

Metallurgical Coal

Resources and Energy Quarterly June 2018



1st

Australia is the largest exporter of metallurgical coal



About **800kg** of metallurgical coal, is needed per every tonne of steel produced



Metallurgical coal is a non-substitutable raw material in the production of steel from iron ore.

Australia accounts for around **17%** of world production



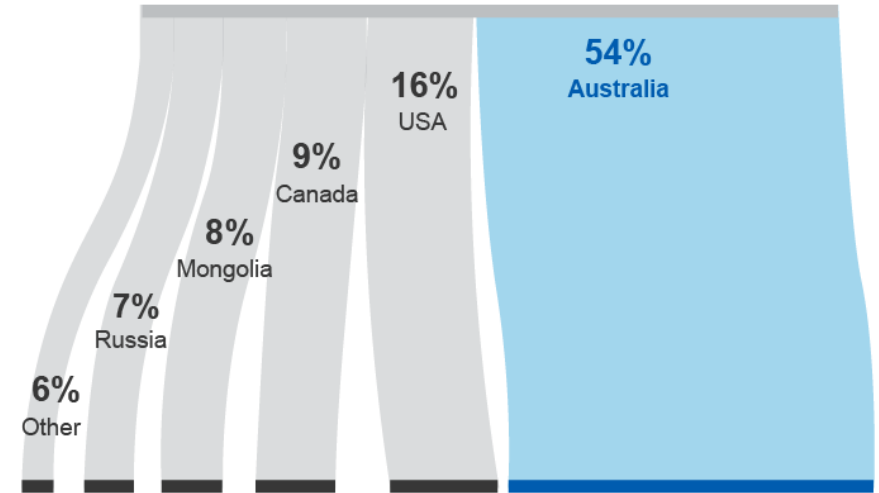
There is more than **200 tonnes** of metallurgical coal in every wind turbine



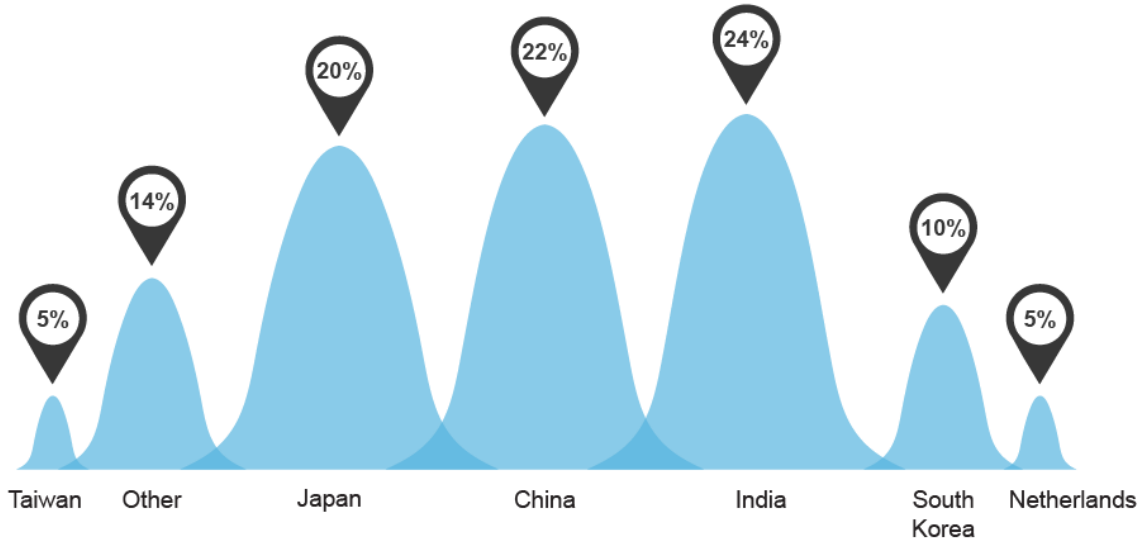
177 million tonnes exported in 2016–17 valued at **\$35 billion**



