



COAL PRODUCER AND RESERVE- HOLDER REPORT 2021

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June 2022

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The U.S. Coal Industry, 2021

Coal continues to provide the U.S. with abundant reliable and affordable energy, with the majority (about 90%) of production going to the electric power sector. Although coal demand has decreased in recent years, coal is still a critical fuel source for a diversified electricity market. Despite the challenges of COVID-19 in 2020, and with the market recovery evident in 2021, the coal industry continued its role as a dependable fuel source for its customers in 2021.

U.S. coal production was 578 million short tons in 2021, up 8%, with a 11% increase in the East and a 6% increase in the West. Coal consumption totaled 546 million tons last year, a 15% increase. Coal consumption by the power sector, coal's largest market, increased 15% to 501 million tons. Coal exports, up 23%, totaled 85 million tons - 40 million tons of thermal coal and 45 million tons of metallurgical coal. Coal stocks ended the year at 124 million tons, down from 162 at the end of 2020.

The Energy Information Administration's June 2022 Short-term Outlook is forecasting coal production to increase 3.9% this year to 601 million tons. Power sector coal consumption is expected to decrease 3.5% to 484 million tons, and coal exports should increase 4.8% to 81 million tons. EIA attributes the power sector decline to continued coal-fueled power plant retirements, limited rail capacity, reduced coal mining capacity due to closures and increasing renewable generation.

This report highlights some key coal market indicators, and information on major sales and restructuring activity in 2021 and through May 2022. Tables 1-4 include company and mine level production and company reserves for a number of major producers.

Sources: EIA, Monthly Energy Review, May 2022; Quarterly Coal Report, October-December 2021; Short-term Energy Outlook, June 2022

2020's Recent Asset Acquisitions, Sales and Restructuring Activity for Selected Companies – as of May 2022

U.S. coal company sales, acquisitions and restructuring activities that have occurred in recent months are identified below. This list is based on publicly available information and news reports and may not include all activity, particularly where smaller companies are involved.

American Resources Corp. announced in March 2022 that it acquired the operating rights to a PCI carbon surface mine operation to further expand the production of its McCoy Elkhorn Complex in Pike County, Kentucky.

Arch Resources, Inc. In February 2021, Arch announced that it transferred the Viper thermal coal mine to Knight Hawk Coal in the 4th quarter of 2020.

Contura Energy, Inc. In February 2021 Contura changed its name to Alpha Metallurgical Resources, Inc.

FM Coal LLC. In March 2021, FM Coal and its subsidiaries emerged from Chapter 11 bankruptcy (filed Sept. 2020).

JSW Steel. In December 2021 JSW announced that it restructured and consolidated its West Virginia coal operations.

Lighthouse Resources Inc. In March 2021, Lighthouse won bankruptcy court approval to wind down its operating assets and establish a trust to fulfill its environmental cleanup obligations.

Ramaco Resources, Inc. In December 2021, Ramaco announced that it successfully completed acquisition of the Amonate assets located in West Virginia and Virginia from Coronado Global Resources Inc. In February 2022, Ramaco Resources agreed to acquire 100% of the equity interests of Ramaco Coal, LLC with the transaction completed in April 2022.

Major Coal Producing Companies and Mines in 2021 (Tables 1-3)

Table 1, compiled by the National Mining Association (NMA) from preliminary data collected by the U.S. Mine Safety & Health Administration, shows 2021 production for 42 U.S. coal producing companies. Peabody was the largest coal producer in the U.S., with production of 108.7 million tons, which represented 18.3% of total U.S. coal production. The second largest was Arch Resources, with 72.0 million tons, representing 12.5% of coal production. Ranking third was Navajo Transitional Energy, with 50.0 million tons and 8.7% of production. The fourth largest coal producer was American Consolidated Natural Resources, with 40.1 million tons and 6.9% of production. The fifth largest producer was Alliance Resource Partners, with 32.2 million tons and 5.6% of production. The top five coal producing companies in the survey accounted for nearly 52% of total U.S. production, while the top 10 accounted for nearly 72%.

Table 2 lists the top underground mines in 2021 in terms of production. The top five mines were CONSOL Energy's Bailey mine in Pennsylvania, with 11.8 million tons; American Consolidated Resources' Marshall County mine in West Virginia, with 11.0 million tons; Alliance Resource Partners' River View mine in Kentucky, with 9.8 million tons; Foresight Energy's M Class Number 1 mine in Illinois, with 7.9 million tons; and Signal Peak's Bull Mountain mine in Montana, with 7.2 million tons.

