6.1 Summary

- Thermal coal spot prices stabilised in the December quarter 2020, on the back of production cuts in major exporting countries and stronger demand, as Asian economies emerged from COVID-19 containment measures. The Newcastle benchmark price is estimated to average US$57 a tonne in 2020, before slowly rising to US$65 a tonne in 2022.
- Reports of informal import restrictions in China on Australian coal are weighing on producer sentiment. Australia’s exports are forecast to decrease from around 213 million tonnes in 2019–20 to 199 million tonnes in 2020–21, then to 222 million tonnes in 2021–22 (see Australia section).
- Australia’s thermal coal exports are forecast to fall from $20 billion in 2019–20 to $15 billion in 2020–21, and $16 billion in 2021–22 driven by higher prices and volumes.

6.2 Prices

International thermal coal prices recover as COVID-19 impacts recede

Thermal coal prices recovered from their August 2020 low point in the December quarter 2020. The benchmark Australian thermal coal spot price — Newcastle 6,000 kcal/kg — rebounding to average at an estimated $60 a tonne in the December quarter, 24 per cent higher than the September quarter 2020 average (Figure 6.1). This recovery coincided with cooler weather in the northern hemisphere and the emergence of many countries from COVID-19 containment measures. But the main driver of improving prices was the curtailment of coal mine production around the world, with world exports in the September quarter down 13 per cent year-on-year, as higher-cost mines sought to limit their operating losses amid low prices.

The Newcastle 6,000 kcal spot price is likely to have averaged around US$57 a tonne in 2020 (Figure 6.2). Australian producers have received some support over this period from the 2020–21 Japanese Fiscal Year (April to March) contract price of US$69 a tonne, though not all cargoes to Japan trade at this price. The Japanese fiscal year contract price, which serves as a benchmark for the Asian market, as usual, is expected to settle at a premium relative to the spot price over the outlook period (Figure 6.2).

China’s domestic thermal coal prices rise strongly

China’s government intervention to limit imports is placing downward pressure on Australian thermal coal prices, while supporting China’s thermal coal miners. Prices for China’s domestic product have soared to around double the price of the equivalent Australian coal (see comparison with QHD prices in Figure 6.1).

In 2021, thermal coal spot price gains will be driven by a rise in seaborne

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6.2 Thermal coal price outlook

Figure 6.2: Thermal coal price outlook

Note: JFY is Japanese Fiscal Year (April to March).
Source: IHS (2020); Department of Industry, Science, Energy and Resources (2020)

thermal coal demand, as the global economy recovers from the COVID-19 pandemic. However, longer-term trends will constrain the extent of the rise: growth in the seaborne trade over the outlook period is forecast to be modest, and may never regain the levels of 2019.

6.3 World trade

In 2020, world thermal coal trade is estimated to have declined for only the second time this century (the first in 2015). World thermal coal imports are forecast to have fallen by 70 million tonnes — or 6.4 per cent to 1,036 million tonnes. The fall in seaborne thermal coal demand has been led by India and Europe (Figure 6.3). Europe’s coal imports are expected to continue to fall, as a part of the region’s long-term shift away from coal in energy generation. Demand in South and Southeast Asia is also being affected by the impact of the COVID-19 pandemic on power demand and economic activity. The largest output cuts are likely to have come from Indonesia, Colombia and the US, although all miners have been affected.

In 2021 and 2022, global thermal coal import demand is expected to grow weakly, as the world economy slowly rebounds from the impacts of COVID-19. However, the shift away from coal in power generation in some countries, combined with the drive for self-sufficiency in others, is expected to keep world trade in thermal coal below 2019 levels during the outlook period.

6.4 World imports

Import policy causes China’s coal price premium to soar

China’s total thermal coal imports in the September quarter 2020 were 38 per cent lower than the same period in 2019 due to China’s expanding domestic coal production and import restrictions. This fall occurred despite China’s power generators increasing their year-on-year output by 5.3 per cent in September and 4.6 per cent in October.

As the world’s largest thermal coal producer, consumer and importer, China exerts a profound influence on seaborne markets. Propelled by a rebounding economy — after its intense early 2020 measures to contain COVID-19 infections — China’s total thermal coal imports surged in the first half of 2020. However, this was short-lived. Many traders appear to have quickly exhausted their permitted import volumes, and in the second half of the year have turned to higher-cost Chinese coal or to overland imports from Mongolia as substitutes.

