Coal extraction data

Richard Heede
Climate Mitigation Services
File started: 11 January 2005
Last modified: January 2020

Rio Tinto, Australia

yellow column indicates original reported units

Investor-owned

www.riotinto.com Melbourne

Production / Extraction data

Rio Tinto Annual Report 2013.

RioTinto

Founded in 1873

Year	Thermal Coal: Gross production, Million tonnes/yr, Nerco 1975-92, Kennecott 1993-04	Thermal Coal: Gross production, Million tonnes/yr, Rio Tinto	Coking Coal: Gross production, Million tonnes/yr	Coking Coal: Gross production, Million tonnes/yr, Rio Tinto	Total Coal: Gross production, Million tons/yr, Rio Tinto	Total Coal: Gross production, Million tonnes/yr, Rio Tinto
1950						
1951						
1952						
1953						
1954						
1955						
1956						
1957		Rio Tinto Steam coal, million tons 1961-85, million tonnes 1986-		Rio Tinto Metallurgical coal, million tons 1961-85, million tonnes 1986-	million tons	million tonnes
1958		0.92		0.75	1.7	2
1959		0.93		0.81	1.7	2
1960		1.61		0.11	1.7	2
1961		1.83		0.11	1.9	2
1962		2.01	estimated	0.12	2.1	2
1963		2.21	estimated	0.44 int	2.7	2
1964		2.43	estimated	0.77	3.2	3
1965		2.45	interpolated	0.77	3.2	3
1966		2.46	interpolated	0.77	3.2	3
1967		2.47	interpolated	0.77	3.2	3
1968		2.48	interpolated	0.77	3.2	3
1969		2.49	interpolated	0.81 int	3.3	3
1970	NERCO 1975-1992	2.50	interpolated	0.86 int	3.4	3
1971	Kennecott 1993-2008	2.51	interpolated	0.91 int	3.4	3
1972	million tonnes	2.53	interpolated	0.95 int	14.4	13
1973	Key 9.87	2.54	interpolated	1.00 int	15.7	14
1974	Key 11.02	2.55	interpolated	1.05 int	15.6	14
1975	Key 10.88	2.56	interpolated	1.09 int	15.1	14
1976	Key 10.36	2.57	interpolated	1.14 int	20.1	18
1977	Key 14.86	2.58		1.19 int	20.7	19
1978	Key 15.33	3.04		1.23 int	24.7	22
1979	Key 18.55	3.24		1.28 int	19.8	18
1980	Key 13.88	3.40		1.33 int	19.5	18
1981	Key 13.43	3.40		1.37 int	21.1	19
1982	Key 14.82	4.25		1.42 int	26.5	24
1983	Key 18.87	12.60	start "tonnes"	1.47 int	38.7	35
1984	Key 21.05	14.30	interpolated	1.51 int	42.3	38
1985	Key 22.54	16.00		1.56 int	43.2	39
1986	Key 21.59	18.89		1.61	47.1	43
1987	Key 22.23	23.72		2.19	57.3	52
1988	Key 26.04	25.72		2.19	59.5	54
1989	Key 26.04	9.02		2.67	45.4	41
1990	Key 29.47	10.59	RTZ acquires Kennecott	2.95	51.2	46
1991	Key 32.90	27.10	Rio Tinto AnnRpt	1.98 int	72.4	66
1992	ton 36.60	26.35	RTZ non-US only	1.76 int	74.6	68
1993	39.61	26.93		1.54 int	76.5	69
1994	40.94	26.58		1.32 int	92.6	84
1995	56.14	28.44		1.10 int	125.3	114
1996	84.14	29.50	Rio Tinto AnnRpt	0.88	153.0	139
1997	108.39	28.75		1.73	145.0	132
1998	101.03	40.62		1.65	164.2	149
1999	106.66	41.91		1.93	164.4	149
2000	105.32	38.26		2.31	164.0	149
2001	108.18	32.94		6.76	173.5	157
2002	117.73		only total coal production available for 2005		169.3	154
2003		31.16	Rio Tinto AnnRpt	5.91	178.9	162
2004	125.26	24.39		6.18	171.6	156
2005	125.08	22.36		7.43	177.0	161
2006	130.76	129.74		10.35		140
2007		60.71		12.04		73
2008		19.73		11.67		31
2009		20.65		11.33		32
2010		22.98		12.07		35
2011		21.89		10.68		33
2012		18.64		11.51		30
2013		17.25		12.24		29
2014		13.93		9.72		24
2015		2.53		3.99	divested coal assets	7
2016						
2017						
2018						
Total	**1,640**	**946**	**-**	**186**	**2,738**	**2,918**
1989-2018	1,423	841		160	2,423	million tonnes

