	882
Mississippi	2,685	-	-	-	-	2,685
Missouri	140	-	-	-	-	140
Montana	14,491	6,999	-	-	-	21,491
New Mexico	3,390	-	4,597	-	-	7,987
North Dakota	20,186	-	3,901	-	-	24,087
Ohio	624	434	-	-	177	1,235
Oklahoma	-	-	-	-	2	2
Pennsylvania Total	1,463	-	2,789	-	929	5,181
Pennsylvania (Anthracite)	995	-	1,553	-	242	2,789
Pennsylvania (Bituminous)	468	-	1,236	-	687	2,392
Texas	481	9,550	3,784	-	-	13,815
Utah	-	-	52	-	15	67
Virginia	1,469	391	-	-	995	2,855
West Virginia Total	7,006	3,729	875	1,784	3,898	17,292
West Virginia (Northern)	297	-	-	-	135	431
West Virginia (Southern)	6,710	3,729	875	1,784	3,763	16,860
Wyoming	110,864	1,602	124,795	-	-	237,261
Appalachia Total	14,410	6,402	3,748	1,784	8,797	35,141
Appalachia Central	11,038	5,545	875	1,784	7,256	26,498
Appalachia Northern	2,656	857	2,789	-	1,427	7,729
Appalachia Southern	716	-	84	-	113	913
Interior Region Total	3,613	11,431	11,188	-	1,524	27,756
Illinois Basin	308	1,592	7,404	-	1,522	10,827
Other Interior	3,305	9,839	3,784	-	2	16,930
Western Region Total	150,430	8,601	134,566	-	3,233	296,830
Powder River Basin	122,634	6,999	122,317	-	-	251,950
Uinta Basin	994	-	715	-	3,219	4,928
Other Western	26,803	1,602	11,534	-	15	39,953
East of Mississippi River	17,403	7,994	11,152	1,784	10,319	48,652
West of Mississippi River	151,050	18,440	138,349	-	3,235	311,075
U.S. Total	168,453	26,435	149,502	1,784	13,554	359,727

- = 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, or 2. produce less than 50,000 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, 2023

(thousand short tons)

Coal Thickness (inches)	Underground	Surface	Total
Under 7	76	328	403
7 - Under 13	-	196	196
13 - Under 19	146	1,794	1,940
19 - Under 25	465	3,889	4,353
25 - Under 31	1,567	4,107	5,674
31 - Under 37	9,953	9,636	19,590
37 - Under 43	8,466	6,044	14,509
43 - Under 49	12,014	8,059	20,073
49 - Under 55	20,028	6,444	26,472
55 - Under 61	16,127	4,085	20,212
61 - Under 67	18,791	4,462	23,253
67 - Under 73	20,933	3,444	24,377
73 - Under 79	35,733	797	36,531
79 - Under 85	25,511	2,350	27,861
85 - Under 91	19,454	3,906	23,360
91 - Under 97	4,031	1,040	5,071
97 - Under 103	5,934	757	6,692
103 - Under 109	6,887	6,738	13,625
109 - Under 115	2,381	1,088	3,469
115 - 120	798	1,486	2,284
Over 120	8,310	287,961	296,271
Unknown *	327	1,116	1,739
U.S. Total	217,930	359,727	577,954

- = No data reported.

* Includes mines with production of less than 50,000 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, 2023

Coalbed ID Number ¹ Coalbed Name		Production (thousand short tons)			Thickness (inches)		
		Underground	Surface	Total	Average ²	Low	High
1699	Wyodak	-	204,372	204,372	775	120	931
0212	Pittsburgh	53,815	370	54,185	80	66	108
0484	Herrin (Illinois No. 6)	36,315	1,399	37,714	73	46	79
0489	No. 9	24,248	3,794	28,042	62	36	105
1701	Smith	-	18,359	18,359	903	775	1,092
0036	Pittsburgh	13,598	826	14,425	84	20	97
1569	Beulah-Zap	-	13,547	13,547	196	124	210
0084	Lower Kittanning	12,248	1,175	13,424	68	19	115
1696	Anderson-Dietz 1-Dietz 2	-	12,455	12,455	960	960	960
0280	Blue Creek	10,685	167	10,852	53	16	66
1570	Hagel	-	9,436	9,436	116	104	122
0344	Pocahontas No. 3	8,490	-	8,490	57	35	66
1808	Rosebud	-	7,977	7,977	265	186	276
1787	Roland	-	7,728	7,728	372	288	446
0176	Eagle	5,092	1,122	6,214	42	18	52
0168	Lower Elkhorn	4,791	1,395	6,186	41	18	70
1806	Mammoth	5,686	-	5,686	108	108	108
0071	Upper Freeport	4,070	106	4,176	50	6	77
0506	No. 6	3,474	-	3,474	92	92	92
1756	E	3,099	194	3,293	156	60	162
1003	Menefee Formation	643	2,644	3,287	86	84	87
0151	Upper Elkhorn No. 3	1,562	1,527	3,089	48	14	96
0111	Coalburg	53	2,898	2,951	91	15	123
0483	Indiana No. 6	-	2,898	2,898	56	24	64
0266	Jawbone	2,654	165	2,819	70	45	74
Major Coalbeds Total		190,524	294,554	485,078	435	6	1,092
Other Coalbeds		27,079	64,057	91,136	97	1	607
Unknown *		327	1,116	1,739	NA	NA	NA
U.S. Total		217,930	359,727	577,954	380	-	1,092

- = No data reported.

NA = Not Available.

* Includes mines with production of less than 50,000 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, 2023

(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	20	12,043	-	-	-	-	-	-	20	12,043
Alaska	-	-	1	1,009	-	-	-	-	1	1,009
Colorado	5	7,443	4	4,928	-	-	-	-	9	12,371
Illinois	14	36,865	-	-	-	-	-	-	14	36,865
Indiana	17	23,782	-	-	-	-	-	-	17	23,782
Kentucky Total	112	28,346	-	-	-	-	-	-	112	28,346
Kentucky (East)	108	12,413	-	-	-	-	-	-	108	12,413
Kentucky (West)	4	15,933	-	-	-	-	-	-	4	15,933
Louisiana	-	-	-	-	1	289	-	-	1	289
Maryland	12	1,280	-	-	-	-	-	-	12	1,280
Mississippi	-	-	-	-	1	2,685	-	-	1	2,685
Missouri	1	140	-	-	-	-	-	-	1	140
Montana	1	7,581	3	21,491	-	-	-	-	4	29,072
New Mexico	-	-	2	7,987	-	-	-	-	2	7,987
North Dakota	-	-	-	-	4	24,087	-	-	4	24,087
Ohio	9	1,947	-	-	-	-	-	-	9	1,947
Oklahoma	1	2	-	-	-	-	-	-	1	2
Pennsylvania Total	72	39,801	-	-	-	-	41	2,847	113	42,647
Pennsylvania (Anthracite)	-	-	-	-	-	-	41	2,847	41	2,847
Pennsylvania (Bituminous)	72	39,801	-	-	-	-	-	-	72	39,801
Texas	-	-	-	-	4	13,815	-	-	4	13,815
Utah	6	6,921	-	-	-	-	-	-	6	6,921
Virginia	41	10,548	-	-	-	-	-	-	41	10,548
West Virginia Total	165	84,560	-	-	-	-	-	-	165	84,560
West Virginia (Northern)	15	44,613	-	-	-	-	-	-	15	44,613
West Virginia (Southern)	150	39,947	-	-	-	-	-	-	150	39,947
Wyoming	1	1,602	14	235,660	-	-	-	-	15	237,261
Appalachia Total	427	162,592	-	-	-	-	41	2,847	468	165,439
Appalachia Central	299	62,908	-	-	-	-	-	-	299	62,908
Appalachia Northern	108	87,641	-	-	-	-	41	2,847	149	90,487
Appalachia Southern	20	12,043	-	-	-	-	-	-	20	12,043
Interior Region Total	37	76,722	-	-	6	16,788	-	-	43	93,510
Illinois Basin	35	76,581	-	-	-	-	-	-	35	76,581
Other Interior	2	141	-	-	6	16,788	-	-	8	16,930
Western Region Total	13	23,547	24	271,074	4	24,087	-	-	41	318,708
Powder River Basin	-	-	15	251,950	-	-	-	-	15	251,950
Uinta Basin	8	13,591	4	4,928	-	-	-	-	12	18,518
Other Western	5	9,956	5	14,197	4	24,087	-	-	14	48,240
East of Mississippi River	462	239,173	-	-	1	2,685	41	2,847	504	244,704
West of Mississippi River	15	23,688	24	271,074	9	38,191	-	-	48	332,953
U.S. Subtotal	477	262,861	24	271,074	10	40,876	41	2,847	552	577,657
Refuse Recovery	6	226	-	-	-	-	2	70	8	297
U.S. Total	483	263,087	24	271,074	10	40,876	43	2,917	560	577,954

- = 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, 2023

(thousand short tons)

Coal-Producing State and Region ¹	Union		Nonunion		Total	
	Underground	Surface	Underground	Surface	Underground	Surface
Alabama	10,831	-	299	865	11,130	865
Alaska	-	1,009	-	-	-	1,009
Colorado	2,405	1,603	5,039	3,325	7,443	4,928
Illinois	-	-	36,092	741	36,092	741
Indiana	-	-	13,728	10,054	13,728	10,054
Kentucky Total	-	-	21,403	6,578	21,403	6,578
Kentucky (East)	-	-	5,470	6,578	5,470	6,578
Kentucky (West)	-	-	15,933	-	15,933	-
Louisiana	-	-	-	289	-	289
Maryland	-	-	398	843	398	843
Mississippi	-	-	-	2,685	-	2,685
Missouri	-	-	-	140	-	140
Montana	-	9,036	7,581	12,455	7,581	21,491
New Mexico	-	4,597	-	3,390	-	7,987
North Dakota	-	3,901	-	20,186	-	24,087
Ohio	-	-	712	1,212	712	1,212
Pennsylvania Total	5,934	1,220	31,472	3,556	37,406	4,776
Pennsylvania (Anthracite)	-	1,220	-	1,378	-	2,597
Pennsylvania (Bituminous)	5,934	-	31,472	2,178	37,406	2,178
Texas	-	9,550	-	4,264	-	13,815
Utah	-	-	6,854	67	6,854	67
Virginia	-	-	7,646	2,732	7,646	2,732
West Virginia Total	27,884	1,189	39,325	15,864	67,209	17,053
West Virginia (Northern)	27,753	-	16,428	429	44,181	429
West Virginia (Southern)	131	1,189	22,897	15,435	23,027	16,624
Wyoming	-	5,201	-	232,061	-	237,261
Appalachia Total	44,650	2,408	85,321	31,651	129,971	34,059
Appalachia Central	131	1,189	36,013	24,745	36,143	25,933
Appalachia Northern	33,687	1,220	49,010	6,040	82,698	7,260
Appalachia Southern	10,831	-	299	865	11,130	865
Interior Region Total	-	9,550	65,754	18,172	65,754	27,722
Illinois Basin	-	-	65,754	10,794	65,754	10,794
Other Interior	-	9,550	-	7,378	-	16,928
Western Region Total	2,405	25,347	19,474	271,483	21,878	296,830
Powder River Basin	-	9,036	-	242,914	-	251,950
Uinta Basin	2,405	1,603	11,186	3,325	13,591	4,928
Other Western	-	14,708	8,288	25,244	8,288	39,953
East of Mississippi River	44,650	2,408	151,075	45,130	195,725	47,538
West of Mississippi River	2,405	34,897	19,474	276,176	21,878	311,073
U.S. Subtotal	47,055	37,305	170,549	321,306	217,603	358,611
Unknown *	-	-	-	-	327	1,116
U.S. Total	47,055	37,305	170,549	321,306	217,930	359,727

- = No data reported.

* Includes mines with production of less than 50,000 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, 2023

(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	264	2,031	-	-	7,518	40	7,782	2,071
Alaska	-	1,006	-	-	-	-	-	1,006
Colorado	-	5,922	-	5,580	74	40	74	11,543
Illinois	-	19,734	-	9,083	-	6,529	-	35,345
Indiana	-	11,241	-	9,425	-	-	-	20,666
Kentucky Total	900	22,968	102	-	968	-	1,969	22,968
Kentucky (East)	900	7,901	102	-	968	-	1,969	7,901
Kentucky (West)	-	15,067	-	-	-	-	-	15,067
Louisiana	-	280	-	-	-	-	-	280
Maryland	337	729	-	-	-	-	337	729
Mississippi	-	2,931	-	-	-	-	-	2,931
Missouri	-	140	-	-	-	-	-	140
Montana	-	17,208	-	7,556	-	4,311	-	29,075
New Mexico	-	4,032	-	3,787	-	-	-	7,819
North Dakota	-	24,028	-	-	-	-	-	24,028
Ohio	-	1,730	-	-	-	185	-	1,916
Pennsylvania Total	3,407	18,784	72	339	1,902	1,628	5,380	20,751
Pennsylvania (Anthracite)	312	1,805	-	94	-	289	312	2,188
Pennsylvania (Bituminous)	3,094	16,979	72	245	1,902	1,339	5,068	18,563
Texas	-	738	-	13,362	-	-	-	14,100
Utah	-	5,157	-	-	-	386	-	5,543
Virginia	2,375	734	66	-	3,068	-	5,509	734
West Virginia Total	9,644	38,026	309	40	20,337	7,396	30,291	45,463
West Virginia (Northern)	801	29,946	-	40	5,810	5,992	6,612	35,978
West Virginia (Southern)	8,843	8,080	309	-	14,527	1,404	23,679	9,484
Wyoming	-	143,393	-	92,003	-	1,212	-	236,608
U.S. Subtotal	16,926	320,813	549	141,175	33,867	21,728	51,342	483,716
Adjustments ⁴	-2,439	-	-	-	-	-	-2,439	-
Other Exports *	-	-	-	-	17,215	27,399	17,215	27,399
U.S. Total **	14,487	320,813	549	141,175	51,082	49,126	66,118	511,115

- = 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 50,000 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, 2023

