

# Coal extraction data

**Richard Heede**  
 Climate Mitigation Services  
 File started: 11 January 2005  
 Last modified: July 2018

## Kazakhstan

Astana

yellow column indicates original reported units

### Production / Extraction data

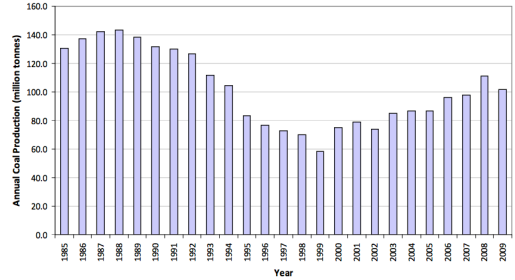
Year	Lignite & Bituminous		Anthracite & Coke		Total Coal	
	Gross production	Gross production	Gross production	Gross production	Gross production	Gross production
	Million tons/yr	Million tons/yr	Million tons/yr	Million tons/yr	Million tonnes/yr	Million tonnes/yr



US BuMines data 1960-1969	
1960	566.2
1961	563.2
1962	570.9
1963	586.5
1964	611.1
1965	637.4
1966	646.0
1967	656.6
1968	656.2
1969	590.0
1970	584.8
1971	603.1

%	USSR		%	USSR	%	Total
	Lignite	Bitumin. & Anthrac.				
27%	152.41	413.80	73%	566.21		
26%	147.18	416.00	74%	563.18		
25%	144.40	426.45	75%	570.85		
26%	150.57	435.96	74%	586.53		
26%	159.98	451.12	74%	611.10		
26%	165.18	472.20	74%	637.38		
25%	161.42	484.54	75%	645.96		
24%	158.53	498.04	76%	656.57		
23%	152.45	503.73	77%	656.18		
27%	159.13	430.88	73%	590.01		
25%	148.32	436.44	75%	584.76		
26%	157.63	445.44	74%	603.07		
Total	1,857	5,415		7,272		
%	25.5%	74.5%				

Figure 20-1. Kazakhstan Annual Coal Production (million tonnes)



Included in Former Soviet Union (FSU) coal production 1900-1991

EIA coal stats:

metallurgical coal not included in total

Year	Lignite		Sub-bituminous		Bituminous		Metallurgical		Kazakhstan		Kazakhstan	
	million sh. tons	million sh. tons	million sh. tons	million sh. tons	million sh. tons	million sh. tons	million sh. tons	million sh. tons	million sh. tons	million tonnes	million tonnes	
1991	7.8	8.6	107.9	15.1	139.5	127						
1992	6.6	7.3	91.4	12.8	118.2	107						
1993	6.2	6.8	85.1	11.9	110.0	100						
1994	5.0	5.5	68.9	9.7	89.0	81						
1995	4.6	5.1	63.4	8.9	82.0	74						
1996	4.3	4.8	59.8	8.4	77.4	70						
1997	4.3	4.7	58.9	8.3	76.2	69						
1998	3.6	4.0	49.5	6.9	64.0	58						
1999	4.6	5.1	63.9	9.0	82.5	75						
2000	4.7	5.2	65.3	9.2	84.4	77						
2001	4.4	4.8	60.6	8.5	78.3	71						
2002	5.0	5.5	68.9	9.7	89.1	81						
2003	5.1	5.7	70.8	9.9	91.6	83						
2004	5.1	5.7	70.6	9.9	91.3	83						
2005	6.0	6.6	82.4	11.6	106.6	97						
2006	6.0	6.7	83.4	11.7	107.8	98						
2007	6.1	6.8	84.4	11.8	109.1	99						
2008	6.2	6.9	86.0	12.1	111.2	101						
2009	6.8	7.6	94.6	13.3	122.3	111						
2010	7.2	8.0	99.3	13.9	128.4	116						
2011	7.4	8.2	102.8	14.4	132.9	121						
2012	7.4	8.2	102.0	14.3	131.8	120						
2013	7.6	7.5	90.8	19.7	125.6	114						
2014	6.1	7.4	86.0	18.8	118.3	107						
2015	6.3	7.2	83.1	17.1	113.6	103						
2016	-	-	-	-	-	112						
2017	-	-	-	-	-	118						
2018	-	-	-	-	-	118						