Oil & Gas
Rio Tinto oil prod'n
million bbl per yr
2.206
2.026

Oil & gas prod'n not reported after 1960

NERCO
million tons
10.88
12.15
11.99
11.41
16.38
16.90
20.45
15.30
14.80
16.34
20.81
23.20
24.84
23.80
24.50
28.70
28.70
Keystone Manual Nerco 1975-1992

Coal Types:	Subbituminous	Bituminous	Coking coal	Total
Percent 1980-2018:	58.70%	34.71%	6.59%	100.00%

Energy & Minerals

2018 results	2018	2017
Hard coking coal production (000 tonnes – Rio Tinto share)	**3,988**	7,704
Thermal coal production[1] (000 tonnes – Rio Tinto share)	**2,527**	4,065
Iron ore pellets and concentrates production[2] (000 tonnes – Rio Tinto share)	**8,952**	11,166
Titanium dioxide slag production (000 tonnes – Rio Tinto share)	**1,116**	1,315
Borates production (000 tonnes – Rio Tinto share)	**512**	517
Salt production (000 tonnes – Rio Tinto share)	**6,153**	5,090
Uranium production (000 lbs – Rio Tinto share)	**6,764**	6,650

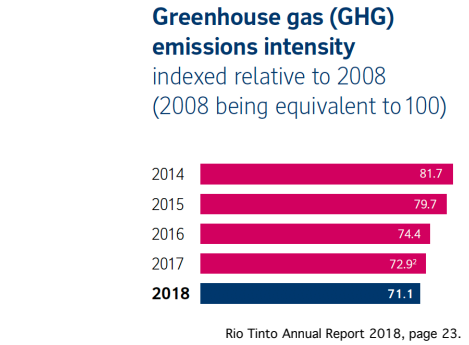
Rio Tinto Annual Report 2018, page 48.

	Rio Tinto % share[a]	2013 Production Total	2013 Production Rio Tinto share	2012 Production Total	2012 Production Rio Tinto share	2011 Production Total	2011 Production Rio Tinto share
BAUXITE ('000 tonnes)							
Rio Tinto Alcan							
Gove (Australia) (f)	100.0	8,029	8,029	7,944	7,944	7,246	7,246
Porto Trombetas (MRN) (Brazil)	12.0	15,729	1,887	15,512	1,861	15,224	1,827
Sangaredi (Guinea)	(k)	15,437	6,947	14,001	6,301	12,517	5,633
Weipa (Australia)	100.0	26,341	26,341	23,257	23,257	20,732	20,732
Rio Tinto total			43,204		39,363		35,437
BORATES ('000 tonnes) (l)							
Rio Tinto Minerals – Boron (US)	100.0	495	495	453	453	486	486
Rio Tinto Minerals – Tincalayu (Argentina) (m)	–	–	–	9	9	18	18
Rio Tinto total			495		463		504
COAL (hard coking) ('000 tonnes)							
Rio Tinto Coal Australia							
Hail Creek Coal (Australia)	82.0	6,839	5,608	7,174	5,882	7,291	5,979
Kestrel Coal (Australia)	80.0	2,553	2,043	2,468	1,974	3,545	2,836
Total Australian hard coking coal			7,651		7,857		8,815
Rio Tinto Coal Mozambique							
Benga (n)	65.0	867	564	289	188	–	–
Rio Tinto total hard coking coal			8,214		8,044		8,815
COAL (semi-soft coking) ('000 tonnes)							
Rio Tinto Coal Australia							
Hunter Valley (Australia) (o)	80.0	2,634	2,107	2,119	1,695	1,906	1,450
Mount Thorley (Australia) (o)	64.0	1,846	1,182	1,584	1,014	1,922	1,159
Warkworth (Australia) (o)	44.5	1,281	569	1,296	576	594	250
Rio Tinto total semi-soft coking coal			3,859		3,286		2,859
COAL (thermal) ('000 tonnes)							
Rio Tinto Coal Australia							
Bengalla (Australia) (o)	32.0	8,232	2,634	7,026	2,248	5,368	1,629
Blair Athol (Australia) (p)	71.2	–	–	2,587	1,843	2,885	2,055
Clermont (Australia) (q)	50.1	11,782	5,903	8,189	4,103	5,790	2,901
Hail Creek Coal (Australia) (r)	82.0	191	157	–	–	–	–
Hunter Valley (Australia) (o)	80.0	11,002	8,802	9,836	7,869	10,332	7,839
Kestrel Coal (Australia)	80.0	463	371	350	280	326	261
Mount Thorley (Australia) (o)	64.0	2,357	1,508	2,497	1,598	1,319	801
Warkworth (Australia) (o)	44.5	6,995	3,110	5,477	2,435	5,454	2,304
Total Australian thermal coal			22,485		20,376		17,791
Rio Tinto Coal Mozambique							
Benga (n)	65.0	754	490	419	272	–	–
US Coal							
Colowyo (US) (s)	–	–	–	–	–	1,939	1,939
Rio Tinto total thermal coal			22,975		20,648		19,729