Rank	Mine Name / Operating Company	Mine Type	State	Production (short tons)
1	North Antelope Rochelle Mine / Peabody Powder River Mining LLC	Surface	Wyoming	62,018,972
2	Black Thunder / Thunder Basin Coal Company LLC	Surface	Wyoming	60,567,709
3	Antelope Coal Mine / Navajo Transitional Energy Com	Surface	Wyoming	19,254,551
4	Eagle Butte Mine / Eagle Specialty Materials LLC	Surface	Wyoming	16,300,133
5	Caballo Mine / Peabody Caballo Mining, LLC	Surface	Wyoming	15,301,635
6	Belle Ayr Mine / Eagle Specialty Materials LLC	Surface	Wyoming	15,159,945
7	Buckskin Mine / Buckskin Mining Company	Surface	Wyoming	12,462,134
8	Spring Creek Mine / Navajo Transitional Energy Com	Surface	Montana	12,454,895
9	Freedom Mine / The Coteau Properties Company	Surface	North Dakota	11,375,696
10	Bailey Mine / Consol Pennsylvania Coal Company	Underground	Pennsylvania	11,163,524
11	Rawhide Mine / Peabody Caballo Mining, LLC	Surface	Wyoming	9,786,512
12	River View Mine / River View Coal LLC	Underground	Kentucky	9,714,510
13	Kosse Strip / Luminant Mining Company LLC	Surface	Texas	9,550,166
14	Cordero Rojo Mine / Navajo Transitional Energy Com	Surface	Wyoming	9,407,910
15	Enlow Fork Mine / Consol Pennsylvania Coal Company	Underground	Pennsylvania	8,660,839
16	Tunnel Ridge Mine / Tunnel Ridge, LLC	Underground	West Virginia	7,664,330
17	Bull Mountains Mine No 1 / Signal Peak Energy LLC	Underground	Montana	7,581,000
18	Marshall County Mine / Marshall County Coal Resources	Underground	West Virginia	7,412,191
19	Harrison County Mine / Harrison County Coal Resources	Underground	West Virginia	7,049,832
20	Mach #1 Mine / Mach Mining LLC	Underground	Illinois	7,037,074
21	Rosebud Mine & Crusher/Conveyo / Westmoreland Rosebud Mining LI	Surface	Montana	6,999,447
22	Marion County Mine / Marion County Coal Resources,	Underground	West Virginia	6,839,719
23	Lively Grove Mine / Prairie State Generating Company	Underground	Illinois	6,711,708
24	Falkirk Mine / Falkirk Mining Company	Surface	North Dakota	6,639,264
25	Ohio County Mine / Ohio County Coal Resources, In	Underground	West Virginia	6,451,629
26	Harvey Mine / Consol Pennsylvania Coal Company	Underground	Pennsylvania	6,237,282
27	Cumberland Mine / Iron Cumberland LLC	Underground	Pennsylvania	5,934,113
28	Mc#1 Mine / M-Class Mining LLC	Underground	Illinois	5,791,526
29	Mine No. 1 / Hamilton County Coal, LLC	Underground	Illinois	5,624,399
30	Bear Run Mine / Peabody Bear Run Mining LLC	Surface	Indiana	5,536,036
31	Gibson South / Gibson County Coal, LLC	Underground	Indiana	5,317,234
32	No 7 Mine / Warrior Met Coal Mining, LLC	Underground	Alabama	5,141,323
33	Navajo Mine / Bisti Fuels Company LLC	Surface	New Mexico	4,597,118
34	Leer Mine / Aci Tygart Valley	Underground	West Virginia	4,443,600
35	Cardinal / Warrior Coal LLC	Underground	Kentucky	4,375,920
36	Prairie Eagle-Underground / Knight Hawk Coal, LLC	Underground	Illinois	4,337,390
37	Dry Fork Mine / Western Fuels-Wyoming Inc	Surface	Wyoming	4,193,171
Subtotal				415,094,437
All Other Mines				162,859,580
U.S. Total				577,954,017

Notes: Major mines are mines that produced more than 4 million short tons in 2023. 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, 2023

Rank	Controlling Company Name	Production (thousand short tons)	Percent of Total Production
1	Peabody Energy Corp	104,251	18.0
2	Arch Resources Inc	75,291	13.0
3	Navajo Transitional Energy Co	45,714	7.9
4	Alliance Resource Partners LP	34,877	6.0
5	Acnr Holdings Inc	32,178	5.6
6	David Michael Jamison Petri E Koivula	31,974	5.5
7	CONSOL Energy Inc	26,377	4.6
8	NACCO Industries Inc	23,640	4.1
9	Foresight Energy Labor LLC	16,303	2.8
10	Alpha Metallurgical Resources Inc	16,213	2.8
11	Kiewit Peter Sons' Inc	12,462	2.2
12	Vistra Energy	9,550	1.7
13	Seven Global Investments As	9,499	1.6
14	Westmoreland Mining Holdings LLC	9,036	1.6
15	Warrior Met Coal Intermediate Holdco LLC	7,646	1.3
16	Global Mining Group LLC	7,581	1.3
17	Prairie State Energy Campus	6,712	1.2
18	Hallador Energy Company	6,650	1.2
19	Coronado Coal LLC	6,336	1.1
20	Iron Senergy Holding LLC	5,934	1.0
21	Wolverine Fuels LLC	5,477	0.9
Subtotal		493,702	85.4
All Other Coal Producers		84,252	14.6
U.S. Total		577,954	100.0

Notes: The listed companies each produced more than 5 million short tons of coal in 2023. 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, 2023 and 2022

(thousand short tons)

Coal-Producing State	2023			2022			Percent Change		
	Underground	Surface	Total	Underground	Surface	Total	Underground	Surface	Total
Alabama	13,155	1,852	15,008	13,055	1,909	14,964	0.8	-3.0	0.3
Alaska	-	3,000	3,000	-	3,000	3,000	-	-	-
Colorado	13,250	7,600	20,850	13,245	7,640	20,885	s	-0.5	-0.2
Illinois	43,879	930	44,809	43,325	1,900	45,225	1.3	-51.1	-0.9
Indiana	14,400	15,780	30,180	15,800	13,440	29,240	-8.9	17.4	3.2
Kentucky Total	25,621	8,196	33,817	24,700	8,982	33,683	3.7	-8.8	0.4
Kentucky (East)	6,321	8,196	14,517	7,600	8,982	16,583	-16.8	-8.8	-12.5
Kentucky (West)	19,300	-	19,300	17,100	-	17,100	12.9	-	12.9
Louisiana	-	385	385	-	385	385	-	-	-
Maryland	600	994	1,594	600	1,901	2,501	-	-47.7	-36.3
Mississippi	-	3,600	3,600	-	3,600	3,600	-	-	-
Missouri	-	150	150	-	150	150	-	-	-
Montana	11,000	33,500	44,500	11,000	33,900	44,900	-	-1.2	-0.9
New Mexico	-	10,570	10,570	9,000	10,770	19,770	-	-1.9	-46.5
North Dakota	-	32,100	32,100	-	35,100	35,100	-	-8.5	-8.5
Ohio	850	2,188	3,038	1,329	2,362	3,691	-36.0	-7.4	-17.7
Pennsylvania Total	42,407	8,022	50,429	42,397	6,889	49,286	s	16.4	2.3
Pennsylvania (Anthracite)	52	4,313	4,365	45	3,499	3,543	15.6	23.3	23.2
Pennsylvania (Bituminous)	42,355	3,709	46,064	42,353	3,390	45,743	s	9.4	0.7
Texas	-	17,287	17,287	-	17,250	17,250	-	0.2	0.2
Utah	12,159	2,000	14,159	15,950	2,000	17,950	-23.8	-	-21.1
Virginia	9,056	3,182	12,238	9,238	4,102	13,339	-2.0	-22.4	-8.3
West Virginia Total	91,294	23,086	114,380	89,167	22,053	111,221	2.4	4.7	2.8
West Virginia (Northern)	62,306	502	62,809	58,007	600	58,608	7.4	-16.3	7.2
West Virginia (Southern)	28,988	22,584	51,571	31,160	21,453	52,613	-7.0	5.3	-2.0
Wyoming	-	394,913	394,913	-	405,478	405,478	-	-2.6	-2.6
U.S. Total	277,671	569,336	847,008	288,807	582,812	871,619	-3.9	-2.3	-2.8

- = No data reported.

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

Notes: Productive capacity is the maximum amount of coal that can be produced annually as reported by mining companies on Form EIA-7A, 'Annual Survey of Coal Production and Preparation.' Excluding refuse recovery and mines producing less than 50,000 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, 2023 and 2022

(percent)

Coal-Producing State	2023			2022		
	Underground	Surface	Total	Underground	Surface	Total
Alabama	84.34	46.84	79.71	69.87	64.55	69.19
Alaska	-	33.63	33.63	-	33.81	33.81
Colorado	56.18	64.84	59.33	63.25	57.79	61.25
Illinois	82.26	79.61	82.20	84.50	44.62	82.83
Indiana	95.34	63.48	78.68	84.60	75.94	80.62
Kentucky Total	82.58	75.41	80.84	90.54	63.98	83.46
Kentucky (East)	82.67	75.41	78.57	78.07	63.98	70.44
Kentucky (West)	82.55	-	82.55	96.08	-	96.08
Louisiana	-	75.02	75.02	-	79.77	79.77
Maryland	66.32	77.27	73.15	49.74	60.92	58.23
Mississippi	-	74.58	74.58	-	93.57	93.57
Missouri	-	93.13	93.13	-	49.02	49.02
Montana	68.92	64.15	65.33	67.56	61.36	62.88
New Mexico	-	75.57	75.57	17.74	83.13	53.36
North Dakota	-	75.04	75.04	-	76.16	76.16
Ohio	83.79	54.75	62.87	97.65	49.88	67.08
Pennsylvania Total	88.32	59.24	83.69	82.95	62.65	80.11
Pennsylvania (Anthracite)	87.39	63.73	64.01	75.04	65.16	65.28
Pennsylvania (Bituminous)	88.32	54.03	85.56	82.96	60.06	81.26
Texas	-	79.91	79.91	-	99.04	99.04
Utah	56.37	3.33	48.88	65.01	17.71	59.74
Virginia	84.43	79.03	83.03	82.34	77.01	80.70
West Virginia Total	73.42	71.55	73.04	76.64	67.43	74.81
West Virginia (Northern)	70.91	85.40	71.03	80.14	80.78	80.14
West Virginia (Southern)	78.80	71.24	75.49	70.12	67.05	68.87
Wyoming	-	60.08	60.08	-	60.36	60.36
U.S. Total	78.22	62.76	67.83	76.85	63.58	67.98

- = No data reported.

Notes: Capacity utilization is the ratio of annual production to annual productive capacity. Excludes refuse recovery and mines producing less than 50,000 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, 2023

(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	3,454	77.00	s	-	9,702	86.95	13,155	84.34
Colorado	3,240	57.25	s	-	10,010	55.83	13,250	56.18
Illinois	18,213	89.82	s	-	25,666	76.89	43,879	82.26
Indiana	14,400	95.34	s	-	s	-	14,400	95.34
Kentucky Total	25,542	82.63	79	67.54	s	-	25,621	82.58
Kentucky (East)	6,242	82.86	79	67.54	s	-	6,321	82.67
Kentucky (West)	19,300	82.55	s	-	s	-	19,300	82.55
Maryland	600	66.32	s	-	s	-	600	66.32
Montana	1,100	68.92	s	-	9,900	68.92	11,000	68.92
Ohio	850	83.79	s	-	s	-	850	83.79
Pennsylvania Total	8,890	86.38	52	87.39	33,465	88.83	42,407	88.32
Pennsylvania (Anthracite)	s	-	52	87.39	s	-	52	87.39
Pennsylvania (Bituminous)	8,890	86.38	s	-	33,465	88.83	42,355	88.32
Utah	4,309	54.14	s	-	7,850	57.59	12,159	56.37
Virginia	4,976	89.98	s	-	4,080	77.67	9,056	84.43
West Virginia Total	38,501	71.66	s	-	52,793	74.69	91,294	73.42
West Virginia (Northern)	9,513	49.91	s	-	52,793	74.69	62,306	70.91
West Virginia (Southern)	28,988	78.80	s	-	s	-	28,988	78.80
U.S. Total	124,075	80.32	131	75.48	153,466	76.52	277,671	78.22

- = 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 50,000 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, 2023

(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	1,368	52.37	-	-	360	23.39	-	-	125	53.84	1,852	46.84
Alaska	1,500	33.63	-	-	1,500	33.63	-	-	-	-	3,000	33.63
Colorado	1,426	69.70	-	-	1,050	68.12	-	-	5,124	62.81	7,600	64.84
Illinois	-	-	840	77.93	-	-	-	-	90	95.24	930	79.61
Indiana	432	71.30	1,704	55.03	9,637	76.83	-	-	4,007	34.11	15,780	63.48
Kentucky Total	3,461	82.59	1,554	91.69	s	-	-	-	3,181	59.64	8,196	75.41
Kentucky (East)	3,461	82.59	1,554	91.69	s	-	-	-	3,181	59.64	8,196	75.41
Louisiana	-	-	385	75.02	-	-	-	-	-	-	385	75.02
Maryland	400	68.25	500	84.50	-	-	-	-	94	77.18	994	77.27
Mississippi	3,600	74.58	-	-	-	-	-	-	-	-	3,600	74.58
Missouri	150	93.13	-	-	-	-	-	-	-	-	150	93.13
Montana	23,500	61.67	10,000	69.99	-	-	-	-	-	-	33,500	64.15
New Mexico	4,000	84.75	-	-	6,570	69.97	-	-	-	-	10,570	75.57
North Dakota	27,100	74.49	-	-	5,000	78.03	-	-	-	-	32,100	75.04
Ohio	987	63.24	880	49.33	-	-	-	-	321	43.50	2,188	54.75
Pennsylvania Total	2,081	70.29	-	-	4,692	59.45	-	-	1,249	40.08	8,022	59.24
Pennsylvania (Anthracite)	1,347	73.85	-	-	2,615	59.38	-	-	350	57.30	4,313	63.73
Pennsylvania (Bituminous)	734	63.75	-	-	2,076	59.54	-	-	899	33.36	3,709	54.03
Texas	2,287	21.01	9,550	100.00	5,450	69.43	-	-	-	-	17,287	79.91
Utah	-	-	-	-	1,560	3.33	-	-	440	3.33	2,000	3.33
Virginia	1,802	81.54	480	81.44	-	-	-	-	900	72.72	3,182	79.03
West Virginia Total	10,869	64.46	4,302	86.68	1,250	69.98	1,790	99.64	4,875	64.06	23,086	71.55
West Virginia (Northern)	370	80.18	-	-	-	-	-	-	132	100.00	502	85.40
West Virginia (Southern)	10,499	63.91	4,302	86.68	1,250	69.98	1,790	99.64	4,743	63.06	22,584	71.24
Wyoming	245,300	45.20	5,000	32.04	144,613	86.30	-	-	-	-	394,913	60.08
U.S. Total	330,262	51.01	35,196	75.11	181,682	82.29	1,790	99.64	20,406	54.59	569,336	62.76