The five top producing surface mines (Table 3) in 2021 were Peabody’s North Antelope Rochelle mine, with 62.8 million tons; Arch Resources’ Black Thunder mine, with 59.4 million tons; Navajo Transitional Energy’s Antelope mine, with 21.7 million tons; Eagle Specialty Materials’ Eagle Butte mine, with 14.5 million tons; and Peabody’s Caballo mine, with 13.9 million tons.

Major U.S. Coal Reserve Holder Estimates in 2021 (Table 4)

The U.S. government is the single largest reserve holder, with about one-third ownership of the nation’s coal resources – or approximately 84 billion tons of estimated recoverable coal reserves. Great Northern Properties Limited Partnership was the second largest reserve holder with 21 billion tons. Third was American Consolidated Resources, with about 4 billion tons, and fourth and fifth respectively were Peabody with 2.2 billion tons, and Foresight Energy with 2.1 billion tons.

Top Ten U.S. Coal Producers - 2021 (Million Short Tons)		
Company	Production Tonnage	Percent of Total U.S.
1. Peabody	105.7	18.3%
2. Arch Resources, Inc	72.0	12.5%
3. Navajo Transitional Energy Co. (NTEC)	50.0	8.7%
4. American Consolidated Natural Resources, Inc.(ACNR)	40.1	6.9%
5. Alliance Resource Partners, LP	32.2	5.6%
6. North American Coal Corporation (NACCO)	29.6	5.1%
7. Eagle Specialty Minerals LLC	28.0	4.8%
8. CONSOL Energy, Inc.	24.0	4.1%
9. Foresight Energy LP	17.8	3.1%
10. Alpha Metallurgical Resources, Inc.	15.8	2.7%
Other Producers	162.9	28.2%
Total U.S. Production	578.1	100.0%
Top Ten as a Percent of Total U.S. Coal Production		71.8%
Top Five as a Percent of Total U.S. Coal Production		51.9%

Notes: Figures are rounded. 2021 estimated production data are from the Mine Safety & Health Administration. U.S. production total for 2021 is a preliminary EIA estimate and subject to revision.

TABLE 1
Major U.S. Coal Producers - 2021
(Million Short Tons)

Company	Production ^{1/} Tonnage	Percent of Total U.S.
1. Peabody	105.7	18.3%
2. Arch Resources, Inc. (formerly Arch Coal)	72.0	12.5%
3. Navajo Transitional Energy Co. LLC (NTEC)	50.0	8.7%
4. American Consolidated Natural Resources, Inc. (ACNR)	40.1	6.9%
5. Alliance Resource Partners, LP	32.2	5.6%
6. North American Coal Corporation (NACCO)	29.6	5.1%
7. Eagle Specialty Materials LLC	28.0	4.8%
8. CONSOL Energy, Inc.	24.0	4.1%
9. Foresight Energy LP	17.8	3.1%
10. Alpha Metallurgical Resources, Inc.	15.8	2.7%
11. Luminant Mining Company (Vistra Energy Corp.)	10.9	1.9%
12. Kiewit Mining Group, Inc.	10.6	1.8%
13. Westmoreland Mining, LLC	10.1	1.7%
14. Seven Energy AG	8.1	1.4%
15. Signal Peak Energy, LLC	7.2	1.3%
16. Coronado Coal LLC	6.9	1.2%
17. Prairie State Energy Company	6.6	1.1%
18. Iron Senergy Holdings, LLC	6.0	1.0%
19. Wolverine Fuels LLC	5.9	1.0%
20. Sunrise Coal Company (Hallador)	5.8	1.0%
21. Warrior Met Coal, Inc.	5.6	1.0%
22. Knight Hawk Coal, LLC	5.5	1.0%
23. Rosebud Mining Company (J. Clifford Forrest)	5.4	0.9%
24. Interwest Mining Company (PacifiCorp/Bridger)	4.4	0.8%
25. Western Fuels Association	3.7	0.6%
26. BNI Coal, LTD (Allete)	3.6	0.6%
27. Black Hills Corporation (Wyodak Resources)	3.5	0.6%
28. Ramaco Resources, Inc.	3.2	0.6%
29. Metinvest B.V. (United Coal Co.)	2.8	0.5%
30. Kemmerer Holdings	2.5	0.4%
31. North American Construction Group	2.5	0.4%
32. Colowyo Coal Co. LP (Tri-State Generating)	2.1	0.4%
33. Lighthouse Resources Inc.	2.0	0.3%
34. Mega Highwall Mining LLC (Bunn)	2.0	0.3%
35. Coal-Mac LLC (John M. Potter/JMP)	1.9	0.3%
36. Trapper Mining Inc. (Salt River; Tri-State; Pacificorp; Platte River; Xcel)	1.5	0.3%
37. Blue Mountain Energy, Inc. (Deseret Power)	1.5	0.3%
38. Cleveland Cliffs Inc	1.4	0.2%
39. Bronco Coal Resources	1.2	0.2%
40. Corsa Coal Co. (Quintana)	1.0	0.2%
41. Usibelli Coal Mine, Inc.	1.0	0.2%
42. White Stallion Energy (formerly Vigo Coal & Solar Sources)	0.1	0.0%
Other Producers	26.4	4.6%
Total U.S. Production ^{2/}	578.1	100.0%

