



Annual Coal Report 2022

October 2023

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Contacts

EIA prepared this publication. You can request general information about the data in this report through [email](#).

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 47th 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 2022 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*.

Production

In 2022, U.S. coal production increased 2.9% to 594.2 million short tons (MMst) from 2021, while the number of producing mines increased to 548 mines from 512 mines in 2021. Coal production in basins east of the Mississippi river increased 4.6%, and production increased 1.8% in basins west of the Mississippi river.

The Appalachian region's coal production in 2022 was 160.5 MMst, an increase of 3.5% from 2021. West Virginia's production increased 6.3% to 83.4 MMst, Eastern Kentucky's production increased 19.4% to 12.1 MMst, and Pennsylvania's production decreased 6.5% to 39.7 MMst.

Coal production in the Interior region was 98.3 MMst, an increase of 5.5% from 2021. Production in Indiana increased 21.1% to 23.6 MMst, production in Illinois increased 2.4% to 37.5 MMst, and production in Western Kentucky increased 0.8% to 16.4 MMst. Production in the rest of the Interior region increased 0.2% to 20.8 MMst, led by a production increase in Mississippi of 5.3% to 3.4 MMst.

Coal production in the Western region in 2022 increased 1.9% to 334.8 MMst. Production in Wyoming, the largest coal-producing state in the region, increased by 2.5% to 244.7 MMst. Other large producing states in the basin include North Dakota, where production increased by 0.8% to 26.7 MMst; Colorado, where production increased by 7.7% to 12.8 MMst; and Montana, where production decreased by 1.2% to 28.2 MMst.

Disposition of coal during 2022 totaled 593.2 MMst, of which 532.3 MMst was marketed as thermal coal and 60.9 MMst was marketed as metallurgical coal. Of the metallurgical coal dispositions, 46.5 MMst was exported, and 14.5 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 2022, the collective productive capacity of U.S. coal mines increased 0.1% to 872 MMst. Major producing states that reported an increase in productive capacity include Virginia (7.9% to 13.3 MMst) and West Virginia (7.1% to 111.2 MMst). States with a decrease in reported productive capacity include Texas (-6.7% to 17.2 MMst) and Utah (-9.6% to 18.0 MMst).

The overall capacity utilization across all mines increased to 68.0% in 2022 from 66.1% in 2021. Capacity utilization is measured as the ratio of annual production to the annual productive capacity of mines.

Recoverable reserves

Total U.S. recoverable coal reserves that are technologically and economically feasible to extract as reported by producers fell to 11,737 MMst at the end of 2022 from 12,282 MMst at the end of 2021. Although declines were reported for most states, increases were reported for Alabama, Eastern Kentucky, Maryland, Virginia, and West Virginia. Recoverable reserves increased 7.9% to 186 MMst in Alabama and 23.1% to 1,809 MMst in West Virginia.

Employment

The average number of employees at U.S. coal mines in 2022 increased from 2021 by 4,064 to 43,582 employees. The average number of employees at underground mines increased by 2,635 employees, and average employment at surface mines increased by 1,460 employees.

Total U.S. productivity as measured by average production per employee hour decreased by 8.9% to 6.11 short tons per employee hour. Average productivity decreased 10.2% to 3.62 tons per employee hour at underground mines and decreased 8.7% to 10.39 tons per employee hour at surface mines during 2022, as compared with 2021.

Consumption

U.S. coal consumption in 2022 was 515.5 MMst, a decrease of 5.5% from 2021. Coal consumption in the electric power sector decreased by 28.6 MMst to 472.8 MMst. Coal consumption in the industrial, coke, and commercial and institutional sectors was 42.7 MMst in 2022, a 3.5% decrease from 2021.

Exports

Exports increased by 1.0 MMst in 2022 to 86.0 MMst. Europe was the top destination of U.S. exports, accounting for 33.6 MMst. Steam coal exports accounted for 45.9% (39.5 MMst) of the total, and metallurgical coal accounted for 54.1% (46.5 MMst).

Stocks

U.S. coal stocks in 2022 ended the year at 114.3 MMst, 1.2% lower than at the same time in 2021. Stocks in the electric power sector decreased by 3.1 MMst to 89.2 MMst at the end of 2022. Coal stocks held by the other industrial, coke, and commercial sectors, as well as producers and distributors, increased 1.6 MMst to 25.1 MMst at the end of 2022 compared with the end of 2021.

Sales price

The total average sales price of coal from U.S. mines in 2022 increased by 49.4% from 2021 to \$54.46 per short ton. The average sales price of thermal coal in 2022 increased by 33.7% from 2021 to \$34.57 per short ton, and the average sales price of metallurgical coal in 2022 increased by 72.9% from 2021 to \$262.72 per short ton. The average sales price of coal from surface mines increased by 37.0% to \$29.20 per short ton, and the average sales price of coal from underground mines increased by 59.5% to \$96.47 per short ton. The average sales prices of coal by rank are as follows:

- Average sales price of bituminous coal was \$97.96 per short ton in 2022, a 58.8% increase from 2021.
- Average sales price of subbituminous coal was \$16.55 per short ton in 2022, a 16.7% increase from 2021.
- Average sales price of lignite coal was \$21.79 per short ton in 2022, an 8.4% increase from 2021.
- Average sales price of anthracite coal was \$155.03 per short ton in 2022, a 44.8% increase from 2021.

Table ES1. Coal Production, 1949-2022

(short tons)

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

Year	Rank				Mining Method		Location		Total ¹
	Bituminous Coal ¹	Subbituminous Coal	Lignite	Anthracite ¹	Underground	Surface ¹	East of Mississippi River ¹	West of Mississippi River ¹	
2004	561,484,652	465,368,953	83,539,698	1,705,567	367,557,255	744,541,615	484,795,840	627,303,030	1,112,098,870
2005	571,177,133	474,675,461	83,941,728	1,703,777	368,611,500	762,886,599	493,801,042	637,697,057	1,131,498,099
2006	561,631,018	515,332,638	84,248,267	1,537,736	359,021,815	803,727,844	490,797,869	671,951,790	1,162,749,659
2007	542,757,594	523,724,347	78,584,915	1,568,489	351,789,934	794,845,411	478,161,383	668,473,962	1,146,635,345
2008	555,267,210	539,145,383	75,683,638	1,712,438	357,079,371	814,729,298	493,342,095	678,466,574	1,171,808,669
2009	504,101,778	496,421,871	72,478,549	1,921,194	332,061,582	742,861,810	449,593,554	625,329,838	1,074,923,392
2010	489,532,051	514,829,513	78,230,494	1,776,090	337,154,614	747,213,534	446,196,808	638,171,340	1,084,368,148
2011	525,995,943	486,295,739	81,101,129	2,234,725	345,605,509	750,022,027	456,446,210	639,181,326	1,095,627,536
2012	485,363,301	449,799,910	78,927,292	2,367,915	342,386,637	674,071,781	423,475,610	592,982,808	1,016,458,418
2013	471,182,631	434,287,168	77,228,703	2,143,277	341,684,553	643,157,226	407,340,833	577,500,946	984,841,779
2014	479,990,818	438,623,717	79,487,116	1,947,107	354,703,991	645,344,767	409,520,451	590,528,307	1,000,048,758
2015	404,426,770	419,514,932	70,857,085	2,141,776	306,821,302	590,119,261	348,977,735	547,962,828	896,940,563
2016	325,147,260	330,242,617	71,309,951	1,664,670	252,106,254	476,258,244	281,627,159	446,737,339	728,364,498
2017	353,519,714	351,502,385	67,674,760	1,912,498	273,128,860	501,480,497	304,429,935	470,179,422	774,609,357
2018	357,226,100	340,007,405	57,037,552	1,896,038	275,361,378	480,805,717	310,662,897	445,504,198	756,167,095
2019	338,954,766	311,551,673	53,191,887	2,610,937	267,372,934	438,936,329	296,045,637	410,263,626	706,309,263
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

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, 1949-2022

(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

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, 1949-2022

(Thousand Short Tons)

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

Year	Production	Trade			Stock Change ²	Consumption ³
		Imports	Exports	Net Imports ¹		
2006	16,404	4,068	1,616	2,451	71	18,784
2007	16,201	2,460	1,444	1,016	-52	17,270
2008	15,646	3,603	1,959	1,644	284	17,006
2009	11,143	347	1,307	-960	-140	10,323
2010	15,022	1,214	1,463	-249	-74	14,847
2011	15,420	1,418	970	448	43	15,825
2012	15,172	1,135	974	161	-139	15,472
2013	15,320	138	840	-703	266	14,351
2014	15,154	77	946	-869	-75	14,359
2015	13,755	140	857	-717	-90	13,128
2016	11,855	229	1,000	-772	-128	11,212
2017	12,948	58	1,212	-1,153	-21	11,815
2018	13,806	117	1,151	-1,034	-204	12,976
2019	12,870	116	967	-852	86	11,932
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

(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- 2022

(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

* = 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, 2001-2022

(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

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, 2022 and 2021

(thousand short tons)

Coal-Producing State and Region ¹	2022		2021		Percent Change	
	Number of Mines	Production	Number of Mines	Production	Number of Mines	Production
Alabama	22	10,408	20	9,338	10.0	11.5
Underground	6	9,121	6	7,959	-	14.6
Surface	16	1,287	14	1,380	14.3	-6.7
Alaska	1	1,014	1	1,042	-	-2.7
Surface	1	1,014	1	1,042	-	-2.7
Colorado	10	12,793	8	11,875	25.0	7.7
Underground	5	8,378	5	7,130	-	17.5
Surface	5	4,415	3	4,745	66.7	-7.0
Illinois	14	37,488	12	36,614	16.7	2.4
Underground	8	36,611	8	36,198	-	1.1
Surface	6	877	4	416	50.0	110.7
Indiana	14	23,573	13	19,470	7.7	21.1
Underground	4	13,366	4	10,411	-	28.4
Surface	10	10,207	9	9,059	11.1	12.7
Kentucky Total	111	28,527	101	26,426	9.9	8.0
Underground	44	22,487	37	21,497	18.9	4.6
Surface	67	6,040	64	4,929	4.7	22.6
Kentucky (East)	108	12,097	96	10,130	12.5	19.4
Underground	41	6,057	34	5,439	20.6	11.4
Surface	67	6,040	62	4,691	8.1	28.8
Kentucky (West)	3	16,430	5	16,296	-40.0	0.8
Underground	3	16,430	3	16,058	-	2.3
Surface	-	-	2	238	-	-
Louisiana	1	307	1	300	-	2.3
Surface	1	307	1	300	-	2.3
Maryland	14	1,509	10	1,263	40.0	19.5
Underground	1	298	1	375	-	-20.5
Surface	13	1,210	9	888	44.4	36.4
Mississippi	1	3,369	1	3,201	-	5.3
Surface	1	3,369	1	3,201	-	5.3
Missouri	1	74	1	44	-	66.5
Surface	1	74	1	44	-	66.5
Montana	5	28,233	6	28,580	-16.7	-1.2
Underground	1	7,431	1	7,247	-	2.6
Surface	4	20,802	5	21,333	-20.0	-2.5
New Mexico	3	10,550	3	9,265	-	13.9
Underground	1	1,597	1	1,572	-	1.6
Surface	2	8,953	2	7,693	-	16.4
North Dakota	5	26,731	5	26,513	-	0.8
Surface	5	26,731	5	26,513	-	0.8
Ohio	10	2,492	9	2,759	11.1	-9.7
Underground	3	1,298	4	1,781	-25.0	-27.1
Surface	7	1,195	5	978	40.0	22.1
Oklahoma	1	2	1	1	-	245.2
Surface	1	2	1	1	-	245.2
Pennsylvania Total	108	39,701	120	42,460	-10.0	-6.5
Underground	28	35,188	33	38,052	-15.2	-7.5
Surface	80	4,514	87	4,407	-8.1	2.4
Pennsylvania (Anthracite)	36	2,357	41	2,043	-12.2	15.4
Underground	6	52	8	54	-25.0	-3.1
Surface	30	2,304	33	1,989	-9.1	15.9
Pennsylvania (Bituminous)	72	37,345	79	40,417	-8.9	-7.6
Underground	22	35,135	25	37,998	-12.0	-7.5
Surface	50	2,209	54	2,418	-7.4	-8.6
Tennessee	1	-	-	-	-	-
Surface	1	-	-	-	-	-

Coal-Producing State and Region ¹	2022		2021		Percent Change	
	Number of Mines	Production	Number of Mines	Production	Number of Mines	Production
Texas	4	17,084	5	17,250	-20.0	-1.0
Surface	4	17,084	5	17,250	-20.0	-1.0
Utah	6	10,723	6	12,434	-	-13.8
Underground	5	10,369	5	12,000	-	-13.6
Surface	1	354	1	434	-	-18.4
Virginia	40	10,855	32	10,691	25.0	1.5
Underground	9	7,607	8	8,023	12.5	-5.2
Surface	31	3,248	24	2,668	29.2	21.8
West Virginia Total	151	83,448	135	78,501	11.9	6.3
Underground	70	68,393	60	65,157	16.7	5.0
Surface	81	15,056	75	13,344	8.0	12.8
West Virginia (Northern)	16	46,983	16	44,460	-	5.7
Underground	11	46,485	10	44,057	10.0	5.5
Surface	5	497	6	404	-16.7	23.1
West Virginia (Southern)	135	36,466	119	34,040	13.5	7.1
Underground	59	21,907	50	21,100	18.0	3.8
Surface	76	14,558	69	12,940	10.1	12.5
Wyoming	16	244,730	16	238,773	-	2.5
Underground	-	-	1	3,195	-	-
Surface	16	244,730	15	235,578	6.7	3.9
Appalachia Total	454	160,510	422	155,141	7.6	3.5
Underground	158	127,961	146	126,786	8.2	0.9
Surface	296	32,549	276	28,355	7.3	14.8
Appalachia Central	284	59,417	247	54,861	15.0	8.3
Underground	109	35,571	92	34,562	18.5	2.9
Surface	175	23,847	155	20,299	12.9	17.5
Appalachia Northern	148	90,685	155	90,942	-4.5	-0.3
Underground	43	83,269	48	84,265	-10.4	-1.2
Surface	105	7,416	107	6,677	-1.9	11.1
Appalachia Southern	22	10,408	20	9,338	10.0	11.5
Underground	6	9,121	6	7,959	-	14.6
Surface	16	1,287	14	1,380	14.3	-6.7
Interior Region Total	39	98,325	39	93,176	-	5.5
Underground	15	66,407	15	62,667	-	6.0
Surface	24	31,918	24	30,509	-	4.6
Illinois Basin	31	77,491	30	72,380	3.3	7.1
Underground	15	66,407	15	62,667	-	6.0
Surface	16	11,084	15	9,713	6.7	14.1
Other Interior	8	20,834	9	20,796	-11.1	0.2
Surface	8	20,834	9	20,796	-11.1	0.2
Western Region Total	46	334,775	45	328,481	2.2	1.9
Underground	12	27,775	13	31,143	-7.7	-10.8
Surface	34	306,999	32	297,338	6.3	3.3
Powder River Basin	15	258,486	16	251,324	-6.3	2.9
Surface	15	258,486	16	251,324	-6.3	2.9
Uinta Basin	13	22,464	11	23,298	18.2	-3.6
Underground	8	18,049	8	18,553	-	-2.7
Surface	5	4,415	3	4,745	66.7	-7.0
Other Western	18	53,825	18	53,860	-	-0.1
Underground	4	9,726	5	12,591	-20.0	-22.8
Surface	14	44,099	13	41,269	7.7	6.9
East of Mississippi River	486	241,369	453	230,722	7.3	4.6
West of Mississippi River	53	352,241	53	346,076	-	1.8
U.S. Subtotal	539	593,610	506	576,799	6.5	2.9
Refuse Recovery	9	545	6	633	50.0	-13.8
U.S. Total	548	594,155	512	577,431	7.0	2.9

-- 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, 2022

(thousand short tons)

Coal-Producing State and County	Underground		Surface		Total	
	Number of Mines	Production	Number of Mines	Production	Number of Mines	Production
Alabama	6	9,121	16	1,287	22	10,408
De Kalb	-	-	1	14	1	14
Jefferson	3	6,670	7	794	10	7,464
Tuscaloosa	1	1,559	5	417	6	1,976
Walker	2	892	3	62	5	954
Alaska	-	-	1	1,014	1	1,014
Denali	-	-	1	1,014	1	1,014
Colorado	5	8,378	5	4,415	10	12,793
Gunnison	1	4,356	-	-	1	4,356
La Plata	1	469	-	-	1	469
Las Animas	1	230	-	-	1	230
Moffat	-	-	5	4,415	5	4,415
Rio Blanco	1	1,788	-	-	1	1,788
Routt	1	1,536	-	-	1	1,536
Illinois	8	36,611	6	877	14	37,488
Franklin	1	5,578	-	-	1	5,578
Hamilton	1	4,693	-	-	1	4,693
Montgomery	1	4,469	-	-	1	4,469
Perry	1	4,272	3	402	4	4,674
Randolph	1	2,380	1	86	2	2,466
Sangamon	1	958	-	-	1	958
Wabash	-	-	2	389	2	389
Washington	1	6,544	-	-	1	6,544
Williamson	1	7,716	-	-	1	7,716
Indiana	4	13,366	10	10,207	14	23,573
Clay	-	-	1	103	1	103
Daviess	-	-	1	474	1	474
Gibson	2	7,006	1	563	3	7,569
Knox	2	6,360	1	42	3	6,401
Pike	-	-	2	215	2	215
Spencer	-	-	1	181	1	181
Sullivan	-	-	1	6,722	1	6,722
Warrick	-	-	2	1,907	2	1,907
Kentucky	44	22,487	67	6,040	111	28,527
Bell	2	260	8	652	10	911
Breathitt	-	-	2	102	2	102
Clay	-	-	1	3	1	3
Elliott	-	-	1	11	1	11
Floyd	5	198	4	96	9	293
Harlan	7	1,441	6	722	13	2,163
Hopkins	1	4,116	-	-	1	4,116
Johnson	-	-	3	513	3	513
Knott	1	41	4	309	5	351
Knox	1	50	3	20	4	69
Lawrence	-	-	1	3	1	3
Leslie	1	384	-	-	1	384
Letcher	1	32	7	1,378	8	1,410
Martin	-	-	4	124	4	124
Morgan	-	-	1	127	1	127
Muhlenberg	1	2,156	-	-	1	2,156
Perry	4	867	5	1,215	9	2,082
Pike	18	2,774	11	487	29	3,261
Union	1	10,158	-	-	1	10,158
Whitley	1	10	6	278	7	288
Louisiana	-	-	1	307	1	307
Natchitoches	-	-	1	307	1	307