Rio Tinto Annual Report 2013, page 212.

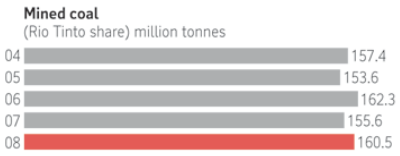
COAL (h)	Coal type (f)		Reserves Proved millions of tonnes	Reserves Probable at end 2013 millions of tonnes	Marketable reserves Proved millions of tonnes	Marketable reserves Probable at end 2013 millions of tonnes	Marketable reserves Total 2013 millions of tonnes	Marketable reserves Total 2012 millions of tonnes	Marketable coal quality (g) Calorific value MJ/kg	Marketable coal quality (g) Sulphur content %	Average % yield to give marketable reserves		Rio Tinto share Marketable reserves millions of tonnes
Reserves at operating mines													
Rio Tinto Coal Australia													
Bengalla	O/C	SC	151	10	113	7.1	120	128	27.86	0.48	74	32.0	38
Clermont	O/C	SC	156	4.6	149	4.2	153	165	27.90	0.33	96	50.1	77
Hail Creek	O/C	MC	74	44	38	23	60	66	32.20	0.35	51	82.0	49
Hunter Valley Operations (i) (j)	O/C	SC + MC	332	49	242	35	277	217	29.12	0.59	73	80.0	221
Kestrel Coal	U/G	MC	40	95	34	79	112	116	31.60	0.59	83	80.0	90
Mount Thorley Operations (k)	O/C	SC + MC	24	7.3	17	4.7	21	25	29.80	0.45	67	64.0	14
Warkworth (l)	O/C	SC + MC	204	155	132	101	233	242	29.80	0.45	65	44.5	104
Sub-total													593
Rio Tinto Coal Mozambique													
Benga	O/C	SC + MC	133	103	67	45	112	119	26.40	0.89	47	65.0	73
Total reserves at operating mines													665
Other undeveloped reserves (m)													
Rio Tinto Coal Australia													
Mount Pleasant	O/C	SC		399		326	326	326	26.92	0.48	82	80.0	261

Rio Tinto Annual Report 2013, page 215.



Rio Tinto Annual Report 2018, page 23.

Rio Tinto Annual Report 2018, page 23.



BORATES ('000 tonnes) (l)									
Rio Tinto Minerals – Boron (US)	100.0	**483**	**483**	411	411	591	591		
Rio Tinto Minerals – Tincalayu (Argentina)	100.0	**18**	**18**	13	13	19	19		
Rio Tinto total			**500**		424		610		
COAL – hard coking ('000 tonnes)									
Rio Tinto Coal Australia									
Hail Creek Coal (Australia)	82.0	**7,183**	**5,890**	6,308	5,173	6,049	4,960		
Kestrel Coal (Australia)	80.0	**3,846**	**3,076**	2,868	2,294	3,089	2,471		
Rio Tinto total hard coking coal			**8,967**		7,467		7,431		