Notes: Figures are rounded. 2021 data compiled from MSHA 2021 preliminary production data. May not be all-inclusive.

1/ U.S. Department of Labor, Mine Safety & Health Administration, 2021 preliminary data.

2/ U.S. Department of Energy, Energy Information Administration, 2021 preliminary data.

TABLE 2

Major U.S. Underground Coal Mines - 2021 ^{1/}
(Million Short Tons)

	Mine Name	Location	Tonnage	Operating Company
1.	Bailey	Pennsylvania	11.8	CONSOL Pennsylvania Coal Co.
2.	Marshall County	West Virginia	11.0	Marshall County Coal Co. (ACNR)
3.	River View	Kentucky	9.8	River View Coal, LLC (Alliance)
4.	M Class No. 1	Illinois	7.9	M Class Mining LLC (Foresight/ACNR)
5.	Bull Mountain No. 1	Montana	7.2	Signal Peak Energy LLC
6.	Tunnel Ridge	West Virginia	7.2	Tunnel Ridge, LLC (Alliance)
7.	Enlow Fork	Pennsylvania	6.8	CONSOL Pennsylvania Coal Co.
8.	Mach No. 1	Illinois	6.7	Mach Mining LLC (Foresight/ACNR)
9.	Lively Grove	Illinois	6.6	Prairie State Generating Co.
10.	Marion County	West Virginia	6.2	Marion County Coal Co. (ACNR)
11.	Harrison County	West Virginia	6.1	Harrison County Coal Co. (ACNR)
12.	Cumberland	Pennsylvania	6.0	Iron Senergy Holding, LLC
13.	Ohio County	West Virginia	6.0	Ohio County Coal Co. (ACNR)
14.	Harvey	Pennsylvania	5.3	CONSOL Pennsylvania Coal Co.
15.	Hamilton County No. 1	Illinois	4.9	Hamilton County Coal (Alliance)
16.	Buchanan	Virginia	4.9	Coronado Coal, LLC
17.	No. 7	Alabama	4.8	Warrior Met Coal Mining, LLC
18.	Leer	West Virginia	4.4	ACI Tygart Valley (Arch)
19.	Warrior (Cardinal)	Kentucky	4.1	Warrior Coal, LLC (Alliance)
20.	Prairie Eagle Underground	Illinois	4.1	Knight Hawk Coal, LLC
21.	Oaktown Fuels No. 1	Indiana	3.5	Sunrise Coal Co. (Hallador)
22.	Lila Canyon	Utah	3.4	UtahAmerican Energy, Inc. (ACNR)
23.	Sufco	Utah	3.3	Canyon Fuel Co., LLC (Wolverine Fuels)
24.	Gibson South	Indiana	3.3	Gibson County Coal, LLC (Alliance)
25.	West Elk	Colorado	3.3	Mountain Coal Co. (Arch)
26.	Deer Run	Illinois	3.2	Patton Mining LLC (Foresight)
27.	Bridger Underground	Wyoming	3.2	Bridger Coal Company (Interwest/Pacificorp)
28.	Skyline	Utah	2.6	Canyon Fuel Co., LLC (Wolverine Fuels)
29.	Deep Mine No. 41	Virginia	2.3	Paramont Contura, LLC (Alpha Metallurgical Resources)
30.	Oaktown Fuels No. 2	Indiana	2.1	Sunrise Coal Co. (Hallador)
31.	Pride	Kentucky	2.1	Muhlenberg County Coal Co. (ACNR)
32.	Oak Grove	Alabama	2.0	Murray Oak Grove Coal LLC
33.	Twentymile (Foidel Creek)	Colorado	1.7	Peabody
34.	Gateway North	Illinois	1.7	Peabody
35.	San Juan	New Mexico	1.6	Westmoreland San Juan Mining LLC
36.	Deserado	Colorado	1.5	Blue Mountain Energy, Inc. (Deseret Power)
37.	Mettiki (Mountain View)	West Virginia	1.5	Mettiki Coal LLC (Alliance)
38.	Francisco	Indiana	1.5	Peabody
39.	Road Fork No. 52	West Virginia	1.5	Spartan Mining Co (Alpha)
40.	Century	Ohio	1.3	American Energy Corp. (ACNR)
41.	Excel #5	Kentucky	1.2	Excel Mining (Alliance)
42.	Slabcamp Stockton	West Virginia	1.2	Mammoth Coal Co. (Alpha)
43.	Emery	Utah	1.2	Bronco Utah Operations, LLC
44.	Mountaineer II	West Virginia	1.1	Mingo Logan Coal Co. (Arch)
45.	Beckley	West Virginia	1.1	ICG Beckley (Arch)
46.	North Eagle	West Virginia	1.0	Kanawha Eagle Mining Co. (Blackhawk)
47.	Lynn Branch No. 2	West Virginia	1.0	Aracoma Coal Co. (Alpha)
48.	Viper	Illinois	1.0	Knight Hawk Coal, LLC