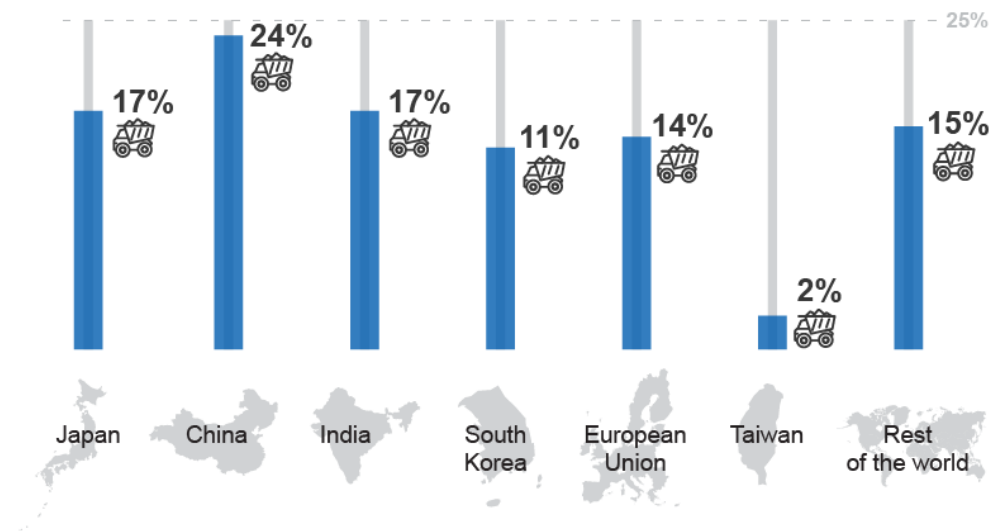
Share of world metallurgical coal exports, 2017



Australia's metallurgical coal key export destinations, 2016–17



Share of world metallurgical coal imports, 2017



5.1 Summary

- The metallurgical coal spot price is forecast to decline from an average of US\$193 a tonne in 2018 to US\$148 a tonne in 2020, with the impacts of improved supply combined with weakening demand from China expected to outweigh growing demand from India.
- Australia's export volumes are forecast to grow from 182 million tonnes in 2017–18 to 200 million tonnes in 2019–20, reflecting a recovery after Cyclone Debbie in 2017, and modest growth from new capacity.
- Australia's metallurgical coal export earnings are expected to have reached a record \$38 billion in 2017–18. Earnings are forecast to decline to \$32 billion in 2019–20, as lower prices offset rising export volumes.

5.2 Prices

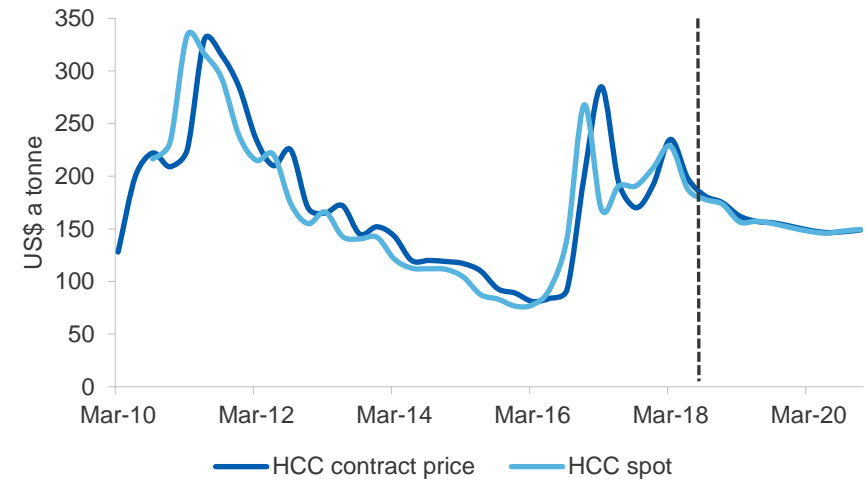
Metallurgical coal price forecast to ease

The premium hard coking coal (HCC) spot price (FOB Australia) averaged US\$191 a tonne in the June quarter. Spot prices for metallurgical coal declined sharply from mid-March to late-April, as a result of subdued import demand from China. A subsequent rebound in demand from Asia and concerns over supply shortages has provided price support, with the spot price returning to over US\$200 a tonne in mid-June.