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		2010 Production Total	2010 Production Rio Tinto share	2009 Production Total	2009 Production Rio Tinto share	2008 Production Total	2008 Production Rio Tinto share
	Rio Tinto % share (a)						
COAL – semi-soft coking('000 tonnes)(m)							
Rio Tinto Coal Australia							
Hunter Valley (Australia)	75.7	**2,469**	**1,869**	2,626	1,988	2,865	2,169
Mount Thorley (Australia)	60.6	**1,460**	**884**	1,112	674	1,168	708
Warkworth (Australia)	42.1	**764**	**321**	530	223	386	162
Rio Tinto total semi-soft coking coal			**3,075**		2,885		3,039
COAL – thermal ('000 tonnes) (m)							
Rio Tinto Coal Australia							
Bengalla (Australia)	30.3	**5,477**	**1,659**	5,466	1,655	5,357	1,622
Blair Athol (Australia)	71.2	**6,803**	**4,846**	11,325	8,068	10,194	7,262
Clermont (Australia) (n)	50.1	**3,770**	**1,889**	–	–	–	–
Hunter Valley (Australia)	75.7	**8,442**	**6,391**	8,606	6,515	7,886	5,970
Kestrel Coal (Australia)	80.0	**713**	**571**	849	679	929	744
Mount Thorley (Australia)	60.6	**1,518**	**920**	2,230	1,351	1,780	1,078
Tarong Coal (Australia) (o)	–	–	–	–	–	262	262
Warkworth (Australia)	42.1	**5,120**	**2,154**	4,632	1,949	5,652	2,378
Total Australian thermal coal			**18,430**		20,217		19,317
US Coal							
Antelope (US) (p)	–	**31,156**	**15,043**	30,865	29,031	32,474	32,474
Colowyo (US) (q)	100.0	**2,371**	**2,371**	3,214	3,214	4,446	4,446
Cordero Rojo (US) (p)	–	**33,518**	**16,184**	35,687	33,361	36,318	36,318
Decker (US) (p)	–	**2,521**	**609**	4,161	2,017	5,939	2,970
Jacobs Ranch (US) (r)	–	–	–	26,537	26,537	38,206	38,206
Spring Creek (US) (p)	–	**16,726**	**8,076**	16,035	15,360	16,341	16,341
Total US thermal coal			**42,283**		109,520		130,755
Rio Tinto total thermal coal			**60,713**		129,738		150,072
COPPER (mined) ('000 tonnes)							

Rio Tinto 2010 Annual Report.

Cell: I9
Comment: Rick Heede:
We work in about 35 countries – in mines, smelters and refineries, as well as in sales offices, data centres, research and development labs and with artificial intelligence. Our geologists explore the Earth's wildest terrain. Our wildlife specialists work to protect and conserve grizzly bears in Canada and migratory shorebirds in Western Australia. Our marketing teams make sure our essential materials meet the specific needs of customers around the world. In Australia, our archaeologists work alongside Indigenous Australians to preserve 40,000-year-old rock art.
We are home to one of the world's largest robots and maybe one of the smallest – we call him Mark. We built a wind farm 200 kilometres south of the Arctic Circle to help power our diamond mine, and in 2018 became the only major mining company to stop producing fossil fuels, including coal. We want to be part of the solution to climate change, and believe we are.
We were founded in 1873, on the banks of the Rio Tinto river in Andalusia, Spain. We are proud of everything we have achieved. At Rio Tinto, we know our future is even brighter than our past.
https://www.riotinto.com/about

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: E24
Comment: Rick Heede:
RTZ coal production data is inconsistent to completely lacking in its annual reports from 1960 to 1993; with better reporting 1994-2004. The uncertainty is highest during years with lower production levels, and the annual reports 1968-1979 provide no production tonnage data whatsoever.

Steam coal production is separated from coking coal production.

Units in million tons per year 1961-1985, million tonnes 1986-2004. Kennecott production (column D) is also converted to tonnes. While RTZ includes Kennecott production after the US properties were acquired in 1993, CMS only reports on the company's Australian and Indonesian production 1993-2004 in column E.

Cell: M26
Comment: Rick Heede:
Rio Tinto Annual Report 1960, shows oil production in California (Kern Oil California) of 998k bbls, plus Kern Trinidad production of 1.028 million bbl; also shows 1959 production.