BP Stat Rev 2018	Mt
	126.5
	111.9
	104.6
	83.3
	76.8
	72.6
	69.8
	58.4
	74.9
	79.1
	73.7
	84.9
	86.9
	86.6
	96.2
	97.8
	111.1
	100.9
	110.9
	116.4
	120.5
	119.6
	114.0
	107.3
	103.1
	112.3
	117.8

104.0

<b>Total</b>	<b>144</b>	<b>160</b>	<b>1,980</b>	<b>297</b>	<b>2,581</b>	<b>2,571</b>
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Coal Types:	Lignite	Sub-Bituminous	Bituminous	Metallurgical	
Percent 1992-2016	5.60%	6.19%	76.72%	11.49%	100.00%

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	
91																		
92																		
93																		
94				<b>Kazakhstan</b>								<b>EIA data updated June 2019</b>			<b>BP StatRev 2018</b>			
95				Lignite		Sub-Bituminous		Bituminous		Metallurgical		Total coal			Coal methane emissions		130.8	
96				EIA coal stats:		EIA coal stats:		EIA coal stats:		EIA coal stats:		EIA coal stats:			CMM emissions		137.5	
97				thousand tons		thousand tons		thousand tons		thousand tons		thousand tons			million cubic meters		142.1	
98																		143.1
99																		138.4
100																		131.4
101																		130.4
102																		126.5
103																		111.9
104																		104.6
105																		83.3
106																		76.8
107																		72.6
108																		69.8
109																		58.4
110																		74.9
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112																		73.7
113																		84.9
114																		86.9
115																		86.9
116																		96.2
117																		97.8
118																		111.1
119																		100.9
120																		110.9
121																		116.4
122																		120.5
123																		119.6
124																		114.0
125																		107.3
126																		103.1
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128																		<b>117.8</b>
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<https://www.eia.gov/beta/international/data/browser/>

Global Methane Initiative (2010)  
See sources below

subt. 1992-2016	144,419	159,802	1,979,976	296,670	2,580,867
percent of 2016	5.58%	6.31%	73.11%	15.01%	100%
<b>% 1992-2016:</b>	<b>5.60%</b>	<b>6.19%</b>	<b>76.72%</b>	<b>11.49%</b>	<b>100%</b>

Kerimkhanov, Abdul (2019) Coal mining in Kazakhstan hits over 117 million tons, *Azer News*, 31 January.

Kazakhstan

**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:** H25

**Comment:** Rick Heede:

Soviet production includes Svalbard production-sharing with Norway (~0.4 million tons per year).

**Cell:** H52

**Comment:** Rick Heede:

EIA (2011) International Energy Statistics on World Coal Production (lignite, bituminous, anthracite, and metallurgical coal), by country; data for 1980-2009; total Primary Coal Production data extends to 2010. [www.eia.gov/emeu/international/energy.html](http://www.eia.gov/emeu/international/energy.html) or [www.eia.gov/countries/data.cfm](http://www.eia.gov/countries/data.cfm).

**Cell:** M56

**Comment:** Rick Heede:

BP Statistical Review of World Energy 2018.

**Cell:** E70

**Comment:** Rick Heede:

EIA (2006) Table 5.3 World Bituminous Coal Production, 1980-2004.

**Cell:** O74

**Comment:** Rick Heede:

World Coal Institute 2009 report, <http://www.worldcoal.org/resources/coal-statistics/>, [http://www.worldcoal.org/bin/pdf/original\\_pdf\\_file/coal\\_factsnewversion09\(15\\_09\\_2010\).pdf](http://www.worldcoal.org/bin/pdf/original_pdf_file/coal_factsnewversion09(15_09_2010).pdf)

**Cell:** K76

**Comment:** Rick Heede:

World Coal Assoc website <http://www.worldcoal.org/resources/coal-statistics/>, 2010 production, link to 2008 production, no link to 2009 (Rhea), assume 2009 same as 2010

**Cell:** K79

**Comment:** Rick Heede:

**Cell:** K83

**Comment:** Rick Heede:

In lieu of unavailable EIA data, CAI uses 2016 and 2017 coal production data from the BP Statistical Review 2018.