- = 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 50,000 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, 2023 and 2022

(million short tons)

Coal-Producing State	2023	2022	Percent Change Recoverable Coal Reserves
	Recoverable Coal Reserves	Recoverable Coal Reserves	
Alabama	170	186	-8.2
Alaska	44	45	-2.3
Colorado	205	281	-26.9
Illinois	1,811	1,846	-1.9
Indiana	271	285	-4.8
Kentucky Total	391	350	11.7
Kentucky (East)	147	157	-5.9
Kentucky (West)	243	193	25.9
Louisiana	12	12	-2.3
Maryland	8	9	-14.8
Mississippi	99	102	-2.6
Missouri	s	s	-35.0
Montana	383	401	-4.3
New Mexico	28	36	-20.3
North Dakota	580	599	-3.1
Ohio	33	35	-6.4
Pennsylvania Total	979	1,016	-3.6
Pennsylvania (Anthracite)	137	121	13.9
Pennsylvania (Bituminous)	842	895	-6.0
Texas	336	275	22.3
Utah	101	140	-27.7
Virginia	141	150	-6.2
West Virginia Total	1,810	1,809	s
West Virginia (Northern)	1,276	1,234	3.5
West Virginia (Southern)	533	576	-7.4
Wyoming	3,796	4,161	-8.8
U.S. Total	11,200	11,737	-4.6

- = 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 50,000 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, 2023

(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	161	308	610	9	2,206	3,097	170	2,513	3,707
Alaska	-	2,335	5,423	44	474	656	44	2,809	6,079
Arkansas	-	126	271	-	101	144	-	227	415
Colorado	181	5,656	10,777	24	3,740	4,754	205	9,396	15,531
Georgia	-	1	2	-	1	2	-	2	4
Idaho	-	2	4	-	-	-	-	2	4
Illinois	1,808	27,497	86,564	3	10,020	16,463	1,811	37,516	103,027
Indiana	113	3,413	8,240	159	196	334	271	3,608	8,574
Iowa	-	807	1,732	-	320	457	-	1,127	2,189
Kansas	-	-	-	-	679	970	-	679	970
Kentucky Total	337	6,611	15,410	54	7,175	12,424	391	13,787	27,834
Kentucky (East)	94	237	425	54	4,958	8,878	147	5,195	9,303
Kentucky (West)	243	6,374	14,985	-	2,218	3,546	243	8,592	18,531
Louisiana	-	-	-	12	271	365	12	271	365
Maryland	5	302	552	3	23	34	8	326	586
Michigan	-	55	123	-	3	5	-	58	128
Mississippi	-	-	-	99	-	-	99	-	-
Missouri	-	689	1,479	s	3,153	4,504	-	3,842	5,983
Montana	171	35,827	70,770	213	38,426	47,546	383	74,253	118,316
New Mexico	-	2,725	5,991	28	3,969	5,677	28	6,694	11,668
North Carolina	-	5	11	-	-	-	-	5	11
North Dakota	-	-	-	580	6,422	8,419	580	6,422	8,419
Ohio	31	7,543	17,145	3	3,690	5,637	33	11,233	22,782
Oklahoma	-	569	1,221	-	218	312	-	787	1,533
Oregon	-	6	15	-	2	3	-	9	17
Pennsylvania Total	824	9,846	21,604	155	947	4,078	979	10,793	25,682
Pennsylvania (Anthracite)	s	340	3,839	137	415	3,313	137	754	7,153
Pennsylvania (Bituminous)	824	9,507	17,765	18	533	764	842	10,039	18,529
South Dakota	-	-	-	-	277	366	-	277	366
Tennessee	-	270	494	-	170	251	-	441	744
Texas	-	-	-	336	8,956	11,635	336	8,956	11,635
Utah	101	2,224	4,537	s	206	260	101	2,430	4,798
Virginia	130	404	719	11	282	440	141	686	1,159
Washington	-	674	1,332	-	6	8	-	681	1,340
West Virginia Total	1,610	14,126	26,467	199	1,887	2,990	1,810	16,012	29,458
West Virginia (Northern)	1,274	NA	NA	2	NA	NA	1,276	NA	NA
West Virginia (Southern)	336	NA	NA	197	NA	NA	533	NA	NA
Wyoming	-	22,901	42,409	3,796	11,100	13,408	3,796	34,001	55,816
U.S. Total	5,471	144,923	323,902	5,728	104,922	145,240	11,200	249,845	469,142

- = 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, 2024.' 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, 2023. 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 50,000 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, 2023

(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	50	s	111	161
Colorado	117	s	64	181
Illinois	521	s	1,286	1,808
Indiana	113	s	s	113
Kentucky Total	337	s	s	337
Kentucky (East)	94	s	s	94
Kentucky (West)	243	s	s	243
Maryland	5	s	s	5
Montana	17	s	153	171
Ohio	31	s	s	31
Pennsylvania Total	111	s	713	824
Pennsylvania (Anthracite)	s	s	s	s
Pennsylvania (Bituminous)	111	s	713	824
Utah	38	s	63	101
Virginia	49	s	81	130
West Virginia Total	517	s	1,094	1,610
West Virginia (Northern)	181	s	1,094	1,274
West Virginia (Southern)	336	s	s	336
U.S. Total	1,906	s	3,565	5,471

- = 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 50,000 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, 2023

(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	5	-	4	-	s	9
Alaska	22	-	22	-	-	44
Colorado	6	-	6	-	13	24
Illinois	-	3	-	-	s	3
Indiana	2	10	143	-	4	159
Kentucky Total	35	12	s	-	7	54
Kentucky (East)	35	12	s	-	7	54
Louisiana	-	12	-	-	-	12
Maryland	s	3	-	-	s	3
Mississippi	99	-	-	-	-	99
Missouri	s	-	-	-	-	s
Montana	161	51	-	-	-	213
New Mexico	1	-	27	-	-	28
North Dakota	522	-	58	-	-	580
Ohio	2	1	-	-	s	3
Pennsylvania Total	70	-	85	-	1	155
Pennsylvania (Anthracite)	67	-	70	-	s	137
Pennsylvania (Bituminous)	3	-	15	-	1	18
Texas	103	174	59	-	-	336
Utah	-	-	s	-	s	s
Virginia	7	1	-	-	2	11
West Virginia Total	132	27	1	17	22	199
West Virginia (Northern)	2	-	-	-	-	2
West Virginia (Southern)	130	27	1	17	22	197
Wyoming	1,580	47	2,169	-	-	3,796
U.S. Total	2,746	342	2,573	17	50	5,728

- = 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 50,000 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, 2023

(million short tons)

Mine Production Range (thousand short tons)	Underground	Surface	Total
	Recoverable Coal Reserves	Recoverable Coal Reserves	Recoverable Coal Reserves
Over 1,000	4,629	5,212	9,841
Over 200 to 500	285	335	620
Over 100 to 200	209	68	276
Over 50 to 100	106	60	166
Over 10 to 50	s	20	20
U.S. Total	5,471	5,728	11,200

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, 2023 and 2022

Coal-Producing State and Region ¹	2023			2022			Percent Change		
	Underground	Surface	Total	Underground	Surface	Total	Underground	Surface	Total
Alabama	1,914	345	2,259	1,678	420	2,098	14.1	-17.9	7.7
Alaska	-	105	105	-	99	99	-	6.1	6.1
Colorado	906	386	1,292	914	370	1,284	-0.9	4.3	0.6
Illinois	2,213	102	2,315	2,063	99	2,162	7.3	3.0	7.1
Indiana	1,484	1,006	2,490	1,358	917	2,275	9.3	9.7	9.5
Kentucky Total	3,706	1,323	5,029	3,591	1,224	4,815	3.2	8.1	4.4
Kentucky (East)	2,063	1,323	3,386	2,007	1,224	3,231	2.8	8.1	4.8
Kentucky (West)	1,643	-	1,643	1,584	-	1,584	3.7	-	3.7
Louisiana	-	35	35	-	35	35	-	-	-
Maryland	147	132	279	124	150	274	18.5	-12.0	1.8
Mississippi	-	236	236	-	231	231	-	2.2	2.2
Missouri	-	8	8	-	7	7	-	14.3	14.3
Montana	266	667	933	230	724	954	15.7	-7.9	-2.2
New Mexico	-	598	598	183	589	772	-100.0	1.5	-22.5
North Dakota	-	1,175	1,175	-	1,186	1,186	-	-0.9	-0.9
Ohio	142	193	335	233	180	413	-39.1	7.2	-18.9
Oklahoma	-	1	1	-	1	1	-	-	-
Pennsylvania Total	3,395	1,430	4,825	3,172	1,320	4,492	7.0	8.3	7.4
Pennsylvania (Anthracite)	58	916	974	57	794	851	1.8	15.4	14.5
Pennsylvania (Bituminous)	3,337	514	3,851	3,115	526	3,641	7.1	-2.3	5.8
Tennessee	4	-	4	4	4	8	-	-100.0	-50.0
Texas	-	837	837	-	904	904	-	-7.4	-7.4
Utah	1,365	56	1,421	1,346	52	1,398	1.4	7.7	1.6
Virginia	1,661	869	2,530	1,501	824	2,325	10.7	5.5	8.8
West Virginia Total	10,823	3,191	14,014	10,219	2,778	12,997	5.9	14.9	7.8
West Virginia (Northern)	4,552	96	4,648	4,324	103	4,427	5.3	-6.8	5.0
West Virginia (Southern)	6,271	3,095	9,366	5,895	2,675	8,570	6.4	15.7	9.3
Wyoming	-	4,722	4,722	-	4,794	4,794	-	-1.5	-1.5
Appalachia Total	20,149	7,483	27,632	18,938	6,900	25,838	6.4	8.4	6.9
Appalachia Central	9,999	5,287	15,286	9,407	4,727	14,134	6.3	11.8	8.2
Appalachia Northern	8,236	1,851	10,087	7,853	1,753	9,606	4.9	5.6	5.0
Appalachia Southern	1,914	345	2,259	1,678	420	2,098	14.1	-17.9	7.7
Interior Region Total	5,340	2,225	7,565	5,005	2,194	7,199	6.7	1.4	5.1
Illinois Basin	5,340	1,108	6,448	5,005	1,016	6,021	6.7	9.1	7.1
Other Interior	-	1,117	1,117	-	1,178	1,178	-	-5.2	-5.2
Western Region Total	2,537	7,709	10,246	2,673	7,814	10,487	-5.1	-1.3	-2.3
Powder River Basin	-	4,801	4,801	-	4,925	4,925	-	-2.5	-2.5
Uinta Basin	2,078	427	2,505	2,027	401	2,428	2.5	6.5	3.2
Other Western	459	2,481	2,940	646	2,488	3,134	-28.9	-0.3	-6.2
East of Mississippi River	25,489	8,827	34,316	23,943	8,147	32,090	6.5	8.3	6.9
West of Mississippi River	2,537	8,590	11,127	2,673	8,761	11,434	-5.1	-2.0	-2.7
U.S. Subtotal	28,026	17,417	45,443	26,616	16,908	43,524	5.3	3.0	4.4
Refuse Recovery	-	-	33	-	-	58	-	-	-43.1
U.S. Total	28,026	17,417	45,476	26,616	16,908	43,582	5.3	3.0	4.3

- = 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, 2023

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	5	18	20	1,546	607	2,153
Alaska	-	1	1	-	105	105
Colorado	1	9	9	48	1,212	1,260
Illinois	-	16	16	-	2,172	2,172
Indiana	-	17	17	-	2,373	2,373
Kentucky Total	16	107	112	683	3,611	4,294
Kentucky (East)	16	103	108	683	2,126	2,809
Kentucky (West)	-	4	4	-	1,485	1,485
Louisiana	-	1	1	-	35	35
Maryland	3	12	12	105	128	233
Mississippi	-	1	1	-	236	236
Missouri	-	1	1	-	8	8
Montana	-	4	4	-	923	923
New Mexico	-	2	2	-	598	598
North Dakota	-	4	4	-	1,175	1,175
Ohio	-	9	9	-	307	307
Oklahoma	-	1	1	-	1	1
Pennsylvania Total	37	99	116	1,262	2,952	4,214
Pennsylvania (Anthracite)	4	39	43	64	479	543
Pennsylvania (Bituminous)	33	60	73	1,198	2,473	3,671
Texas	-	4	4	-	837	837
Utah	-	6	6	-	1,299	1,299
Virginia	15	37	43	1,763	438	2,201
West Virginia Total	86	127	166	7,129	5,378	12,507
West Virginia (Northern)	6	13	15	1,367	3,102	4,469
West Virginia (Southern)	80	114	151	5,762	2,276	8,038
Wyoming	-	15	15	-	4,722	4,722
Appalachia Total	162	405	474	12,487	11,937	24,424
Appalachia Central	111	254	302	8,208	4,840	13,048
Appalachia Northern	46	133	152	2,733	6,490	9,223
Appalachia Southern	5	18	20	1,546	607	2,153
Interior Region Total	-	45	45	-	7,147	7,147
Illinois Basin	-	37	37	-	6,030	6,030
Other Interior	-	8	8	-	1,117	1,117
Western Region Total	1	41	41	48	10,034	10,082
Powder River Basin	-	15	15	-	4,791	4,791
Uinta Basin	-	12	12	-	2,383	2,383
Other Western	1	14	14	48	2,860	2,908
East of Mississippi River	162	443	512	12,487	18,203	30,690
West of Mississippi River	1	48	48	48	10,915	10,963
U.S. Total	163	491	560	12,536	29,117	41,653

- = 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 50,000 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, 2023

