

Table 21. Coal Productivity by State and Mine Type, 2019 and 2018

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

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

Coal-Producing State, Region ¹ and Mine Type	Number of Mining Operations ²			Number of Employees ³			Average Production per Employee Hour (short tons) ⁴		
	2019	2018	Percent Change	2019	2018	Percent Change	2019	2018	Percent Change
Underground	18	19	-5.3	2,933	2,965	-1.1	5.78	5.64	2.5
Surface	49	52	-5.8	10,840	11,322	-4.3	16.89	17.38	-2.8
U.S. Subtotal	918	911	0.8	52,714	53,489	-1.4	5.95	6.24	-4.7
Underground	355	357	-0.6	31,881	32,012	-0.4	3.60	3.68	-2.3
Surface	563	554	1.6	20,833	21,477	-3.0	9.88	10.36	-4.6
Refuse Recovery	19	21	-9.5	90	94	-4.3	4.36	4.56	-4.3
U.S. Total	937	932	0.5	52,804	53,583	-1.5	5.94	6.23	-4.7

-- = No data reported.

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

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

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

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

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.'