^{1/} U.S. Department of Labor, Mine Safety & Health Administration, 2021 preliminary data.

TABLE 3

Major U.S. Surface Coal Mines - 2021 ^{1/}
(Million Short Tons)

Mine Name	Location	Tonnage	Operating Company
1. North Antelope Rochelle	Wyoming	62.8	Peabody
2. Black Thunder	Wyoming	59.4	Arch Resources, Inc.
3. Antelope	Wyoming	21.7	Navajo Transitional Energy Co. LLC
4. Belle Ayr	Wyoming	14.5	Eagle Specialty Materials
5. Caballo	Wyoming	13.9	Peabody
6. Eagle Butte	Wyoming	13.5	Eagle Specialty Materials
7. Spring Creek	Montana	13.1	Navajo Transitional Energy Co. LLC
8. Cordero Rojo	Wyoming	12.9	Navajo Transitional Energy Co. LLC
9. Freedom	North Dakota	12.6	Coteau Properties Co. (North American)
10. Rawhide	Wyoming	11.6	Peabody
11. Buckskin	Wyoming	10.6	Buckskin Mining Co. (Kiewit)
12. Kosse	Texas	8.8	Luminant Mining
13. Falkirk	North Dakota	7.9	The Falkirk Mining Co. (North American)
14. Colstrip (Rosebud)	Montana	6.5	Western Energy Co. (Westmoreland)
15. Bear Run	Indiana	6.0	Peabody
16. Navajo	New Mexico	4.0	Navajo Transitional Energy Co. LLC
17. Dry Fork	Wyoming	3.7	Western Fuels-Wyoming, Inc.
18. El Segundo	New Mexico	3.7	Peabody
19. Center	North Dakota	3.6	BNI Coal, Ltd. (Allete)
20. Wyodak	Wyoming	3.5	Wyodak Resources Dev. Corp. (Black Hills)
21. Red Hills	Mississippi	3.2	Mississippi Lignite (North American)
22. Kemmerer	Wyoming	2.5	Kemmerer Holdings, LLC (Westmoreland)
23. San Miguel ^{2/}	Texas	2.5	Kiewit Mining Group
24. Workman Creek	West Virginia	2.4	Republic Energy LLC (Alpha)
25. Wild Boar	Indiana	2.3	Peabody
26. Liberty/Martin Lake	Texas	2.1	Luminant Mining
27. Colowyo	Colorado	2.1	Colowyo Coal Co (Tri-State)
28. Calvert/Walnut Creek Lignite ^{2/}	Texas	2.1	Kiewit Mining Group
29. Coyote Creek	North Dakota	2.0	Coyote Creek Mining Co. (North American)
30. Coal Creek	Wyoming	2.0	Arch Resources, Inc.
31. Monongalia County	West Virginia	2.0	Monongalia County Coal Res. (ACNR)
32. Sabine/So. Hallsville No. 1	Texas	1.9	Sabine Mining Co. (North American)
33. Black Butte ^{3/}	Wyoming	1.8	Black Butte Coal Co. (Lighthouse/Anadarko)
34. Trapper	Colorado	1.5	Trapper Mining Inc.