Coal-Producing State, Region ¹ and Mine Type	Mine Production Range (thousand short tons)								Total Number of Employees
	Above 1,000	Above 500 to 1,000	Above 200 to 500	Above 100 to 200	Above 50 to 100	Above 10 to 50	Above 0 to 10	Zero ²	
Alabama	1,428	327	157	66	107	23	45	106	2,259
Underground	1,428	327	-	58	-	14	-	87	1,914
Surface	-	-	157	8	107	9	45	19	345
Alaska	105	-	-	-	-	-	-	-	105
Surface	105	-	-	-	-	-	-	-	105
Colorado	1,080	125	-	-	55	-	-	32	1,292
Underground	713	106	-	-	55	-	-	32	906
Surface	367	19	-	-	-	-	-	-	386
Illinois	1,969	114	56	-	-	10	12	154	2,315
Underground	1,969	114	-	-	-	-	-	130	2,213
Surface	-	-	56	-	-	10	12	24	102
Indiana	2,080	40	167	53	27	6	-	111	2,490
Underground	1,373	-	-	-	-	-	-	111	1,484
Surface	707	40	167	53	27	6	-	-	1,006
Kentucky Total	1,698	210	802	644	366	459	115	682	5,029
Underground	1,698	108	537	364	178	272	57	447	3,706
Surface	-	102	265	280	188	187	58	235	1,323
Kentucky (East)	248	210	802	609	366	459	115	524	3,386
Underground	248	108	537	329	178	272	57	289	2,063
Surface	-	102	265	280	188	187	58	235	1,323
Kentucky (West)	1,450	-	-	35	-	-	-	158	1,643
Underground	1,450	-	-	35	-	-	-	158	1,643
Louisiana	-	-	35	-	-	-	-	-	35
Surface	-	-	35	-	-	-	-	-	35
Maryland	-	-	163	15	5	35	15	46	279
Underground	-	-	101	-	-	-	-	46	147
Surface	-	-	62	15	5	35	15	-	132
Mississippi	236	-	-	-	-	-	-	-	236
Surface	236	-	-	-	-	-	-	-	236
Missouri	-	-	-	8	-	-	-	-	8
Surface	-	-	-	8	-	-	-	-	8
Montana	923	-	-	-	-	-	-	10	933
Underground	266	-	-	-	-	-	-	-	266
Surface	657	-	-	-	-	-	-	10	667
New Mexico	598	-	-	-	-	-	-	-	598
Surface	598	-	-	-	-	-	-	-	598
North Dakota	1,175	-	-	-	-	-	-	-	1,175
Surface	1,175	-	-	-	-	-	-	-	1,175
Ohio	-	60	133	78	9	27	-	28	335
Underground	-	60	-	64	-	-	-	18	142
Surface	-	-	133	14	9	27	-	10	193
Oklahoma	-	-	-	-	-	-	1	-	1
Surface	-	-	-	-	-	-	1	-	1
Pennsylvania Total	2,302	198	773	387	248	164	131	572	4,825
Underground	2,302	198	463	221	-	15	27	165	3,395
Surface	-	-	310	166	248	149	104	407	1,430
Pennsylvania (Anthracite)	-	-	171	59	168	89	47	394	974
Underground	-	-	-	-	-	15	15	28	58
Surface	-	-	171	59	168	74	32	366	916
Pennsylvania (Bituminous)	2,302	198	602	328	80	75	84	178	3,851
Underground	2,302	198	463	221	-	-	12	137	3,337
Surface	-	-	139	107	80	75	72	41	514
Tennessee	-	-	-	-	-	-	-	4	4
Underground	-	-	-	-	-	-	-	4	4
Texas	705	-	132	-	-	-	-	-	837
Surface	705	-	132	-	-	-	-	-	837
Utah	768	212	153	151	15	-	-	112	1,421

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	768	212	153	151	-	-	-	81	1,365
Surface	-	-	-	-	15	-	-	31	56
Virginia	1,065	-	537	283	120	162	28	335	2,530
Underground	1,065	-	219	95	21	42	9	210	1,661
Surface	-	-	318	188	99	120	19	125	869
West Virginia Total	5,516	2,447	2,670	961	349	484	75	1,512	14,014
Underground	5,060	2,019	1,755	517	247	155	15	1,055	10,823
Surface	456	428	915	444	102	329	60	457	3,191
West Virginia (Northern)	3,752	214	293	186	18	-	6	179	4,648
Underground	3,752	214	293	123	18	-	-	152	4,552
Surface	-	-	-	63	-	-	6	27	96
West Virginia (Southern)	1,764	2,233	2,377	775	331	484	69	1,333	9,366
Underground	1,308	1,805	1,462	394	229	155	15	903	6,271
Surface	456	428	915	381	102	329	54	430	3,095
Wyoming	4,722	-	-	-	-	-	-	-	4,722
Surface	4,722	-	-	-	-	-	-	-	4,722
Appalachia Total	10,559	3,242	5,235	2,399	1,204	1,354	409	3,127	27,632
Underground	10,103	2,712	3,075	1,284	446	498	108	1,874	20,149
Surface	456	530	2,160	1,115	758	856	301	1,253	7,483
Appalachia Central	3,077	2,443	3,716	1,667	817	1,105	212	2,196	15,286
Underground	2,621	1,913	2,218	818	428	469	81	1,406	9,999
Surface	456	530	1,498	849	389	636	131	790	5,287
Appalachia Northern	6,054	472	1,362	666	280	226	152	825	10,087
Underground	6,054	472	857	408	18	15	27	381	8,236
Surface	-	-	505	258	262	211	125	444	1,851
Appalachia Southern	1,428	327	157	66	107	23	45	106	2,259
Underground	1,428	327	-	58	-	14	-	87	1,914
Surface	-	-	157	8	107	9	45	19	345
Interior Region Total	6,440	154	390	96	27	16	13	423	7,565
Underground	4,792	114	-	35	-	-	-	399	5,340
Surface	1,648	40	390	61	27	16	13	24	2,225
Illinois Basin	5,499	154	223	88	27	16	12	423	6,448
Underground	4,792	114	-	35	-	-	-	399	5,340
Surface	707	40	223	53	27	16	12	24	1,108
Other Interior	941	-	167	8	-	-	1	-	1,117
Surface	941	-	167	8	-	-	1	-	1,117
Western Region Total	9,371	337	153	151	70	-	-	154	10,246
Underground	1,747	318	153	151	55	-	-	113	2,537
Surface	7,624	19	-	-	15	-	-	41	7,709
Powder River Basin	4,791	-	-	-	-	-	-	10	4,801
Surface	4,791	-	-	-	-	-	-	10	4,801
Uinta Basin	1,848	231	153	151	-	-	-	112	2,505
Underground	1,481	212	153	151	-	-	-	81	2,078
Surface	367	19	-	-	-	-	-	31	427
Other Western	2,732	106	-	-	70	-	-	32	2,940
Underground	266	106	-	-	55	-	-	32	459
Surface	2,466	-	-	-	15	-	-	-	2,481
East of Mississippi River	16,294	3,396	5,458	2,487	1,231	1,370	421	3,550	34,316
Underground	14,895	2,826	3,075	1,319	446	498	108	2,273	25,489
Surface	1,399	570	2,383	1,168	785	872	313	1,277	8,827
West of Mississippi River	10,076	337	320	159	70	-	1	154	11,127
Underground	1,747	318	153	151	55	-	-	113	2,537
Surface	8,329	19	167	8	15	-	1	41	8,590
U.S. Subtotal	26,370	3,733	5,778	2,646	1,301	1,370	422	3,704	45,443
Underground	16,642	3,144	3,228	1,470	501	498	108	2,386	28,026
Surface	9,728	589	2,550	1,176	800	872	314	1,318	17,417
Refuse Recovery	-	-	-	4	-	26	3	-	33
U.S. Total	26,370	3,733	5,778	2,650	1,301	1,396	425	3,704	45,476

- = No data reported.

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

² Includes all employees at preparation plants and tipplers 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, 2023

Coal-Producing State and Region ¹	Union		Nonunion	
	Underground	Surface	Underground	Surface
Alabama	1,810	-	90	306
Alaska	-	105	-	-
Colorado	173	142	733	244
Illinois	-	-	2,213	91
Indiana	-	-	1,484	994
Kentucky Total	-	-	3,332	1,070
Kentucky (East)	-	-	1,689	1,070
Kentucky (West)	-	-	1,643	-
Louisiana	-	-	-	35
Maryland	-	-	147	92
Mississippi	-	-	-	236
Missouri	-	-	-	8
Montana	-	406	266	261
New Mexico	-	354	-	244
North Dakota	-	169	-	1,006
Ohio	-	-	142	182
Pennsylvania Total	751	309	2,613	966
Pennsylvania (Anthracite)	-	309	43	580
Pennsylvania (Bituminous)	751	-	2,570	386
Tennessee	-	-	4	-
Texas	-	361	-	476
Utah	-	-	1,365	46
Virginia	71	1	1,539	729
West Virginia Total	2,469	36	8,184	2,766
West Virginia (Northern)	2,276	-	2,276	90
West Virginia (Southern)	193	36	5,908	2,676
Wyoming	-	442	-	4,280
Appalachia Total	5,101	346	14,408	6,111
Appalachia Central	264	37	9,140	4,475
Appalachia Northern	3,027	309	5,178	1,330
Appalachia Southern	1,810	-	90	306
Interior Region Total	-	361	5,340	1,840
Illinois Basin	-	-	5,340	1,085
Other Interior	-	361	-	755
Western Region Total	173	1,618	2,364	6,081
Powder River Basin	-	406	-	4,395
Uinta Basin	173	142	1,905	275
Other Western	-	1,070	459	1,411
East of Mississippi River	5,101	346	19,748	7,432
West of Mississippi River	173	1,979	2,364	6,600
U.S. Total	5,274	2,325	22,112	14,032

- = No data reported.

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

Notes: Includes all employees at preparation plants and tipples 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 50,000 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, 2023 and 2022

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		
	2023	2022	Percent Change	2023	2022	Percent Change	2023	2022	Percent Change
Alabama	28	28	-	2,259	2,098	7.7	2.06	1.85	11.2
Underground	11	10	10.0	1,914	1,678	14.1	2.14	1.98	8.2
Surface	17	18	-5.6	345	420	-17.9	1.42	1.28	10.9
Alaska	1	1	-	105	99	6.1	4.85	5.33	-9.1
Surface	1	1	-	105	99	6.1	4.85	5.33	-9.1
Colorado	10	11	-9.1	1,292	1,284	0.6	4.71	5.07	-7.0
Underground	6	6	-	906	914	-0.9	4.10	4.72	-13.1
Surface	4	5	-20.0	386	370	4.3	6.06	5.87	3.2
Illinois	22	21	4.8	2,315	2,162	7.1	7.17	7.79	-8.0
Underground	12	12	-	2,213	2,063	7.3	7.33	7.93	-7.6
Surface	10	9	11.1	102	99	3.0	3.50	4.52	-22.4
Indiana	20	17	17.6	2,490	2,275	9.5	4.07	4.34	-6.3
Underground	6	6	-	1,484	1,358	9.3	3.84	3.99	-3.7
Surface	14	11	27.3	1,006	917	9.7	4.42	4.91	-9.9
Kentucky Total	164	158	3.8	5,029	4,815	4.4	2.44	2.52	-3.1
Underground	72	68	5.9	3,706	3,591	3.2	2.50	2.60	-3.9
Surface	92	90	2.2	1,323	1,224	8.1	2.26	2.24	0.6
Kentucky (East)	157	152	3.3	3,386	3,231	4.8	1.65	1.64	0.5
Underground	65	62	4.8	2,063	2,007	2.8	1.25	1.30	-3.7
Surface	92	90	2.2	1,323	1,224	8.1	2.26	2.24	0.6
Kentucky (West)	7	6	16.7	1,643	1,584	3.7	3.86	4.13	-6.3
Underground	7	6	16.7	1,643	1,584	3.7	3.86	4.13	-6.3
Louisiana	1	1	-	35	35	-	4.05	4.30	-5.9
Surface	1	1	-	35	35	-	4.05	4.30	-5.9
Maryland	13	15	-13.3	279	274	1.8	2.18	2.46	-11.4
Underground	2	2	-	147	124	18.5	1.29	1.14	13.2
Surface	11	13	-15.4	132	150	-12.0	3.17	3.45	-8.1
Mississippi	1	1	-	236	231	2.2	5.50	6.97	-21.2
Surface	1	1	-	236	231	2.2	5.50	6.97	-21.2
Missouri	1	1	-	8	7	14.3	8.94	5.54	61.5
Surface	1	1	-	8	7	14.3	8.94	5.54	61.5
Montana	5	6	-16.7	933	954	-2.2	14.68	15.24	-3.7
Underground	1	1	-	266	230	15.7	11.78	15.31	-23.0
Surface	4	5	-20.0	667	724	-7.9	16.07	15.21	5.6
New Mexico	2	3	-33.3	598	772	-22.5	6.79	6.92	-1.8
Underground	-	1	-	-	183	-	-	4.43	-
Surface	2	2	-	598	589	1.5	6.79	7.69	-11.6
North Dakota	4	5	-20.0	1,175	1,186	-0.9	10.57	11.77	-10.2
Surface	4	5	-20.0	1,175	1,186	-0.9	10.57	11.77	-10.2
Ohio	14	14	-	335	413	-18.9	2.52	2.96	-15.1
Underground	5	5	-	142	233	-39.1	2.17	3.08	-29.5
Surface	9	9	-	193	180	7.2	2.77	2.85	-2.7
Oklahoma	1	1	-	1	1	-	1.96	1.63	19.9
Surface	1	1	-	1	1	-	1.96	1.63	19.9
Pennsylvania Total	165	158	4.4	4,825	4,492	7.4	4.01	4.14	-3.1
Underground	49	47	4.3	3,395	3,172	7.0	4.89	5.08	-3.8
Surface	116	111	4.5	1,430	1,320	8.3	1.75	1.70	3.2
Pennsylvania (Anthracite)	78	71	9.9	974	851	14.5	1.46	1.41	3.0
Underground	15	15	-	58	57	1.8	0.55	0.55	0.4
Surface	63	56	12.5	916	794	15.4	1.51	1.47	2.8
Pennsylvania (Bituminous)	87	87	-	3,851	3,641	5.8	4.59	4.71	-2.7
Underground	34	32	6.3	3,337	3,115	7.1	4.95	5.14	-3.9
Surface	53	55	-3.6	514	526	-2.3	2.15	2.02	6.3
Tennessee	1	2	-50.0	4	8	-50.0	-	0.3	-
Underground	1	1	-	4	4	-	-	-	-
Surface	-	1	-	-	4	-	-	0.6	-

