Overview
Resources and Energy Quarterly March 2019

Resources and energy sector

- Contributed 21% of Australia’s GDP growth in the year to the December quarter
- 8.8% of GDP in 2018
- 57% of goods exports in 2018
- Over 250,000 people employed (as at February 2019)
- 45% of Australia’s exports of goods and services in 2018

Australia’s resources and energy exports 2018–19, A$ billion

- 2017–18
  - Iron ore
  - Metallurgical coal
  - Others
  - LNG
  - Thermal coal
  - Base metals
  - Gold

- 2018–19
  - Iron ore
  - Metallurgical coal
  - Others
  - LNG
  - Thermal coal
  - Base metals
  - Gold
  - $60b
  - $41b
  - $36b
  - $30b
  - $23b
  - $20b
  - $16b

Major markets for Australia’s resources and energy exports, 2018 (A$ billion)

- EU28: 9
- India: 14
- South Korea: 15
- Japan: 29
- China: 82
The three phases of the mining boom

1. Price phase
2. Investment phase
3. Production phase

Index (2018-19 = 100)

- Prices
- Production
- Investment (rhs)

2018-19 A$ billion

1.1 Summary

- The prices of Australia’s major resource commodities have recently hit 7-year highs, but are likely to drift lower after 2018–19 due to softer demand and rising supply.
- Supply problems — primarily in other producing nations — have pushed up commodity prices in 2019. The price gains are such that, combined with a weaker than expected exchange rate, Australia’s resource and exports are set to hit a new record of $278 billion in 2018–19, before falling back over the next 5 years. Volumes of Australia’s resource and exports are forecast to level out after 2021–22.
- The world industrial production cycle slowed sharply as the year turned. The extent of the likely down-cycle in resource commodities depends on whether China can maintain recent rates of economic growth, and a resolution of trade disputes of the US with its trading partners.

1.2 Export values

Australia’s export values expected to be $278 billion in 2018–19

The Office of the Chief Economist’s (OCE) Resources and Energy Export Values Index rose by 24.3 per cent in the year to the March quarter 2019. An 8.1 per cent rise in volumes added to a 16.0 per cent rise in prices. Figure 1.2 shows that in 2018–19, a forecast 16.4 per cent rise in prices will add to the impact of a 5.8 per cent rise in export volumes. Resource export earnings are thus forecast to rise by 22.1 per cent to a record $278 billion. 2019–20 is forecast to see export values drop by 2.2 per cent to $272 billion (or $266 billion in real terms), as a 7.2 per cent fall in prices more than offsets a 5.1 per cent rise in volumes. Post 2019–20, a forecast rise in the AUD/USD will contribute to further falls in export earnings.

The ongoing weakness in the AUD/USD is boosting export earnings

In Australian dollar terms, the OCE’s Resources and Energy Commodity Price Index grew by 4.4 per cent (preliminary estimate) in the March quarter to be 15.5 per cent higher than a year earlier. In US dollar terms, the index grew by 4.9 per cent in the quarter, to be 5.8 per cent higher than a year earlier. Figure 1.3 shows that Australian dollar prices for resource commodities rose by 11.4 per cent in the March quarter, while prices of energy commodities fell by 1.7 per cent in the quarter.
Supply, macroeconomic and geopolitical factors

Supply problems in the markets of some of Australia’s major resource and energy commodities have been a feature of the past few months. In Brazil, worries over tailings dam designs have resulted in the enforced closures of some iron ore mines. These concerns culminated in the Brazilian government ordering the decommissioning of existing upstream tailings dams by 2021. The policy will require the closure of about 50 dams in the mining heartland state of Minas Gerais alone — the source of 180 million tonnes per annum (Mtpa), or 40 per cent, of Brazil’s output. Rain in north Queensland in January impacted on port operations, pushing up metallurgical coal prices. Copper supply in 2019 will be impacted by lower output in the Democratic Republic of Congo, major smelter closures for maintenance and India’s Supreme Court decision preventing the restart of Vedanta’s 400 thousand tonnes per annum (ktpta) Tuticorin copper smelter (accounting for ~1.7% of global copper supply). Oil supply will be impacted by problems in Iran, Libya and Venezuela — a nation beset by an escalating power struggle and civil unrest.

The global economic cycle has slowed noticeably in recent months, raising doubts over the strength of demand for resource and energy commodities over the first half of the 5 year outlook period. At the same time, the ability of governments to stimulate economic growth is limited, due to already low interest rates and high fiscal deficits and debt. Low inflation in all major economies (except the US), provides scope for easy monetary conditions to continue. The major risk to world growth is an escalation of protectionist trade measures. A ‘no-deal’ Brexit could cause significant disruption to global supply chains — especially in Europe — during the outlook period. Car makers have announced UK plant closures, as they anticipate difficulties in exporting cars to mainland Europe.