The premium HCC spot price is forecast to steadily decline over the outlook period, from an average of US\$193 a tonne in 2018 to US\$148 a tonne in 2020, weighed down by softening demand from China. Softer demand from China is expected to be underpinned by a gradual decline in steel output. Nevertheless, growing demand elsewhere in the world, particularly India, and relatively constrained growth in global supply, are expected to provide some support to prices, which are expected to remain well above the lows of 2016.

The departure away from bilateral negotiations of the quarterly benchmark price for premium HCC towards the adoption of spot price indexation has continued in 2018. This reflects the broader trend of an evolving market, with growing spot market activity, the adoption of price benchmarks, and the growing use of derivatives.

Figure 5.1: Quarterly Australian HCC spot and contract prices



Source: IHS (2018); Department of Industry, Innovation and Science (2018)

Figure 5.2: China's metallurgical coal imports, year-on-year change



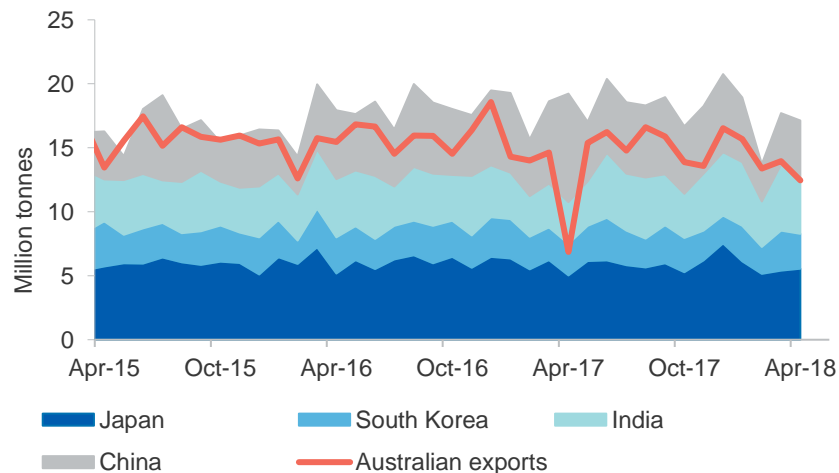
Source: Bloomberg (2018) China Customs General Administration

5.3 World trade

The first half of 2018 saw a continuation of the pickup in global economic growth and industrial production which has supported global steel output and thus demand for metallurgical coal. At the same time, Australia's exports of metallurgical coal have been constrained by weather, industrial and transport disruptions. Major importers have been increasingly turning to alternative sources of supply, with notable increases in exports from the United States and Canada. Export growth from these countries are expected to slow as prices soften and Australia's supply normalises.

World trade in metallurgical coal is forecast to grow by 5.1 per cent in 2018 to 334 million tonnes — driven by a recovery in Australian exports and strong global steel output — before growth slows to 2.7 per cent in 2019 and to 0.9 per cent 2020. Australia is forecast to account for 58 per cent of the seaborne market at the end of the outlook period, a small decline from 60 per cent in 2016, but up from an estimated 54 per cent in 2017.

Figure 5.3: Monthly Asian imports vs Australian exports



Source: IHS (2018)

World imports

China's metallurgical coal imports forecast to gradually decline

China's metallurgical coal imports declined by 35 per cent year-on-year in the year to April, despite steel production growing over the same period. Import demand for metallurgical coal has been weighed down by high seaborne metallurgical coal prices, which has encouraged steel producers to draw down on stocks or use more competitively priced domestic coal. Metallurgical coal demand may have also been affected by the growing use of higher quality iron ore in China's steel mills, which allows the same volume of output to be produced with fewer coal inputs.

China's imports of metallurgical coal are expected to recover briefly, on the back of accelerating steel production growth. However, beyond 2018 imports are forecast to follow a gradual downwards trajectory, underpinned by a slow decline in steel output and the use of high grade iron ore.