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		
	2023	2022	Percent Change	2023	2022	Percent Change	2023	2022	Percent Change
Texas	4	4	-	837	904	-7.4	7.73	8.71	-11.2
Surface	4	4	-	837	904	-7.4	7.73	8.71	-11.2
Utah	13	13	-	1,421	1,398	1.6	2.45	3.66	-33.2
Underground	9	9	-	1,365	1,346	1.4	2.52	3.72	-32.4
Surface	4	4	-	56	52	7.7	0.64	2.52	-74.4
Virginia	70	65	7.7	2,530	2,325	8.8	1.83	2.01	-8.7
Underground	25	22	13.6	1,661	1,501	10.7	2.01	2.17	-7.4
Surface	45	43	4.7	869	824	5.5	1.49	1.71	-13.2
West Virginia Total	247	235	5.1	14,014	12,997	7.8	2.57	2.78	-7.5
Underground	112	111	0.9	10,823	10,219	5.9	2.65	2.89	-8.6
Surface	135	124	8.9	3,191	2,778	14.9	2.30	2.34	-1.8
West Virginia (Northern)	23	24	-4.2	4,648	4,427	5.0	4.04	4.53	-10.7
Underground	16	16	-	4,552	4,324	5.3	4.07	4.58	-11.0
Surface	7	8	-12.5	96	103	-6.8	2.25	2.22	1.1
West Virginia (Southern)	224	211	6.2	9,366	8,570	9.3	1.82	1.85	-1.6
Underground	96	95	1.1	6,271	5,895	6.4	1.58	1.63	-2.6
Surface	128	116	10.3	3,095	2,675	15.7	2.30	2.34	-1.9
Wyoming	15	16	-6.3	4,722	4,794	-1.5	24.94	25.53	-2.3
Surface	15	16	-6.3	4,722	4,794	-1.5	24.94	25.53	-2.3
Appalachia Total	695	669	3.9	27,632	25,838	6.9	2.58	2.70	-4.3
Underground	270	260	3.8	20,149	18,938	6.4	2.76	2.91	-5.2
Surface	425	409	3.9	7,483	6,900	8.4	2.09	2.10	-0.5
Appalachia Central	452	430	5.1	15,286	14,134	8.2	1.79	1.83	-2.3
Underground	187	180	3.9	9,999	9,407	6.3	1.59	1.64	-3.3
Surface	265	250	6.0	5,287	4,727	11.8	2.16	2.21	-2.0
Appalachia Northern	215	211	1.9	10,087	9,606	5.0	3.93	4.23	-7.2
Underground	72	70	2.9	8,236	7,853	4.9	4.32	4.69	-7.8
Surface	143	141	1.4	1,851	1,753	5.6	1.99	2.03	-1.7
Appalachia Southern	28	28	-	2,259	2,098	7.7	2.06	1.85	11.2
Underground	11	10	10.0	1,914	1,678	14.1	2.14	1.98	8.2
Surface	17	18	-5.6	345	420	-17.9	1.42	1.28	10.9
Interior Region Total	57	52	9.6	7,565	7,199	5.1	5.35	5.87	-8.8
Underground	25	24	4.2	5,340	5,005	6.7	5.21	5.56	-6.2
Surface	32	28	14.3	2,225	2,194	1.4	5.72	6.65	-14.0
Illinois Basin	49	44	11.4	6,448	6,021	7.1	5.07	5.45	-7.0
Underground	25	24	4.2	5,340	5,005	6.7	5.21	5.56	-6.2
Surface	24	20	20.0	1,108	1,016	9.1	4.34	4.88	-11.0
Other Interior	8	8	-	1,117	1,178	-5.2	7.16	8.23	-13.0
Surface	8	8	-	1,117	1,178	-5.2	7.16	8.23	-13.0
Western Region Total	50	55	-9.1	10,246	10,487	-2.3	15.46	16.04	-3.6
Underground	16	17	-5.9	2,537	2,673	-5.1	4.22	5.14	-17.8
Surface	34	38	-10.5	7,709	7,814	-1.3	19.24	19.84	-3.0
Powder River Basin	16	16	-	4,801	4,925	-2.5	25.92	26.19	-1.0
Surface	16	16	-	4,801	4,925	-2.5	25.92	26.19	-1.0
Uinta Basin	19	20	-5.0	2,505	2,428	3.2	3.62	4.48	-19.2
Underground	12	12	-	2,078	2,027	2.5	3.20	4.30	-25.6
Surface	7	8	-12.5	427	401	6.5	5.63	5.39	4.4
Other Western	15	19	-21.1	2,940	3,134	-6.2	8.36	8.98	-7.0
Underground	4	5	-20.0	459	646	-28.9	8.83	8.03	10.0
Surface	11	14	-21.4	2,481	2,488	-0.3	8.26	9.22	-10.4
East of Mississippi River	745	714	4.3	34,316	32,090	6.9	3.07	3.25	-5.6
Underground	295	284	3.9	25,489	23,943	6.5	3.27	3.47	-5.7
Surface	450	430	4.7	8,827	8,147	8.3	2.46	2.58	-4.5
West of Mississippi River	57	62	-8.1	11,127	11,434	-2.7	14.81	15.37	-3.6
Underground	16	17	-5.9	2,537	2,673	-5.1	4.22	5.14	-17.8
Surface	41	45	-8.9	8,590	8,761	-2.0	17.98	18.52	-2.9
U.S. Subtotal	802	776	3.4	45,443	43,524	4.4	5.66	6.11	-7.5
Underground	311	301	3.3	28,026	26,616	5.3	3.35	3.62	-7.5
Surface	491	475	3.4	17,417	16,908	3.0	9.70	10.39	-6.6

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		
	2023	2022	Percent Change	2023	2022	Percent Change	2023	2022	Percent Change
Refuse Recovery	17	17	-	33	58	-43.1	6.09	5.36	13.6
U.S. Total	819	793	3.3	45,476	43,582	4.3	5.66	6.11	-7.4

- = 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, 2023

(short tons produced per employee hour)

Coal-Producing State, Region ¹ and Mine Type	Continuous	Conventional and Other ²	Longwall	Total
Alabama	1.82	-	2.40	2.14
Colorado	3.42	-	4.44	4.10
Illinois	6.95	-	8.61	7.33
Indiana	4.10	-	-	3.84
Kentucky Total	2.99	0.5	-	2.58
Kentucky (East)	1.57	0.7	-	1.28
Kentucky (West)	4.23	-	-	3.86
Maryland	1.72	-	-	1.29
Montana	11.78	-	11.78	11.78
Ohio	2.56	-	-	2.17
Pennsylvania Total	3.17	0.12	6.17	4.91
Pennsylvania (Anthracite)	-	0.56	-	0.56
Pennsylvania (Bituminous)	3.17	-	6.17	4.96
Utah	1.62	-	3.75	2.52
Virginia	2.18	-	2.57	2.03
West Virginia Total	1.97	-	4.49	2.66
West Virginia (Northern)	2.77	-	4.49	4.07
West Virginia (Southern)	1.86	-	-	1.59
Appalachia Total	2.05	0.2	4.40	2.79
Appalachia Central	1.84	0.2	2.57	1.61
Appalachia Northern	2.91	0.5	5.08	4.33
Appalachia Southern	1.82	-	2.40	2.14
Interior Region Total	4.86	-	8.61	5.21
Illinois Basin	4.86	-	8.61	5.21
Western Region Total	2.42	-	5.56	4.22
Uinta Basin	2.05	-	4.10	3.20
Other Western	4.23	-	11.78	8.83
East of Mississippi River	2.85	0.2	4.87	3.30
West of Mississippi River	2.42	-	5.56	4.22
U.S. Total	2.82	0.2	4.96	3.38

- = 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 50,000 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, 2023

(short tons produced per employee hour)

Coal-Producing State and Region ¹	Contour Strip	Area	Open Pit	Mountaintop Mining	Other ²	Total
Alabama	1.67	-	0.93	-	0.91	1.42
Alaska	4.85	-	4.85	-	-	4.85
Colorado	5.18	-	4.42	-	7.00	6.06
Illinois	-	4.97	-	-	1.33	3.50
Indiana	6.50	2.64	4.67	-	4.94	4.42
Kentucky Total	2.30	3.54	-	-	1.84	2.26
Kentucky (East)	2.30	3.54	-	-	1.84	2.26
Kentucky (West)	-	-	-	-	-	-
Louisiana	-	4.05	-	-	-	4.05
Maryland	2.27	4.30	-	-	3.11	3.17
Mississippi	5.50	-	-	-	-	5.50
Missouri	8.94	-	-	-	-	8.94
Montana	20.84	11.19	-	-	s	16.07
New Mexico	7.04	-	6.62	-	-	6.79
North Dakota	10.24	-	12.70	-	-	10.57
Ohio	3.17	3.35	-	-	1.48	2.77
Oklahoma	-	-	-	-	1.96	1.96
Pennsylvania Total	2.32	-	2.61	-	0.74	1.75
Pennsylvania (Anthracite)	2.14	-	3.08	-	0.27	1.51
Pennsylvania (Bituminous)	2.84	-	2.18	-	1.81	2.15
Tennessee	-	-	-	-	-	-
Texas	1.84	11.55	5.42	-	-	7.73
Utah	-	-	1.64	-	0.20	0.64
Virginia	1.65	2.57	-	-	1.13	1.49
West Virginia Total	2.70	2.36	3.08	3.03	1.57	2.30
West Virginia (Northern)	5.68	-	-	-	0.96	2.25
West Virginia (Southern)	2.64	2.36	3.08	3.03	1.61	2.30
Wyoming	23.22	5.91	27.93	-	-	24.94
Appalachia Total	2.36	2.71	2.59	3.03	1.40	2.09
Appalachia Central	2.36	2.59	3.08	3.03	1.58	2.16
Appalachia Northern	2.66	3.76	2.61	-	0.90	1.99
Appalachia Southern	1.67	-	0.93	-	0.91	1.42
Interior Basin Total	4.45	8.25	4.90	-	4.07	5.72
Illinois Basin	6.50	3.27	4.67	-	4.08	4.34
Interior	4.32	10.95	5.42	-	1.96	7.16
Western Total	18.30	9.59	23.34	-	5.90	19.24
Powder River Basin	24.45	11.19	30.13	-	s	25.92
Uinta Region	5.18	-	4.42	-	6.16	5.63
Western	8.90	5.91	7.47	-	1.64	8.26
East of Mississippi River	2.62	2.80	3.68	3.03	1.55	2.46
West of Mississippi River	17.78	10.27	21.40	-	5.89	17.98
U.S. Total	11.13	5.69	15.74	3.03	1.88	9.70

- = 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 50,000 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, 2023

(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	2.63	0.67	1.46	2.31	1.16	2.07	0.51	2.06
Underground	2.63	0.67	-	1.69	-	1.98	-	2.14
Surface	-	-	1.46	7.71	1.16	2.23	0.51	1.42
Alaska	4.85	-	-	-	-	-	-	4.85
Surface	4.85	-	-	-	-	-	-	4.85
Colorado	4.86	5.15	-	-	0.66	-	-	4.71
Underground	4.44	3.46	-	-	0.66	-	-	4.10
Surface	5.71	11.73	-	-	-	-	-	6.06
Illinois	7.94	3.56	5.11	-	-	2.41	1.37	7.17
Underground	7.94	3.56	-	-	-	-	-	7.33
Surface	-	-	5.11	-	-	2.41	1.37	3.50
Indiana	4.26	6.50	4.44	2.31	1.40	3.80	-	4.07
Underground	4.10	-	-	-	-	-	-	3.84
Surface	4.61	6.50	4.44	2.31	1.40	3.80	-	4.42
Kentucky Total	3.97	2.69	2.27	1.97	1.54	1.33	0.61	2.44
Underground	3.97	1.90	1.45	1.41	1.40	1.01	0.44	2.50
Surface	-	3.49	3.84	2.59	1.66	1.69	0.78	2.26
Kentucky (East)	1.98	2.69	2.27	2.01	1.54	1.33	0.61	1.65
Underground	1.98	1.90	1.45	1.42	1.40	1.01	0.44	1.25
Surface	-	3.49	3.84	2.59	1.66	1.69	0.78	2.26
Kentucky (West)	4.31	-	-	1.37	-	-	-	3.86
Underground	4.31	-	-	1.37	-	-	-	3.86
Louisiana	-	-	4.05	-	-	-	-	4.05
Surface	-	-	4.05	-	-	-	-	4.05
Maryland	-	-	2.31	4.40	9.05	2.14	0.56	2.18
Underground	-	-	1.72	-	-	-	-	1.29
Surface	-	-	3.18	4.40	9.05	2.14	0.56	3.17
Mississippi	5.50	-	-	-	-	-	-	5.50
Surface	5.50	-	-	-	-	-	-	5.50
Missouri	-	-	-	8.94	-	-	-	8.94
Surface	-	-	-	8.94	-	-	-	8.94
Montana	14.80	-	-	-	-	-	-	14.68
Underground	11.78	-	-	-	-	-	-	11.78
Surface	16.27	-	-	-	-	-	-	16.07
New Mexico	6.79	-	-	-	-	-	-	6.79
Surface	6.79	-	-	-	-	-	-	6.79
North Dakota	10.57	-	-	-	-	-	-	10.57
Surface	10.57	-	-	-	-	-	-	10.57
Ohio	-	4.08	3.20	1.59	2.88	1.13	-	2.52
Underground	-	4.08	-	1.26	-	-	-	2.17
Surface	-	-	3.20	3.21	2.88	1.13	-	2.77
Oklahoma	-	-	-	-	-	-	1.96	1.96
Surface	-	-	-	-	-	-	1.96	1.96
Pennsylvania Total	6.13	3.69	2.76	2.68	1.76	1.93	0.82	4.01
Underground	6.13	3.69	2.37	2.39	-	1.59	0.32	4.89
Surface	-	-	3.32	3.10	1.76	1.96	0.99	1.75
Pennsylvania (Anthracite)	-	-	3.90	4.56	1.55	1.63	0.82	1.46
Underground	-	-	-	-	-	1.59	0.54	0.55
Surface	-	-	3.90	4.56	1.55	1.64	0.97	1.51
Pennsylvania (Bituminous)	6.13	3.69	2.44	2.44	2.17	2.28	0.82	4.59
Underground	6.13	3.69	2.37	2.39	-	-	0.12	4.95
Surface	-	-	2.66	2.55	2.17	2.28	1.01	2.15
Texas	8.74	-	1.84	-	-	-	-	7.73
Surface	8.74	-	1.84	-	-	-	-	7.73
Utah	3.74	1.69	1.25	0.43	1.64	-	-	2.45
Underground	3.74	1.69	1.25	0.43	-	-	-	2.52