Cell: E28
Comment: Rick Heede:
Rio Tinto Company annual report 1961, p. 14, reports that "Rio Tinto Australia formed Rio Tinto Collieries Pty" in 1961, chiefly in the Burragorang Valley west of Sydney producing approximately 650,000 tons of coking coal," plus unreported production from two smaller collieries producing steam coal. Rio Tinto's 1962 annual report, p.25, is not clear about total mined coal quantities, coke vs steam coal, or Rio Tinto's equity production vs total mined quantities. With these reporting ambiguities in mind:
CMS assumes, for 1962, that Rio Tinto's coke in 1962 is Illawarra's 111,000 tonnes of coke plus 700,000 of total Port Kembla's 798,000 tonnes is coke (up from the reported 650,000 tons in 1961). Rio Tinto Collieriies is assumed to be steam coal: 833,000 tons, plus the remainder of Kembla's production (798,000 mines the 650,000 tons of coke = 148,000 tons); total steam coal = 0.148 plus 0.833 million tons.
CMS assumes, for 1961, that Rio Tinto's coke production: is Illawarra's 100,000 tonnes of coke plus 650,000 tonnes of total Port Kembla's production of 735,000 tonnes is coke (1961 AnnRpt). Rio Tinto Collieriies is assumed to be steam coal: 833,000 tons, plus the remainder of Kembla's production (735,000 minus the 650,000 tons of coke = 85,000 tons); total steam coal = 0.100 plus 0.833 million tons.

Cell: H28
Comment: Rick Heede:
Rio Tinto's 1962 annual report, p.25, is not clear about total mined coal quantities, coke vs steam coal, or Rio Tinto's equity production vs total mined quantities. With these reporting ambiguities in mind:
CMS assumes, for 1962, that Rio Tinto's coke in 1962 is Illawarra's 111,000 tonnes of coke plus 700,000 of total Port Kembla's 798,000 tonnes is coke (up from the reported 650,000 tons in 1961). Rio Tinto Collieriies is assumed to be steam coal: 833,000 tons, plus the remainder of Kembla's production (798,000 mines the 650,000 tons of coke = 148,000 tons); total steam coal = 0.148 plus 0.833 million tons.
CMS assumes, for 1961, that Rio Tinto's coke production: is Illawarra's 100,000 tonnes of coke plus 650,000 tonnes of total Port Kembla's production of 735,000 tonnes is coke (1961 AnnRpt). Rio Tinto Collieriies is assumed to be steam coal: 833,000 tons, plus the remainder of Kembla's production (735,000 minus the 650,000 tons of coke = 85,000 tons); total steam coal = 0.100 plus 0.833 million tons.

Cell: M29
Comment: Rick Heede:
Mention of oil production regions and profitability is discussed, but no quantitative data is reported.

Cell: E30
Comment: Rick Heede:
Steam and Coke production for 1963 and 1964 from Rio Tinto-Zinc Corporation Annual Report 1964.

Cell: H30
Comment: Rick Heede:
Rio Tinto annual report 1963 now shows most production at Kembla is steam coal and the minor fraction (108,000 vs 778,000 tons) as coking coal, a shift from the 1961 report ("producing 650,000 tons a year of coking coal"). Regardless of this change in reporting, or change in type of coal produced, CMS lists the reported quantities, ie, 108,000 tons of coke.

Cell: E31
Comment: Rick Heede:
Steam and Coke production for 1963 and 1964 from Rio Tinto-Zinc Corporation Annual Report 1964.

Cell: E34
Comment: Rick Heede:
Rio Tinto-Zinc Corporation (1967) Annual Report, p. 43, shows no quantitative production data, but does report "a substantial increase over 1966. CMS has not been able to report actual production of steam coal since the 1964, and interprets "substantial increase" to mean 10 percent per year 1965 and 1966 and 1967.

Cell: H34
Comment: Rick Heede:
Rio Tinto-Zinc Corporation (1967) Annual Report, p. 43. "A new contract for Japanese steel mills was concluded for the supply of approx 650 thousand tons of coal per annum for five years from April 1968." CMS adds previous quantity of coking coal production (115,000 tons in 1965), since this is new contract.

Cell: E48
Comment: Rick Heede:
Rio Tinto 1981 annual report shows Kembla Coal and Coke Pty production of 2.964 million tons, plus 75,226 tons at Blair Athol Coal Pty, plus pre-production construciton at Tarong, QLD. No mention of coke production at Kembla or Broken Hill Smelters.