India to become the world's largest importer of metallurgical coal by 2020

There has been strong growth in India's imports of metallurgical coal in the year to date, driven by the ongoing expansion of India's steel sector. India imported 11 million tonnes of metallurgical coal from Australia in the March quarter, an increase of 22 per cent year-on-year, while imports from North America grew by 146 per cent to 2.5 million tonnes. India's steel mills have turned to North America (particularly the United States) as an alternative source of supply after weather-related supply disruptions in Australia. Growth in imports from the North American region is expected to soften as prices decline and supply from Australia normalises.

India's imports of metallurgical coal are set to grow steadily over the outlook period, driven by demand from its rapidly growing steel sector. India has only limited domestic production of metallurgical coal, and is forecast to overtake China as the world's largest importer of metallurgical coal by 2020, when imports are forecast to reach 69 million tonnes.

Japan and South Korea's imports of metallurgical coal to grow modestly

Japan's imports of metallurgical coal declined by 7.7 per cent year-on-year in the March quarter, before rebounding in April, growing by 10 per cent year-on-year. Japan's imports of metallurgical coal are forecast to grow modestly over the outlook period, with Japan's steel sector expected to be supported by a rebound in capital expenditure, export growth in the automobile and manufacturing sectors, and demand from 2020 Olympics-related projects. However, the US steel tariffs, from which Japan is not exempt, presents a risk to the outlook.

South Korea's imports of metallurgical coal declined by 2.2 per cent year-on-year in the March quarter, before a subsequent rebound in April of 10 per cent year-on-year. South Korea's imports of metallurgical coal are forecast to grow modestly, with its steel sector buoyed by growing domestic demand and rising exports.

World exports

United States exports to hold some of their recent gains

Metallurgical coal exports from the United States have continued to grow in early 2018, with an increase of 22 per cent year-on-year in the March quarter. Export growth has been driven by high prices and disruptions to Australian supply, which has resulted in Asian countries diversifying their sources of supply. Notably, exports of metallurgical coal from the United States to India tripled year-on-year in the March quarter of 2018, and grew by a robust 71 per cent to Japan over the same period.

Exports of metallurgical coal from the United States are forecast to ease over the outlook period, as softening metallurgical coal prices make some of the higher cost operations uneconomic. Nevertheless, the United States is expected to hold some of its gains in the seaborne metallurgical coal market in the short-term. The US Energy Information Administration is forecasting exports to decline from 2017 volumes, but remain higher than 2016 export volumes of 37 million tonnes. In 2017, higher volumes were driven by the gap in the market left by the impact of Cyclone Debbie.

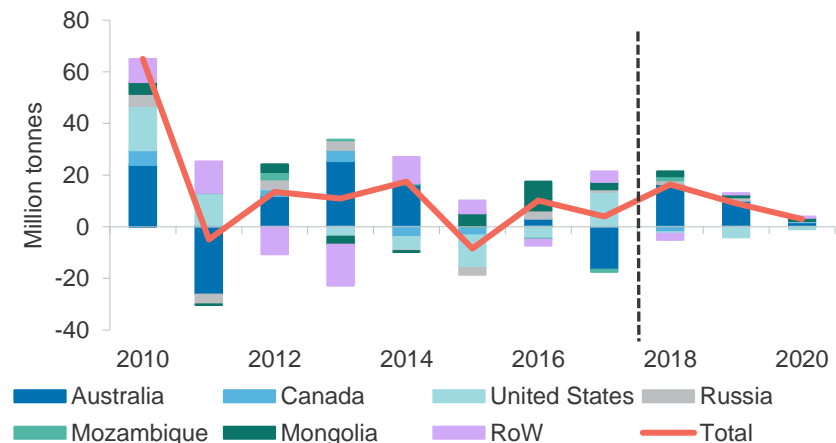
Russia's exports are forecast to modestly increase

Russia's metallurgical coal exports are forecast to grow modestly over the outlook period, supported by increased sales to the Asian market. As the country's reserves of metallurgical coal are not as extensive as its reserves of thermal coal, Russia's ability to capture substantial market share is expected to be limited over the outlook period.