Coal-Producing State and County	Underground		Surface		Total	
	Number of Mines	Production	Number of Mines	Production	Number of Mines	Production
Maryland	1	298	13	1,210	14	1,509
Allegany	-	-	7	839	7	839
Garrett	1	298	6	371	7	669
Mississippi	-	-	1	3,369	1	3,369
Choctaw	-	-	1	3,369	1	3,369
Missouri	-	-	1	74	1	74
Bates	-	-	1	74	1	74
Montana	1	7,431	4	20,802	5	28,233
Big Horn	-	-	2	13,795	2	13,795
Musselshell	1	7,431	-	-	1	7,431
Richland	-	-	1	36	1	36
Rosebud	-	-	1	6,971	1	6,971
New Mexico	1	1,597	2	8,953	3	10,550
Mckinley	-	-	1	3,669	1	3,669
San Juan	1	1,597	1	5,284	2	6,881
North Dakota	-	-	5	26,731	5	26,731
Mclean	-	-	1	7,526	1	7,526
Mercer	-	-	3	15,302	3	15,302
Oliver	-	-	1	3,903	1	3,903
Ohio	3	1,298	7	1,195	10	2,492
Athens	-	-	1	16	1	16
Belmont	1	364	1	325	2	689
Harrison	2	934	3	407	5	1,341
Noble	-	-	1	414	1	414
Tuscarawas	-	-	1	32	1	32
Oklahoma	-	-	1	2	1	2
Okmulgee	-	-	1	2	1	2
Pennsylvania	28	35,188	80	4,514	108	39,701
Armstrong	2	528	1	51	3	579
Cambria	2	1,001	5	165	7	1,167
Carbon	-	-	1	630	1	630
Clarion	-	-	3	44	3	44
Clearfield	2	409	16	660	18	1,068
Columbia	-	-	1	113	1	113
Dauphin	1	9	-	-	1	9
Elk	-	-	1	-	1	-
Fayette	-	-	3	40	3	40
Fulton	-	-	1	124	1	124
Greene	3	23,024	-	-	3	23,024
Indiana	6	2,183	2	133	8	2,316
Jefferson	1	161	2	10	3	171
Luzerne	-	-	3	119	3	119
Lycoming	-	-	1	69	1	69
Northumberland	1	2	8	318	9	320
Schuylkill	4	41	17	1,124	21	1,166
Somerset	4	1,049	13	865	17	1,914
Washington	1	6,292	-	-	1	6,292
Westmoreland	1	489	2	49	3	537
Tennessee	-	-	1	-	1	-
Campbell	-	-	1	-	1	-
Texas	-	-	4	17,084	4	17,084
Atascosa	-	-	1	3,194	1	3,194
Harrison	-	-	1	2,434	1	2,434
Limestone	-	-	1	9,335	1	9,335
Robertson	-	-	1	2,121	1	2,121
Utah	5	10,369	1	354	6	10,723
Carbon	1	2,548	-	-	1	2,548
Emery	3	3,944	-	-	3	3,944
Kane	-	-	1	354	1	354
Sevier	1	3,877	-	-	1	3,877
Virginia	9	7,607	31	3,248	40	10,855

Coal-Producing State and County	Underground		Surface		Total	
	Number of Mines	Production	Number of Mines	Production	Number of Mines	Production
Buchanan	3	4,436	8	1,331	11	5,767
Dickenson	3	2,767	6	916	9	3,682
Russell	-	-	2	63	2	63
Tazewell	1	68	6	402	7	470
Wise	2	336	9	535	11	872
West Virginia	70	68,393	81	15,056	151	83,448
Barbour	2	2,403	-	-	2	2,403
Boone	4	2,194	6	823	10	3,018
Fayette	2	882	9	1,475	11	2,357
Grant	-	-	1	50	1	50
Greenbrier	-	-	2	142	2	142
Kanawha	3	2,522	3	658	6	3,180
Logan	14	6,608	10	1,885	24	8,493
Marion	1	6,813	1	196	2	7,009
Marshall	2	16,010	-	-	2	16,010
Mcdowell	17	1,485	14	1,090	31	2,575
Mercer	1	56	2	422	3	478
Mingo	2	108	10	2,204	12	2,312
Nicholas	2	821	4	263	6	1,084
Ohio	1	8,313	-	-	1	8,313
Raleigh	6	3,597	6	3,232	12	6,829
Randolph	2	439	2	54	4	494
Taylor	1	4,042	-	-	1	4,042
Tucker	1	1,427	-	-	1	1,427
Webster	-	-	1	196	1	196
Wetzel	1	7,039	-	-	1	7,039
Wyoming	8	3,633	10	2,364	18	5,997
Wyoming	-	-	16	244,730	16	244,730
Campbell	-	-	11	216,064	11	216,064
Converse	-	-	1	21,657	1	21,657
Lincoln	-	-	1	2,123	1	2,123
Sweetwater	-	-	3	4,887	3	4,887
U.S. Subtotal	185	222,143	354	371,467	539	593,610
Refuse Recovery	-	-	-	-	9	545
U.S. Total	185	222,143	354	371,467	548	594,155

- = 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, 2022

(thousand short tons)

Coal-Producing State and Region ¹	Continuous	Conventional and Other ²	Longwall	Total
Alabama	2,261	-	6,860	9,121
Colorado	1,430	-	6,948	8,378
Illinois	16,400	-	20,211	36,611
Indiana	13,366	-	-	13,366
Kentucky Total	22,220	267	-	22,487
Kentucky (East)	5,790	267	-	6,057
Kentucky (West)	16,430	-	-	16,430
Maryland	298	-	-	298
Montana	595	-	6,837	7,431
New Mexico	-	-	1,597	1,597
Ohio	934	-	364	1,298
Pennsylvania Total	7,912	52	27,223	35,188
Pennsylvania (Anthracite)	-	52	-	52
Pennsylvania (Bituminous)	7,912	-	27,223	35,135
Utah	3,263	-	7,106	10,369
Virginia	4,245	-	3,361	7,607
West Virginia Total	26,103	260	42,030	68,393
West Virginia (Northern)	4,456	-	42,030	46,485
West Virginia (Southern)	21,647	260	-	21,907
Appalachia Total	47,544	579	79,838	127,961
Appalachia Central	31,682	527	3,361	35,571
Appalachia Northern	13,601	52	69,617	83,269
Appalachia Southern	2,261	-	6,860	9,121
Interior Region Total	46,196	-	20,211	66,407
Illinois Basin	46,196	-	20,211	66,407
Western Region Total	5,287	-	22,488	27,775
Uinta Basin	3,995	-	14,054	18,049
Other Western	1,293	-	8,434	9,726
East of Mississippi River	93,740	579	100,049	194,368
West of Mississippi River	5,287	-	22,488	27,775
U.S. Total	99,027	579	122,537	222,143

- = No data reported.

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

2 Mines that: 1. produce coal using shortwall, scoop loading, hand loading, or other methods, or 2. produce less than 25,000 short tons, which are not required to provide data.

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

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

Table 3.1 Surface Coal Production by State and Mining Method, 2022

(thousand short tons)

Coal-Producing State and Region ¹	Contour Strip	Area	Open Pit	Mountaintop Mining	Other ²	Total
Alabama	859	-	226	-	202	1,287
Alaska	507	-	507	-	-	1,014
Colorado	887	-	758	-	2,769	4,415
Illinois	-	766	-	-	111	877
Indiana	-	1,438	8,474	-	295	10,207
Kentucky Total	2,882	1,178	52	-	1,928	6,040
Kentucky (East)	2,882	1,178	52	-	1,928	6,040
Louisiana	-	307	-	-	-	307
Maryland	361	425	-	-	424	1,210
Mississippi	3,369	-	-	-	-	3,369
Missouri	74	-	-	-	-	74
Montana	13,795	7,007	-	-	-	20,802
New Mexico	3,669	-	5,284	-	-	8,953
North Dakota	22,828	-	3,903	-	-	26,731
Ohio	669	442	-	-	84	1,195
Oklahoma	-	-	-	-	2	2
Pennsylvania Total	1,283	-	2,692	-	539	4,514
Pennsylvania (Anthracite)	829	-	1,278	-	197	2,304
Pennsylvania (Bituminous)	454	-	1,413	-	342	2,209
Tennessee	-	-	-	-	s	s
Texas	2,434	9,335	5,315	-	-	17,084
Utah	-	-	347	-	7	354
Virginia	1,592	651	-	-	1,006	3,248
West Virginia Total	6,116	4,528	-	1,364	3,047	15,056
West Virginia (Northern)	256	-	-	-	242	497
West Virginia (Southern)	5,861	4,528	-	1,364	2,806	14,558
Wyoming	124,256	1,567	117,960	-	946	244,730
Appalachia Total	13,762	7,224	2,969	1,364	7,230	32,549
Appalachia Central	10,334	6,357	52	1,364	5,740	23,847
Appalachia Northern	2,569	867	2,692	-	1,288	7,416
Appalachia Southern	859	-	226	-	202	1,287
Interior Region Total	5,876	11,846	13,789	-	407	31,918
Illinois Basin	-	2,204	8,474	-	406	11,084
Other Interior	5,876	9,642	5,315	-	2	20,834
Western Region Total	165,942	8,575	128,760	-	3,723	306,999
Powder River Basin	135,678	6,971	115,837	-	-	258,486
Uinta Basin	887	-	758	-	2,769	4,415
Other Western	29,377	1,604	12,165	-	953	44,099
East of Mississippi River	17,131	9,428	11,444	1,364	7,636	47,002
West of Mississippi River	168,449	18,216	134,075	-	3,724	324,465
U.S. Total	185,580	27,644	145,519	1,364	11,360	371,467

- = 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 25,000 short tons, which are not required to provide data.

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

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

Table 4. Coal Production by Coalbed Thickness and Mine Type, 2022

(thousand short tons)

Coal Thickness (inches)	Underground	Surface	Total
Under 7	59	47	106
7 - Under 13	-	414	414
13 - Under 19	178	1,662	1,840
19 - Under 25	376	4,887	5,264
25 - Under 31	2,181	5,100	7,281
31 - Under 37	8,115	11,440	19,555
37 - Under 43	11,276	6,911	18,187
43 - Under 49	9,066	9,502	18,568
49 - Under 55	12,896	3,422	16,318
55 - Under 61	22,863	5,518	28,381
61 - Under 67	20,779	4,736	25,515
67 - Under 73	25,540	2,176	27,717
73 - Under 79	33,775	275	34,049
79 - Under 85	20,943	2,110	23,053
85 - Under 91	19,318	1,129	20,446
91 - Under 97	7,700	4,604	12,304
97 - Under 103	5,381	427	5,809
103 - Under 109	7,110	6,072	13,182
109 - Under 115	1,770	137	1,908
115 - 120	3,611	9,270	12,881
Over 120	8,970	290,614	299,585
Unknown *	235	1,012	1,792
U.S. Total	222,143	371,467	594,155

- = No data reported.

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

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

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

Table 5. Coal Production and Coalbed Thickness by Major Coalbeds and Mine Type, 2022

Coalbed ID Number ¹ Coalbed Name	Production (thousand short tons)			Thickness (inches)			
	Underground	Surface	Total	Average ²	Low	High	
1699	Wyodak	-	212,322	212,322	771	120	982
0212	Pittsburgh	41,430	547	41,976	79	60	108
0484	Herrin (Illinois No. 6)	35,299	940	36,239	73	46	79
0489	No. 9	24,483	2,769	27,252	61	36	105
0036	Pittsburgh	26,425	416	26,841	82	20	97
1701	Smith	-	17,835	17,835	918	870	984
1569	Beulah-Zap	-	15,302	15,302	199	114	210
1696	Anderson-Dietz 1-Dietz 2	-	11,565	11,565	960	960	960
1570	Hagel	-	10,590	10,590	115	28	120
0084	Lower Kittanning	8,969	908	9,877	69	19	115
0280	Blue Creek	8,745	204	8,949	53	16	66
0344	Pocahontas No. 3	8,355	-	8,355	58	35	74
1808	Rosebud	-	8,286	8,286	262	186	276
1787	Roland	-	7,563	7,563	389	327	453
0176	Eagle	6,021	1,521	7,542	42	18	52
0168	Lower Elkhorn	4,518	1,573	6,091	42	12	70
0204	Mammoth	5,573	-	5,573	108	108	108
1756	E	4,312	998	5,310	146	60	162
0071	Upper Freeport	4,983	135	5,117	54	4	78
0506	No. 6	4,469	-	4,469	92	92	92
1003	Menefee Formation	469	2,898	3,367	93	84	94
0483	Indiana No. 6	-	3,348	3,348	57	36	65
1847	Upper Hiawatha	3,140	-	3,140	96	96	96
0151	Upper Elkhorn No. 3	1,546	1,519	3,065	47	14	96
0480	Danville No. 7	-	2,799	2,799	40	24	61
Major Coalbeds Total	188,737	304,038	492,775	438	4	984	
Other Coalbeds	33,171	66,417	99,588	88	1	599	
Unknown *	235	1,012	1,792	NA	NA	NA	
U.S. Total	222,143	371,467	594,155	378	-	984	

- = No data reported.

NA = Not Available.

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

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

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

Notes: This table lists the top 25 producing coalbeds. The category 'Other Coalbeds' includes all coalbeds from which less than 4.0 million short tons were produced during the year. In some regions, coalbeds are characteristically discontinuous or uncorrelatable from one location to another, and production is identified by the geological formations, coal groups, or coal zones of the native rock where the coalbeds occur. These types of coalbeds are found primarily in the Rocky Mountain States and even in the Gulf Coast lignite belt. Coalbeds of these types are also included in 'Other Coalbeds,' even though production may exceed 4.0 million short tons. Totals may not equal sum of components due to independent rounding. The coalbed name given is the name most commonly used in the State having the greatest production from that coalbed. The States having greatest production for each coalbed are Wyoming (coalbed codes 1495, 1699, and 1701); West Virginia (coalbed codes 212, 84, 111, 168, 103, 71); Illinois (coalbed code 484); Indiana (coalbed code 489); Pennsylvania (coalbed code 36); North Dakota (coalbed codes 1569, 1570); Montana (coalbed codes 1696, 1808, 204); Virginia (coalbed code 344); Alabama (coalbed code 280); Utah (coalbed code 1847); New Mexico (coalbed code 1003); Colorado (coalbed code 1756); West Virginia (coalbed codes 157, 176); Kentucky (coalbed code 151). In some other States where these are major producing beds, the following alternative coalbed names are also used: coalbed code 484 (Kentucky, Kentucky No 11), coalbed code 489 (Indiana, Indiana No 5), coalbed code 36 (Pennsylvania/Ohio, Pittsburgh No. 8), coalbed code 111 (Kentucky, Hazard No 6).

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

Table 6. Coal Production and Number of Mines by State and Coal Rank, 2022

(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	22	10,408	-	-	-	-	-	-	22	10,408
Alaska	-	-	1	1,014	-	-	-	-	1	1,014
Colorado	6	8,457	4	4,336	-	-	-	-	10	12,793
Illinois	14	37,488	-	-	-	-	-	-	14	37,488
Indiana	14	23,573	-	-	-	-	-	-	14	23,573
Kentucky Total	111	28,527	-	-	-	-	-	-	111	28,527
Kentucky (East)	108	12,097	-	-	-	-	-	-	108	12,097
Kentucky (West)	3	16,430	-	-	-	-	-	-	3	16,430
Louisiana	-	-	-	-	1	307	-	-	1	307
Maryland	14	1,509	-	-	-	-	-	-	14	1,509
Mississippi	-	-	-	-	1	3,369	-	-	1	3,369
Missouri	1	74	-	-	-	-	-	-	1	74
Montana	1	7,431	3	20,766	1	36	-	-	5	28,233
New Mexico	2	5,265	1	5,284	-	-	-	-	3	10,550
North Dakota	-	-	-	-	5	26,731	-	-	5	26,731
Ohio	10	2,492	-	-	-	-	-	-	10	2,492
Oklahoma	1	2	-	-	-	-	-	-	1	2
Pennsylvania Total	72	37,345	-	-	-	-	36	2,357	108	39,701
Pennsylvania (Anthracite)	-	-	-	-	-	-	36	2,357	36	2,357
Pennsylvania (Bituminous)	72	37,345	-	-	-	-	-	-	72	37,345
Tennessee	1	s	-	-	-	-	-	-	1	s
Texas	-	-	-	-	4	17,084	-	-	4	17,084
Utah	6	10,723	-	-	-	-	-	-	6	10,723
Virginia	40	10,855	-	-	-	-	-	-	40	10,855
West Virginia Total	151	83,448	-	-	-	-	-	-	151	83,448
West Virginia (Northern)	16	46,983	-	-	-	-	-	-	16	46,983
West Virginia (Southern)	135	36,466	-	-	-	-	-	-	135	36,466
Wyoming	2	2,514	14	242,217	-	-	-	-	16	244,730
Appalachia Total	418	158,154	-	-	-	-	36	2,357	454	160,510
Appalachia Central	284	59,417	-	-	-	-	-	-	284	59,417
Appalachia Northern	112	88,329	-	-	-	-	36	2,357	148	90,685
Appalachia Southern	22	10,408	-	-	-	-	-	-	22	10,408
Interior Region Total	33	77,566	-	-	6	20,759	-	-	39	98,325
Illinois Basin	31	77,491	-	-	-	-	-	-	31	77,491
Other Interior	2	75	-	-	6	20,759	-	-	8	20,834
Western Region Total	17	34,390	23	273,618	6	26,767	-	-	46	334,775
Powder River Basin	-	-	15	258,486	-	-	-	-	15	258,486
Uinta Basin	9	18,128	4	4,336	-	-	-	-	13	22,464
Other Western	8	16,263	4	10,795	6	26,767	-	-	18	53,825
East of Mississippi River	449	235,644	-	-	1	3,369	36	2,357	486	241,369
West of Mississippi River	19	34,466	23	273,618	11	44,158	-	-	53	352,241
U.S. Subtotal	468	270,110	23	273,618	12	47,526	36	2,357	539	593,610
Refuse Recovery	5	416	-	-	-	-	4	129	9	545
U.S. Total	473	270,526	23	273,618	12	47,526	40	2,486	548	594,155

- = No data reported.