Cell: E49
Comment: Rick Heede:
RTZ Annual Report 1982 shows 3.1 Mt at Kembla Coal and 136,439 tonnes at Tarong and Blair Athol Coal (under construction, scheduled for first shipment in Apr84).

Cell: E50
Comment: Rick Heede:
RTZ 1983 annual report (partial copy covering "Coal and Coke" (p.43) but neglecting to give production data; instead, "production of coking coal was lower ..., whilst production of steaming coal was higher than in 1982." CMS assumes 5 percent higher production than in 1982.

Cell: E51
Comment: Rick Heede:
RTZ annual report 1984 gives no data; due to weak market, Kembla production "production of coking coal was 11 per centg lower inn 1984 than in 1983" (p. 16). Also, "production of steaming coal increased from Queensland operations of Blair Athol and Tarong." CMS thus assumes overall 1984 same as 1983.

Cell: E52
Comment: Rick Heede:
RTZ annual report 1984, p. 21, gives no production data; "Kembla Coal & Coke kept its output, which is mainly coking coal, at the lower levels set in 1984, giving a drop of 8 per cent in run of mine output." Sales increased 64 percent due to lifting of export restrictions allowed the sale of stockpiles to India and the UK. "CRA's steam coal operations also achieved good profits, ... two more generating sets at Tarong ... production increased accordingly." "Blair Athol raised output by 83 per cent ... to markets in Asia." In lieu of published data by RTZ, CMS assumes coal output increased by 25 percent over 1984.

Cell: E53
Comment: Rick Heede:
RTZ annual report 1988, p. 15, shows partial production data for Kembla ("profitability ... increased sales ... industry-wide disputes"); Blair Athol (increased 20 per cent to 6.3 million tonnes ... to produce 8 milllion tonnes per annum by 1991"); CRA "is to proceed with the development of the 7 million tonne a year Kaltim Prina coal mine in East Kalimantan, Indonesia. CRA is manager of this joint venture. ... reserves in excess of 360 million tonnes:); in British Columbia Rio Algom's Bullmoose mine ("increased earnings, ... shipments .. same level"); in Zimbabwe (initially "only small tonnages will be produced"). CMS thus assumes, lacking production data from RTZ, that company-wide production of steam coal is twice the reported production at Blair Athol (6.3 * 2) million tonnes. CMS also assumes Kembla production of coking coal

Cell: J53
Comment: Rick Heede:
It is not clear from RTZ's annual reports -- since tonnage is rarely reported -- when the company changed from reporting "tons" to "tonnes." The 1986 report is the first mention of "tonnes," and CMS changes its conversion formula accordingly.

Cell: E55
Comment: Rick Heede:
Rio Tinto annual report, p. 18: "In November 1989 CRA bouhgt BP's major coal assets, .. Include production of 4.5 million tonnes. This acquisition increases CRA's annual coal production to over 20 million tonnes. CMS thus assumes 1989 production at 20.5 million, and 1988 production at 4.5 million tonnes less. First reported use of metric "tonnes" as opposed to "tons." CMS adjusts its conversion.

Cell: H56
Comment: Rick Heede:
See cell note at E59 (RTZ steam coal, 1990).

Cell: E57
Comment: Rick Heede:
RTZ Corporation annual report 1990, p.18, shows a curiously incomplete list of coal mines (excluding substantial production from its West Cliff, Tahmoor, Western Main, and Vic kery mines). CMS ignores reported production of 7.81 million tonnes, since 1989 total production was "over 20 million tonnes." CMS does use the reported coking coal production, even this total also excludes any coking coal production from the same excluded mines; see column H. As for steam coal production, CMS assumes the total reported production in 1989 less 1990 coking coal production, plus 5 percent gain to reflect RTZ's "production and sales improved at CRA's Australian coal mines, ... increased sales to Japan and elsewhere in Asia."

Cell: E58
Comment: Rick Heede:
RTZ annual report 1991, p. 16, shows no production tonnage, but mentions "demand for steam coal strengthened during the year, ... demand for metallurgical coal held up well ... CRA maintained overall coal production at a similar level to that in 1990." "THe Kaltin Prima coal mine in Indonesia. Almost 2 million tonnes were shipped in 1991. THe mine is scheduled to come rapidly into full production with 6.5 million tonnes planned in 1992 and the 7 million tonne design capacity to be achieved the following year."