Mongolia's exports hampered by bottlenecks at the China border

Mongolia's exports of metallurgical coal declined by 27 per cent year-on-year in the March quarter of 2018. Exports to China — its primary trading partner for metallurgical coal — continued to be affected by ongoing transportation bottlenecks at the border, as the customs authorities implemented new policies to address the smuggling of other products. The planned construction of a new route should relieve congestion pressures. In the meantime, exports are forecast to remain subdued over the outlook period.

Figure 5.4: Annual change in world metallurgical exports



Source: IEA (2018); Department of Industry, Innovation and Science (2018)

5.4 Australia

Metallurgical coal exports likely to have reached a record high in 2017–18

Australia's exports of metallurgical coal declined by 5.8 per cent year-on-year to \$9.4 billion in the March quarter of 2018. Despite higher spot prices, export earnings were weighed down by lower contract prices. Export earnings were also affected by flat export volumes — while output grew by 6.7 per cent year-on-year to 49 million tonnes in the March quarter, exports were affected by weather-related disruptions and rail and port maintenance work. Australia's metallurgical coal export earnings are estimated to have reached \$38 billion in 2017–18, an increase of 6.2 per cent and a record high (in nominal terms). Higher export earnings reflect both higher average prices and higher production and export volumes.

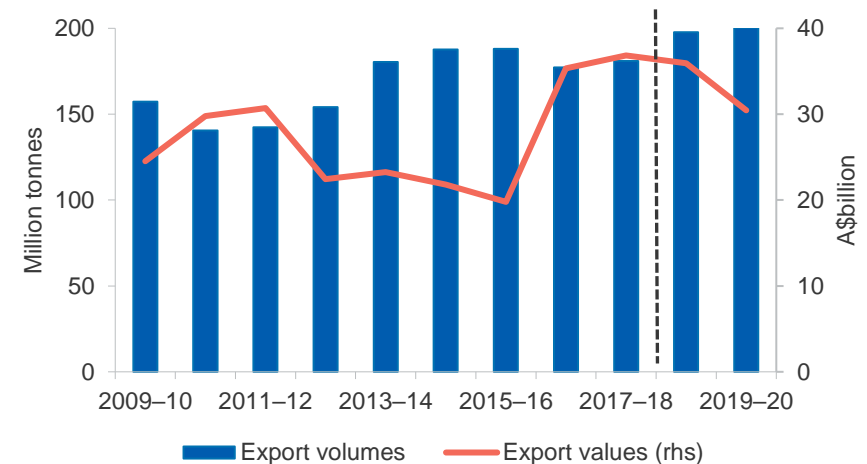
Metallurgical coal export earnings are forecast to decline by 5.7 per cent to \$35 billion in 2018–19, and by a further 11 per cent to \$32 billion in 2019–20. A forecast rise in production and export volumes (supported by the ramp up of QCoal's Byerwen mine and BHP's Blackwater and Caval Ridge Southern Circuit projects) is expected to be more than offset by the impact of a forecast decline in prices.

Potential capacity losses from proposed changes to the maintenance schedule of Aurizon, the rail network operator of the Central Queensland Coal Network (CQCN), due to enforced cuts to its revenue, present a risk to the outlook. In September, the Queensland Competition Authority is expected to make a final decision on whether Aurizon will need to charge \$1 billion less for maintenance than it asked for over the next four years. Aurizon may also have to trim, by \$100 million annually, charges to coal miners for operating and maintaining the four-network CQCN system.

