

# Coal extraction data

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**Climate Mitigation Services**  
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## Arch Coal, USA

[www.archcoal.com](http://www.archcoal.com)

St. Louis

yellow column indicates original reported units



## Production / Extraction data

Year	Thermal Coal		Thermal Coal		Total Coal	
	Gross production	Gross production	Gross production	Gross production	Gross production	Gross production
	Million tons/yr	Million tons/yr	Million tons/yr	Million tonnes/yr	Million tons/yr	Million tonnes/yr
	Arch Coal	ARCO Coal -1998 acq by Arch 1998	Vulcan Coal tk-2002			

- 15 1950
- 16 1951
- 17 1952
- 18 1953
- 19 1954
- 20 1955
- 21 1956
- 22 1957
- 23 1958
- 24 1959
- 25 1960
- 26 1961
- 27 1962
- 28 1963
- 29 1964
- 30 1965
- 31 1966
- 32 1967
- 33 1968
- 34 1969
- 35 1970
- 36 1971
- 37 1972
- 38 1973
- 39 1974
- 40 1975
- 41 1976
- 42 1977
- 43 1978
- 44 1979
- 45 1980
- 46 1981
- 47 1982
- 48 1983
- 49 1984
- 50 1985
- 51 1986
- 52 1987
- 53 1988
- 54 1989
- 55 1990
- 56 1991
- 57 1992
- 58 1993
- 59 1994
- 60 1995
- 61 1996
- 62 1997
- 63 1998
- 64 1999
- 65 2000
- 66 2001
- 67 2002
- 68 2003
- 69 2004
- 70 2005
- 71 2006
- 72 2007
- 73 2008
- 74 2009
- 75 2010

USA producer only



Arch Coal acquired International Coal Group in 2011  
 (to be completed 2Q 2011); 15.5 tons in 2010 USA (NMA 2010 Rpt)

ARCO attrib to Arch

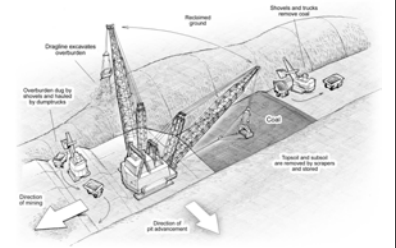
Mining Complex	Captive Mines(1)	Contract Mines(1)	Mining Equipment	Railroad	Tons Sold(2)		
					2008	2009	2010
<b>Powder River Basin:</b>							
Black Thunder	5	—	D, S	UP/BN	88.5	81.2	116.2
Coal Creek	5	—	D, S	UP/BN	11.5	9.8	11.4
<b>Western Bituminous:</b>							
Arch of Wyoming	5	—	L	UP	0.2	0.1	0.1
Dugout Canyon	U	—	LW, CM	UP	4.3	3.2	2.3
Skyline	U	—	LW, CM	UP	3.3	2.8	2.9
Sufo	U	—	LW, CM	UP	7.4	6.6	6.1
West Elk	U	—	LW, CM	UP	5.3	4.0	4.8
<b>Central Appalachia:</b>							
Coal-Mac	5	U	L, E	NS/CSX	3.7	2.9	3.2
Cumberland River	S(1), U(3)	U(4)	L, CM, HW	NS	2.4	1.6	1.5
Lone Mountain	U(3)	—	CM	NS/CSX	2.7	2.2	2.1
Mountain Laurel	U	S(2)	L, LW, CM	CSX	4.3	4.4	5.1
<b>Totals</b>					<b>133.6</b>	<b>118.8</b>	<b>155.7</b>

Arch Coal 10-K for 2010, page 9.

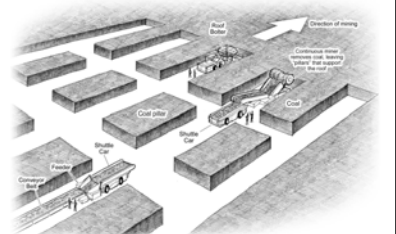
Year	Arch Coal million tons/yr	ARCO coal million tons/yr
1973	12.5	Keystone Manual
1974	13.9	
1975	13.5	
1976	13.6	
1977	12.6	
1978	12.9	
1979	12.6	
1980	15.8	11.1 Keystone Manual
1981	12.7	15.8
1982	12.8	19.2
1983	12.9	18.8
1984	12.9	26.3
1985	13.0	29.8
1986	13.1	27.2
1987	18.7	26.1
1988	18.5	32.4
1989	18.9	39.4
1990	23.4	38.3
1991	18.6	41.6
1992	20.1	39.8
1993	15.0	47.7
1994	22.9	38.4
1995	24.3	45.7
1996	20.2	51.0
1997	26.1	46.4
1998	88.9	17.3 acq by Arch 1998
1999	108.8	23.8
2000	108.7	33.0
2001	116.5	43.0
2002	110.8	42.2
2003	107.7	41.5
2004	123.1	
2005	140.2	
2006	135.0	
2007	135.0	
2008	139.6	
2009	126.1	
2010	162.8	