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

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, 2022

(thousand short tons)

Coal-Producing State and Region ¹	Union		Nonunion		Total	
	Underground	Surface	Underground	Surface	Underground	Surface
Alabama	8,923	-	198	1,232	9,121	1,232
Alaska	-	1,014	-	-	-	1,014
Colorado	1,788	1,431	6,590	2,984	8,378	4,415
Illinois	-	-	36,611	848	36,611	848
Indiana	-	-	13,366	10,207	13,366	10,207
Kentucky Total	-	-	22,363	5,747	22,363	5,747
Kentucky (East)	-	-	5,933	5,747	5,933	5,747
Kentucky (West)	-	-	16,430	-	16,430	-
Louisiana	-	-	-	307	-	307
Maryland	-	-	298	1,158	298	1,158
Mississippi	-	-	-	3,369	-	3,369
Missouri	-	-	-	74	-	74
Montana	-	9,237	7,431	11,565	7,431	20,802
New Mexico	1,597	5,284	-	3,669	1,597	8,953
North Dakota	-	3,941	-	22,789	-	26,731
Ohio	-	-	1,298	1,178	1,298	1,178
Pennsylvania Total	5,381	904	29,754	3,319	35,135	4,223
Pennsylvania (Anthracite)	-	904	-	1,283	-	2,187
Pennsylvania (Bituminous)	5,381	-	29,754	2,036	35,135	2,036
Texas	-	9,335	-	7,749	-	17,084
Utah	-	-	10,369	354	10,369	354
Virginia	-	-	7,607	3,159	7,607	3,159
West Virginia Total	30,139	1,144	38,195	13,726	68,334	14,870
West Virginia (Northern)	29,862	-	16,624	485	46,485	485
West Virginia (Southern)	277	1,144	21,572	13,241	21,848	14,385
Wyoming	-	4,496	-	240,234	-	244,730
Appalachia Total	44,443	2,048	83,283	29,520	127,726	31,568
Appalachia Central	277	1,144	35,111	22,147	35,388	23,291
Appalachia Northern	35,243	904	47,974	6,141	83,217	7,045
Appalachia Southern	8,923	-	198	1,232	9,121	1,232
Interior Region Total	-	9,335	66,407	22,553	66,407	31,887
Illinois Basin	-	-	66,407	11,055	66,407	11,055
Other Interior	-	9,335	-	11,498	-	20,833
Western Region Total	3,385	25,404	24,390	281,596	27,775	306,999
Powder River Basin	-	9,201	-	249,286	-	258,486
Uinta Basin	1,788	1,431	16,261	2,984	18,049	4,415
Other Western	1,597	14,773	8,129	29,326	9,726	44,099
East of Mississippi River	44,443	2,048	149,690	43,943	194,133	45,991
West of Mississippi River	3,385	34,738	24,390	289,725	27,775	324,464
U.S. Subtotal	47,828	36,787	174,080	333,668	221,908	370,455
Unknown *	-	-	-	-	235	1,012
U.S. Total	47,828	36,787	174,080	333,668	222,143	371,467

- = No data reported.

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

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

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

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

Table 8. Coal Disposition by State, 2022

(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	235	1,628	-	-	5,621	194	5,856	1,822
Alaska	-	1,021	-	-	-	-	-	1,021
Colorado	-	6,039	-	4,987	-	-	-	11,026
Illinois	-	19,773	-	8,856	-	7,996	-	36,625
Indiana	-	10,983	-	10,708	-	-	-	21,691
Kentucky Total	2,330	23,068	168	347	579	65	3,076	23,481
Kentucky (East)	2,330	7,475	168	347	579	65	3,076	7,888
Kentucky (West)	-	15,593	-	-	-	-	-	15,593
Louisiana	-	331	-	-	-	-	-	331
Maryland	265	1,118	-	-	22	-	287	1,118
Mississippi	-	3,215	-	-	-	-	-	3,215
Missouri	-	74	-	-	-	-	-	74
Montana	-	17,713	-	7,245	-	-	-	24,958
New Mexico	-	7,291	-	3,787	-	-	-	11,077
North Dakota	-	26,645	-	-	-	-	-	26,645
Ohio	-	2,492	-	-	-	-	-	2,492
Pennsylvania Total	4,026	21,116	39	496	1,140	1,014	5,205	22,626
Pennsylvania (Anthracite)	172	1,500	-	143	-	6	172	1,649
Pennsylvania (Bituminous)	3,853	19,616	39	353	1,140	1,008	5,033	20,977
Texas	-	2,364	-	14,046	-	-	-	16,410
Utah	-	8,936	-	-	-	1,199	-	10,136
Virginia	2,567	911	3	-	2,785	-	5,355	911
West Virginia Total	9,826	43,914	712	253	16,346	3,248	26,884	47,414
West Virginia (Northern)	39	36,754	336	253	4,959	2,661	5,334	39,668
West Virginia (Southern)	9,786	7,159	376	-	11,388	587	21,550	7,746
Wyoming	-	155,765	-	87,699	-	1,089	-	244,554
U.S. Subtotal	19,248	354,394	922	138,425	26,493	14,806	46,663	507,625
Adjustments ⁴	-5,713	-	-	-	-	-	-5,713	-
Other Exports [*]	-	-	-	-	19,985	24,672	19,985	24,672
U.S. Total ^{**}	13,535	354,394	922	138,425	46,478	39,478	60,935	532,297

- = No data reported.

^{*} Estimated quantity of coal exported by coal brokers, coal traders and coal terminals reported on the EIA-8A, 'Annual Survey of Coal Stocks and Coal Exports'.^{**} Excludes mines producing less than 25,000 short tons, which are not required to provide data, and refuse recovery.¹ Open market sales include all coal sold on the open market to other coal companies or consumers; excludes exports.² Captive sales transactions include all coal used by the producing company or sold to affiliate or parent companies; excludes exports.³ State level total and U.S. subtotal include the quantity of coal exported by coal mines only.⁴ Adjustments reflect differences in source data. State-level data are sourced from the EIA-7A, 'Annual Survey of Coal Production and Preparation'. Adjustments are estimated using coal consumed for coke production from the EIA-3, 'Quarterly Survey of Industrial, Commercial, & Institutional Users' and metallurgical coal imports from the U.S. Department of Commerce, Bureau of the Census, 'Monthly Report IM 145.' US Total Exports are sourced from U.S. Department of Commerce, Bureau of the Census, 'Monthly Report EM 545.'

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

Table 9. Major U.S. Coal Mines, 2022

Rank	Mine Name / Operating Company	Mine Type	State	Production (short tons)
1	Black Thunder / Thunder Basin Coal Company LLC	Surface	Wyoming	62,181,557
2	North Antelope Rochelle Mine / Peabody Powder River Mining LLC	Surface	Wyoming	60,389,761
3	Antelope Coal Mine / Navajo Transitional Energy Com	Surface	Wyoming	21,656,666
4	Buckskin Mine / Buckskin Mining Company	Surface	Wyoming	18,233,969
5	Eagle Butte Mine / Eagle Specialty Materials LLC	Surface	Wyoming	15,062,345
6	Belle Ayr Mine / Eagle Specialty Materials LLC	Surface	Wyoming	14,257,882
7	Freedom Mine / The Coteau Properties Company	Surface	North Dakota	13,422,628
8	Cordero Rojo Mine / Navajo Transitional Energy Com	Surface	Wyoming	12,463,913
9	Caballo Mine / Peabody Caballo Mining, LLC	Surface	Wyoming	12,055,977
10	Bailey Mine / Consol Pennsylvania Coal Company	Underground	Pennsylvania	11,567,919
11	Spring Creek Mine / Navajo Transitional Energy Com	Surface	Montana	11,565,298
12	Rawhide Mine / Peabody Caballo Mining, LLC	Surface	Wyoming	10,335,565
13	River View Mine / River View Coal LLC	Underground	Kentucky	10,158,148
14	Marshall County Mine / Marshall County Coal Resources	Underground	West Virginia	9,640,814
15	Kosse Strip / Luminant Mining Company LLC	Surface	Texas	9,334,585
16	Tunnel Ridge Mine / Tunnel Ridge, LLC	Underground	West Virginia	8,312,644
17	Mach #1 Mine / Mach Mining LLC	Underground	Illinois	7,715,724
18	Falkirk Mine / Falkirk Mining Company	Surface	North Dakota	7,525,885
19	Bull Mountains Mine No 1 / Signal Peak Energy LLC	Underground	Montana	7,431,273
20	Harrison County Mine / Harrison County Coal Resources	Underground	West Virginia	7,039,318
21	Rosebud Mine & Crusher/Conveyo / Westmoreland Rosebud Mining LI	Surface	Montana	6,970,910
22	Marion County Mine / Marion County Coal Resources,	Underground	West Virginia	6,813,124
23	Bear Run Mine / Peabody Bear Run Mining LLC	Surface	Indiana	6,721,885
24	Lively Grove Mine / Prairie State Generating Company	Underground	Illinois	6,543,896
25	Ohio County Mine / Ohio County Coal Resources, In	Underground	West Virginia	6,368,730
26	Enlow Fork Mine / Consol Pennsylvania Coal Company	Underground	Pennsylvania	6,291,939
27	Harvey Mine / Consol Pennsylvania Coal Company	Underground	Pennsylvania	6,074,719
28	Mc#1 Mine / M-Class Mining LLC	Underground	Illinois	5,578,465
29	Cumberland Mine / Iron Cumberland LLC	Underground	Pennsylvania	5,381,422
30	Navajo Mine / Bisti Fuels Company LLC	Surface	New Mexico	5,284,406
31	Gibson South / Gibson County Coal, LLC	Underground	Indiana	5,255,627
32	No 7 Mine / Warrior Met Coal Mining, LLC	Underground	Alabama	4,755,684
33	Mine No. 1 / Hamilton County Coal, LLC	Underground	Illinois	4,693,251
34	Deer Run Mine / Patton Mining LLC	Underground	Illinois	4,469,223
35	West Elk Mine / Mountain Coal Company, L.L.C.	Underground	Colorado	4,355,703
36	Buchanan Mine #1 / Buchanan Minerals, LLC	Underground	Virginia	4,309,238
37	Prairie Eagle-Underground / Knight Hawk Coal, LLC	Underground	Illinois	4,271,659
38	Cardinal / Warrior Coal LLC	Underground	Kentucky	4,115,682
39	Leer Mine / Aci Tygart Valley	Underground	West Virginia	4,041,623
	Subtotal			432,649,057
	All Other Mines			161,506,225
	U.S. Total			594,155,282

Notes: Major mines are mines that produced more than 4 million short tons in 2022. 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, 2022

Rank	Controlling Company Name	Production (thousand short tons)	Percent of Total Production
1	Peabody Energy Corp	101,929	17.2
2	Arch Resources Inc	78,364	13.2
3	Navajo Transitional Energy Co	50,970	8.6
4	Acnr Holdings Inc	36,499	6.1
5	Alliance Resource Partners LP	35,477	6.0
6	David Michael Jamison Petri Koivula	29,421	5.0
7	NACCO Industries Inc	28,899	4.9
8	CONSOL Energy Inc	24,103	4.1
9	Kiewit Peter Sons' Inc	18,234	3.1
10	Foresight Energy Labor LLC	17,763	3.0
11	Alpha Metallurgical Resources Inc	15,867	2.7
12	Westmoreland Mining Holdings LLC	10,872	1.8
13	Vistra Energy	9,335	1.6
14	Seven Energy Ag	9,117	1.5
15	Global Mining Group LLC	7,431	1.3
16	Coronado Coal LLC	6,650	1.1
17	Prairie State Energy Campus	6,544	1.1
18	Hallador Energy Company	6,542	1.1
19	Wolverine Fuels LLC	6,425	1.1
20	Warrior Met Coal Intermediate Holdco LLC	6,315	1.1
21	J Clifford Forrest	5,415	0.9
22	Iron Senergy Holding LLC	5,381	0.9
	Subtotal	517,553	87.1
	All Other Coal Producers	76,602	12.9
	U.S. Total	594,155	100.0

Notes: The listed companies each produced more than 5 million short tons of coal in 2022. 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, 2022 and 2021

(thousand short tons)

Coal-Producing State	2022			2021			Percent Change		
	Underground	Surface	Total	Underground	Surface	Total	Underground	Surface	Total
Alabama	13,055	1,909	14,964	13,055	2,276	15,331	-	-16.1	-2.4
Alaska	-	3,000	3,000	-	3,000	3,000	-	-	-
Colorado	13,245	7,640	20,885	15,290	5,865	21,155	-13.4	30.3	-1.3
Illinois	43,325	1,900	45,225	43,060	1,250	44,310	0.6	52.0	2.1
Indiana	15,800	13,440	29,240	17,700	12,460	30,160	-10.7	7.9	-3.1
Kentucky Total	24,700	8,982	33,683	24,743	7,312	32,054	-0.2	22.8	5.1
Kentucky (East)	7,600	8,982	16,583	8,143	7,072	15,214	-6.7	27.0	9.0
Kentucky (West)	17,100	-	17,100	16,600	240	16,840	3.0	-	1.5
Louisiana	-	385	385	-	385	385	-	-	-
Maryland	600	1,901	2,501	600	1,061	1,661	-	79.2	50.6
Mississippi	-	3,600	3,600	-	3,600	3,600	-	-	-
Missouri	-	150	150	-	100	100	-	50.0	50.0
Montana	11,000	33,900	44,900	11,000	34,104	45,104	-	-0.6	-0.5
New Mexico	9,000	10,770	19,770	9,000	10,000	19,000	-	7.7	4.1
North Dakota	-	35,100	35,100	-	35,100	35,100	-	-	-
Ohio	1,329	2,362	3,691	2,212	1,768	3,980	-39.9	33.6	-7.3
Pennsylvania Total	42,397	6,889	49,286	44,160	7,079	51,239	-4.0	-2.7	-3.8
Pennsylvania (Anthracite)	45	3,499	3,543	41	3,527	3,568	9.8	-0.8	-0.7
Pennsylvania (Bituminous)	42,353	3,390	45,743	44,119	3,552	47,671	-4.0	-4.6	-4.0
Texas	-	17,250	17,250	-	18,491	18,491	-	-6.7	-6.7
Utah	15,950	2,000	17,950	17,860	2,000	19,860	-10.7	-	-9.6
Virginia	9,238	4,102	13,339	8,433	3,933	12,366	9.5	4.3	7.9
West Virginia Total	89,167	22,053	111,221	83,959	19,914	103,873	6.2	10.7	7.1
West Virginia (Northern)	58,007	600	58,608	57,700	801	58,501	0.5	-25.1	0.2
West Virginia (Southern)	31,160	21,453	52,613	26,260	19,113	45,373	18.7	12.2	16.0
Wyoming	-	405,478	405,478	3,400	406,518	409,918	-	-0.3	-1.1
U.S. Total	288,807	582,812	871,619	294,473	576,216	870,689	-1.9	1.1	0.1

- = No data reported.

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

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

Table 12. Capacity Utilization of Coal Mines by State, 2022 and 2021

(percent)

Coal-Producing State	2022			2021		
	Underground	Surface	Total	Underground	Surface	Total
Alabama	69.87	64.55	69.19	60.96	58.97	60.67
Alaska	-	33.81	33.81	-	34.74	34.74
Colorado	63.25	57.79	61.25	46.63	80.90	56.13
Illinois	84.50	44.62	82.83	84.06	32.72	82.61
Indiana	84.60	75.94	80.62	58.82	72.43	64.44
Kentucky Total	90.54	63.98	83.46	86.71	64.11	81.55
Kentucky (East)	78.07	63.98	70.44	66.26	62.99	64.74
Kentucky (West)	96.08	-	96.08	96.74	96.96	96.74
Louisiana	-	79.77	79.77	-	77.95	77.95
Maryland	49.74	60.92	58.23	62.56	79.67	73.49
Mississippi	-	93.57	93.57	-	88.91	88.91
Missouri	-	49.02	49.02	-	44.16	44.16
Montana	67.56	61.36	62.88	65.88	62.55	63.36
New Mexico	17.74	83.13	53.36	17.47	76.93	48.77
North Dakota	-	76.16	76.16	-	75.53	75.53
Ohio	97.65	49.88	67.08	80.50	55.33	69.32
Pennsylvania Total	82.95	62.65	80.11	86.12	58.28	82.28
Pennsylvania (Anthracite)	75.04	65.16	65.28	80.55	55.14	55.43
Pennsylvania (Bituminous)	82.96	60.06	81.26	86.13	61.40	84.29
Texas	-	99.04	99.04	-	93.29	93.29
Utah	65.01	17.71	59.74	67.19	21.71	62.61
Virginia	82.34	77.01	80.70	94.89	66.07	85.72
West Virginia Total	76.64	67.43	74.81	77.53	65.69	75.26
West Virginia (Northern)	80.14	80.78	80.14	76.36	49.90	75.99
West Virginia (Southern)	70.12	67.05	68.87	80.11	66.35	74.32
Wyoming	-	60.36	60.36	93.97	57.95	58.25
U.S. Total	76.85	63.58	67.98	74.86	61.65	66.12

- = No data reported.