Looking past the statistical noise caused by shifts in the timing of enforced winter Chinese production cutbacks, growth in Chinese steel output seems to have rebounded. The rebound is likely the result of both buoyant property markets in some parts of China, and recent Chinese government efforts to ensure that domestic growth does not slow too much; US tariffs on imports from China have impacted adversely on Chinese production and supply chains. These efforts include some easing of monetary policy, tax cuts and higher infrastructure spending. Chinese economic growth is likely to be 5.5–6.0 per cent over the outlook period.

The US economy was adversely impacted by the partial government shutdown of late December and January. Looking beyond that impact, it seems likely that after a period of above trend performance, the US economy will grow close to trend over the outlook period.

Eurozone growth has slowed, mainly due to slower growth in Germany (where confusion over new emission limits saw purchases delayed) and Italy (where the government’s fiscal and debt standing is causing concern).

Changing trends that could impact on resources and energy demand over the next 5 years include actions to cut carbon emissions and air pollution, the increasing availability of ride-hailing and car-sharing services (which may lower car sales) and new International Maritime Organisation’s rules on the sulphur content of shipping fuel used globally, effective in 2020.
1.4 Prices

The iron ore price lifted sharply in early February, as the mine closures in Brazil pushed buyers to secure supply elsewhere to cover their exposure. The iron ore price is forecast to fall modestly over the next two years (Figure 1.4), as Chinese steel output eases and world supply recovers from the Brazilian mine closures. However, over the early part of the outlook period, prices are likely to be at least US$5 per tonne higher than they otherwise would have been without the problems in Brazil. The price of metallurgical coal rebounded back over the US$200 a tonne mark in the March quarter, as supply concerns — mainly related to flooding in Queensland — hit the market. The price is likely to ease back over the outlook period. High energy thermal coal prices have declined much more sharply than low energy coal prices over the past quarter, pushing the differential back down towards ‘normal’ levels. Thermal coal prices are expected to ease significantly during the 2019–21 period, as supply rebounds and demand moderates (Figure 1.4). However, the lack of investment in new mines will impact prices in the second half of the forecast period, as meagre production growth sees shortages emerge.

Oil prices have partly recovered from the sharp declines of the December quarter, which has flow-through implications for LNG revenues over the next few months. Spot Asian LNG prices recently fell to relatively attractive buying levels. With oil prices expected to hold above the US$65 a barrel mark in nominal terms, Australia’s growing oil, condensate and LNG volumes should result in petroleum and LNG revenues holding at relatively high levels. Gold pushed above the US$1,300 an ounce mark in late January before levelling out as the US Federal Reserve scaled back the pace and extent of likely future US interest rate hikes. Gold is forecast to benefit from strong central bank and jewellery demand over the coming year or so. Base metal prices rose on signs of a resolution of the US-China trade stoush. With the exception of zinc, base metals are expected to rise over the outlook period (Figure 1.5), as inventories fall.

Rising resource and energy prices have driven a strong rebound in our terms of trade in the past three years, raising Australia’s national income.

Figure 1.4: Bulk commodity prices

Notes: Prices are in US dollars, and are the international benchmark prices
Source: Bloomberg (2019)

Figure 1.5: Base metal prices

Notes: Prices are in US dollars, and are the international benchmark prices
Source: Bloomberg (2019)
1.5 Export volumes
Export volumes to grow, driven by growing energy exports
With the exception of gold and alumina/aluminium, most energy and resource commodities recorded annual growth in the year to the March quarter. Flooding in Queensland in early 2019 impacted on port operations and inhibited metallurgical coal exports, but better supply to the seaborne market is likely in 2019–20. The OCE’s Resources and Energy Export Volumes Index (preliminary estimate) rose by 8.1 per cent year-on-year in the March quarter 2019, taking the index to a new record high. Resource commodity volumes rose by 3.6 percent, and energy commodity volumes rose by 11.9 per cent.

Volumes are expected to show further strong (across the board) growth over the next year, before peaking in 2021–22.

1.6 Contribution to growth and investment
Mining industry continues to support overall economic growth
Australia’s real Gross Domestic Product (GDP) grew by 0.2 per cent in the December quarter 2018 and by 2.3 per cent over the year. The mining industry directly accounted for 21 per cent of the growth in Australia’s GDP in the year to the December quarter.

As stressed in previous editions of the REQ, since the global financial crisis, swings in Australian resource and energy export earnings have correlated very closely with swings in nominal GDP. Figure 1.6 suggests that, with growth in resource and energy export values likely having peaked in early 2019, if the correlation persists, nominal GDP growth could weaken noticeably over the next couple of years — though from a relatively high base.

Mining output has grown by 6.7 per cent since the December quarter last year. Mining value-added rose by 1.2 per cent in the December quarter, as a surge in oil and gas extraction offset slight falls in bulk and metal mining.