Coal-Producing State, Region ¹ and Mine Type	Mine Production Range (thousand short tons)							Total ²
	Above 1,000	Above 500 to 1,000	Above 200 to 500	Above 100 to 200	Above 50 to 100	Above 10 to 50	10 or Under	
Surface	-	-	-	-	1.64	-	-	0.64
Virginia	2.58	-	1.57	1.84	2.00	1.25	1.12	1.83
Underground	2.58	-	1.59	1.37	1.59	0.66	0.65	2.01
Surface	-	-	1.57	2.08	2.11	1.41	1.46	1.49
West Virginia Total	3.99	2.03	1.87	2.16	1.70	1.16	1.00	2.57
Underground	4.02	1.83	1.63	1.42	1.12	1.04	0.49	2.65
Surface	3.66	2.92	2.29	2.88	3.25	1.21	1.03	2.30
West Virginia (Northern)	4.68	1.60	0.77	1.89	2.38	-	0.26	4.04
Underground	4.68	1.60	0.77	0.96	2.38	-	-	4.07
Surface	-	-	-	3.20	-	-	0.26	2.25
West Virginia (Southern)	2.55	2.07	1.99	2.21	1.68	1.16	1.14	1.82
Underground	2.13	1.86	1.79	1.52	1.06	1.04	0.49	1.58
Surface	3.66	2.92	2.29	2.84	3.25	1.21	1.18	2.30
Wyoming	24.94	-	-	-	-	-	-	24.94
Surface	24.94	-	-	-	-	-	-	24.94
Appalachia Total	4.03	2.04	2.07	2.16	1.68	1.37	0.79	2.58
Underground	4.05	1.84	1.71	1.60	1.26	1.04	0.42	2.76
Surface	3.66	3.04	2.55	2.75	1.93	1.53	0.91	2.09
Appalachia Central	2.51	2.13	1.99	2.07	1.65	1.24	0.87	1.79
Underground	2.30	1.86	1.69	1.46	1.23	0.99	0.49	1.59
Surface	3.66	3.04	2.42	2.59	2.13	1.39	1.07	2.16
Appalachia Northern	5.21	2.77	2.35	2.40	1.92	1.86	0.78	3.93
Underground	5.21	2.77	1.77	1.87	2.38	1.59	0.32	4.32
Surface	-	-	3.27	3.22	1.90	1.88	0.92	1.99
Appalachia Southern	2.63	0.67	1.46	2.31	1.16	2.07	0.51	2.06
Underground	2.63	0.67	-	1.69	-	1.98	-	2.14
Surface	-	-	1.46	7.71	1.16	2.23	0.51	1.42
Interior Region Total	5.86	4.61	3.74	2.38	1.40	2.87	1.42	5.35
Underground	5.66	3.56	-	1.37	-	-	-	5.21
Surface	6.50	6.50	3.74	3.04	1.40	2.87	1.42	5.72
Illinois Basin	5.53	4.61	4.61	1.92	1.40	2.87	1.37	5.07
Underground	5.66	3.56	-	1.37	-	-	-	5.21
Surface	4.61	6.50	4.61	2.31	1.40	2.87	1.37	4.34
Other Interior	7.95	-	2.32	8.94	-	-	1.96	7.16
Surface	7.95	-	2.32	8.94	-	-	1.96	7.16
Western Region Total	16.73	2.83	1.25	0.43	0.95	-	-	15.46
Underground	5.46	2.19	1.25	0.43	0.66	-	-	4.22
Surface	19.41	11.73	-	-	1.64	-	-	19.24
Powder River Basin	25.97	-	-	-	-	-	-	25.92
Surface	25.97	-	-	-	-	-	-	25.92
Uinta Basin	4.43	2.60	1.25	0.43	-	-	-	3.62
Underground	4.09	1.69	1.25	0.43	-	-	-	3.20
Surface	5.71	11.73	-	-	-	-	-	5.63
Other Western	8.73	3.46	-	-	0.95	-	-	8.36
Underground	11.78	3.46	-	-	0.66	-	-	8.83
Surface	8.32	-	-	-	1.64	-	-	8.26
East of Mississippi River	4.55	2.13	2.17	2.15	1.67	1.39	0.80	3.07
Underground	4.57	1.89	1.71	1.59	1.26	1.04	0.42	3.27
Surface	4.39	3.28	2.74	2.73	1.91	1.55	0.93	2.46
West of Mississippi River	16.13	2.83	1.78	0.77	0.95	-	1.96	14.81
Underground	5.46	2.19	1.25	0.43	0.66	-	-	4.22
Surface	18.44	11.73	2.32	8.94	1.64	-	1.96	17.98
U.S. Subtotal	8.52	2.19	2.15	2.06	1.64	1.39	0.80	5.66
Underground	4.65	1.91	1.69	1.46	1.20	1.04	0.42	3.35
Surface	16.17	3.54	2.72	2.77	1.91	1.55	0.93	9.70
Refuse Recovery	-	-	-	13.23	-	4.40	2.87	6.09
U.S. Total	8.52	2.19	2.15	2.08	1.64	1.44	0.81	5.66

- = 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, 2023

(short tons produced per employee hour)

Coal-Producing State and Region ¹	Union		Nonunion	
	Underground	Surface	Underground	Surface
Alabama	2.19	-	1.12	1.43
Alaska	-	4.85	-	-
Colorado	7.24	5.18	3.40	6.60
Illinois	-	-	7.33	3.58
Indiana	-	-	3.84	4.45
Kentucky Total	-	-	2.61	2.37
Kentucky (East)	-	-	1.31	2.37
Kentucky (West)	-	-	3.86	-
Louisiana	-	-	-	4.05
Maryland	-	-	1.29	3.39
Mississippi	-	-	-	5.50
Missouri	-	-	-	8.94
Montana	-	11.10	11.78	23.78
New Mexico	-	6.62	-	7.04
North Dakota	-	12.70	-	10.24
Ohio	-	-	2.17	2.82
Pennsylvania Total	3.50	1.89	5.33	1.72
Pennsylvania (Anthracite)	-	1.89	0.56	1.34
Pennsylvania (Bituminous)	3.50	-	5.39	2.19
Tennessee	-	-	-	-
Texas	-	11.55	-	4.44
Utah	-	-	2.52	0.82
Virginia	-	-	2.12	1.50
West Virginia Total	4.76	13.74	2.02	2.26
West Virginia (Northern)	5.15	-	3.01	2.35
West Virginia (Southern)	0.28	13.74	1.64	2.25
Wyoming	-	6.04	-	26.82
Appalachian Total	3.53	3.28	2.52	2.11
Appalachia Central	0.21	13.49	1.66	2.16
Appalachia Northern	4.76	1.89	4.08	2.05
Appalachia Southern	2.19	-	1.12	1.43
Interior Region Total	-	11.55	5.21	4.54
Illinois Basin	-	-	5.21	4.37
Other Interior	-	11.55	-	4.81
Western Region Total	7.24	7.94	4.02	22.23
Powder River Basin	-	11.10	-	27.28
Uinta Basin	7.24	5.18	2.86	6.10
Other Western	-	7.10	8.83	9.13
East of Mississippi River	3.53	3.28	3.25	2.53
West of Mississippi River	7.24	8.68	4.02	20.83
U.S. Total	3.62	7.85	3.32	10.45

- = 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 50,000 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, 2023 and 2022

(thousand short tons)

Census Division and State	2023				2022				Total		
	Electric Power ¹	Other Industrial	Coke	Commercial and Institutional	Electric Power ¹	Other Industrial	Coke	Commercial and Institutional	2023	2022	Percent Change
New England	136	-	-	-	212	-	-	-	136	212	-35.9
Connecticut	s	-	-	-	s	-	-	-	s	s	-
Maine	66	-	-	-	65	-	-	-	66	65	1.1
New Hampshire	70	-	-	-	147	-	-	-	70	147	-52.4
Rhode Island	s	-	-	-	s	-	-	-	s	s	-
Middle Atlantic	9,847	579	5,066	2	14,990	703	5,427	3	15,494	21,122	-26.7
New Jersey	s	-	-	-	242	-	-	-	s	242	-100.0
New York	s	191	-	-	s	241	-	-	191	241	-21.1
Pennsylvania	9,847	389	5,066	2	14,748	461	5,427	3	15,304	20,639	-25.9
East North Central	74,272	3,848	9,469	93	101,588	4,241	9,033	130	87,682	114,992	-23.8
Illinois	15,801	1,721	952	70	24,351	1,866	987	74	18,545	27,278	-32.0
Indiana	21,125	1,133	4,087	24	26,833	1,229	3,733	57	26,369	31,851	-17.2
Michigan	12,792	327	1,397	-	19,861	313	1,428	-	14,516	21,602	-32.8
Ohio	12,788	340	3,032	-	18,087	376	2,885	-	16,160	21,348	-24.3
Wisconsin	11,766	326	-	-	12,456	456	-	-	12,092	12,912	-6.4
West North Central	82,332	9,551	-	31	98,522	11,299	-	131	91,914	109,952	-16.4
Iowa	9,297	2,128	-	16	10,550	2,362	-	91	11,441	13,003	-12.0
Kansas	10,482	117	-	-	13,053	86	-	-	10,599	13,139	-19.3
Minnesota	7,483	913	-	2	9,594	880	-	4	8,399	10,478	-19.8
Missouri	24,119	757	-	3	31,083	845	-	12	24,879	31,940	-22.1
Nebraska	10,702	672	-	-	11,929	972	-	-	11,373	12,902	-11.9
North Dakota	19,161	4,696	-	10	21,065	5,891	-	24	23,867	26,979	-11.5
South Dakota	1,088	268	-	-	1,249	263	-	-	1,355	1,511	-10.3
South Atlantic	46,950	1,418	832	42	53,138	1,969	983	45	49,243	56,136	-12.3
Delaware	13	-	-	-	70	-	-	-	13	70	-81.0
District of Columbia	-	-	-	s	-	-	-	s	s	s	-
Florida	5,451	99	-	-	7,153	188	-	-	5,550	7,341	-24.4
Georgia	8,616	177	-	-	8,858	261	-	-	8,794	9,119	-3.6
Maryland	902	372	-	-	2,119	425	-	-	1,274	2,545	-49.9
North Carolina	5,897	186	-	33	6,029	375	-	37	6,115	6,440	-5.0
South Carolina	6,529	72	-	-	6,081	93	-	-	6,601	6,174	6.9
Virginia	775	277	832	9	1,652	367	830	9	1,894	2,858	-33.7
West Virginia	18,766	234	-	-	21,176	261	153	-	19,001	21,589	-12.0
East South Central	43,991	2,301	481	s	50,510	2,590	566	1	46,773	53,667	-12.9
Alabama	10,966	425	481	-	14,635	655	566	-	11,872	15,856	-25.1
Kentucky	20,801	680	-	s	22,589	801	-	1	21,481	23,391	-8.2
Mississippi	3,888	79	-	-	4,915	69	-	-	3,967	4,984	-20.4
Tennessee	8,336	1,117	-	-	8,371	1,065	-	-	9,453	9,436	0.2
West South Central	67,409	775	-	-	82,144	947	-	-	68,183	83,091	-17.9
Arkansas	10,089	139	-	-	11,926	141	-	-	10,227	12,067	-15.3
Louisiana	3,098	278	-	-	5,296	332	-	-	3,377	5,628	-40.0
Oklahoma	3,516	156	-	-	5,854	201	-	-	3,671	6,055	-39.4
Texas	50,706	202	-	-	59,068	273	-	-	50,908	59,340	-14.2
Mountain	58,752	2,320	-	1	68,185	2,695	-	11	61,074	70,890	-13.9
Arizona	7,301	239	-	-	8,152	260	-	-	7,541	8,412	-10.4
Colorado	10,964	127	-	s	12,275	153	-	s	11,091	12,428	-10.8
Idaho	-	49	-	-	-	76	-	-	49	76	-36.3
Montana	7,368	177	-	s	7,395	250	-	2	7,545	7,647	-1.3
Nevada	1,300	191	-	-	1,577	212	-	-	1,491	1,789	-16.7
New Mexico	4,033	62	-	-	7,370	62	-	-	4,094	7,432	-44.9
Utah	7,867	308	-	-	10,571	318	-	-	8,175	10,889	-24.9
Wyoming	19,918	1,169	-	1	20,844	1,364	-	9	21,088	22,217	-5.1
Pacific	3,517	1,381	-	498	3,544	1,448	-	478	5,396	5,471	-1.4
Alaska	722	1	-	498	760	1	-	478	1,221	1,239	-1.5
California	s	1,277	-	-	s	1,322	-	-	1,277	1,322	-3.4

Census Division and State	2023				2022				Total		
	Electric Power ¹	Other Industrial	Coke	Commercial and Institutional	Electric Power ¹	Other Industrial	Coke	Commercial and Institutional	2023	2022	Percent Change
Hawaii	-	-	-	-	380	-	-	-	-	380	-
Oregon	-	28	-	-	-	48	-	-	28	48	-41.6
Washington	2,795	75	-	-	2,405	78	-	-	2,870	2,482	15.6
U.S. Total	387,205	22,173	15,849	668	472,834	25,891	16,009	800	425,895	515,534	-17.4

- = 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, 2023 and 2022

(thousand short tons)