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

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

Table 13. Productive Capacity and Capacity Utilization of Underground Coal Mines by State and Mining Method, 2022

(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	3,357	67.35	s	-	9,698	70.74	13,055	69.87
Colorado	2,455	58.25	s	-	10,790	64.39	13,245	63.25
Illinois	18,823	87.13	s	-	24,503	82.48	43,325	84.50
Indiana	15,800	84.60	s	-	s	-	15,800	84.60
Kentucky Total	24,424	90.98	277	51.70	s	-	24,700	90.54
Kentucky (East)	7,324	79.06	277	51.70	s	-	7,600	78.07
Kentucky (West)	17,100	96.08	s	-	s	-	17,100	96.08
Maryland	600	49.74	s	-	s	-	600	49.74
Montana	880	67.56	s	-	10,120	67.56	11,000	67.56
New Mexico	s	-	s	-	9,000	17.74	9,000	17.74
Ohio	965	96.76	s	-	364	100.00	1,329	97.65
Pennsylvania Total	9,169	86.30	45	75.04	33,184	82.04	42,397	82.95
Pennsylvania (Anthracite)	s	-	45	75.04	s	-	45	75.04
Pennsylvania (Bituminous)	9,169	86.30	s	-	33,184	82.04	42,353	82.96
Utah	5,082	64.20	s	-	10,868	65.39	15,950	65.01
Virginia	5,260	80.72	s	-	3,978	84.49	9,238	82.34
West Virginia Total	36,668	71.12	275	81.66	52,224	80.48	89,167	76.64
West Virginia (Northern)	5,783	77.05	s	-	52,224	80.48	58,007	80.14
West Virginia (Southern)	30,885	70.01	275	81.66	s	-	31,160	70.12
U.S. Total	123,482	80.18	596	67.26	164,729	74.39	288,807	76.85

- = No data reported.

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

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

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

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

Table 13.1 Productive Capacity and Capacity Utilization of Surface Coal Mines by State and Mining Method, 2022

(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	1,357	63.33	-	-	360	62.69	-	-	192	76.67	1,909	64.55
Alaska	1,500	33.81	-	-	1,500	33.81	-	-	-	-	3,000	33.81
Colorado	1,426	62.21	-	-	1,125	67.42	-	-	5,089	54.42	7,640	57.79
Illinois	-	-	1,780	43.04	-	-	-	-	120	68.03	1,900	44.62
Indiana	-	-	2,610	55.09	9,525	88.97	-	-	1,305	22.60	13,440	75.94
Kentucky Total	4,155	69.36	1,453	81.10	120	43.48	-	-	3,255	50.24	8,982	63.98
Kentucky (East)	4,155	69.36	1,453	81.10	120	43.48	-	-	3,255	50.24	8,982	63.98
Louisiana	-	-	385	79.77	-	-	-	-	-	-	385	79.77
Maryland	442	81.82	500	84.97	-	-	-	-	960	38.77	1,901	60.92
Mississippi	3,600	93.57	-	-	-	-	-	-	-	-	3,600	93.57
Missouri	150	49.02	-	-	-	-	-	-	-	-	150	49.02
Montana	23,500	58.70	10,400	67.38	-	-	-	-	-	-	33,900	61.36
New Mexico	4,200	87.35	-	-	6,570	80.43	-	-	-	-	10,770	83.13
North Dakota	30,100	75.84	-	-	5,000	78.05	-	-	-	-	35,100	76.16
Ohio	1,169	57.20	1,050	42.11	-	-	-	-	143	47.13	2,362	49.88
Pennsylvania Total	1,809	70.94	-	-	4,520	59.55	-	-	560	60.88	6,889	62.65
Pennsylvania (Anthracite)	1,126	73.65	-	-	2,051	62.34	-	-	322	53.41	3,499	65.16
Pennsylvania (Bituminous)	683	66.47	-	-	2,470	57.23	-	-	238	71.00	3,390	60.06
Texas	2,434	100.00	9,366	99.67	5,450	97.52	-	-	-	-	17,250	99.04
Utah	-	-	-	-	1,960	17.71	-	-	40	17.71	2,000	17.71
Virginia	2,078	76.59	783	83.15	-	-	-	-	1,241	73.83	4,102	77.01
West Virginia Total	11,207	54.58	5,074	89.25	-	-	1,550	87.98	4,223	67.76	22,053	67.43
West Virginia (Northern)	326	78.44	-	-	-	-	-	-	274	83.57	600	80.78
West Virginia (Southern)	10,881	53.86	5,074	89.25	-	-	1,550	87.98	3,948	66.66	21,453	67.05
Wyoming	252,000	49.31	3,850	40.71	147,078	80.20	-	-	2,550	37.11	405,478	60.36
U.S. Total	341,126	54.40	37,250	74.21	183,208	79.43	1,550	87.98	19,678	53.05	582,812	63.58

- = No data reported.

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

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

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

Recoverable Reserves

Table 14. Recoverable Coal Reserves at Producing Mines by State, 2022 and 2021

(million short tons)

Coal-Producing State	2022	2021	Percent Change Recoverable Coal Reserves
	Recoverable Coal Reserves	Recoverable Coal Reserves	
Alabama	186	172	7.9
Alaska	45	46	-2.2
Colorado	281	284	-1.1
Illinois	1,846	1,873	-1.4
Indiana	285	302	-5.6
Kentucky Total	350	354	-1.1
Kentucky (East)	157	131	19.8
Kentucky (West)	193	223	-13.4
Louisiana	12	13	-2.4
Maryland	9	6	43.5
Mississippi	102	105	-3.2
Missouri	s	s	NM
Montana	401	559	-28.3
New Mexico	36	44	-19.5
North Dakota	599	621	-3.7
Ohio	35	49	-28.3
Pennsylvania Total	1,016	1,370	-25.9
Pennsylvania (Anthracite)	121	118	2.2
Pennsylvania (Bituminous)	895	1,252	-28.5
Texas	275	292	-5.9
Utah	140	169	-17.3
Virginia	150	149	0.8
West Virginia Total	1,809	1,470	23.1
West Virginia (Northern)	1,234	1,013	21.7
West Virginia (Southern)	576	457	26.1
Wyoming	4,161	4,403	-5.5
U.S. Total	11,737	12,282	-4.4

- = No data reported.

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

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

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

Table 15. Recoverable Coal Reserves at Producing Mines, Estimated Recoverable Reserves, and Demonstrated Reserve Base by Mining Method, 2022

(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	174	319	632	12	2,207	3,098	186	2,525	3,730
Alaska	-	2,335	5,423	45	475	658	45	2,810	6,081
Arkansas	-	126	271	-	101	144	-	227	415
Colorado	183	5,667	10,798	98	3,740	4,754	281	9,407	15,552
Georgia	-	1	2	-	1	2	-	2	4
Idaho	-	2	4	-	-	-	-	2	4
Illinois	1,842	27,520	86,636	4	10,020	16,464	1,846	37,540	103,100
Indiana	123	3,424	8,267	163	203	347	285	3,627	8,614
Iowa	-	807	1,732	-	320	457	-	1,127	2,189
Kansas	-	-	-	-	679	970	-	679	970
Kentucky Total	290	6,631	15,453	60	7,180	12,433	350	13,811	27,886
Kentucky (East)	97	244	436	60	4,962	8,887	157	5,206	9,323
Kentucky (West)	193	6,388	15,017	-	2,218	3,546	193	8,605	18,563
Louisiana	-	-	-	12	271	366	12	271	366
Maryland	6	303	552	4	24	35	9	327	588
Michigan	-	55	123	-	3	5	-	58	128
Mississippi	-	-	-	102	-	-	102	-	-
Missouri	-	689	1,479	s	3,153	4,504	-	3,842	5,983
Montana	181	35,835	70,785	220	38,448	47,573	401	74,283	118,358
New Mexico	-	2,725	5,991	36	3,976	5,687	36	6,701	11,678
North Carolina	-	5	11	-	-	-	-	5	11
North Dakota	-	-	-	599	6,445	8,449	599	6,445	8,449
Ohio	32	7,544	17,146	4	3,691	5,638	35	11,234	22,785
Oklahoma	-	569	1,221	-	218	312	-	787	1,533
Oregon	-	6	15	-	2	3	-	9	17
Pennsylvania Total	875	9,886	21,679	141	950	4,084	1,016	10,836	25,764
Pennsylvania (Anthracite)	s	340	3,840	120	415	3,317	121	755	7,157
Pennsylvania (Bituminous)	874	9,547	17,840	21	535	767	895	10,081	18,607
South Dakota	-	-	-	-	277	366	-	277	366
Tennessee	-	270	494	-	170	251	-	441	744
Texas	-	-	-	275	8,970	11,652	275	8,970	11,652
Utah	140	2,231	4,551	s	206	260	140	2,437	4,811
Virginia	134	413	735	17	284	444	150	697	1,178
Washington	-	674	1,332	-	6	8	-	681	1,340
West Virginia Total	1,573	14,198	26,602	237	1,900	3,012	1,809	16,098	29,614
West Virginia (Northern)	1,230	NA	NA	4	NA	NA	1,234	NA	NA
West Virginia (Southern)	343	NA	NA	233	NA	NA	576	NA	NA
Wyoming	-	22,901	42,409	4,161	11,346	13,704	4,161	34,246	56,113
U.S. Total	5,550	145,136	324,344	6,188	105,268	145,680	11,737	250,404	470,024

-- 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, 2023.' 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, 2022. The demonstrated reserve base includes publicly available data on coal mapped to measured and indicated degrees of accuracy and found at depths and in coalbed thicknesses considered technologically minable at the time of determinations; see Glossary for criteria. All reserve expressions exclude silt, culm, refuse bank, slurry dam, and dredge operations. Reserves at Producing Mines exclude mines producing less than 25,000 short tons, which are not required to provide reserves data.

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

Table 16. Recoverable Coal Reserves at Producing Underground Coal Mines by State and Mining Method, 2022

(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	53	s	121	174
Colorado	112	s	71	183
Illinois	532	s	1,309	1,842
Indiana	123	s	s	123
Kentucky Total	289	1	s	290
Kentucky (East)	96	1	s	97
Kentucky (West)	193	s	s	193
Maryland	6	s	s	6
Montana	14	s	166	181
New Mexico	s	s	s	s
Ohio	32	s	s	32
Pennsylvania Total	123	s	751	875
Pennsylvania (Anthracite)	s	s	s	s
Pennsylvania (Bituminous)	123	s	751	874
Utah	46	s	93	140
Virginia	54	s	80	134
West Virginia Total	435	1	1,137	1,573
West Virginia (Northern)	93	s	1,137	1,230
West Virginia (Southern)	342	1	s	343
U.S. Total	1,820	2	3,728	5,550

- = No data reported.

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

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

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

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

Table 16.1 Recoverable Coal Reserves at Producing Surface Coal Mines by State and Mining Method, 2022

(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	7	-	4	-	1	12
Alaska	22	-	22	-	-	45
Colorado	7	-	39	-	52	98
Illinois	-	4	-	-	s	4
Indiana	-	13	148	-	2	163
Kentucky Total	44	13	s	-	2	60
Kentucky (East)	44	13	s	-	2	60
Louisiana	-	12	-	-	-	12
Maryland	s	3	-	-	s	4
Mississippi	102	-	-	-	-	102
Missouri	s	-	-	-	-	s
Montana	176	44	-	-	-	220
New Mexico	5	-	31	-	-	36
North Dakota	537	-	62	-	-	599
Ohio	2	1	-	-	s	4
Pennsylvania Total	53	-	87	-	1	141
Pennsylvania (Anthracite)	50	-	70	-	s	120
Pennsylvania (Bituminous)	3	-	18	-	s	21
Texas	104	109	62	-	-	275
Utah	-	-	s	-	s	s
Virginia	11	2	-	-	4	17
West Virginia Total	164	27	-	22	23	237
West Virginia (Northern)	3	-	-	-	s	4
West Virginia (Southern)	161	27	-	22	23	233
Wyoming	1,700	36	2,414	-	11	4,161
U.S. Total	2,935	265	2,869	22	96	6,188

- = No data reported.

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

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

Notes: Recoverable coal reserves at producing mines represent the quantity of coal that can be recovered (i.e. mined) from existing coal reserves at reporting mines. Excludes mines producing less than 25,000 short tons, which are not required to provide data and refuse recovery. Mines reporting multiple mining methods are assigned to the mining method with the greatest percentage of production reported.

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

Table 17. Recoverable Coal Reserves at Producing U.S. Mines by Mine Production Range and Mine Type, 2022

(million short tons)

Mine Production Range (thousand short tons)	Underground	Surface	Total
	Recoverable Coal Reserves	Recoverable Coal Reserves	Recoverable Coal Reserves
Over 1,000	4,855	5,746	10,602
Over 500 to 1,000	263	47	309
Over 200 to 500	231	156	387
Over 100 to 200	139	151	290
Over 50 to 100	45	45	90
Over 10 to 50	17	42	60
U.S. Total	5,550	6,188	11,737

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, 2022 and 2021

Coal-Producing State and Region ¹	2022			2021			Percent Change		
	Underground	Surface	Total	Underground	Surface	Total	Underground	Surface	Total
Alabama	1,678	420	2,098	1,385	346	1,731	21.2	21.4	21.2
Alaska	-	99	99	-	103	103	-	-3.9	-3.9
Colorado	914	370	1,284	721	347	1,068	26.8	6.6	20.2
Illinois	2,063	99	2,162	1,965	52	2,017	5.0	90.4	7.2
Indiana	1,358	917	2,275	1,092	714	1,806	24.4	28.4	26.0
Kentucky Total	3,591	1,224	4,815	3,084	1,110	4,194	16.4	10.3	14.8
Kentucky (East)	2,007	1,224	3,231	1,600	1,078	2,678	25.4	13.5	20.6
Kentucky (West)	1,584	-	1,584	1,484	32	1,516	6.7	-100.0	4.5
Louisiana	-	35	35	-	34	34	-	2.9	2.9
Maryland	124	150	274	114	102	216	8.8	47.1	26.9
Mississippi	-	231	231	-	205	205	-	12.7	12.7
Missouri	-	7	7	-	8	8	-	-12.5	-12.5
Montana	230	724	954	245	685	930	-6.1	5.7	2.6
New Mexico	183	589	772	235	585	820	-22.1	0.7	-5.9
North Dakota	-	1,186	1,186	-	1,176	1,176	-	0.9	0.9
Ohio	233	180	413	213	141	354	9.4	27.7	16.7
Oklahoma	-	1	1	-	1	1	-	-	-
Pennsylvania Total	3,172	1,320	4,492	3,087	1,247	4,334	2.8	5.9	3.6
Pennsylvania (Anthracite)	57	794	851	57	753	810	-	5.4	5.1
Pennsylvania (Bituminous)	3,115	526	3,641	3,030	494	3,524	2.8	6.5	3.3
Tennessee	4	4	8	4	-	4	-	-	100.0
Texas	-	904	904	-	1,037	1,037	-	-12.8	-12.8
Utah	1,346	52	1,398	1,313	58	1,371	2.5	-10.3	2.0
Virginia	1,501	824	2,325	1,312	630	1,942	14.4	30.8	19.7
West Virginia Total	10,219	2,778	12,997	9,099	2,412	11,511	12.3	15.2	12.9
West Virginia (Northern)	4,324	103	4,427	4,008	93	4,101	7.9	10.8	7.9
West Virginia (Southern)	5,895	2,675	8,570	5,091	2,319	7,410	15.8	15.4	15.7
Wyoming	-	4,794	4,794	112	4,455	4,567	-100.0	7.6	5.0
Appalachia Total	18,938	6,900	25,838	16,814	5,956	22,770	12.6	15.8	13.5
Appalachia Central	9,407	4,727	14,134	8,007	4,027	12,034	17.5	17.4	17.5
Appalachia Northern	7,853	1,753	9,606	7,422	1,583	9,005	5.8	10.7	6.7
Appalachia Southern	1,678	420	2,098	1,385	346	1,731	21.2	21.4	21.2
Interior Region Total	5,005	2,194	7,199	4,541	2,083	6,624	10.2	5.3	8.7
Illinois Basin	5,005	1,016	6,021	4,541	798	5,339	10.2	27.3	12.8
Other Interior	-	1,178	1,178	-	1,285	1,285	-	-8.3	-8.3
Western Region Total	2,673	7,814	10,487	2,626	7,409	10,035	1.8	5.5	4.5
Powder River Basin	-	4,925	4,925	-	4,541	4,541	-	8.5	8.5
Uinta Basin	2,027	401	2,428	1,883	378	2,261	7.6	6.1	7.4
Other Western	646	2,488	3,134	743	2,490	3,233	-13.1	-0.1	-3.1
East of Mississippi River	23,943	8,147	32,090	21,355	6,959	28,314	12.1	17.1	13.3
West of Mississippi River	2,673	8,761	11,434	2,626	8,489	11,115	1.8	3.2	2.9
U.S. Subtotal	26,616	16,908	43,524	23,981	15,448	39,429	11.0	9.5	10.4
Refuse Recovery	-	-	58	-	-	89	-	-	-34.8
U.S. Total	26,616	16,908	43,582	23,981	15,448	39,518	11.0	9.5	10.3

- = 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, 2022

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	8	17	22	1,574	424	1,998
Alaska	-	1	1	-	99	99
Colorado	1	10	10	41	1,211	1,252
Illinois	-	15	15	-	2,018	2,018
Indiana	-	14	14	-	2,169	2,169
Kentucky Total	25	101	112	1,088	3,117	4,205
Kentucky (East)	25	98	109	1,088	1,665	2,753
Kentucky (West)	-	3	3	-	1,452	1,452
Louisiana	-	1	1	-	35	35
Maryland	2	13	14	88	145	233
Mississippi	-	1	1	-	231	231
Missouri	-	1	1	-	7	7
Montana	-	5	5	-	944	944
New Mexico	-	3	3	-	772	772
North Dakota	-	5	5	-	1,186	1,186
Ohio	-	10	10	-	386	386
Oklahoma	-	1	1	-	1	1
Pennsylvania Total	42	91	112	1,154	2,783	3,937
Pennsylvania (Anthracite)	5	36	40	58	417	475
Pennsylvania (Bituminous)	37	55	72	1,096	2,366	3,462
Tennessee	-	1	1	-	4	4
Texas	-	4	4	-	904	904
Utah	-	6	6	-	1,304	1,304
Virginia	22	31	42	1,748	278	2,026
West Virginia Total	92	116	152	6,624	4,959	11,583
West Virginia (Northern)	6	14	16	1,211	3,030	4,241
West Virginia (Southern)	86	102	136	5,413	1,929	7,342
Wyoming	-	16	16	-	4,794	4,794
Appalachia Total	191	377	462	12,275	10,645	22,920
Appalachia Central	133	232	288	8,248	3,877	12,125
Appalachia Northern	50	128	152	2,453	6,344	8,797
Appalachia Southern	8	17	22	1,574	424	1,998
Interior Region Total	-	40	40	-	6,817	6,817
Illinois Basin	-	32	32	-	5,639	5,639
Other Interior	-	8	8	-	1,178	1,178
Western Region Total	1	46	46	41	10,310	10,351
Powder River Basin	-	15	15	-	4,915	4,915
Uinta Basin	-	13	13	-	2,334	2,334
Other Western	1	18	18	41	3,061	3,102
East of Mississippi River	191	410	495	12,275	16,515	28,790
West of Mississippi River	1	53	53	41	11,257	11,298
U.S. Total	192	463	548	12,316	27,772	40,088

- = No data reported.