For 1991, CMS thus assumes coke and steam coal production at the same level as 1990, but adding 2 million tonnes to account for the new mine in Indonesia.

Ditto for 1992, but adding 6.5 million tonnes of steam coal. Ditto for 1993, but adding 7.0 million tonnes.

Cell: E59
Comment: Rick Heede:
RTZ's 1993 annual report refers to "RTZ's coal production rose from 12 million tonnes in 1992 to 37 million tonnes in 1993. Of this 23 million tonnes came from US acquisitions." Note: CMS lists Kennecott production in Column D, and thus excludes US production from column E. CMS cannot resolve the conflicting data between its operating data that excludes several mines acquired in 1989 from BP, stated CRA coal 1991 production as "over 20 million tonnnes" and now, without referring to the sale of coal properties, non-US coal production rising from "12 million tonnes in 1992."

That said, CMS elects to report "RTS's net share of production" (p. 19) -- even this list ignores production from several mines acquired from BP in 1989 -- which totals 11.685 million tonnes in 1992 and 13.536 million tonnes in 1993. Of this total in 1992, 2.666 Mt was coking coal, and 9.019 Mt steam coal. In 1993, steam coal totaled 10.589 Mt and 2.947 Mt of coking coal. In both years CMS allocates one-third of "Coal & Allied" steam and coking coal as coking and two-thirds as steam coal.

RTZ may clear up this confusing picture with additional data. Note that very few production data have been provided in the company's annual reports since the first acquisition of its coal miniing operations in 1961.

Cell: D61
Comment: Rick Heede:
Rio Tinto Annual report for 1998, p. 40: "Rio Tinto became a US coal producer in 1993 through the acquisition of three mines from Nerco Inc. and Cordero Mine from Cordero Mining Company. Nerco and Cordero were renamed the Kennecott Energy and Coal Company." Rio Tinto also has a partnership interest in Colowyo Coal Company and Fort Union. The Company also acquired the Jacobs Ranch coal mine in 1998 (purchased from Kerr-McGee for $400 million). Rio Tinto's share of the coal production totalled 84.1 million tonnes in 1998.

Rio Tinto AnnRpt, p. 88, shows US, Australian, and Indonesian coal production for 1994-1998, in million tonnes per year.

Cell: E61
Comment: Rick Heede:
Rio Tinto Annual report for 1998 does not specify type of coal mined or type of customer.

Cell: D66
Comment: Rick Heede:
Steam coal production (US operations only) 1999-2003 from Rio Tinto (2004) Databook, p. 30. In million tonnes.

Cell: E66
Comment: Rick Heede:
Steam coal (non-US only) production 1999-2003 from Rio Tinto (2004) Databook, p. 26.

Cell: H66
Comment: Rick Heede:
Coking coal production 1999-2003 from Rio Tinto (2004) Databook, p. 26.

Cell: E71
Comment: Rick Heede:
Rio Tinto hard coking coal (6.76 million tonnes) and "other coal" (32.943 million tonnes) (assumed to be all thermal) produced in Australia, plus Kennecott production (117.734 million tonnes) from Rio Tinto (2005) Production Report for First Quarter 2005, p.8.

Cell: F72
Comment: Rick Heede:
CMS was unable to view archived annual reports (prior to 2008). 2005 total coal production shown in a bar chart.

Cell: G73
Comment: Rick Heede (Feb10):
Rio Tinto Annual Report 2008, page 108-109. Production data disaggregated into "Coal - Hard Coking" mined in Australia (in this worksheet's column "H"), "Coal - Other" (defined as thermal coal and semi-soft coking coal, also Australian, in column "E"), and "Rio Tinto Energy America" (presumably all or chiefly western subbituminous coal, in column "D"). All data in million tonnes.

Cell: K76
Comment: Rick Heede:
AR 2010 online, 2006-2008 values consistent between this table and onlline report. Report's section "Metals and minerals production" details coal production by hard and soft coking coals (Australia), thermal coal (Australia and US); see our columns for thermal and coking coal production for details.