Oil and gas extraction has been the largest contributor to mining industry value-added growth in the last few years, propelled by growing export volumes associated with the LNG export boom. In the coming few years, with ramp up completed in the large LNG projects, lower export growth and relatively low investment in the oil and gas production sector are expected to provide a smaller contribution to Australia’s GDP growth.

Figure 1.6: Australia’s nominal GDP vs resource and energy commodity export earnings, annual per cent change

Mining investment is recovering after years of decline
Investment in Australia’s mining industry stood at $36 billion in 2017–18 — a 6 per cent decline from 2016–17 (see Figure 1.7). However, the potential recovery in investment identified in the December 2018 Resources and Energy Quarterly (see Major Projects chapter December 2018 edition) appears to be reflected in the latest Australian Bureau of Statistics data.

Investment in the December quarter rose 7 per cent from the September quarter, driven by a 34 per cent rise in coal mining investment, and a 16 per cent rise in metal ore investment (Figure 1.8). This was partly offset by the ongoing decline in oil and gas investment, which fell by 6 per cent.
Gas dominated resources investment in 2013 and 2014, as large projects such as Wheatstone in Western Australia and Ichthys in the Northern Territory were constructed, but has been declining in recent years, due to the conclusion of those projects. With capital spending on most commodities now growing, and the rate of decline in gas investment slowing, total mining investment appears to have passed its low point.

1.7 Revisions to the outlook

The outlook for Australia’s resources and energy export earnings in 2018–19 has been revised up by around $13.8 billion from the December 2018 Resources and Energy Quarterly. Both the stronger iron ore price and the modestly weaker AUD/USD exchange rate factored into our forecasts, explain the majority of the higher total export values in 2018–19. Those two factors also accounted for $18.8 billion of the upward revision to total exports in 2019–20. Stronger coal exports — deriving from upward revisions to both prices and volumes — also contributed to forecasts of stronger export values in 2019–20, now estimated at $272 billion (nominal terms), or $265 billion in real (2018–19) terms. The new forecast for 2019–20 is $31 billion higher than in the December 2018REQ.
Figure 1.10: Australia’s major resource & energy commodity exports

Notes: Real (2018–19) price terms; per cent change is compound annual growth (CAGR) from 2017–18 to the specified year; f forecast.

Table 1.1: Outlook for Australia’s resources and energy exports in nominal and real terms

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<tr>
<td>Resources and energy</td>
<td>227,507</td>
<td>277,842</td>
<td>271,729</td>
<td>266,381</td>
<td>270,193</td>
<td>262,967</td>
<td>256,162</td>
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<td>– realb</td>
<td>232,042</td>
<td>277,842</td>
<td>265,360</td>
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<td>Energy</td>
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<td>Resources</td>
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<td>143,794</td>
<td>140,564</td>
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<td>139,060</td>
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<tr>
<td>– realb</td>
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<td>143,794</td>
<td>137,270</td>
<td>135,048</td>
<td>134,160</td>
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Notes: b In 2018–19 Australian dollars. f forecast. z projection. r CAGR is compound annual growth rate in percentage terms from 2017–18 to 2023–24


Table 1.2: Australia’s resource and energy exports, selected commodities

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Prices</th>
<th>Export volumes</th>
<th>Real export values A$b, 2018–19 prices</th>
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<tbody>
<tr>
<td>Iron ore</td>
<td>US$/t</td>
<td>66</td>
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<tr>
<td>Metallurgical coal</td>
<td>US$/t</td>
<td>202</td>
<td>187</td>
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<td>LNG</td>
<td>A$/GJ</td>
<td>12.6</td>
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<tr>
<td>Thermal coal</td>
<td>US$/t</td>
<td>101</td>
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<tr>
<td>Gold</td>
<td>US$/oz</td>
<td>1,266</td>
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<td>Alumina</td>
<td>US$/t</td>
<td>439</td>
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<tr>
<td>Copper</td>
<td>US$/t</td>
<td>6,489</td>
<td>980</td>
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<tr>
<td>Oila</td>
<td>US$/bbl</td>
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<tr>
<td>Aluminium</td>
<td>US$/t</td>
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<td>Zinc</td>
<td>US$/t</td>
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<td>Nickel</td>
<td>US$/t</td>
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<td>Lithium</td>
<td>US$/t</td>
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<td>Uranium</td>
<td>US$/lb</td>
<td>28</td>
<td>6,792</td>
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Notes: a Export data covers both crude oil and condensate. f forecast. Price information: Iron ore fob (free-on-board) at 62 per cent iron content estimated netback from Western Australia to Qingdao China; Metallurgical coal premium hard coking coal fob East Coast Australia; Thermal coal fob Newcastle 6000 kc (calorific content); LNG fob Australia’s export unit values; Gold LBMA PM; Alumina fob Australia; Copper LME cash; Crude oil Brent; Aluminium LME cash; Zinc LME cash; Nickel LME cash; Lithium spodumene ore. z projection.