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

² Some mines produce both metallurgical and non-metallurgical.

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

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

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

Table 19. Average Number of Employees at Underground and Surface Mines by State and Mine Production Range, 2022

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		
Alabama	1,132	415	189	62	95	89	16	100	2,098
Underground	1,132	415	-	26	22	-	-	83	1,678
Surface	-	-	189	36	73	89	16	17	420
Alaska	99	-	-	-	-	-	-	-	99
Surface	99	-	-	-	-	-	-	-	99
Colorado	1,030	-	201	14	7	-	-	32	1,284
Underground	681	-	201	-	-	-	-	32	914
Surface	349	-	-	14	7	-	-	-	370
Illinois	1,812	123	61	-	9	5	4	148	2,162
Underground	1,812	123	-	-	-	-	-	128	2,063
Surface	-	-	61	-	9	5	4	20	99
Indiana	1,968	24	64	70	-	43	-	98	2,275
Underground	1,260	-	-	-	-	-	-	98	1,358
Surface	708	24	64	70	-	43	-	-	917
Kentucky Total	1,684	102	931	505	431	405	141	567	4,815
Underground	1,684	-	773	243	192	233	51	367	3,591
Surface	-	102	158	262	239	172	90	200	1,224
Kentucky (East)	232	102	931	505	431	405	141	435	3,231
Underground	232	-	773	243	192	233	51	235	2,007
Surface	-	102	158	262	239	172	90	200	1,224
Kentucky (West)	1,452	-	-	-	-	-	-	132	1,584
Underground	1,452	-	-	-	-	-	-	132	1,584
Louisiana	-	-	35	-	-	-	-	-	35
Surface	-	-	35	-	-	-	-	-	35
Maryland	-	-	151	18	24	36	4	41	274
Underground	-	-	83	-	-	-	-	41	124
Surface	-	-	68	18	24	36	4	-	150
Mississippi	231	-	-	-	-	-	-	-	231
Surface	231	-	-	-	-	-	-	-	231
Missouri	-	-	-	-	7	-	-	-	7
Surface	-	-	-	-	7	-	-	-	7
Montana	938	-	-	-	-	6	-	10	954
Underground	230	-	-	-	-	-	-	-	230
Surface	708	-	-	-	-	6	-	10	724
New Mexico	772	-	-	-	-	-	-	-	772
Underground	183	-	-	-	-	-	-	-	183
Surface	589	-	-	-	-	-	-	-	589
North Dakota	1,147	-	-	-	-	39	-	-	1,186
Surface	1,147	-	-	-	-	39	-	-	1,186
Ohio	-	48	294	16	6	22	-	27	413
Underground	-	48	171	-	-	-	-	14	233
Surface	-	-	123	16	6	22	-	13	180
Oklahoma	-	-	-	-	-	-	1	-	1
Surface	-	-	-	-	-	-	1	-	1
Pennsylvania Total	2,122	246	577	528	179	123	137	530	4,492
Underground	2,122	183	472	197	-	13	21	143	3,172
Surface	-	63	105	331	179	110	116	387	1,320
Pennsylvania (Anthracite)	-	63	35	165	78	50	59	373	851
Underground	-	-	-	-	-	13	21	23	57
Surface	-	63	35	165	78	37	38	350	794
Pennsylvania (Bituminous)	2,122	183	542	363	101	73	78	157	3,641
Underground	2,122	183	472	197	-	-	-	120	3,115
Surface	-	-	70	166	101	73	78	37	526
Tennessee	-	-	-	-	-	-	4	4	8
Underground	-	-	-	-	-	-	-	4	4
Surface	-	-	-	-	-	-	4	-	4
Texas	904	-	-	-	-	-	-	-	904

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
Surface	904	-	-	-	-	-	-	-	904
Utah	1,178	105	21	-	-	-	-	84	1,398
Underground	1,178	105	-	-	-	-	-	63	1,346
Surface	-	-	21	-	-	-	-	21	52
Virginia	983	251	308	192	179	68	28	316	2,325
Underground	983	113	-	110	71	17	-	207	1,501
Surface	-	138	308	82	108	51	28	109	824
West Virginia Total	4,810	3,370	1,496	871	409	504	117	1,420	12,997
Underground	4,375	2,723	1,152	444	257	235	13	1,020	10,219
Surface	435	647	344	427	152	269	104	400	2,778
West Virginia (Northern)	3,889	-	151	181	7	13	-	186	4,427
Underground	3,889	-	151	130	-	-	-	154	4,324
Surface	-	-	-	51	7	13	-	32	103
West Virginia (Southern)	921	3,370	1,345	690	402	491	117	1,234	8,570
Underground	486	2,723	1,001	314	257	235	13	866	5,895
Surface	435	647	344	376	145	256	104	368	2,675
Wyoming	4,782	-	12	-	-	-	-	-	4,794
Surface	4,782	-	12	-	-	-	-	-	4,794
Appalachia Total	9,279	4,432	3,946	2,192	1,323	1,247	447	2,873	25,838
Underground	8,844	3,482	2,651	1,020	542	498	85	1,747	18,938
Surface	435	950	1,295	1,172	781	749	362	1,126	6,900
Appalachia Central	2,136	3,723	2,584	1,387	1,012	964	290	1,989	14,134
Underground	1,701	2,836	1,774	667	520	485	64	1,312	9,407
Surface	435	887	810	720	492	479	226	677	4,727
Appalachia Northern	6,011	294	1,173	743	216	194	141	784	9,606
Underground	6,011	231	877	327	-	13	21	352	7,853
Surface	-	63	296	416	216	181	120	432	1,753
Appalachia Southern	1,132	415	189	62	95	89	16	100	2,098
Underground	1,132	415	-	26	22	-	-	83	1,678
Surface	-	-	189	36	73	89	16	17	420
Interior Region Total	6,367	147	160	70	16	48	5	378	7,199
Underground	4,524	123	-	-	-	-	-	358	5,005
Surface	1,843	24	160	70	16	48	5	20	2,194
Illinois Basin	5,232	147	125	70	9	48	4	378	6,021
Underground	4,524	123	-	-	-	-	-	358	5,005
Surface	708	24	125	70	9	48	4	20	1,016
Other Interior	1,135	-	35	-	7	-	1	-	1,178
Surface	1,135	-	35	-	7	-	1	-	1,178
Western Region Total	9,946	105	234	14	7	45	-	126	10,487
Underground	2,272	105	201	-	-	-	-	95	2,673
Surface	7,674	-	33	14	7	45	-	31	7,814
Powder River Basin	4,915	-	-	-	-	-	-	10	4,925
Surface	4,915	-	-	-	-	-	-	10	4,925
Uinta Basin	2,208	105	-	14	7	-	-	84	2,428
Underground	1,859	105	-	-	-	-	-	63	2,027
Surface	349	-	-	14	7	-	-	21	401
Other Western	2,823	-	234	-	-	45	-	32	3,134
Underground	413	-	201	-	-	-	-	32	646
Surface	2,410	-	33	-	-	45	-	-	2,488
East of Mississippi River	14,742	4,579	4,071	2,262	1,332	1,295	451	3,251	32,090
Underground	13,368	3,605	2,651	1,020	542	498	85	2,105	23,943
Surface	1,374	974	1,420	1,242	790	797	366	1,146	8,147
West of Mississippi River	10,850	105	269	14	14	45	1	126	11,434
Underground	2,272	105	201	-	-	-	-	95	2,673
Surface	8,578	-	68	14	14	45	1	31	8,761
U.S. Subtotal	25,592	4,684	4,340	2,276	1,346	1,340	452	3,377	43,524
Underground	15,640	3,710	2,852	1,020	542	498	85	2,200	26,616
Surface	9,952	974	1,488	1,256	804	842	367	1,177	16,908
Refuse Recovery	-	-	-	10	29	10	9	-	58
U.S. Total	25,592	4,684	4,340	2,286	1,375	1,350	461	3,377	43,582

- = No data reported.

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

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

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

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

Table 20. Average Number of Employees at Underground and Surface Mines by State and Union Status, 2022

Coal-Producing State and Region ¹	Union		Nonunion	
	Underground	Surface	Underground	Surface
Alabama	1,600	-	78	382
Alaska	-	99	-	-
Colorado	173	121	741	249
Illinois	-	-	2,063	94
Indiana	-	-	1,358	909
Kentucky Total	-	-	3,424	1,023
Kentucky (East)	-	-	1,840	1,023
Kentucky (West)	-	-	1,584	-
Louisiana	-	-	-	35
Maryland	-	-	124	130
Mississippi	-	-	-	231
Missouri	-	-	-	7
Montana	-	438	230	286
New Mexico	183	363	-	226
North Dakota	-	207	-	979
Ohio	-	-	233	173
Pennsylvania Total	698	279	2,432	913
Pennsylvania (Anthracite)	-	279	36	492
Pennsylvania (Bituminous)	698	-	2,396	421
Tennessee	-	-	4	-
Texas	-	350	-	554
Utah	-	-	1,346	42
Virginia	69	1	1,432	794
West Virginia Total	2,402	35	7,753	2,498
West Virginia (Northern)	2,212	-	2,112	97
West Virginia (Southern)	190	35	5,641	2,401
Wyoming	-	434	-	4,360
Appalachia Total	4,769	315	13,896	5,913
Appalachia Central	259	36	8,917	4,218
Appalachia Northern	2,910	279	4,901	1,313
Appalachia Southern	1,600	-	78	382
Interior Region Total	-	350	5,005	1,830
Illinois Basin	-	-	5,005	1,003
Other Interior	-	350	-	827
Western Region Total	356	1,662	2,317	6,142
Powder River Basin	-	432	-	4,493
Uinta Basin	173	121	1,854	270
Other Western	183	1,109	463	1,379
East of Mississippi River	4,769	315	18,901	7,147
West of Mississippi River	356	2,012	2,317	6,738
U.S. Total	5,125	2,327	21,218	13,885

- = 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 25,000 short tons and preparation plants with less than 5,000 employee hours per year, which are not required to provide data.

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

Productivity

Table 21. Coal Productivity by State and Mine Type, 2022 and 2021

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		
	2022	2021	Percent Change	2022	2021	Percent Change	2022	2021	Percent Change
Alabama	28	26	7.7	2,098	1,731	21.2	1.85	2.10	-11.7
Underground	10	10	-	1,678	1,385	21.2	1.98	2.20	-9.9
Surface	18	16	12.5	420	346	21.4	1.28	1.67	-23.3
Alaska	1	1	-	99	103	-3.9	5.33	5.33	-
Surface	1	1	-	99	103	-3.9	5.33	5.33	-
Colorado	11	9	22.2	1,284	1,068	20.2	5.07	5.43	-6.8
Underground	6	6	-	914	721	26.8	4.72	4.82	-2.1
Surface	5	3	66.7	370	347	6.6	5.87	6.71	-12.4
Illinois	21	19	10.5	2,162	2,017	7.2	7.79	8.36	-6.8
Underground	12	12	-	2,063	1,965	5.0	7.93	8.45	-6.2
Surface	9	7	28.6	99	52	90.4	4.52	4.30	5.1
Indiana	17	15	13.3	2,275	1,806	26.0	4.34	4.82	-10.0
Underground	6	6	-	1,358	1,092	24.4	3.99	4.13	-3.4
Surface	11	9	22.2	917	714	28.4	4.91	5.98	-17.9
Kentucky Total	158	149	6.0	4,815	4,194	14.8	2.52	2.79	-10.0
Underground	68	60	13.3	3,591	3,084	16.4	2.60	3.00	-13.3
Surface	90	89	1.1	1,224	1,110	10.3	2.24	2.15	4.2
Kentucky (East)	152	140	8.6	3,231	2,678	20.6	1.64	1.75	-6.2
Underground	62	54	14.8	2,007	1,600	25.4	1.30	1.53	-15.0
Surface	90	86	4.7	1,224	1,078	13.5	2.24	2.12	6.0
Kentucky (West)	6	9	-33.3	1,584	1,516	4.5	4.13	4.43	-6.8
Underground	6	6	-	1,584	1,484	6.7	4.13	4.45	-7.4
Surface	-	3	-	-	32	-	-	3.19	-
Louisiana	1	1	-	35	34	2.9	4.30	4.57	-5.8
Surface	1	1	-	35	34	2.9	4.30	4.57	-5.8
Maryland	15	11	36.4	274	216	26.9	2.46	2.61	-5.8
Underground	2	2	-	124	114	8.8	1.14	1.51	-24.2
Surface	13	9	44.4	150	102	47.1	3.45	3.79	-9.1
Mississippi	1	1	-	231	205	12.7	6.97	7.49	-6.8
Surface	1	1	-	231	205	12.7	6.97	7.49	-6.8
Missouri	1	1	-	7	8	-12.5	5.54	4.29	29.1
Surface	1	1	-	7	8	-12.5	5.54	4.29	29.1
Montana	6	7	-14.3	954	930	2.6	15.24	15.88	-4.1
Underground	1	1	-	230	245	-6.1	15.31	14.47	5.8
Surface	5	6	-16.7	724	685	5.7	15.21	16.43	-7.4
New Mexico	3	3	-	772	820	-5.9	6.92	5.89	17.4
Underground	1	1	-	183	235	-22.1	4.43	3.38	30.9
Surface	2	2	-	589	585	0.7	7.69	6.95	10.7
North Dakota	5	5	-	1,186	1,176	0.9	11.77	11.96	-1.6
Surface	5	5	-	1,186	1,176	0.9	11.77	11.96	-1.6
Ohio	14	13	7.7	413	354	16.7	2.96	3.48	-14.9
Underground	5	6	-16.7	233	213	9.4	3.08	3.69	-16.6
Surface	9	7	28.6	180	141	27.7	2.85	3.16	-9.8
Oklahoma	1	1	-	1	1	-	1.63	0.47	244.8
Surface	1	1	-	1	1	-	1.63	0.47	244.8
Pennsylvania Total	158	163	-3.1	4,492	4,334	3.6	4.14	4.59	-9.9
Underground	47	49	-4.1	3,172	3,087	2.8	5.08	5.64	-10.0
Surface	111	114	-2.6	1,320	1,247	5.9	1.70	1.76	-3.9
Pennsylvania (Anthracite)	71	70	1.4	851	810	5.1	1.41	1.29	9.4
Underground	15	14	7.1	57	57	-	0.55	0.62	-11.0
Surface	56	56	-	794	753	5.4	1.47	1.33	10.1
Pennsylvania (Bituminous)	87	93	-6.5	3,641	3,524	3.3	4.71	5.28	-10.6
Underground	32	35	-8.6	3,115	3,030	2.8	5.14	5.71	-9.9
Surface	55	58	-5.2	526	494	6.5	2.02	2.41	-15.9
Tennessee	2	1	100.0	8	4	100.0	0.3	-	-
Underground	1	1	-	4	4	-	-	-	-