Minor downwards revision to export earnings for 2017–18

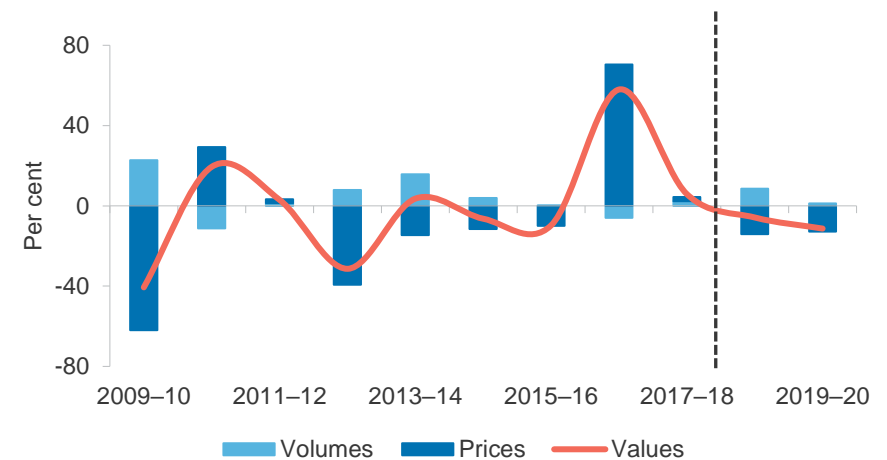
Export earnings for 2017–18 have been revised down by \$2.7 billion from the March 2018 edition of the *Resources and Energy Quarterly*. The revision reflects lower than expected spot prices and export volumes in the March and June quarters of 2018. Forecasts for 2018–19 and 2019–20 are broadly unchanged from the March 2018 forecasts.

Figure 5.5: Australia's metallurgical coal exports



Source: ABS (2018) International Trade, Australia, 5454.0; Department of Industry, Innovation and Science (2018)

Figure 5.6: Annual growth in Australia's metallurgical coal exports values, and contributions from export volumes and prices



Notes: Prices based on export unit values

Source: ABS (2018) International Trade, Australia, 5454.0; Department of Industry, Innovation and Science (2018)

Table 5.1: World trade in metallurgical coal

	Unit	2017 ^s	2018 ^f	2019 ^f	2020 ^f	Annual percentage change		
						2018 ^f	2019 ^f	2020 ^f
World trade	Mt	318	334	343	346	5.1	2.7	0.9
Metallurgical coal imports								
European Union 28	Mt	41	44	46	47	9.0	3.3	3.0
Japan	Mt	50	51	51	52	0.5	1.2	1.2
South Korea	Mt	32	36	37	37	14.5	1.2	1.2
China	Mt	70	68	68	68	-2.5	-0.3	-0.2
India	Mt	48	58	63	69	19.8	10.2	9.2
Metallurgical coal exports								
Australia	Mt	173	189	199	201	9.5	5.2	0.8
Canada	Mt	28	26	27	27	-7.3	1.5	1.5
United States	Mt	50	50	46	45	-1.3	-8.1	-2.2
Russia	Mt	23	24	25	26	6.6	4.8	0.6

Notes: **s** Estimate. **f** Forecast.

Source: IHS (2018); Department of Industry, Innovation and Science (2018)

Table 5.2: Metallurgical coal outlook

World	Unit	2017	2018 ^f	2019 ^f	2020 ^f	Annual percentage change		
						2018 ^s	2019 ^f	2020 ^f
Contract prices ^e								
– nominal	US\$/t	210.1	197.6	156.8	147.9	–6.0	–20.6	–5.7
– real ^d	US\$/t	215.1	197.6	153.5	142.0	–8.1	–22.3	–7.4
Spot prices ^g								
– nominal	US\$/t	189.5	192.7	154.9	147.7	1.7	–19.6	–4.6
– real ^d	US\$/t	194.0	192.7	151.6	141.9	–0.6	–21.3	–6.4
World production	Mt	1,102	1,124	1,120	1,112	2.0	–0.4	–0.7
World consumption	Mt	1,076	1,091	1,092	1,088	1.4	0.0	–0.3
Australia	Unit	2016–17	2017–18^f	2018–19^f	2019–20^f	2017–18^f	2018–19^f	2019–20^f
Production	Mt	184.0	187.7	204.6	207.1	2.0	9.0	1.2
Export volume	Mt	177.2	181.5	197.8	200.3	2.4	9.0	1.3
– nominal value	A\$m	35,335	37,521	35,401	31,577	6.2	–5.7	–10.8
– real value ⁱ	A\$m	36,027	37,521	34,588	30,143	4.1	–7.8	–12.9

Notes: **d** In 2018 US dollars. **e** Contract price assessment for high-quality hard coking coal. **i** In 2017–18 Australian dollars. **f** forecast. **g** Hard coking coal fob Australia east coast ports.

Source: ABS (2018) International Trade in Goods and Services, Australia, 5368.0; Department of Industry, Innovation and Science (2018); IHS (2018)