Cell: E78
Comment: Rick Heede:
Rio Tinto Annual Report 2013, page 212, thermal coal production, Rio Tinto share 2011-2013. Chiefly Australia, minor production in Mozambique and USA (Colowyo).

Cell: H78

Comment: Rick Heede:
Rio Tinto Annual Report 2013, page 212, hard coking plus semi-soft coking production, Rio Tinto share 2011-2013.

Cell: E81
Comment: Rick Heede:
Rio Tinto AnnRpt 2015, page 212. Thermal coal (nearly all Australia; Benga in Mozambique sold in 2014).

Cell: H81
Comment: Rick Heede:
rio tinto AnnRpt 2015, page 216. Hard coking coal (Australia and Mozambique) plus semi-soft coking (Australia: Hunter Valle, Mount Thorley, Warkworth).

Cell: E83
Comment: Rick Heede:
Rio Tinto Annual report 2017, page 225.

Cell: E85
Comment: Rick Heede:
Rio Tinto announced sale of coal mining assets, and sold "our interests in the Hail Creek and Kestrel coal mines and the Valeria and Winchester South coal development projects." However, 2018 production of thermal coal totaled 2.527 Mt (and 3.988 Mt of coking coal).
All coal assets are now divested,verified on page 48: "Review of operations Energy In 2018, we sold our interests in the Kestrel and Hail Creek coking coal mines and the Valeria and Winchester South coal development projects. We completed these transactions by 1 August 2018, for a combined consideration of $4.15 billion. As of this date, we are no longer producing coal. We expect to pay approximately $0.9 billion in tax on these disposals to the Australian Taxation Office in the first half of 2019."
Rio Tinto Annual Report 2018, pages 47-48; also shows 2017 thermal and coking coal production (7.704 Mt and 4.065 Mt, respectively, from 2017's production from assets remaining in 2018. We do not reduce production data for 2017 as reported in 2017, insofar as legacy production is attributed to extant companies such as Rio Tinto.

Cell: J85
Comment: Rick Heede:
Rio Tinto (2019) Climate Change Report, London, 31 p. Page 14: 2016 emissions: 32 MtCO2e, of which 5% coal, 12% natural gas, 34% electricity & steam, 19% diesel and feul oil, 7% process emissions, 22% anodes & reductants, etc. page 15: Scope 1: 21.1 MtCO2e, Scope 2: 11.3 MtCO2e, Scope 3: +600 MtCO2e ("Scope 3 includes emissions from third party transport of our products and use of our products by customers.") CAI estimates only 62 MtCO2 (+tk in methane) in 2016. CAI doews not include oil & gas production, de minimus? Rio Tinto Scope 3: 6 MtCO2 for transport, 102 MtCO2e for burning coal for power and steel, and 524 MtCO2 for "using our iron ore to produce steel."
Rio Tinto "disposed" of assets since 2015: Grasberg, Kitimat wharf, Qld coking coal, Aluminium Dunkerque, Coal & Allied, Other: ~$12 billion. Prelim Annual review 2018, Feb19.
Verify no coal production in 2018.
Jan2020: update from Rio Tinto Annual Report 2018, page 47: "This year saw a milestone: the sale of our remaining Australian coal assets – our interests in the Hail Creek and Kestrel coal mines and the Valeria and Winchester South coal development projects – for $4.15 billion pre-tax. This is helping us to strengthen our portfolio by focusing on assets that will deliver the highest returns through targeted allocation of capital. The sale of our Australian coal assets began in 2013. The total sale proceeds, including from our interests in the Coal & Allied business, are approximately $8.7 billion – delivering value to our shareholders, while helping us to reshape our business for long-term success in a low-carbon economy.
Rio Tinto Annual Report 2018, page 48, 2018 results: Coking coal production of 3.988 Mt; Thermal coal production coal of 2.527 Mt.
All coal assets are now divested, verified on page 48: "Review of operations Energy In 2018, we sold our interests in the Kestrel and Hail Creek coking coal mines and the Valeria and Winchester South coal development projects. We completed these transactions by 1 August 2018, for a combined consideration of $4.15 billion. As of this date, we are no longer producing coal. We expect to pay approximately $0.9 billion in tax on these disposals to the Australian Taxation Office in the first half of 2019."

Cell: Q195
Comment: Rick Heede:

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Cell: Q196
Comment: Rick Heede:

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