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		
	2022	2021	Percent Change	2022	2021	Percent Change	2022	2021	Percent Change
Surface	1	-	-	4	-	-	0.6	-	-
Texas	4	5	-20.0	904	1,037	-12.8	8.71	7.88	10.5
Surface	4	5	-20.0	904	1,037	-12.8	8.71	7.88	10.5
Utah	13	13	-	1,398	1,371	2.0	3.66	4.20	-12.6
Underground	9	9	-	1,346	1,313	2.5	3.72	4.27	-12.8
Surface	4	4	-	52	58	-10.3	2.52	2.86	-12.0
Virginia	65	51	27.5	2,325	1,942	19.7	2.01	2.41	-16.5
Underground	22	18	22.2	1,501	1,312	14.4	2.17	2.64	-17.8
Surface	43	33	30.3	824	630	30.8	1.71	1.90	-9.9
West Virginia Total	235	205	14.6	12,997	11,511	12.9	2.78	3.00	-7.5
Underground	111	93	19.4	10,219	9,099	12.3	2.89	3.09	-6.3
Surface	124	112	10.7	2,778	2,412	15.2	2.34	2.63	-11.1
West Virginia (Northern)	24	23	4.3	4,427	4,101	7.9	4.53	4.73	-4.2
Underground	16	14	14.3	4,324	4,008	7.9	4.58	4.76	-3.8
Surface	8	9	-11.1	103	93	10.8	2.22	2.74	-18.8
West Virginia (Southern)	211	182	15.9	8,570	7,410	15.7	1.85	2.03	-8.8
Underground	95	79	20.3	5,895	5,091	15.8	1.63	1.78	-8.8
Surface	116	103	12.6	2,675	2,319	15.4	2.34	2.63	-10.9
Wyoming	16	16	-	4,794	4,567	5.0	25.53	26.73	-4.5
Underground	-	1	-	-	112	-	-	13.10	-
Surface	16	15	6.7	4,794	4,455	7.6	25.53	27.12	-5.9
Appalachia Total	669	610	9.7	25,838	22,770	13.5	2.70	3.02	-10.7
Underground	260	233	11.6	18,938	16,814	12.6	2.91	3.27	-11.1
Surface	409	377	8.5	6,900	5,956	15.8	2.10	2.26	-6.8
Appalachia Central	430	374	15.0	14,134	12,034	17.5	1.83	2.03	-10.0
Underground	180	152	18.4	9,407	8,007	17.5	1.64	1.87	-12.3
Surface	250	222	12.6	4,727	4,027	17.4	2.21	2.38	-7.2
Appalachia Northern	211	210	0.5	9,606	9,005	6.7	4.23	4.56	-7.3
Underground	70	71	-1.4	7,853	7,422	5.8	4.69	5.03	-6.9
Surface	141	139	1.4	1,753	1,583	10.7	2.03	2.09	-3.2
Appalachia Southern	28	26	7.7	2,098	1,731	21.2	1.85	2.10	-11.7
Underground	10	10	-	1,678	1,385	21.2	1.98	2.20	-9.9
Surface	18	16	12.5	420	346	21.4	1.28	1.67	-23.3
Interior Region Total	52	52	-	7,199	6,624	8.7	5.87	6.30	-6.8
Underground	24	24	-	5,005	4,541	10.2	5.56	6.02	-7.7
Surface	28	28	-	2,194	2,083	5.3	6.65	6.97	-4.6
Illinois Basin	44	43	2.3	6,021	5,339	12.8	5.45	5.98	-8.9
Underground	24	24	-	5,005	4,541	10.2	5.56	6.02	-7.7
Surface	20	19	5.3	1,016	798	27.3	4.88	5.76	-15.4
Other Interior	8	9	-11.1	1,178	1,285	-8.3	8.23	7.72	6.7
Surface	8	9	-11.1	1,178	1,285	-8.3	8.23	7.72	6.7
Western Region Total	55	54	1.9	10,487	10,035	4.5	16.04	16.54	-3.0
Underground	17	18	-5.6	2,673	2,626	1.8	5.14	5.66	-9.3
Surface	38	36	5.6	7,814	7,409	5.5	19.84	20.70	-4.1
Powder River Basin	16	17	-5.9	4,925	4,541	8.5	26.19	28.27	-7.3
Surface	16	17	-5.9	4,925	4,541	8.5	26.19	28.27	-7.3
Uinta Basin	20	18	11.1	2,428	2,261	7.4	4.48	4.88	-8.1
Underground	12	12	-	2,027	1,883	7.6	4.30	4.63	-7.1
Surface	8	6	33.3	401	378	6.1	5.39	6.15	-12.4
Other Western	19	19	-	3,134	3,233	-3.1	8.98	8.69	3.3
Underground	5	6	-16.7	646	743	-13.1	8.03	8.43	-4.8
Surface	14	13	7.7	2,488	2,490	-0.1	9.22	8.78	5.0
East of Mississippi River	714	654	9.2	32,090	28,314	13.3	3.25	3.61	-9.9
Underground	284	257	10.5	23,943	21,355	12.1	3.47	3.85	-9.8
Surface	430	397	8.3	8,147	6,959	17.1	2.58	2.81	-8.3
West of Mississippi River	62	62	-	11,434	11,115	2.9	15.37	15.64	-1.7
Underground	17	18	-5.6	2,673	2,626	1.8	5.14	5.66	-9.3
Surface	45	44	2.3	8,761	8,489	3.2	18.52	18.94	-2.2
U.S. Subtotal	776	716	8.4	43,524	39,429	10.4	6.11	6.71	-8.9
Underground	301	275	9.5	26,616	23,981	11.0	3.62	4.03	-10.2

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		
	2022	2021	Percent Change	2022	2021	Percent Change	2022	2021	Percent Change
Surface	475	441	7.7	16,908	15,448	9.5	10.39	11.38	-8.7
Refuse Recovery	17	14	21.4	58	89	-34.8	5.36	9.37	-42.8
U.S. Total	793	730	8.6	43,582	39,518	10.3	6.11	6.71	-8.9

- = No data reported.

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

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

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

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

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

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

Table 22. Underground Coal Mining Productivity by State and Mining Method, 2022

(short tons produced per employee hour)

Coal-Producing State, Region ¹ and Mine Type	Continuous	Conventional and Other ²	Longwall	Total
Alabama	1.79	-	2.17	1.98
Colorado	3.20	-	5.48	4.72
Illinois	7.05	-	10.03	7.93
Indiana	4.25	-	-	3.99
Kentucky Total	2.99	0.13	-	2.63
Kentucky (East)	1.54	0.19	-	1.31
Kentucky (West)	4.47	-	-	4.13
Maryland	1.59	-	-	1.14
Montana	15.31	-	15.31	15.31
New Mexico	-	-	4.43	4.43
Ohio	3.68	-	2.83	3.08
Pennsylvania Total	3.40	0.9	6.49	5.10
Pennsylvania (Anthracite)	-	0.52	-	0.52
Pennsylvania (Bituminous)	3.40	-	6.49	5.14
Utah	3.17	-	4.40	3.72
Virginia	2.16	-	3.15	2.17
West Virginia Total	2.04	0.10	4.99	2.91
West Virginia (Northern)	3.14	-	4.99	4.58
West Virginia (Southern)	1.90	0.11	-	1.63
Appalachia Total	2.11	0.9	4.71	2.92
Appalachia Central	1.85	0.11	3.15	1.65
Appalachia Northern	3.25	0.4	5.46	4.69
Appalachia Southern	1.79	-	2.17	1.98
Interior Region Total	5.05	-	10.03	5.56
Illinois Basin	5.05	-	10.03	5.56
Western Region Total	3.49	-	6.09	5.14
Uinta Basin	3.41	-	4.87	4.30
Other Western	3.74	-	10.45	8.03
East of Mississippi River	2.96	0.8	5.27	3.49
West of Mississippi River	3.49	-	6.09	5.14
U.S. Total	2.98	0.8	5.41	3.63

- = No data reported.

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

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

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

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

Table 22.1. Surface Coal Mining Productivity By State and Mining Method, 2022

(short tons produced per employee hour)

Coal-Producing State and Region ¹	Contour Strip	Area	Open Pit	Mountaintop Mining	Other ²	Total
Alabama	1.58	-	0.92	-	0.93	1.28
Alaska	5.33	-	5.33	-	-	5.33
Colorado	5.75	-	4.13	-	6.69	5.87
Illinois	-	6.02	-	-	1.66	4.52
Indiana	-	4.95	5.01	-	3.08	4.91
Kentucky Total	2.15	3.38	2.96	-	1.95	2.24
Kentucky (East)	2.15	3.38	2.96	-	1.95	2.24
Kentucky (West)	-	-	-	-	-	-
Louisiana	-	4.30	-	-	-	4.30
Maryland	2.50	3.76	-	-	4.53	3.45
Mississippi	6.97	-	-	-	-	6.97
Missouri	5.54	-	-	-	-	5.54
Montana	18.81	11.24	-	-	s	15.21
New Mexico	8.40	-	7.26	-	-	7.69
North Dakota	11.60	-	12.85	-	-	11.77
Ohio	3.06	3.21	-	-	1.32	2.85
Oklahoma	-	-	-	-	1.63	1.63
Pennsylvania Total	2.28	-	2.65	-	0.50	1.70
Pennsylvania (Anthracite)	2.22	-	3.37	-	0.24	1.47
Pennsylvania (Bituminous)	2.40	-	2.22	-	1.29	2.02
Tennessee	-	-	-	-	0.6	0.6
Texas	7.19	11.50	6.55	-	-	8.71
Utah	-	-	4.86	-	0.10	2.52
Virginia	1.71	2.92	-	-	1.35	1.71
West Virginia Total	2.63	2.57	-	2.84	1.63	2.34
West Virginia (Northern)	6.21	-	-	-	1.32	2.22
West Virginia (Southern)	2.56	2.57	-	2.84	1.66	2.34
Wyoming	25.16	7.81	27.11	-	9.92	25.53
Appalachia Total	2.27	2.80	2.32	2.84	1.43	2.10
Appalachia Central	2.27	2.72	2.96	2.84	1.68	2.21
Appalachia Northern	2.65	3.46	2.65	-	0.91	2.03
Appalachia Southern	1.58	-	0.92	-	0.93	1.28
Interior Basin Total	7.04	9.11	5.51	-	2.49	6.65
Illinois Basin	-	5.27	5.01	-	2.50	4.88
Interior	7.04	10.92	6.55	-	1.63	8.23
Western Total	19.93	10.40	22.46	-	6.32	19.84
Powder River Basin	25.79	11.39	29.06	-	s	26.19
Uinta Region	5.75	-	4.13	-	5.75	5.39
Western	10.09	7.55	7.78	-	9.84	9.22
East of Mississippi River	2.61	3.14	3.85	2.84	1.46	2.58
West of Mississippi River	19.41	10.67	20.49	-	6.31	18.52
U.S. Total	12.18	5.87	15.29	2.84	1.95	10.39

- = No data reported.

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

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

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

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

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

Table 23. Coal Mining Productivity by State, Mine Type, and Mine Production Range, 2022

(short tons produced per employee hour)

Coal-Producing State, Region ^a 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	2.59	0.67	1.42	1.59	1.28	1.21	1.17	1.85
Underground	2.59	0.67	-	1.92	1.59	-	-	1.98
Surface	-	-	1.42	1.39	1.19	1.21	1.17	1.28
Alaska	5.33	-	-	-	-	-	-	5.33
Surface	5.33	-	-	-	-	-	-	5.33
Colorado	5.55	-	2.28	13.18	5.39	-	-	5.07
Underground	5.45	-	2.28	-	-	-	-	4.72
Surface	5.74	-	-	13.18	5.39	-	-	5.87
Illinois	8.69	4.03	6.44	-	4.17	2.78	3.40	7.79
Underground	8.69	4.03	-	-	-	-	-	7.93
Surface	-	-	6.44	-	4.17	2.78	3.40	4.52
Indiana	4.55	12.19	3.14	4.39	-	1.16	-	4.34
Underground	4.25	-	-	-	-	-	-	3.99
Surface	5.11	12.19	3.14	4.39	-	1.16	-	4.91
Kentucky Total	4.23	3.25	2.00	2.00	1.50	1.32	0.78	2.52
Underground	4.23	-	1.42	1.30	1.30	1.07	0.66	2.60
Surface	-	3.25	4.61	2.57	1.67	1.78	0.86	2.24
Kentucky (East)	2.68	3.25	2.00	2.00	1.50	1.32	0.78	1.64
Underground	2.68	-	1.42	1.30	1.30	1.07	0.66	1.30
Surface	-	3.25	4.61	2.57	1.67	1.78	0.86	2.24
Kentucky (West)	4.47	-	-	-	-	-	-	4.13
Underground	4.47	-	-	-	-	-	-	4.13
Louisiana	-	-	4.30	-	-	-	-	4.30
Surface	-	-	4.30	-	-	-	-	4.30
Maryland	-	-	2.85	3.11	3.22	2.17	0.12	2.46
Underground	-	-	1.59	-	-	-	-	1.14
Surface	-	-	4.14	3.11	3.22	2.17	0.12	3.45
Mississippi	6.97	-	-	-	-	-	-	6.97
Surface	6.97	-	-	-	-	-	-	6.97
Missouri	-	-	-	-	5.54	-	-	5.54
Surface	-	-	-	-	5.54	-	-	5.54
Montana	15.40	-	-	-	-	3.09	-	15.24
Underground	15.31	-	-	-	-	-	-	15.31
Surface	15.44	-	-	-	-	3.09	-	15.21
New Mexico	6.92	-	-	-	-	-	-	6.92
Underground	4.43	-	-	-	-	-	-	4.43
Surface	7.69	-	-	-	-	-	-	7.69
North Dakota	12.14	-	-	-	-	0.53	-	11.77
Surface	12.14	-	-	-	-	0.53	-	11.77
Ohio	-	5.82	2.79	3.62	4.86	1.20	-	2.96
Underground	-	5.82	2.38	-	-	-	-	3.08
Surface	-	-	3.15	3.62	4.86	1.20	-	2.85
Oklahoma	-	-	-	-	-	-	1.63	1.63
Surface	-	-	-	-	-	-	1.63	1.63
Pennsylvania Total	6.44	4.36	2.66	2.48	1.91	2.73	0.76	4.14
Underground	6.44	4.23	2.67	2.36	-	1.70	0.60	5.08
Surface	-	4.80	2.62	2.56	1.91	2.83	0.79	1.70
Pennsylvania (Anthracite)	-	4.80	3.06	3.17	1.36	2.41	0.49	1.41
Underground	-	-	-	-	-	1.70	0.60	0.55
Surface	-	4.80	3.06	3.17	1.36	2.58	0.43	1.47
Pennsylvania (Bituminous)	6.44	4.23	2.63	2.24	2.34	3.01	0.99	4.71
Underground	6.44	4.23	2.67	2.36	-	-	-	5.14
Surface	-	-	2.39	2.10	2.34	3.01	0.99	2.02
Tennessee	-	-	-	-	-	-	0.6	0.3
Surface	-	-	-	-	-	-	0.6	0.6
Texas	8.71	-	-	-	-	-	-	8.71

Mine Production Range (thousand short tons)

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	8.71	-	-	-	-	-	-	8.71
Utah	4.04	2.60	4.86	-	-	-	-	3.66
Underground	4.04	2.60	-	-	-	-	-	3.72
Surface	-	-	4.86	-	-	-	-	2.52
Virginia	2.83	1.72	2.28	1.39	1.97	1.46	0.78	2.01
Underground	2.83	1.92	-	1.16	1.49	1.14	-	2.17
Surface	-	1.57	2.28	1.71	2.27	1.56	0.78	1.71
West Virginia Total	4.64	2.00	2.02	1.97	1.77	1.15	0.56	2.78
Underground	4.73	1.89	1.68	1.33	1.71	0.78	0.93	2.89
Surface	3.76	2.43	3.08	2.56	1.84	1.49	0.50	2.34
West Virginia (Northern)	4.99	-	0.99	1.64	2.81	2.72	-	4.53
Underground	4.99	-	0.99	0.94	-	-	-	4.58
Surface	-	-	-	3.07	2.81	2.72	-	2.22
West Virginia (Southern)	3.25	2.00	2.13	2.05	1.75	1.10	0.56	1.85
Underground	2.76	1.89	1.78	1.47	1.71	0.78	0.93	1.63
Surface	3.76	2.43	3.08	2.49	1.79	1.41	0.50	2.34
Wyoming	25.57	-	13.47	-	-	-	-	25.53
Surface	25.57	-	13.47	-	-	-	-	25.53
Appalachia Total	4.48	2.04	2.17	2.05	1.73	1.45	0.71	2.70
Underground	4.52	1.90	1.80	1.51	1.50	0.97	0.69	2.91
Surface	3.76	2.53	2.87	2.48	1.87	1.77	0.71	2.10
Appalachia Central	3.00	2.02	2.10	1.94	1.67	1.23	0.68	1.83
Underground	2.79	1.89	1.61	1.35	1.50	0.95	0.72	1.64
Surface	3.76	2.40	3.12	2.44	1.83	1.56	0.66	2.21
Appalachia Northern	5.47	4.60	2.49	2.32	2.19	2.45	0.74	4.23
Underground	5.47	4.55	2.21	1.84	-	1.70	0.60	4.69
Surface	-	4.80	3.23	2.70	2.19	2.50	0.76	2.03
Appalachia Southern	2.59	0.67	1.42	1.59	1.28	1.21	1.17	1.85
Underground	2.59	0.67	-	1.92	1.59	-	-	1.98
Surface	-	-	1.42	1.39	1.19	1.21	1.17	1.28
Interior Region Total	6.28	5.36	4.53	4.39	4.71	1.33	2.78	5.87
Underground	5.99	4.03	-	-	-	-	-	5.56
Surface	7.05	12.19	4.53	4.39	4.71	1.33	2.78	6.65
Illinois Basin	5.87	5.36	4.59	4.39	4.17	1.33	3.40	5.45
Underground	5.99	4.03	-	-	-	-	-	5.56
Surface	5.11	12.19	4.59	4.39	4.17	1.33	3.40	4.88
Other Interior	8.37	-	4.30	-	5.54	-	1.63	8.23
Surface	8.37	-	4.30	-	5.54	-	1.63	8.23
Western Region Total	16.75	2.60	3.69	13.18	5.39	0.89	-	16.04
Underground	5.67	2.60	2.28	-	-	-	-	5.14
Surface	20.16	-	7.68	13.18	5.39	0.89	-	19.84
Powder River Basin	26.22	-	-	-	-	-	-	26.19
Surface	26.22	-	-	-	-	-	-	26.19
Uinta Basin	4.75	2.60	-	13.18	5.39	-	-	4.48
Underground	4.56	2.60	-	-	-	-	-	4.30
Surface	5.74	-	-	13.18	5.39	-	-	5.39
Other Western	9.61	-	3.69	-	-	0.89	-	8.98
Underground	10.67	-	2.28	-	-	-	-	8.03
Surface	9.41	-	7.68	-	-	0.89	-	9.22
East of Mississippi River	5.01	2.12	2.24	2.11	1.75	1.44	0.72	3.25
Underground	5.02	1.96	1.80	1.51	1.50	0.97	0.69	3.47
Surface	4.92	2.71	3.00	2.57	1.90	1.74	0.73	2.58
West of Mississippi River	16.02	2.60	3.78	13.18	5.46	0.89	1.63	15.37
Underground	5.67	2.60	2.28	-	-	-	-	5.14
Surface	18.85	-	6.34	13.18	5.46	0.89	1.63	18.52
U.S. Subtotal	9.23	2.13	2.31	2.14	1.79	1.42	0.72	6.11
Underground	5.10	1.97	1.82	1.51	1.50	0.97	0.69	3.62
Surface	16.62	2.71	3.16	2.62	1.95	1.69	0.73	10.39
Refuse Recovery	-	-	-	11.77	5.07	3.62	0.52	5.36
U.S. Total	9.23	2.13	2.31	2.17	1.85	1.43	0.72	6.11