China’s coal mining industry — the world’s largest — produced 3,500 million tonnes of coal in 2019, equal to half of world output. Despite the impacts of COVID-19 containment measures in the early months of the year, China’s domestic coal mining industry has been growing noticeably. China’s mine output in the nine months to September rose by over 2 per cent compared to the equivalent period in 2019. Consequently, and despite firm demand driven by strong industrial activity, China’s total
thermal coal imports in 2020 are estimated to fall by 14 million tonnes.

In the nine months to September, Australia’s thermal coal exports to China were similar in volumes in the equivalent period of 2019. However, historically high export volumes at the start of the year have been offset by sharply lower volumes in more recent months (Figure 6.4). During the September quarter, Australian thermal coal exports to China were 39 per cent lower year-on-year.

With import restrictions expected to continue to curtail volumes until early 2021, annual imports of thermal coal are forecast to be 210 million tonnes in 2020, down from 224 million tonnes in 2019.

China’s government has actively sought to manage coal import levels over the past few years; in part to provide support for China’s coal industry — which is undergoing restructuring — and to pursue energy security goals.

Import data shows that all three major suppliers of thermal coal to China (Indonesia, Australia, Russia) sold lower volumes to China in the September quarter than the same period in 2019. For the month of October, China’s total thermal coal imports were down 61 per cent year-on-year and imports from Australia were down 60 per cent year-on-year. Official data shows that Indonesia’s exports experienced a similar decline as Australia’s. Meanwhile, imports from Russia rose.

Unofficial reports emerged on 2 November that China’s authorities had directed Chinese buyers to reduce or stop purchases of Australian coal. Shipping data suggested that around 7 million tonnes of Australian thermal and metallurgical coal cargoes were awaiting discharge at China’s ports in late November. On 26 November, China’s government said Australian
cargoes were subject to increased testing for quality and environmental reasons.

On 14 December, further reports — this time in state media — indicated that China’s authorities had verbally advised some power plants they could import thermal coal without clearance restrictions, except for Australia. This development poses a downside risk to the forecasts and it is being closely monitored for implications to the outlook. At this stage, there is a high degree of uncertainty around the extent to which this practice will persist throughout the outlook period, as well as the timing and extent to which Australia’s exports can find alternative markets.

China’s National Development and Reform Commission (NDRC) aims to stabilise China’s domestic prices within a price band of 500 to 570 Renminbi (RMB), equivalent to US$76–87 a tonne at the current exchange rate, including by controlling coal imports. Prices in this range are understood to be broadly acceptable to China’s power generators and industrial consumers, while also providing sufficient margins for domestic coal miners. NDRC has tended to ease import restrictions when the domestic benchmark price exceeds RMB570 a tonne, and tighten restrictions when the price goes below RMB500. The price range is shown as a green zone in Figure 6.5.

Since mid-September, the benchmark price has exceeded target levels, indicating pent-up demand. With meteorologists predicting the peak of the La Niña cycle in the December quarter 2020, China’s winter is forecast to be colder than average. Additional demand for heating could be placing additional upward pressure on China’s prices.

With world seaborne prices near their lowest point in years, the benchmark price within China’s green zone provides an unusually large premium to China’s coal producers. For comparison, the FOB price for Newcastle 5,500 has been around 250RMB for six months. The province of Inner Mongolia moved in October to allow a number of major mines to operate above capacity and allowed most other mines to operate at full capacity, to meet increased domestic demand.

China’s thermal coal demand is expected to lift in 2021 and 2022, as economic growth rises. While the bulk of newly installed power generation capacity will likely come from hydro and renewable generators, China has a significant pipeline of coal-fired power plants coming on-stream. In 2021 and 2022, with domestic mine output in China lifting more quickly than thermal coal consumption, China’s imports are expected to decline. Restructuring in China’s coal mining industry has supported rapid thermal coal production growth since 2017. The competitiveness of domestic mines will also be boosted by ongoing infrastructure improvements and expansions. One such project already operational is the 1,800 kilometre Haoji railway, completed in late 2019 and capable of hauling 200 million

Figure 6.5: China's domestic vs Australian thermal coal export price

Notes: The ‘green zone’ is a price band from 500-570RMB. Qinhuangdao (QHD) prices are a key benchmark for coal prices in northeastern China. The Newcastle benchmark series (traded in USD) is converted to RMB at 18 November 2020 exchange rate. Note that the Newcastle series excludes freight costs which typically add around US$10/t or 66 RMB. Source: Bloomberg (2020)
tonnes a year. Coal is sent to consumers in the south from key producing regions in the north such as Inner Mongolia, Shanxi and Shaanxi. To date, it has only tended to haul around ten per cent of its capacity.