Census Division and State	2023					2022					Total		
	Electric Power ¹	Other Industrial	Commercial and Institutional		Producer and Distributor ²	Electric Power ¹	Other Industrial	Commercial and Institutional		Producer and Distributor ²	2023	2022	Percent Change
			Coke					Coke					
New England	w	-	-	-	-	w	-	-	-	-	w	w	-5.8
Connecticut	s	-	-	-	-	s	-	-	-	-	s	s	-
Maine	s	-	-	-	-	s	-	-	-	-	s	s	-
New Hampshire	w	-	-	-	-	w	-	-	-	-	w	w	-5.8
Rhode Island	s	-	-	-	-	s	-	-	-	-	s	s	-
Middle Atlantic	2,977	220	442	20	1,655	2,845	206	496	20	1,908	5,314	5,476	-3.0
New Jersey	s	-	-	-	-	s	-	-	-	-	s	s	-
New York	s	42	-	-	s	s	56	-	-	40	42	96	-56.0
Pennsylvania	2,977	178	442	20	1,655	2,845	150	496	20	1,868	5,272	5,380	-2.0
East North Central	27,100	516	895	22	2,860	17,206	472	932	24	1,956	31,391	20,590	52.5
Illinois	5,591	61	116	19	1,073	2,990	48	157	21	818	6,861	4,034	70.1
Indiana	9,574	177	239	2	1,402	6,728	217	211	3	785	11,394	7,944	43.4
Michigan	3,730	180	325	-	113	3,109	106	304	-	63	4,347	3,582	21.4
Ohio	4,122	21	215	-	41	1,728	20	259	-	76	4,398	2,084	111.1
Wisconsin	4,083	76	-	-	232	2,652	80	-	-	213	4,391	2,945	49.1
West North Central	27,153	546	-	27	1,537	17,704	528	-	17	1,512	29,263	19,761	48.1
Iowa	5,094	136	-	11	14	3,584	141	-	5	22	5,256	3,753	40.1
Kansas	5,151	15	-	-	-	3,254	11	-	-	-	5,165	3,265	58.2
Minnesota	2,879	44	-	5	22	2,283	24	-	6	18	2,951	2,331	26.6
Missouri	8,458	114	-	1	-	4,406	77	-	1	-	8,573	4,483	91.2
Nebraska	3,556	8	-	-	-	2,555	35	-	-	-	3,564	2,590	37.6
North Dakota	w	190	-	9	1,500	w	202	-	5	1,472	w	w	13.5
South Dakota	w	39	-	-	-	w	37	-	-	-	w	w	6.4
South Atlantic	21,432	324	65	46	10,056	14,743	310	71	40	6,101	31,924	21,265	50.1
Delaware	w	-	-	-	-	w	-	-	-	-	w	w	55.4
District of Columbia	-	-	-	3	-	-	-	-	3	-	3	3	s
Florida	1,996	34	-	-	-	1,385	43	-	-	-	2,030	1,428	42.2
Georgia	w	59	-	-	-	w	45	-	-	-	w	w	73.1
Maryland	799	16	-	-	349	567	33	-	-	309	1,164	909	28.1
North Carolina	3,654	89	-	31	-	3,591	81	-	30	-	3,774	3,702	1.9
South Carolina	2,578	46	-	-	-	w	37	-	-	-	2,624	w	w
Virginia	w	62	65	12	2,057	w	48	58	8	1,655	w	w	24.5
West Virginia	6,894	18	-	-	7,649	4,334	23	13	-	4,136	14,561	8,506	71.2
East South Central	13,032	256	150	4	2,193	9,197	242	128	4	1,903	15,634	11,473	36.3
Alabama	4,180	82	150	-	630	w	63	128	-	583	5,042	w	w
Kentucky	6,731	63	-	4	810	5,070	62	-	4	333	7,608	5,468	39.1
Mississippi	w	6	-	-	752	w	5	-	-	988	w	w	3.9
Tennessee	w	105	-	-	-	2,124	112	-	-	-	w	2,236	w
West South Central	26,728	445	-	-	2,258	15,756	236	-	-	2,676	29,431	18,669	57.7
Arkansas	4,679	26	-	-	-	3,564	26	-	-	-	4,706	3,590	31.1
Louisiana	3,563	3	-	-	1,024	1,835	2	-	-	1,038	4,590	2,875	59.7
Oklahoma	5,042	243	-	-	-	2,446	110	-	-	-	5,285	2,557	106.7
Texas	13,444	172	-	-	1,234	7,912	98	-	-	1,638	14,850	9,648	53.9
Mountain	w	414	-	3	4,113	w	378	-	2	4,561	w	w	20.0
Arizona	3,585	54	-	-	-	2,387	16	-	-	-	3,639	2,403	51.4
Colorado	3,566	28	-	s	803	1,903	18	-	s	1,181	4,397	3,102	41.8
Idaho	-	104	-	-	-	-	140	-	-	-	104	140	-25.8
Montana	w	55	-	3	523	w	24	-	2	921	w	w	-19.9
Nevada	w	32	-	-	-	w	45	-	-	-	w	w	42.6
New Mexico	s	4	-	-	1,377	s	2	-	-	1,037	1,381	1,039	32.9
Utah	2,438	50	-	-	813	2,512	52	-	-	641	3,300	3,205	3.0
Wyoming	w	86	-	s	598	2,968	80	-	s	782	w	3,830	w
Pacific	718	142	-	28	204	727	127	-	59	203	1,093	1,116	-2.1
Alaska	w	-	-	28	204	w	-	-	59	203	w	w	1.0
California	s	110	-	-	-	s	107	-	-	-	110	107	3.1
Hawaii	-	-	-	-	-	s	-	-	-	-	-	s	-

Census Division and State	2023					2022					Total		
	Electric Power ¹	Other Industrial	Coke	Commercial and Institutional	Producer and Distributor ²	Electric Power ¹	Other Industrial	Coke	Commercial and Institutional	Producer and Distributor ²	2023	2022	Percent Change
Oregon	-	29	-	-	-	-	16	-	-	-	29	16	81.7
Washington	w	3	-	-	-	w	4	-	-	-	w	w	-6.8
U.S. Total	133,725	2,863	1,551	149	24,874	89,220	2,499	1,627	167	20,820	163,163	114,332	42.7

- = No data reported.

w = Data withheld to avoid disclosure.

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

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

2 Excludes stocks in transit or held outside of the United States.

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, 2023 and 2022

(dollars per short ton)

Coal-Producing State	2023			2022			Percent Change		
	Underground	Surface	Total	Underground	Surface	Total	Underground	Surface	Total
Alabama	211.26	104.03	201.95	284.75	155.86	269.00	-25.8	-33.3	-24.9
Alaska	-	w	w	-	w	w	-	w	w
Colorado	61.00	56.28	59.12	77.33	41.43	65.00	-21.1	35.8	-9.1
Illinois	w	w	48.06	w	w	35.96	w	w	33.7
Indiana	59.52	59.51	59.51	52.83	61.65	56.67	12.7	-3.5	5.0
Kentucky Total	71.22	96.47	76.87	73.19	97.37	78.22	-2.7	-0.9	-1.7
Kentucky (East)	119.01	96.47	106.96	w	w	116.66	w	w	-8.3
Kentucky (West)	55.22	-	55.22	w	-	w	w	-	w
Louisiana	-	w	w	-	w	w	-	w	w
Maryland	w	w	101.89	w	w	75.71	w	w	34.6
Mississippi	-	w	w	-	w	w	-	w	w
Missouri	-	w	w	-	w	w	-	w	w
Montana	w	w	46.56	w	w	43.29	w	w	7.6
New Mexico	-	w	w	w	w	44.07	w	w	w
North Dakota	-	23.33	23.33	-	20.61	20.61	-	13.2	13.2
Ohio	w	w	66.00	w	w	52.95	w	w	24.7
Pennsylvania Total	84.78	148.86	91.71	89.43	141.11	94.69	-5.2	5.5	-3.2
Pennsylvania (Anthracite)	w	w	165.88	w	w	155.03	w	w	7.0
Pennsylvania (Bituminous)	w	w	87.01	w	w	91.51	w	w	-4.9
Texas	-	18.76	18.76	-	22.01	22.01	-	-14.8	-14.8
Utah	w	w	45.01	w	w	47.85	w	w	-5.9
Virginia	178.47	151.55	171.62	220.91	189.06	211.57	-19.2	-19.8	-18.9
West Virginia Total	116.34	135.52	120.08	121.73	154.31	127.52	-4.4	-12.2	-5.8
West Virginia (Northern)	w	w	88.86	85.27	79.83	85.21	w	w	4.3
West Virginia (Southern)	w	w	155.61	200.06	156.86	182.92	w	w	-14.9
Wyoming	-	15.24	15.24	-	14.84	14.84	-	2.7	2.7
U.S. Total	94.82	29.26	54.04	96.47	29.20	54.46	-1.7	0.2	-0.8

- = 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 50,000 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, 2023

(dollars per short ton)

Coal-Producing State	Continuous	Conventional and Other ¹	Longwall	Total
Alabama	204.04	-	213.51	211.26
Colorado	w	-	w	61.00
Illinois	45.56	-	49.61	w
Indiana	59.52	-	-	59.52
Kentucky Total	w	w	-	71.22
Kentucky (East)	w	w	-	119.01
Kentucky (West)	w	-	-	55.22
Maryland	w	-	-	w
Montana	w	-	w	w
Ohio	w	-	-	w
Pennsylvania Total	w	w	74.03	84.78
Pennsylvania (Anthracite)	-	w	-	w
Pennsylvania (Bituminous)	125.22	-	74.03	w
Utah	w	-	w	w
Virginia	w	-	w	178.47
West Virginia Total	157.29	-	87.16	116.34
West Virginia (Northern)	105.77	-	87.16	w
West Virginia (Southern)	167.84	-	-	w
U.S. Total	w	w	88.21	94.82

- = 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 50,000 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, 2023

(dollars per short ton)

Coal-Producing State	Contour Strip	Area	Open Pit	Mountaintop Mining	Other ¹	Total
Alabama	100.50	-	w	-	w	104.03
Alaska	w	-	w	-	-	w
Colorado	w	-	w	-	55.39	56.28
Illinois	-	w	-	-	w	w
Indiana	w	81.78	w	-	76.33	59.51
Kentucky Total	114.66	73.96	-	-	84.97	96.47
Kentucky (East)	114.66	73.96	-	-	84.97	96.47
Louisiana	-	w	-	-	-	w
Maryland	w	w	-	-	w	w
Mississippi	w	-	-	-	-	w
Missouri	w	-	-	-	-	w
Montana	w	w	-	-	-	w
New Mexico	w	-	w	-	-	w
North Dakota	w	-	w	-	-	23.33
Ohio	w	w	-	-	w	w
Oklahoma	-	-	-	-	-	-
Pennsylvania Total	144.73	-	155.04	-	128.94	148.86
Pennsylvania (Anthracite)	w	-	158.47	-	w	w
Pennsylvania (Bituminous)	w	-	151.72	-	w	w
Texas	w	w	w	-	-	18.76
Utah	-	-	w	-	w	w
Virginia	w	w	-	-	145.34	151.55
West Virginia Total	139.76	159.57	w	w	131.01	135.52
West Virginia (Northern)	w	-	-	-	w	w
West Virginia (Southern)	w	159.57	w	w	w	w
Wyoming	w	w	14.24	-	-	15.24
U.S. Total	w	49.89	21.52	w	93.15	29.26

- = 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 50,000 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, 2023

Coal-Producing State and County	Number of Mines	Sales (thousand short tons)	Average Sales Price (dollars per short ton)
Alabama	13	13,139	201.95
Jefferson	6	8,811	257.02
Tuscaloosa	4	w	w
Walker	3	w	w
Alaska	1	w	w
Denali	1	w	w
Colorado	9	12,617	59.12
Gunnison	1	w	w
La Plata	1	w	w
Las Animas	1	w	w
Moffat	4	5,042	56.28
Rio Blanco	1	w	w
Routt	1	w	w
Illinois	11	36,487	48.06
Franklin	1	w	w
Hamilton	1	w	w
Montgomery	1	w	w
Perry	2	w	w
Randolph	1	w	w
Saline	1	w	w
Sangamon	1	w	w
Wabash	1	w	w
Washington	1	w	w
Williamson	1	w	w
Indiana	16	23,288	59.51
Daviess	1	w	w
Gibson	3	w	w
Knox	3	w	w
Pike	3	w	w
Spencer	1	w	w
Sullivan	1	w	w
Warrick	4	2,645	57.50
Kentucky	61	27,213	76.87
Bell	7	708	111.61
Breathitt	1	w	w
Floyd	3	w	w
Harlan	11	2,020	82.41
Hopkins	1	w	w
Jackson	1	w	w
Johnson	1	w	w
Knott	1	w	w
Leslie	2	w	w
Letcher	8	1,702	78.23
Martin	1	w	w
Morgan	1	w	w
Muhlenberg	1	w	w
Perry	5	1,890	114.16
Pike	12	2,727	128.49
Union	2	w	w
Whitley	3	w	w
Louisiana	1	w	w
Natchitoches	1	w	w
Maryland	6	1,158	101.89
Allegany	5	768	65.11
Garrett	1	w	w
Mississippi	1	w	w
Choctaw	1	w	w
Missouri	1	w	w

Coal-Producing State and County	Number of Mines	Sales (thousand short tons)	Average Sales Price (dollars per short ton)
Bates	1	w	w
Montana	4	29,075	46.56
Big Horn	2	w	w
Musselshell	1	w	w
Rosebud	1	w	w
New Mexico	2	w	w
Mckinley	1	w	w
San Juan	1	w	w
North Dakota	4	24,028	23.33
Mclean	1	w	w
Mercer	2	w	w
Oliver	1	w	w
Ohio	8	1,916	66.00
Athens	1	w	w
Belmont	1	w	w
Harrison	4	1,033	74.98
Noble	1	w	w
Tuscarawas	1	w	w
Pennsylvania	67	41,949	91.71
Armstrong	2	w	w
Cambria	4	1,095	140.07
Carbon	1	w	w
Clearfield	6	1,025	166.55
Columbia	1	w	w
Fulton	1	w	w
Greene	3	w	w
Indiana	7	2,271	133.17
Jefferson	1	w	w
Luzerne	5	134	179.13
Lycoming	1	w	w
Northumberland	8	310	103.07
Schuylkill	15	1,661	169.71
Somerset	10	1,781	125.16
Washington	1	w	w
Westmoreland	1	w	w
Texas	4	14,100	18.76
Atascosa	1	w	w
Harrison	1	w	w
Limestone	1	w	w
Robertson	1	w	w
Utah	6	6,869	45.01
Carbon	1	w	w
Emery	3	w	w
Kane	1	w	w
Sevier	1	w	w
Virginia	21	10,180	171.62
Buchanan	5	w	w
Dickenson	7	3,833	175.57
Tazewell	6	788	130.05
Wise	3	w	w
West Virginia	114	82,246	120.08
Barbour	2	w	w
Boone	9	2,569	127.25
Clay	1	w	w
Fayette	7	3,376	162.81
Grant	1	w	w
Greenbrier	1	w	w
Kanawha	7	3,401	112.77
Logan	19	8,808	154.96
Marion	2	w	w
Marshall	2	w	w
Mcdowell	13	2,176	171.15

