

Table 21. Coal Productivity by State and Mine Type, 2023 and 2022

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

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

Coal-Producing State, Region ¹ and Mine Type	Number of Mining Operations ²			Number of Employees ³			Average Production per Employee Hour (short tons) ⁴		
	2023	2022	Percent Change	2023	2022	Percent Change	2023	2022	Percent Change
Refuse Recovery	17	17	-	33	58	-43.1	6.09	5.36	13.6
U.S. Total	819	793	3.3	45,476	43,582	4.3	5.66	6.11	-7.4

- = No data reported.

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

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

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

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

Note: 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.'