**Cell:** H93

**Comment:** Rick Heede:

EIA (2019) International Energy Statistics on World Coal Production (lignite, bituminous, anthracite, and metallurgical coal), by country; data for 1980-2017; <https://www.eia.gov/beta/international/data/browser/>

**Cell:** K96

**Comment:** Rick Heede:

Source: Global Methane Initiative (2010) Coal Mine Methane Country Profiles, Kazakhstan, chapter 20, [www.globalmethane.org/tools-resources/coal\\_overview.aspx](http://www.globalmethane.org/tools-resources/coal_overview.aspx)

"Coal production in Kazakhstan declined by more than 50 percent in the years following independence from the Soviet Union in 1991 (BP, 2010).

The Kazakh coal mines are particularly gassy and prone to violent gas outbursts, and must be degasified and ventilated to prevent explosions and promote worker safety. The underground mines in the Karaganda basin use a variety of pre-mining and post-mining methane drainage techniques. Most of the mines are operated at a depth of more than 500 meters (m) and gas contents in these mines average between 18 and 24 m<sup>3</sup>/tonne (Baimukhametov et al, 2009) with specific emissions averaging 33 m<sup>3</sup>/tonne (KazNIIIMOSK, 2002). Pre-drainage has historically been carried out using in-seam boreholes. Advance degassing from the surface has been trialed with limited success because of the low permeability of the coal seams. The Arcelor Temirtau Coal Division has had recent success in increasing degasification rates, and hence coal production rates, by drilling cross-measure boreholes from a roadway driven 8-12 m below the coal seam. Gob gas is drained with vertical wells from the surface or via galleries driven 20-30 m above the seam (Baimukhametov et al., 2009).

Current drained methane emissions are estimated to be approximately 130 million m<sup>3</sup> resulting from increased underground coal production rates (Alekseev, 2010), However, the level of methane utilization is very low, only about 25 million m<sup>3</sup> annually, which is recovered and combusted in the boiler houses of five mines for mine heating. Surface mines are heavily ventilated and ventilation air with methane concentrations of about 1 percent is vented to the atmosphere (KazNIIIMOSK, 2002).

Table 20-5 details Kazakhstan's measured and estimated CMM emissions. The data in this table may vary from the U.S. EPA data presented in the Executive Summary due to differences in inventory methodology and rounding."

**Cell:** J122

**Comment:** Rick Heede:

EIA International Energy Statistics for Kazakhstan, thousand short tons; data by coal rank only for 2013-2015. Previous data series from older EIA data. CAI includes metallurgical coal production. <https://www.eia.gov/beta/international/data/browser/index.cfm>

**Cell:** J135

**Comment:** Rick Heede:

The extraction of coal and coal concentrate reached 117.8 million tons at the end of 2018. It is 6 percent more than in the same period of 2017. Coal mining is concentrated in two key regions: Pavlodar (70.3 million tons) and Karaganda (39.1 million tons).

Such large enterprises as the Bogatyr Komir LLP, a subsidiary of Samruk-Energo JSC (the Bogatyr and Severny coal mines) are engaged in coal mining in the Pavlodar region; a member of Zaman Group LLP "Gamma" (deposits "Sarykol" and "Taldykol"); Maykuben-West LLP, (Shoptykol lignite deposit), etc.

In the Karaganda region, ERG Eurasian Group (Shubarkol Komir JSC, Tsentralny and Zapadny coal mines), the coal department of ArcelorMittal Temirtau JSC (Lenina, Tentetskaya, Kazakhstanskaya and others), etc. are engaged in coal mining.

Of the total coal and coal concentrate mining, only 5.5 percent (6.4 million tons) accounted for lignite, and 91.1 percent (107.3 million tons) immediately accounted for coal.

At the same time, the main share of hard coal (81 percent) was energy coal (87 million tons), and only 10 percent was coked (10.8 million tons). According to estimates of Samruk-Energo JSC, the main procurer of thermal coal is Bogatyr Komir.

Bogatyr Komir Kazakhstan company is one of the largest in the world in terms of open-pit coal mining, its balance reserves are 2.75 billion tons. The production capacity of the enterprise is 42 million tons of coal per year, including 32 million tons in the Bogatyr mine, and 10 million tons in the Severny mine.

**Cell:** O194

**Comment:** Rick Heede:

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