On 22 September 2020, at the UN General Assembly, China pledged to achieve carbon neutrality by 2060, complementing their previous pledge of peak emissions before 2030. China is currently developing its 14th Five Year Plan for the period 2021–2025. When released, this will indicate whether China intends to proceed with some or most of the currently planned 100 Gigawatts of additional coal generation capacity, or to cap output closer to 1,200 Gigawatts level currently. Any plan targeting extra wind and solar capacity could lower the need for more coal generation.

India’s power and industrial sectors in recovery

India is the world’s second largest thermal coal consumer and importer, importing 189 million tonnes of thermal coal in 2019. The Indian economy is recovering from the impacts of the COVID-19 pandemic, and industrial thermal coal consumption is rising after experiencing the world’s steepest declines in the first half of 2020. In the September quarter, India’s power generators returned to 2019 coal consumption levels, a strong recovery from the June quarter, in which coal power was down 24 per cent year on year. Demand from the sponge iron and cement sectors is also growing. In a normal year, India’s sponge iron sector uses about 25–30 million tonnes of imported thermal coal each year, largely from South Africa.

Coal imports in the September quarter were 4.8 per cent lower year-on-year, a significant improvement on the June quarter which had been the slowest in years. Australia’s thermal coal exports to India are usually very small (Figure 6.6), but in the September quarter they jumped almost 100 per cent year-on-year to 1.7 million tonnes, perhaps as sellers sought alternative markets due to China’s lower import demand.

India’s domestic coal production also recovered from the disruptive effects of COVID-19 during the September quarter 2020, producing about 6 per cent more than in the same period in 2019. Preliminary data for October

Figure 6.6: India’s thermal coal imports, monthly

Source: IHS (2020)

2020 suggests that this production surge is likely to last, as miners strive to meet ambitious monthly targets missed since the beginning of the fiscal year (in April). India’s thermal coal imports are estimated to have declined sharply in 2020 — by 24 million tonnes to 165 million tonnes — due to the impact of the COVID-19 pandemic on India’s economy in the first half of the year. With India’s coal consumption and production both dwarfing import requirements, small changes in either direction will likely exert a huge influence over the trajectory of India’s thermal coal imports.

India’s thermal coal imports are expected to recover gradually over the next two years to reach 190 million tonnes in 2022, as the country recovers from the COVID-19 pandemic, industrial activity resumes and electricity demand picks up. However, the bounce back is expected to be constrained by government targets and policy. In February 2020, India’s Minister for Coal and Mines reaffirmed plans for India to stop importing thermal coal from Indian fiscal year 2023–24 (instead relying on domestic mine production for all its needs). While this has been a long-running goal

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for India, and there are considerable barriers to its achievement, the announcement signals a renewed policy drive for energy self-sufficiency.

The Indian government’s strategy to increase domestic production has several elements. The first is to boost production by state-owned companies, particularly Coal India — which has an annual production target of 1,000 million tonnes by Indian fiscal year 2023–24. The second strategy is to increase production by the private sector. The Indian government has introduced a number of reforms to encourage private sector investment, including opening up the country’s coal sector to foreign direct investment and changing the rules governing coal mine auctions. While India’s mines may fall short of production targets, government policy is nevertheless expected to propel Indian coal production higher over the next few years.

**Japan’s imports to recover partially**

Japan is the world’s third largest thermal coal importer, buying 138 million tonnes in 2019. Low LNG prices and subdued energy demand are weighing on thermal coal imports, despite a colder than normal winter ahead. In the September quarter 2020, Japan’s thermal coal imports were 13 per cent lower than the same period in 2019 (Figure 6.7).

Japan’s total imports for 2020 are expected to decline by about 5 million tonnes to an estimated 133 million tonnes, 4.0 per cent lower than 2019. Beyond 2020, there are competing trends at work: Japan has new high-efficiency coal-fired power generation capacity under construction and/or consideration, but coal consumption will be cut by the retirement of up to 100 older power plants by 2030. As with its population, Japan’s energy demand is on a downward trend so coal imports are forecast to recover to just 135 million tonnes in 2022 as COVID-19 impacts recede.