- = 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, 2022

(short tons produced per employee hour)

Coal-Producing State and Region ¹	Union		Nonunion	
	Underground	Surface	Underground	Surface
Alabama	2.01	-	1.11	1.27
Alaska	-	5.33	-	-
Colorado	5.24	5.75	4.60	5.94
Illinois	-	-	7.93	4.60
Indiana	-	-	3.99	4.95
Kentucky Total	-	-	2.67	2.34
Kentucky (East)	-	-	1.35	2.34
Kentucky (West)	-	-	4.13	-
Louisiana	-	-	-	4.30
Maryland	-	-	1.14	3.58
Mississippi	-	-	-	6.97
Missouri	-	-	-	5.54
Montana	-	11.28	15.31	21.07
New Mexico	4.43	7.26	-	8.40
North Dakota	-	10.48	-	12.02
Ohio	-	-	3.08	2.86
Pennsylvania Total	3.81	1.54	5.48	1.80
Pennsylvania (Anthracite)	-	1.54	0.52	1.47
Pennsylvania (Bituminous)	3.81	-	5.54	2.11
Tennessee	-	-	-	-
Texas	-	11.50	-	6.74
Utah	-	-	3.72	3.01
Virginia	-	-	2.27	1.73
West Virginia Total	5.34	15.01	2.14	2.24
West Virginia (Northern)	5.73	-	3.36	2.30
West Virginia (Southern)	0.64	15.01	1.67	2.24
Wyoming	-	5.79	-	27.27
Appalachian Total	3.82	3.09	2.61	2.11
Appalachia Central	0.48	14.71	1.70	2.17
Appalachia Northern	5.32	1.54	4.34	2.19
Appalachia Southern	2.01	-	1.11	1.27
Interior Region Total	-	11.50	5.56	5.69
Illinois Basin	-	-	5.56	4.92
Other Interior	-	11.50	-	6.69
Western Region Total	4.82	8.10	5.19	22.87
Powder River Basin	-	11.40	-	27.51
Uinta Basin	5.24	5.75	4.22	5.45
Other Western	4.43	7.10	9.55	10.86
East of Mississippi River	3.82	3.09	3.41	2.63
West of Mississippi River	4.82	8.80	5.19	21.39
U.S. Total	3.88	7.97	3.58	11.02

- = No data reported.

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

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

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

Domestic Markets

Table 25. Intentionally left blank

Table 26. U.S. Coal Consumption by End Use Sector, Census Division, and State, 2022 and 2021

(thousand short tons)

Census Division and State	2022				2021				Total		Percent Change
	Electric Power ¹	Other Industrial	Coke	Commercial and Institutional	Electric Power ¹	Other Industrial	Coke	Commercial and Institutional	2022	2021	
New England	212	-	-	-	350	-	-	-	212	350	-39.5
Connecticut	s	-	-	-	158	-	-	-	s	158	-100.0
Maine	65	-	-	-	69	-	-	-	65	69	-5.0
New Hampshire	147	-	-	-	123	-	-	-	147	123	18.7
Rhode Island	s	-	-	-	s	-	-	-	s	s	-
Middle Atlantic	14,990	703	5,427	3	16,766	679	5,292	7	21,122	22,744	-7.1
New Jersey	242	-	-	-	496	-	-	-	242	496	-51.3
New York	s	241	-	-	s	211	-	-	241	211	14.3
Pennsylvania	14,748	461	5,427	3	16,270	468	5,292	7	20,639	22,036	-6.3
East North Central	101,588	4,241	9,033	130	108,614	4,588	9,847	131	114,992	123,180	-6.7
Illinois	24,351	1,866	987	74	25,730	1,983	1,013	83	27,278	28,808	-5.3
Indiana	26,833	1,229	3,733	57	27,728	1,354	4,129	48	31,851	33,259	-4.2
Michigan	19,861	313	1,428	-	20,719	304	1,449	-	21,602	22,472	-3.9
Ohio	18,087	376	2,885	-	19,030	424	3,256	-	21,348	22,710	-6.0
Wisconsin	12,456	456	-	-	15,408	524	-	-	12,912	15,931	-19.0
West North Central	98,522	11,299	-	131	101,973	10,887	-	116	109,952	112,976	-2.7
Iowa	10,550	2,362	-	91	13,022	2,051	-	82	13,003	15,154	-14.2
Kansas	13,053	86	-	-	12,595	57	-	-	13,139	12,651	3.9
Minnesota	9,594	880	-	4	9,360	784	-	6	10,478	10,150	3.2
Missouri	31,083	845	-	12	33,810	928	-	12	31,940	34,750	-8.1
Nebraska	11,929	972	-	-	11,626	976	-	-	12,902	12,602	2.4
North Dakota	21,065	5,891	-	24	20,470	5,872	-	16	26,979	26,358	2.4
South Dakota	1,249	263	-	-	1,092	220	-	-	1,511	1,312	15.2
South Atlantic	53,138	1,969	983	45	61,523	2,160	1,697	55	56,136	65,435	-14.2
Delaware	70	-	-	-	172	-	-	-	70	172	-59.2
District of Columbia	-	-	-	s	-	-	-	s	s	s	-
Florida	7,153	188	-	-	8,304	235	-	-	7,341	8,539	-14.0
Georgia	8,858	261	-	-	9,930	288	-	-	9,119	10,217	-10.8
Maryland	2,119	425	-	-	2,401	405	-	-	2,545	2,806	-9.3
North Carolina	6,029	375	-	37	8,451	374	-	46	6,440	8,870	-27.4
South Carolina	6,081	93	-	-	6,534	130	-	-	6,174	6,664	-7.4
Virginia	1,652	367	830	9	1,482	411	887	8	2,858	2,788	2.5
West Virginia	21,176	261	153	-	24,250	319	811	-	21,589	25,380	-14.9
East South Central	50,510	2,590	566	1	52,083	2,622	752	3	53,667	55,460	-3.2
Alabama	14,635	655	566	-	14,588	692	752	-	15,856	16,033	-1.1
Kentucky	22,589	801	-	1	23,805	681	-	3	23,391	24,489	-4.5
Mississippi	4,915	69	-	-	4,774	74	-	-	4,984	4,848	2.8
Tennessee	8,371	1,065	-	-	8,915	1,175	-	-	9,436	10,091	-6.5
West South Central	82,144	947	-	-	87,029	848	-	-	83,091	87,878	-5.5
Arkansas	11,926	141	-	-	12,277	150	-	-	12,067	12,427	-2.9
Louisiana	5,296	332	-	-	5,555	292	-	-	5,628	5,847	-3.8
Oklahoma	5,854	201	-	-	7,435	148	-	-	6,055	7,583	-20.2
Texas	59,068	273	-	-	61,762	258	-	-	59,340	62,020	-4.3
Mountain	68,185	2,695	-	11	69,581	2,701	-	7	70,890	72,289	-1.9
Arizona	8,152	260	-	-	8,419	273	-	-	8,412	8,693	-3.2
Colorado	12,275	153	-	s	13,400	144	-	s	12,428	13,544	-8.2
Idaho	-	76	-	-	-	125	-	-	76	125	-38.9
Montana	7,395	250	-	2	6,908	232	-	1	7,647	7,141	7.1
Nevada	1,577	212	-	-	1,490	242	-	-	1,789	1,732	3.3
New Mexico	7,370	62	-	-	7,075	57	-	-	7,432	7,132	4.2
Utah	10,571	318	-	-	12,274	335	-	-	10,889	12,609	-13.6
Wyoming	20,844	1,364	-	9	20,014	1,293	-	6	22,217	21,313	4.2
Pacific	3,544	1,448	-	478	3,514	1,360	-	492	5,471	5,367	1.9
Alaska	760	1	-	478	761	1	-	492	1,239	1,254	-1.2
California	s	1,322	-	-	s	1,223	-	-	1,322	1,223	8.1

Census Division and State	2022				2021				Total		Percent Change
	Electric Power ¹	Other Industrial	Coke	Commercial and Institutional	Electric Power ¹	Other Industrial	Coke	Commercial and Institutional	2022	2021	
Hawaii	380	-	-	-	634	-	-	-	380	634	-40.2
Oregon	-	48	-	-	-	57	-	-	48	57	-16.7
Washington	2,405	78	-	-	2,120	79	-	-	2,482	2,198	12.9
U.S. Total	472,834	25,891	16,009	800	501,435	25,845	17,589	811	515,534	545,679	-5.5

- = 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, 2022 and 2021

(thousand short tons)

Census Division and State	2022					2021					Total		
	Electric Power ¹	Other Industrial	Commercial and Coke	Institutional	Producer and Distributor ²	Electric Power ¹	Other Industrial	Commercial and Coke	Institutional	Producer and Distributor ²	2022	2021	Percent Change
New England	w	-	-	-	-	w	-	-	-	-	w	w	12.2
Connecticut	s	-	-	-	-	s	-	-	-	-	s	s	-
Maine	s	-	-	-	-	s	-	-	-	-	s	s	-
New Hampshire	w	-	-	-	-	w	-	-	-	-	w	w	12.2
Rhode Island	s	-	-	-	-	s	-	-	-	-	s	s	-
Middle Atlantic	2,845	206	496	20	1,908	3,253	216	442	21	838	5,476	4,770	14.8
New Jersey	s	-	-	-	-	w	-	-	-	-	s	w	w
New York	s	56	-	-	40	s	57	-	-	-	96	57	69.1
Pennsylvania	2,845	150	496	20	1,868	w	159	442	21	838	5,380	w	w
East North Central	17,206	472	932	24	1,956	18,182	634	886	25	2,148	20,590	21,874	-5.9
Illinois	2,990	48	157	21	818	4,208	138	112	21	1,214	4,034	5,692	-29.1
Indiana	6,728	217	211	3	785	5,506	243	252	4	482	7,944	6,487	22.5
Michigan	3,109	106	304	-	63	2,371	138	251	-	94	3,582	2,854	25.5
Ohio	1,728	20	259	-	76	3,450	19	271	-	94	2,084	3,834	-45.7
Wisconsin	2,652	80	-	-	213	2,647	96	-	-	264	2,945	3,007	-2.1
West North Central	17,704	528	-	17	1,512	19,903	559	-	26	1,573	19,761	22,061	-10.4
Iowa	3,584	141	-	5	22	3,680	175	-	14	50	3,753	3,919	-4.3
Kansas	3,254	11	-	-	-	3,242	5	-	-	-	3,265	3,246	0.6
Minnesota	2,283	24	-	6	18	1,925	34	-	5	47	2,331	2,012	15.8
Missouri	4,406	77	-	1	-	6,179	53	-	1	-	4,483	6,233	-28.1
Nebraska	2,555	35	-	-	-	3,067	40	-	-	-	2,590	3,107	-16.6
North Dakota	w	202	-	5	1,472	w	234	-	6	1,475	w	w	-7.8
South Dakota	w	37	-	-	-	w	17	-	-	-	w	w	8.5
South Atlantic	14,743	310	71	40	6,101	13,663	255	233	43	4,736	21,265	18,929	12.3
Delaware	w	-	-	-	-	w	-	-	-	-	w	w	116.1
District of Columbia	-	-	-	3	-	-	-	-	3	-	3	3	s
Florida	1,385	43	-	-	-	1,660	50	-	-	-	1,428	1,710	-16.5
Georgia	w	45	-	-	-	2,939	39	-	-	-	w	2,978	w
Maryland	567	33	-	-	309	849	15	-	-	336	909	1,200	-24.2
North Carolina	3,591	81	-	30	-	3,402	66	-	31	-	3,702	3,499	5.8
South Carolina	w	37	-	-	-	967	35	-	-	-	w	1,002	w
Virginia	w	48	58	8	1,655	551	28	46	10	1,331	w	1,966	w
West Virginia	4,334	23	13	-	4,136	w	21	187	-	3,070	8,506	w	w
East South Central	9,197	242	128	4	1,903	7,696	150	98	4	1,962	11,473	9,910	15.8
Alabama	w	63	128	-	583	w	59	98	-	798	w	w	-8.5
Kentucky	5,070	62	-	4	333	3,441	41	-	4	331	5,468	3,817	43.2
Mississippi	w	5	-	-	988	w	3	-	-	834	w	w	15.0
Tennessee	2,124	112	-	-	-	2,207	47	-	-	-	2,236	2,254	-0.8
West South Central	15,756	236	-	-	2,676	14,740	230	-	-	1,141	18,669	16,111	15.9
Arkansas	3,564	26	-	-	-	2,946	28	-	-	-	3,590	2,975	20.7
Louisiana	1,835	2	-	-	1,038	2,166	4	-	-	360	2,875	2,529	13.7
Oklahoma	2,446	110	-	-	-	2,025	84	-	-	-	2,557	2,109	21.2
Texas	7,912	98	-	-	1,638	7,603	114	-	-	780	9,648	8,498	13.5
Mountain	w	378	-	2	4,561	w	453	-	3	6,179	w	w	-23.5
Arizona	2,387	16	-	-	-	2,150	32	-	-	-	2,403	2,181	10.2
Colorado	1,903	18	-	s	1,181	2,985	17	-	1	1,239	3,102	4,241	-26.9
Idaho	-	140	-	-	-	-	172	-	-	-	140	172	-18.3
Montana	w	24	-	2	921	w	42	-	3	500	w	w	28.4
Nevada	w	45	-	-	-	w	16	-	-	-	w	w	47.3
New Mexico	s	2	-	-	1,037	w	2	-	-	1,798	1,039	w	w
Utah	2,512	52	-	-	641	2,884	43	-	-	833	3,205	3,761	-14.8
Wyoming	2,968	80	-	s	782	4,300	130	-	s	1,808	3,830	6,238	-38.6
Pacific	727	127	-	59	203	703	128	-	54	437	1,116	1,321	-15.5
Alaska	w	-	-	59	203	w	-	-	54	211	w	w	-3.5
California	s	107	-	-	-	s	116	-	-	226	107	342	-68.7

Census Division and State	2022					2021					Total		Percent Change
	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	2022	2021	
Hawaii	s	-	-	-	-	w	-	-	-	-	s	w	w
Oregon	-	16	-	-	-	-	6	-	-	-	16	6	169.0
Washington	w	4	-	-	-	w	5	-	-	-	w	w	28.5
U.S. Total	89,220	2,499	1,627	167	20,820	92,290	2,624	1,658	176	19,013	114,332	115,762	-1.2

- = No data reported.

w = Data withheld to avoid disclosure.

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

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

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, 2022 and 2021

(dollars per short ton)

Coal-Producing State	2022			2021			Percent Change		
	Underground	Surface	Total	Underground	Surface	Total	Underground	Surface	Total
Alabama	284.75	155.86	269.00	158.70	103.51	150.54	79.4	50.6	78.7
Alaska	-	w	w	-	w	w	-	w	w
Colorado	77.33	41.43	65.00	w	w	46.02	w	w	41.2
Illinois	w	w	35.96	w	w	31.15	w	w	15.4
Indiana	52.83	61.65	56.67	42.57	44.65	43.52	24.1	38.1	30.2
Kentucky Total	73.19	97.37	78.22	53.95	61.04	55.28	35.7	59.5	41.5
Kentucky (East)	w	w	116.66	w	w	74.97	w	w	55.6
Kentucky (West)	w	-	w	w	w	42.93	w	w	w
Louisiana	-	w	w	-	w	w	-	w	w
Maryland	w	w	75.71	w	w	59.12	w	w	28.1
Mississippi	-	w	w	-	w	w	-	w	w
Missouri	-	w	w	-	w	w	-	w	w
Montana	w	w	43.29	w	w	22.66	w	w	91.0
New Mexico	w	w	44.07	w	w	41.98	w	w	5.0
North Dakota	-	20.61	20.61	-	19.00	19.00	-	8.5	8.5
Ohio	w	w	52.95	39.97	34.61	38.08	w	w	39.1
Pennsylvania Total	89.43	141.11	94.69	53.57	96.95	57.63	66.9	45.6	64.3
Pennsylvania (Anthracite)	w	w	155.03	w	w	107.08	w	w	44.8
Pennsylvania (Bituminous)	w	w	91.51	w	w	55.54	w	w	64.8
Texas	-	22.01	22.01	-	20.40	20.40	-	7.9	7.9
Utah	w	w	47.85	w	w	38.41	w	w	24.6
Virginia	220.91	189.06	211.57	122.37	114.81	120.50	80.5	64.7	75.6
West Virginia Total	121.73	154.31	127.52	74.97	87.70	77.12	62.4	76.0	65.4
West Virginia (Northern)	85.27	79.83	85.21	59.64	41.85	59.49	43.0	90.8	43.2
West Virginia (Southern)	200.06	156.86	182.92	107.37	89.06	100.39	86.3	76.1	82.2
Wyoming	-	14.84	14.84	w	w	12.76	w	w	16.3
U.S. Total	96.47	29.20	54.46	60.49	21.32	36.45	59.5	37.0	49.4

- = No data reported.

w = Data withheld to avoid disclosure.