12.5	12.5	11.4
13.9	13.9	12.6
13.5	13.5	12.2
13.6	13.6	12.3
12.6	12.6	11.4
12.9	12.9	11.7
12.6	12.6	11.4
26.9	26.9	24.4
28.5	28.5	25.9
32.0	32.0	29.1
31.7	31.7	28.7
39.3	39.3	35.6
42.8	42.8	38.8
40.3	40.3	36.5
44.9	44.9	40.7
50.9	50.9	46.2
58.3	58.3	52.9
61.7	61.7	55.9
60.2	60.2	54.6
59.9	59.9	54.3
62.7	62.7	56.9
61.4	61.4	55.7
70.0	70.0	63.5
71.2	71.2	64.6
72.5	72.5	65.7
106.2	106.2	96.3
132.5	132.5	120.2
141.8	141.8	128.6
159.5	159.5	144.7
153.0	153.0	138.8
149.2	149.2	135.4
123.1	123.1	111.7
140.2	140.2	127.2
135.0	135.0	122.5
135.0	135.0	122.5
139.6	139.6	126.6
126.1	126.1	114.4
162.8	162.8	147.7

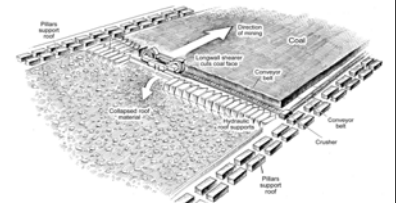
Dragline mining



Room-and-pillar mining



Longwall mining



Arch Coal 10-K for 2010, page 6.

<b>Total</b>	<b>2,015</b>	<b>595</b>	<b>201</b>	<b>-</b>	<b>2,811</b>	<b>2,550</b>
Coal Types:	Assume thermal	100.00%	Metallurgical	na		

Arch Coal

**Cell:** D11

**Comment:** Rick Heede:

Coal production by coal mining companies and state-owned enterprises, including subsidiaries of oil and gas companies.

Coal types produced are not ordinarily reported by coal operators (except for metallurgical coal). We distinguish, where possible and reasonably well known, between hard (bituminous and subbituminous) and soft (lignite or peat) coals, especially for the larger companies operating in regions such as Australia and India where soft coals are predominant. Soft coals have lower carbon content per tonne than do hard coals.

**Cell:** G15

**Comment:** Rick Heede:

Arch Coal acquired Vulcan Partners in 2002. Oligopoly Watch, [www.oligopolywatch.com/2003/09/21.html](http://www.oligopolywatch.com/2003/09/21.html)

**Cell:** G19

**Comment:** Rick Heede:

ABOUT ARCH COAL: As one of the nation's largest and most efficient coal producers, we contribute roughly 16% of America's coal supply. We have a leading position in all three major low-sulfur coal basins, with mining complexes in Wyoming, Utah, Colorado, West Virginia, Kentucky, and Virginia. [www.archcoal.com](http://www.archcoal.com)

**Cell:** D40

**Comment:** Rick Heede:

Keystone Coal Industry Manual for 1975, p. 498, lists Arch Mineral Group coal production for 1973 and 1974. Various Keystone editions for data 1973-1981, plus 1986 (interpolated 1982-1985).

**Cell:** E48

**Comment:** Rick Heede:

ARCO annual report 1983 shows coal shipments 1981-1983.

**Cell:** E50

**Comment:** Rick Heede:

Coal shipment data (which we take as equivalent to production) for 1984-1987 from ARCO (1988) Annual Report 1987, p. 60.

**Cell:** E55

**Comment:** Rick Heede:

Atlantic Richfield Annual Report for 1992, p. 1, shows "annual coal shipments" for 1988-1992.

Keystone Coal Industry Manual for 1993, p. 372, shows 1991 production data for ARCO at 32.6 million tons, and 26.9 million tons in 1988.

**Cell:** E60

**Comment:** Rick Heede:

ARCO annual report 1993, Highlights, shows "coal shipments" for 1989-1993 in million tons; in 1993, 10.2 million tons foreign and 37.5 million tons domestic.

**Cell:** E61

**Comment:** Rick Heede:

EIA Coal Industry Annual 1994, p. 23.

**Cell:** E62

**Comment:** Rick Heede:

EIA Coal Industry Annual 1995, p. 24.

**Cell:** E63

**Comment:** Rick Heede:

EIA Coal Industry Annual 1997, p. 23, ARCO 51.013 million tons.

**Cell:** E64

**Comment:** Rick Heede:

No data in Keystone Coal Industry Manual. ARCO 1997 coal production from EIA Coal Industry Annual 1997, p. 23.

**Cell:** E65

**Comment:** Rick Heede:

Keystone (1999) states that "during 1998, Arch Coal purchased ARCO Coal Company."

**Cell:** G65

**Comment:** Rick Heede:

Keystone Coal Industry Manual for 2000 (with data for 1998), p. 22: Triton Coal Company.

**Cell:** D71

**Comment:** Rick Heede:

Arch Coal Annual Rpt 2006, "tons sold," in million short tons. No data on coal production, or CO2 or methane emissions. Does mention coal-to-liquids project in southern Wyoming "that plans to capture carbon dioxide for plant use in enhanced oil recovery." (page 16.)

**Cell:** D73

**Comment:** Rick Heede:

Arch Coal Annual rpt 2008, "tons sold," in million short tons. No data on coal production, or CO2 or methane emissions. Provides low-sulfur coal for electricity generation. 2010 report pg 55; adds Arch Coal tons sold from powder River Basin, Western Bituminous, and Central Appalachia.