Nuclear power generation is expected to hit a three-year low during the 2020-21 winter period. The 2011 Fukushima nuclear reactor disaster resulted in the closure of Japan’s nuclear power plants. At the time of writing, only nine of Japan’s 42 nuclear reactors had gained approval to restart, and many of these are currently idle undergoing anti-terrorism upgrades or safety testing. Most of the nine reactors are expected to be back online by early to mid-2021. Another four reactors are currently seeking approval and could be online by 2022.

In his first general policy address to the Diet on 26 October 2020, Prime Minister Yoshihide Suga announced that Japan would pursue a national target of net-zero emissions by 2050. Depending on how policies are implemented and the evolution of technologies, this could have a material impact on Japan’s demand for thermal coal.

In mid-2021, Japan’s 6th Basic Energy Plan is expected to be released, setting out a roadmap to the 2050 goal. Accelerating the pace of nuclear reactor restarts may be a part of that plan. Nuclear energy continues to face public opposition in Japan, and the pace of nuclear restarts is the main uncertainty affecting the outlook for Japan’s thermal coal imports in

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**Figure 6.7: Japan, South Korea and Taiwan’s thermal coal imports**

![Graph showing thermal coal imports for Japan, South Korea, and Taiwan from September 2018 to September 2020.](source: IHS (2020))
the next few years.

To date, regulatory and geographic hurdles have slowed the growth of Japanese renewable energy capacity relative to other OECD countries.

However, the commissioning of Japan’s sixth-largest onshore wind project in October 2020 lifted the country to a record year for renewable energy installations, and the Prime Minister’s announcement signals strengthened commitment to the sector.

In November, Japanese engineering company Toshiba was the latest to announce its exit from the coal generation business, joining engineering giants General Electric and Siemens.

South Korea to reduce coal burn over winter

South Korea is the world’s fourth largest thermal coal importer, purchasing 93 million tonnes of thermal coal in 2019. South Korea’s thermal coal imports continued to fall in the September quarter (Figure 6.7), down 12 per cent year-on-year, despite the recovery of economic activity related to South Korea’s success in containing COVID-19. Nuclear generation is expected to contribute more power to the grid this winter, and the return of the government’s winter fine dust policy to improve air quality will result in the temporary closure of some 16 coal-fired power stations during the period December 2020 to March 2021.

South Korea’s import and consumption of thermal coal has been declining since 2018, as government policies have been implemented to manage air pollution problems, including new tax arrangements aimed at encouraging the use of gas over coal. The country plans to convert a quarter of its coal-fired capacity to gas by 2031.

South Korea’s thermal coal imports are expected to have fallen to an estimated 85 million tonnes in 2020, as a result of these ongoing trends and the reduced power demand caused by COVID-19 containment measures earlier in the year.

In October 2020, South Korea’s president declared in a policy speech in the national assembly that the country will be carbon neutral by 2050. This announcement could lead to policies that augment the country’s existing plan to shift its energy mix away from coal and may also have implications for nuclear. Seven coal power units already under construction are likely to be completed but South Korea’s draft 2020–2034 energy plan is expected to set out a roadmap to commence the phase out of coal. In recent years, coal has provided around 27 per cent of South Korea’s power.

The president outlined a multibillion-dollar plan to invest in green infrastructure, clean energy and electric vehicles. South Korea is expected to add 7.2 gigawatts of offshore wind capacity in the next decade, becoming the world’s seventh largest offshore wind market on a cumulative installation basis.

In 2021 and 2022, South Korea’s thermal coal imports are forecast to gradually decline, with increasing power demand offset by the impact of policies to reduce coal use.

Taiwan’s imports resilient in 2020

Taiwan’s thermal coal imports are expected to decline to an estimated 58 million tonnes in 2020, from 61 million tonnes in 2019. Due to its early success in containing COVID-19, power demand in Taiwan has been reasonably resilient. Thermal coal imports in the September quarter declined by 3 per cent year-on-year.

In 2021 and 2022, Taiwan’s thermal coal imports are expected to decline slightly further, as a result of the government’s energy transition policies. Taiwan is aiming to shift its power generation mix towards gas and renewables and away from nuclear power and coal. Under Taiwan’s current energy plan, coal’s share of power generation would fall from 46 per cent at present to 27 per cent in 2025.