Notes: Figures are rounded. Data compiled from 2021 preliminary Mine Safety & Health Administration.
 May not be all-inclusive.

1/ U.S. Department of Labor, Mine Safety & Health Administration, 2021 preliminary data.

2/ Mine managed and operated, but not owned by Kiewit.

3/ Fifty percent ownership each.

TABLE 4
Major Holders of U.S. Coal Reserves - 2021
(Billion Short Tons)

Holder	Estimated Reserves
1. U.S. Government ^{1/}	84.000
2. Great Northern Properties Limited Partnership ^{3/}	21.000
3. American Consolidated Natural Resources, Inc (ACNR) ^{2/}	4.000
4. Peabody ^{2/}	2.177
5. Foresight Energy LP ^{2/}	2.050
6. Natural Resource Partners LP ^{3/}	1.816
7. Pocahontas Land Corporation (Norfolk Southern)	1.640
8. Alliance Resource Partners, LP ^{2/}	1.620
9. Arch Resources, Inc. ^{2/}	0.999
10. Kentucky River Properties LLC	0.973
11. Navajo Transitional Energy Co. LLC ^{3/}	0.895
12. Penn Virginia Resource Partners, LP ^{3/}	0.783
13. Eagle Specialty Materials LLC ^{4/ 3/}	0.752
14. CONSOL Energy, Inc. ^{2/}	0.724
15. BNI Coal, LTD (Allele) ^{3/}	0.596
16. Rosebud Mining Company (J. Clifford Forrest) ^{2/}	0.458
17. Usibelli Coal Mine, Inc. ^{2/}	0.450
18. North American Coal Corporation (NACCO) ^{2/}	0.398
19. Prairie State Energy Company ^{3/}	0.358
20. Alpha Metallurgical Resources, Inc. ^{2/}	0.351
21. Coronado Coal LLC ^{2/}	0.341
22. Lighthouse Resources Inc. ^{4/}	0.279
23. Western Fuels Association ^{2/}	0.277
24. Luminant Mining Company (Vistra Energy Corp.) ^{3/}	0.270
25. Westmoreland Mining, LLC ^{3/}	0.252
26. Kiewit Mining Group, Inc. ^{3/}	0.199
27. Signal Peak Energy, LLC ^{3/}	0.190
28. Black Hills Corporation (Wyodak Resources) ^{3/}	0.178
29. Warrior Met Coal, Inc. ^{2/}	0.170
30. Wolverine Fuels LLC	0.167
31. Metinvest B.V. (United Coal Co.) ^{3/}	0.112
32. Cleveland-Cliffs Inc ^{2/}	0.095
33. Sunrise Coal Company (Hallador) ^{2/}	0.075
34. Knight Hawk Coal, LLC ^{3/}	0.075
35. Colowyo Coal Co. LP (Tri-State Generating) ^{2/}	0.068
36. Ramaco Resources, Inc. ^{2/}	0.039
37. Corsa Coal Co. (Quintana) ^{2/}	0.039
38. Interwest Mining Company (PacifiCorp)	0.021
39. Trapper Mining Inc. (Salt River; Tri-State; PacifiCorp; Platte River) ^{3/}	0.013
40. White Stallion Energy (formerly Vigo Coal & Solar Sources) ^{3/}	0.009
41. Sev.en Energy Group (Blackhawk)	N/A
42. Blue Mountain Energy, Inc (Deseret Power)	N/A
43. Iron Senergy Holding, LLC	N/A

Notes: Data for 2021 were estimated from NMA survey of major reserve holders and from company annual reports and company websites. N/A = not available. List may not be all inclusive.

^{1/} U.S. Government calculation based on federal ownership of about one-third of the United States' coal resources.

(Bureau of Land Management, 1993) and estimated recoverable reserves of 252 billion short tons (Energy Information Adm.)

Reserves are estimated proven & probable. ^{2/} Company website, company annual reports and/or other public and private sources.

^{3/} Estimated from previous surveys. ^{4/} Assigned recoverable reserves.

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