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

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

Table 29. Average Sales Price of Coal by State and Underground Mining Method, 2022

(dollars per short ton)

Coal-Producing State	Continuous	Conventional and Other ¹	Longwall	Total
Alabama	271.71	-	289.02	284.75
Colorado	w	-	w	77.33
Illinois	32.72	-	38.27	w
Indiana	52.83	-	-	52.83
Kentucky Total	73.30	59.14	-	73.19
Kentucky (East)	w	59.14	-	w
Kentucky (West)	w	-	-	w
Maryland	w	-	-	w
Montana	w	-	w	w
New Mexico	-	-	w	w
Ohio	w	-	w	w
Pennsylvania Total	w	w	76.33	89.43
Pennsylvania (Anthracite)	-	w	-	w
Pennsylvania (Bituminous)	135.20	-	76.33	w
Utah	w	-	w	w
Virginia	w	-	w	220.91
West Virginia Total	w	w	83.12	121.73
West Virginia (Northern)	w	-	83.12	85.27
West Virginia (Southern)	w	w	-	200.06
U.S. Total	107.70	122.73	87.38	96.47

- = No data reported.

w = Data withheld to avoid disclosure.

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

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

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

Table 29.1. Average Sales Price of Coal by State and Surface Mining Method, 2022

(dollars per short ton)

Coal-Producing State	Contour Strip	Area	Open Pit	Mountaintop Mining	Other ¹	Total
Alabama	w	-	w	-	104.83	155.86
Alaska	w	-	w	-	-	w
Colorado	w	-	w	-	41.39	41.43
Illinois	-	w	-	-	w	w
Indiana	-	75.61	w	-	w	61.65
Kentucky Total	105.80	w	w	-	105.56	w
Kentucky (East)	105.80	w	w	-	105.56	w
Louisiana	-	w	-	-	-	w
Maryland	w	w	-	-	56.99	w
Mississippi	w	-	-	-	-	w
Missouri	w	-	-	-	-	w
Montana	w	w	-	-	-	w
New Mexico	w	-	w	-	-	w
North Dakota	w	-	w	-	-	20.61
Ohio	47.89	w	-	-	w	w
Oklahoma	-	-	-	-	-	-
Pennsylvania Total	121.12	-	152.59	-	135.89	141.11
Pennsylvania (Anthracite)	w	-	171.27	-	w	w
Pennsylvania (Bituminous)	w	-	141.12	-	w	w
Tennessee	-	-	-	-	-	-
Texas	w	w	w	-	-	22.01
Utah	-	-	w	-	w	w
Virginia	w	w	-	-	167.09	189.06
West Virginia Total	w	192.19	-	w	145.41	154.31
West Virginia (Northern)	w	-	-	-	w	79.83
West Virginia (Southern)	w	192.19	-	w	w	156.86
Wyoming	15.74	w	13.28	-	w	14.84
U.S. Total	w	59.23	21.46	w	96.32	29.20

- = No data reported.

w = Data withheld to avoid disclosure.

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

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

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

Table 30. Average Sales Price of Coal by State, County, and Number of Mines, 2022

Coal-Producing State and County	Number of Mines	Sales (thousand short tons)	Average Sales Price (dollars per short ton)
Alabama	17	10,390	269.00
Jefferson	9	7,393	269.20
Tuscaloosa	5	w	w
Walker	3	w	w
Alaska	1	w	w
Denali	1	w	w
Colorado	10	12,832	65.00
Gunnison	1	w	w
La Plata	1	w	w
Las Animas	1	w	w
Moffat	5	4,408	41.43
Rio Blanco	1	w	w
Routt	1	w	w
Illinois	11	37,643	35.96
Franklin	1	w	w
Hamilton	1	w	w
Montgomery	1	w	w
Perry	2	w	w
Randolph	2	w	w
Sangamon	1	w	w
Wabash	1	w	w
Washington	1	w	w
Williamson	1	w	w
Indiana	14	23,220	56.67
Clay	1	w	w
Daviess	1	w	w
Gibson	3	w	w
Knox	3	w	w
Pike	2	w	w
Spencer	1	w	w
Sullivan	1	w	w
Warrick	2	w	w
Kentucky	73	28,634	78.22
Bell	7	931	110.07
Breathitt	2	w	w
Floyd	5	247	96.15
Harlan	11	2,123	115.12
Hopkins	1	w	w
Johnson	3	w	w
Knott	2	w	w
Knox	1	w	w
Leslie	1	w	w
Letcher	7	1,487	110.67
Martin	1	w	w
Morgan	1	w	w
Muhlenberg	1	w	w
Perry	8	2,102	96.32
Pike	18	3,404	141.01
Union	1	w	w
Whitley	3	w	w
Louisiana	1	w	w
Natchitoches	1	w	w
Maryland	10	1,468	75.71
Allegany	6	827	58.45
Garrett	4	641	97.99
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	5	28,054	43.29
Big Horn	2	w	w
Musselshell	1	w	w
Richland	1	w	w
Rosebud	1	w	w
New Mexico	3	w	w
Mckinley	1	w	w
San Juan	2	w	w
North Dakota	5	26,645	20.61
Mclean	1	w	w
Mercer	3	w	w
Oliver	1	w	w
Ohio	9	2,492	52.95
Belmont	2	w	w
Harrison	5	1,322	60.44
Noble	1	w	w
Tuscarawas	1	w	w
Pennsylvania	68	39,050	94.69
Armstrong	3	w	w
Cambria	5	1,164	153.98
Carbon	1	w	w
Clarion	1	w	w
Clearfield	7	1,034	187.50
Columbia	1	w	w
Fayette	1	w	w
Fulton	1	w	w
Greene	3	w	w
Indiana	7	2,305	145.54
Jefferson	1	w	w
Luzerne	2	w	w
Lycoming	1	w	w
Northumberland	5	307	70.34
Schuylkill	15	1,191	166.70
Somerset	11	1,876	132.36
Washington	1	w	w
Westmoreland	2	w	w
Texas	4	16,410	22.01
Atascosa	1	w	w
Harrison	1	w	w
Limestone	1	w	w
Robertson	1	w	w
Utah	6	11,295	47.85
Carbon	1	w	w
Emery	3	w	w
Kane	1	w	w
Sevier	1	w	w
Virginia	28	10,735	211.57
Buchanan	8	w	w
Dickenson	7	3,686	218.70
Russell	1	w	w
Tazewell	6	501	166.40
Wise	6	833	137.01
West Virginia	122	82,692	127.52
Barbour	2	w	w
Boone	8	2,960	153.36
Fayette	8	2,240	166.25
Grant	1	w	w
Greenbrier	2	w	w
Kanawha	6	3,233	116.93
Logan	21	8,166	187.99
Marion	2	w	w

Coal-Producing State and County	Number of Mines	Sales (thousand short tons)	Average Sales Price (dollars per short ton)
Marshall	2	w	w
Mcdowell	22	2,433	169.74
Mercer	3	w	w
Mingo	10	2,409	99.15
Nicholas	4	1,116	219.60
Ohio	1	w	w
Raleigh	10	6,552	239.43
Randolph	3	w	w
Taylor	1	w	w
Tucker	1	w	w
Webster	1	w	w
Wetzel	1	w	w
Wyoming	13	6,089	202.49
Wyoming	16	245,189	14.84
Campbell	11	215,989	13.68
Converse	1	w	w
Lincoln	1	w	w
Sweetwater	3	w	w
U.S. Total	405	592,466	54.46

- = No data reported.

w = Data withheld to avoid disclosure.

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

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

Table 31. Average Sales Price of Coal by State and Coal Rank, 2022

(dollars per short ton)

Coal-Producing State	Bituminous	Subbituminous	Lignite	Anthracite	Total
Alabama	269.00	-	-	-	269.00
Alaska	-	w	-	-	w
Colorado	w	w	-	-	65.00
Illinois	35.96	-	-	-	35.96
Indiana	56.67	-	-	-	56.67
Kentucky Total	78.22	-	-	-	78.22
Kentucky (East)	w	-	-	-	w
Kentucky (West)	w	-	-	-	w
Louisiana	-	-	w	-	w
Maryland	75.71	-	-	-	75.71
Mississippi	-	-	w	-	w
Missouri	w	-	-	-	w
Montana	w	w	w	-	43.29
New Mexico	w	w	-	-	44.07
North Dakota	-	-	20.61	-	20.61
Ohio	52.95	-	-	-	52.95
Pennsylvania Total	91.51	-	-	155.03	94.69
Pennsylvania (Anthracite)	-	-	-	155.03	155.03
Pennsylvania (Bituminous)	91.51	-	-	-	91.51
Texas	-	-	22.01	-	22.01
Utah	47.85	-	-	-	47.85
Virginia	211.57	-	-	-	211.57
West Virginia Total	127.52	-	-	-	127.52
West Virginia (Northern)	85.21	-	-	-	85.21
West Virginia (Southern)	182.92	-	-	-	182.92
Wyoming	w	w	-	-	14.84
U.S. Total	97.96	16.55	21.79	155.03	54.46

- = No data reported.

w = Data withheld to avoid disclosure.

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

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

Table 32. Average Sales Price of Coal by Mine Production Range and Mine Type, 2022

(dollars per short ton)

Mine Production Range (thousand short tons)	Underground	Surface	Total
Over 1,000	83.08	20.60	42.82
Over 500 to 1,000	176.93	148.76	169.80
Over 200 to 500	158.26	111.66	135.41
Over 100 to 200	168.48	127.63	140.17
Over 50 to 100	129.61	111.81	116.78
50 or Under	128.44	113.82	117.71
U.S. Total	96.47	29.20	54.46

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

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

Table 33. Average Sales Price of U.S. Coal by State and Disposition, 2022

(dollars per short ton)

Coal-Producing State	Open Market ¹	Captive ²	Total ³
Alabama	179.11	-	269.00
Alaska	w	-	w
Colorado	w	w	65.00
Illinois	w	w	35.96
Indiana	55.10	56.82	56.67
Kentucky Total	66.79	256.14	78.22
Kentucky (East)	w	w	w
Kentucky (West)	w	-	w
Louisiana	w	-	w
Maryland	66.85	-	75.71
Mississippi	w	-	w
Missouri	w	-	w
Montana	w	w	43.29
New Mexico	w	w	w
North Dakota	20.61	-	20.61
Ohio	52.95	-	52.95
Pennsylvania Total	w	w	94.69
Pennsylvania (Anthracite)	w	w	155.03
Pennsylvania (Bituminous)	w	w	91.51
Texas	w	w	22.01
Utah	42.27	-	47.85
Virginia	w	w	211.57
West Virginia Total	78.54	126.96	127.52
West Virginia (Northern)	w	w	85.21
West Virginia (Southern)	w	w	182.92
Wyoming	15.13	14.34	14.84
U.S. Total	39.85	27.20	54.46

- = No data reported.

w = Data withheld to avoid disclosure.

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

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

3 Total includes price of coal sold on the open market, captive market and exported by coal mines. Excludes price of coal exported by coal brokers, coal traders and coal terminals.

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

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

Table 33.1 Average Sales Price of U.S. Coal by Use and Disposition, 2014-2022

(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

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

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

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

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

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

Average Consumer Prices

Table 34. Average Price of Coal Delivered to End Use Sector by Census Division and State, 2022 and 2021

(dollars per short ton)

Census Division and State	2022				2021				Annual Percent Change			
	Electric Power ¹	Other Industrial	Commercial and Institutional	Coke	Electric Power ¹	Other Industrial	Commercial and Institutional	Coke	Electric Power ¹	Other Industrial	Commercial and Institutional	Coke
New England	229.89	-	-	-	117.65	-	-	-	95.40	-	-	-
Connecticut	-	-	-	-	-	-	-	-	-	-	-	-
Maine	w	-	-	-	w	-	-	-	72.96	-	-	-
New Hampshire	w	-	-	-	w	-	-	-	w	-	-	-
Rhode Island	-	-	-	-	-	-	-	-	-	-	-	-
Middle Atlantic	59.83	103.11	w	w	38.71	87.46	w	124.33	54.56	17.89	55.34	w
New Jersey	w	-	-	-	w	-	-	-	32.03	-	-	-
New York	-	w	-	-	-	w	-	-	-	8.93	-	-
Pennsylvania	w	109.10	w	w	w	88.38	w	124.33	59.85	23.44	55.34	w
East North Central	45.68	82.93	211.51	59.64	39.03	71.02	134.54	53.86	17.04	16.77	57.21	10.73
Illinois	w	w	w	49.31	w	w	w	50.11	14.77	3.69	60.95	-1.60
Indiana	w	129.93	w	w	w	102.11	w	w	19.92	27.25	53.35	21.81
Michigan	w	116.35	w	-	w	87.60	w	-	14.99	32.82	60.61	-
Ohio	w	127.09	w	-	w	104.07	119.44	-	8.59	22.12	w	-
Wisconsin	43.89	91.69	-	-	36.94	85.24	-	-	18.81	7.57	-	-
West North Central	30.17	31.17	-	86.07	26.47	28.27	-	81.58	13.98	10.26	-	5.50
Iowa	31.67	32.90	-	91.66	27.94	33.69	-	w	13.35	-2.34	-	w
Kansas	32.43	w	-	-	24.74	w	-	-	31.08	7.09	-	-
Minnesota	41.20	54.18	-	w	38.40	49.46	-	w	7.29	9.54	-	16.59
Missouri	33.99	62.41	-	w	29.42	48.22	-	w	15.53	29.43	-	38.43
Nebraska	22.06	w	-	-	20.16	w	-	-	9.42	1.37	-	-
North Dakota	21.87	w	-	w	21.00	w	-	w	4.14	8.06	-	11.51
South Dakota	34.29	w	-	-	31.43	w	-	-	9.10	23.64	-	-
South Atlantic	74.19	144.95	w	w	57.93	97.46	w	122.13	28.07	48.73	97.77	w
Delaware	w	-	-	-	w	-	-	-	w	-	-	-
District of Columbia	-	-	-	-	-	-	-	-	-	-	-	-
Florida	85.37	183.56	-	-	62.69	110.43	-	-	36.18	66.22	-	-
Georgia	76.28	196.69	-	-	55.85	95.02	-	-	36.58	w	-	-
Maryland	w	w	-	-	w	w	-	-	84.74	52.36	-	-
North Carolina	90.04	149.70	-	w	w	97.85	-	w	w	52.99	-	59.60
South Carolina	w	142.14	-	-	w	106.87	-	-	22.48	33.00	-	-
Virginia	68.05	130.79	w	w	50.88	89.29	w	w	33.75	46.48	w	53.74
West Virginia	w	w	w	-	w	w	w	-	16.78	16.95	12.79	-
East South Central	w	128.77	w	w	w	97.77	w	w	30.95	31.71	79.02	5.60
Alabama	51.01	130.55	w	-	40.21	89.64	w	-	26.86	45.64	79.02	-
Kentucky	52.76	133.56	-	w	42.05	104.78	-	w	25.47	27.47	-	5.60
Mississippi	w	w	-	-	w	w	-	-	26.92	26.56	-	-
Tennessee	77.50	114.59	-	-	43.31	90.92	-	-	78.94	26.03	-	-
West South Central	35.76	87.41	-	-	32.97	75.43	-	-	8.46	15.88	-	-
Arkansas	w	w	-	-	w	w	-	-	12.30	33.22	-	-
Louisiana	w	w	-	-	w	w	-	-	-39.12	11.30	-	-
Oklahoma	45.46	114.02	-	-	30.15	113.51	-	-	50.78	s	-	-
Texas	w	103.74	-	-	w	91.75	-	-	9.50	13.07	-	-
Mountain	39.55	68.78	-	w	35.71	61.08	-	w	10.75	12.61	-	32.51
Arizona	51.56	w	-	-	41.87	w	-	-	23.14	16.26	-	-
Colorado	35.46	w	-	-	29.69	w	-	w	19.43	12.10	-	w
Idaho	-	176.97	-	-	-	w	-	-	-	w	-	-
Montana	w	53.08	-	w	w	45.09	-	w	9.07	17.72	-	8.00
Nevada	w	95.92	-	-	w	78.58	-	-	23.98	22.07	-	-
New Mexico	54.31	w	-	-	49.09	w	-	-	10.63	9.85	-	-
Utah	47.77	59.63	-	-	43.93	50.63	-	-	8.74	17.78	-	-
Wyoming	w	56.25	-	w	w	51.52	-	w	-4.53	9.18	-	39.11
Pacific	49.18	90.69	-	88.72	48.45	83.06	-	w	1.51	9.19	-	w
Alaska	56.51	-	-	88.72	49.19	-	-	w	14.88	-	-	w
California	-	91.34	-	-	-	83.16	-	-	-	9.84	-	-

Census Division and State	2022				2021				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	-	-	-	22.10	-	-	-
Oregon	-	w	-	-	-	w	-	-	-	s	-	-
Washington	w	w	-	-	w	w	-	-	15.74	4.53	-	-
U.S. Total	44.51	69.77	195.61	89.85	37.32	57.89	122.37	83.00	19.27	20.52	59.85	8.25

- = 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, 2000-2022

(Short Tons)

Year	Europe																		
	Australia	New Zealand	Canada	Mexico	Colombia	Venezuela	China	India	Indonesia	Norway	Poland	Russia	Ukraine	United Kingdom	Other	Total	South Africa	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

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, 1960-2022

(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

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.'