Coal-Producing State and County	Number of Mines	Sales (thousand short tons)	Average Sales Price (dollars per short ton)
Mercer	3	w	w
Mingo	10	3,402	101.11
Nicholas	4	972	181.28
Ohio	1	w	w
Raleigh	11	6,478	182.50
Randolph	2	w	w
Taylor	1	w	w
Tucker	1	w	w
Webster	1	w	w
Wetzel	1	w	w
Wyoming	15	6,658	177.06
Wyoming	15	237,250	15.24
Campbell	11	211,247	13.85
Converse	1	w	w
Lincoln	1	w	w
Sweetwater	2	w	w
U.S. Total	365	573,690	54.04

- = 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 50,000 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, 2023

(dollars per short ton)

Coal-Producing State	Bituminous	Subbituminous	Lignite	Anthracite	Total
Alabama	201.95	-	-	-	201.95
Alaska	-	w	-	-	w
Colorado	61.00	56.28	-	-	59.12
Illinois	48.06	-	-	-	48.06
Indiana	59.51	-	-	-	59.51
Kentucky Total	76.87	-	-	-	76.87
Kentucky (East)	106.96	-	-	-	106.96
Kentucky (West)	55.22	-	-	-	55.22
Louisiana	-	-	w	-	w
Maryland	101.89	-	-	-	101.89
Mississippi	-	-	w	-	w
Missouri	w	-	-	-	w
Montana	w	w	-	-	46.56
New Mexico	-	w	-	-	w
North Dakota	-	-	23.33	-	23.33
Ohio	66.00	-	-	-	66.00
Pennsylvania Total	87.01	-	-	165.88	91.71
Pennsylvania (Anthracite)	-	-	-	165.88	165.88
Pennsylvania (Bituminous)	87.01	-	-	-	87.01
Texas	-	-	18.76	-	18.76
Utah	45.01	-	-	-	45.01
Virginia	171.62	-	-	-	171.62
West Virginia Total	120.08	-	-	-	120.08
West Virginia (Northern)	88.86	-	-	-	88.86
West Virginia (Southern)	155.61	-	-	-	155.61
Wyoming	w	w	-	-	15.24
U.S. Total	96.23	17.56	22.25	165.88	54.04

- = 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 50,000 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, 2023

(dollars per short ton)

Mine Production Range (thousand short tons)	Underground	Surface	Total
Over 1,000	85.09	20.60	43.96
Over 500 to 1,000	145.89	97.32	133.18
Over 200 to 500	153.05	110.80	129.07
Over 100 to 200	143.93	121.57	129.74
Over 50 to 100	156.72	126.01	134.57
50 or Under	95.99	108.30	106.95
U.S. Total	94.82	29.26	54.04

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 50,000 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, 2023

(dollars per short ton)

Coal-Producing State	Open Market ¹	Captive ²	Total ³
Alabama	150.42	-	201.95
Alaska	w	-	w
Colorado	w	w	59.12
Illinois	w	w	48.06
Indiana	69.10	52.90	59.51
Kentucky Total	69.49	333.58	76.87
Kentucky (East)	w	w	106.96
Kentucky (West)	55.50	-	55.22
Louisiana	w	-	w
Maryland	97.04	-	101.89
Mississippi	w	-	w
Missouri	w	-	w
Montana	w	w	46.56
New Mexico	w	w	w
North Dakota	23.33	-	23.33
Ohio	63.74	-	66.00
Pennsylvania Total	w	w	91.71
Pennsylvania (Anthracite)	w	w	165.88
Pennsylvania (Bituminous)	w	w	87.01
Texas	w	w	18.76
Utah	57.64	-	45.01
Virginia	w	w	171.62
West Virginia Total	w	w	120.08
West Virginia (Northern)	w	w	88.86
West Virginia (Southern)	w	w	155.61
Wyoming	14.96	15.57	15.24
U.S. Total	44.17	27.69	54.04

- = 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 50,000 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, 2014-2023

(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
2020	91.93	27.68	71.07	18.83	119.21	28.43	110.64	24.93
2021	91.50	27.97	137.40	18.57	180.41	34.44	151.97	25.85
2022	153.68	33.66	168.60	26.26	307.48	74.23	262.72	34.57
2023	170.47	37.51	208.80	26.99	225.34	71.01	212.30	37.60

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 50,000 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, 2023 and 2022

(dollars per short ton)

Census Division and State	2023				2022				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	264.38	-	-	-	229.89	-	-	-	15.00	-	-	-
Connecticut	-	-	-	-	-	-	-	-	-	-	-	-
Maine	w	-	-	-	w	-	-	-	24.11	-	-	-
New Hampshire	w	-	-	-	w	-	-	-	14.12	-	-	-
Rhode Island	-	-	-	-	-	-	-	-	-	-	-	-
Middle Atlantic	35.91	128.78	w	w	59.83	103.11	w	w	-39.98	24.90	10.14	78.08
New Jersey	-	-	-	-	w	-	-	-	w	-	-	-
New York	-	w	-	-	-	w	-	-	-	11.82	-	-
Pennsylvania	35.91	140.25	w	w	w	109.10	w	w	w	28.55	10.14	78.08
East North Central	51.87	107.33	227.42	63.33	45.68	82.93	211.51	59.64	13.55	29.42	7.52	6.19
Illinois	w	w	w	58.09	w	w	w	49.31	-2.45	6.72	6.21	17.81
Indiana	w	193.31	w	w	w	129.93	w	w	10.96	48.78	9.95	9.43
Michigan	w	131.65	w	-	w	116.35	w	-	7.15	13.15	0.87	-
Ohio	w	158.31	w	-	w	127.09	w	-	48.84	24.57	6.58	-
Wisconsin	44.86	99.59	-	-	43.89	91.69	-	-	2.21	8.62	-	-
West North Central	30.37	35.37	-	104.77	30.17	31.17	-	86.07	0.66	13.47	-	21.73
Iowa	31.05	32.18	-	w	31.67	32.90	-	91.66	-1.96	-2.19	-	w
Kansas	29.40	w	-	-	32.43	w	-	-	-9.34	2.28	-	-
Minnesota	42.56	55.44	-	w	41.20	54.18	-	w	3.30	2.33	-	12.95
Missouri	33.90	81.86	-	w	33.99	62.41	-	w	s	31.16	-	-0.6
Nebraska	22.86	w	-	-	22.06	w	-	-	3.63	-5.54	-	-
North Dakota	24.44	w	-	w	21.87	w	-	w	11.75	14.47	-	10.31
South Dakota	37.17	w	-	-	34.29	w	-	-	8.40	-9.68	-	-
South Atlantic	84.02	169.83	w	198.86	74.19	144.95	w	w	13.25	17.16	2.61	w
Delaware	w	-	-	-	w	-	-	-	-10.96	-	-	-
District of Columbia	-	-	-	-	-	-	-	-	-	-	-	-
Florida	79.21	w	-	-	85.37	183.56	-	-	-7.22	w	-	-
Georgia	90.07	w	-	-	76.28	196.69	-	-	18.08	w	-	-
Maryland	w	w	-	-	w	w	-	-	-27.73	-0.57	-	-
North Carolina	117.24	187.07	-	w	90.04	149.70	-	w	30.21	24.96	-	-6.13
South Carolina	w	199.21	-	-	w	142.14	-	-	0.79	40.15	-	-
Virginia	106.86	163.66	w	w	68.05	130.79	w	w	57.03	25.13	-0.90	27.08
West Virginia	w	w	-	-	w	w	w	-	23.12	25.84	w	-
East South Central	w	154.03	w	-	w	128.77	w	w	3.50	19.62	1.70	w
Alabama	55.53	175.54	w	-	51.01	130.55	w	-	8.86	34.46	1.70	-
Kentucky	55.27	155.96	-	-	52.76	133.56	-	w	4.76	16.77	-	w
Mississippi	w	w	-	-	w	w	-	-	-5.60	3.01	-	-
Tennessee	76.95	134.56	-	-	77.50	114.59	-	-	-0.71	17.43	-	-
West South Central	35.60	108.23	-	-	35.76	87.41	-	-	s	23.82	-	-
Arkansas	w	w	-	-	w	w	-	-	-3.60	16.84	-	-
Louisiana	w	w	-	-	w	w	-	-	13.80	15.25	-	-
Oklahoma	39.37	130.94	-	-	45.46	114.02	-	-	-13.40	14.84	-	-
Texas	w	128.63	-	-	w	103.74	-	-	s	23.99	-	-
Mountain	42.50	78.58	-	w	39.55	68.78	-	w	7.46	14.25	-	29.92
Arizona	55.08	w	-	-	51.56	w	-	-	6.83	12.38	-	-
Colorado	38.89	w	-	w	35.46	w	-	-	9.67	14.20	-	w
Idaho	-	102.79	-	-	-	176.97	-	-	-	-41.92	-	-
Montana	w	68.02	-	w	w	53.08	-	w	10.15	28.15	-	3.70
Nevada	w	114.50	-	-	w	95.92	-	-	32.35	19.37	-	-
New Mexico	65.32	w	-	-	54.31	w	-	-	20.27	21.18	-	-
Utah	53.60	88.13	-	-	47.77	59.63	-	-	12.20	47.79	-	-
Wyoming	w	58.48	-	w	w	56.25	-	w	13.31	3.96	-	55.99
Pacific	w	113.79	-	w	49.18	90.69	-	88.72	w	25.47	-	w
Alaska	67.40	-	-	w	56.51	-	-	88.72	19.27	-	-	w
California	-	114.84	-	-	-	91.34	-	-	-	25.73	-	-

Census Division and State	2023				2022				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
Hawaii	-	-	-	-	w	-	-	-	w	-	-	-
Oregon	-	w	-	-	-	w	-	-	-	23.92	-	-
Washington	w	w	-	-	w	w	-	-	4.60	18.40	-	-
U.S. Total	46.97	83.39	211.60	95.76	44.51	69.77	195.61	89.85	5.53	19.52	8.17	6.58

- = 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, 2000-2023

(Short Tons)

Year	Europe																South Africa	Other	Total
	Australia	New Zealand	Canada	Mexico	Colombia	Venezuela	China	India	Indonesia	Norway	Poland	Russia	Ukraine	United Kingdom	Other	Total			
2000	167,595	-	1,923,434	6,671	7,636,614	2,038,774	19,646	205	718,149	-	-	1,212	-	238	-	1,450	-	85	12,512,623
2001	315,870	24,178	2,571,415	8,325	11,176,191	3,335,258	109,877	1,169	882,455	15,933	514,166	219,077	-	75,704	12	824,892	440,408	97,273	19,787,299
2002	821,280	-	2,110,688	41,832	9,205,161	3,349,883	62,185	2,055	962,474	-	121,660	87,586	-	277	121	209,644	77,314	33,034	16,875,429
2003	330,337	53,484	2,099,087	-	15,479,019	4,624,916	149,904	2,000	2,104,731	-	-	68,560	-	717	152	69,429	78,264	52,951	25,043,970
2004	295,526	-	2,877,616	309	16,661,238	4,435,630	147,136	443	2,180,899	-	74,609	263,776	104,861	44,285	147,172	634,703	33,795	159,881	27,280,004
2005	230,997	42,136	2,017,435	1,343	21,215,089	3,734,056	20,094	-	2,467,977	-	76,937	393,592	34,728	839	51,994	558,090	77,044	148,082	30,460,349
2006	245,184	-	2,048,224	-	25,340,602	4,197,636	43,491	-	3,146,627	36,806	-	940,685	-	1,069	159,874	1,138,434	61,649	184,003	36,245,976
2007	65,726	51,070	1,967,271	-	26,863,901	3,425,108	50,257	214	3,663,107	35,557	-	134,591	37,527	1,870	32	209,577	-	50,648	36,346,847
2008	149,344	-	2,027,148	-	26,261,802	2,311,865	45,113	-	3,373,574	-	-	71	37,354	-	1,086	38,511	45	1,363	34,207,679
2009	151,738	-	1,287,626	6	17,787,441	1,297,214	9,364	805	2,084,271	-	-	-	19,878	33	11	19,922	-	139	22,638,515
2010	380,404	450	1,766,896	-	14,583,950	581,700	52,869	2,002	1,904,040	-	-	-	41,370	3,647	4	45,021	-	35,359	19,352,687
2011	61,745	-	1,680,490	427	9,500,387	778,887	22,128	3,759	856,038	-	331	177	124,775	-	1,969	127,252	33	58,429	13,087,606
2012	-	220	1,107,727	43	6,951,515	287,147	77,738	14,650	517,532	-	-	14,330	187,837	10	3	202,180	-	508	9,159,257
2013	22	-	1,116,076	-	6,575,927	42,428	51,944	1,356	886,920	-	-	36,395	181,116	115	1,595	219,221	-	14,126	8,906,425
2014	532	-	1,026,523	17	8,295,286	288,738	39,776	1,536	1,526,611	-	-	42,439	103,167	164	-	145,770	23	25,114	11,349,926
2015	60,994	-	1,187,655	83	8,936,034	74,175	16,099	406	890,124	-	-	-	58,802	570	93	59,465	50,773	42,296	11,318,011
2016	121,967	-	1,078,480	978	7,890,800	-	6,955	-	613,944	-	-	64,774	-	341	657	65,772	28,488	39,631	9,846,358
2017	700	-	891,734	92	6,112,092	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
2020	-	-	448,719	52	3,655,196	-	109,814	-	639,982	-	-	278,554	-	913	3,308	282,775	-	4,140	5,137,370
2021	-	-	1,034,232	33	3,366,886	-	116,743	-	494,168	-	-	338,550	-	27	1,326	339,903	36,376	1,333	5,388,348
2022	-	-	1,772,643	7,764	4,043,767	-	219,112	-	137,554	-	-	-	-	-	74,660	74,660	27,282	105,345	6,313,467
2023	-	-	789,989	3,238	2,647,536	-	175,484	-	-	-	-	-	-	2	102,447	102,449	106,376	287,499	4,010,124

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, 1960-2023

(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
2020	4,587	7,889	547	-	973	683	1,221	5,796	395	2,722	1,135	8,681	22,154	6,072	37,045	69,067
2021	4,587	6,252	286	63	761	2,019	1,060	7,322	686	906	1,515	7,721	22,341	7,564	52,093	85,115
2022	4,316	6,426	633	111	1,827	4,203	1,426	12,170	1,115	1,904	2,532	7,654	33,575	8,075	41,218	85,956
2023	5,000	7,521	1,089	68	1,476	3,507	1,714	9,716	1,175	1,738	848	6,443	27,773	9,745	56,611	100,208

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.'