Taiwan’s government is aiming to reduce the share of coal in its energy mix, in part by rapidly ramping up LNG imports. Taiwan faces challenges
in achieving a rapid transition to gas, and will face challenges to bring on LNG regasification capacity at the intended pace (see gas chapter).

Southeast and South Asia imports to grow, led by Vietnam

In 2019, the nations in Southeast and South Asia (excluding India) collectively imported 151 million tonnes of thermal coal, and are expected to play a substantial role in thermal coal markets in the 2020s. The largest importers of thermal coal in these regions are Vietnam, Malaysia and the Philippines. Economic and population growth is driving the demand for electricity, and coal-fired power generation is expected to play a key role in meeting growing power use.

Vietnam’s thermal coal imports are estimated to have grown by almost 20 per cent in 2020 to an estimated 55 million tonnes, as power demand climbed thanks to Vietnam’s early success in containing the spread of COVID-19. The composition of electrical power supply also tilted towards coal, as hydroelectric power generation was crippled by a prolonged dry season. Recent flooding has also caused disruption to generation and transmission infrastructure.

Power generators in the Philippines are estimated to have cut coal imports in 2020, as measures aimed to contain the COVID-19 pandemic reduced power demand. In 2020, Southeast and South Asia’s imports are expected to have declined slightly to an estimated 150 million tonnes, as Vietnam’s forecast import growth offsets declines in all other importers in the region.

Over the outlook period, thermal coal imports by Southeast and South Asia are expected to increase, reaching 189 million tonnes in 2022 (Figure 6.8). Vietnam is expected to be a key driver of import demand growth, with around 5.5 Gigawatts of additional coal-fired power generation capacity likely to come online in the outlook period in that country alone. An early 2020 resolution of Vietnam’s government sought to prioritise renewables and gas over thermal coal, but uncertainty over the level and duration of policy support may undermine the required investment.

6.5 World exports

Indonesia’s exports decline sharply

Indonesia is the world’s largest thermal coal exporter, exporting 449 million tonnes in 2019 — a record high — from production of 610 million tonnes. 2020 has been a difficult year for Indonesia’s coal exporters, with prices below the cost of production for some miners. The drop in India’s imports — the main destination for Indonesia’s exports — throughout 2020 has reduced demand for Indonesia’s lower calorific coals.

With the more recent drop in China’s imports, Indonesia’s exports in 2020 are estimated to be just 390 million tonnes, 13 per cent lower than 2019.

In the September quarter 2020, Indonesia’s exports fell by 22 per cent compared with the same period a year earlier. This was a partial recovery from the heavy export reductions in the June quarter, which were the
result both of heavy rains in South Kalimantan and miners’ strategic decisions to lower output due to low prices.

Indonesia’s exports are expected to rise slightly in 2021 and 2022, as prices recover. However, output will not return to 2019 levels during the outlook period, as forecast low prices discourage production. Moreover, the Indonesian government has previously flagged plans to limit annual output, in order to preserve coal reserves for future domestic use. The government targeted an output cap of 550 million tonnes in 2020.

Russia’s production and exports in reverse
Russia was the third largest thermal coal exporter in 2019, shipping 181 million tonnes. Russia’s exports in the September quarter 2020 were strong, with volumes on par with 2019.

Figure 6.9: Thermal coal exports

After years of strong production growth, Russia’s coal industry had a challenging year in 2020, with low prices weighing on coal production, despite falls in the value of the Russian Ruble.

Future export growth will be supported by ongoing government plans to invest in the coal industry and associated rail/port infrastructure. Russia has been investing heavily in transportation infrastructure to the country’s eastern ports — targeting the Asian market, as Japan’s utilities are looking to diversify their sources of supply, and South Korea’s new regulations are lifting demand for Russia’s low sulphur thermal coal.

In 2020, Russian export volumes are estimated at 170 million tonnes, a decline of 5.8 per cent. Exports are forecast rebound to 184 million tonnes in 2022 as seaborne demand rises.

Colombia’s exports fall due to prolonged strike
Colombia exported 69 million tonnes of thermal coal in 2019. COVID-19 containment measures in March and April 2020 disrupted production to some extent, but the decline deepened when miners at the massive Cerrejón coal mine went on strike on 31 August. The strike, over a pay dispute with the company, was resolved in the December quarter and a gradual return to work is planned from 8 December, with a focus on safety and occupational health. With just one of Colombia’s big 4 coal exporters fully operational during the September quarter — due to stoppages at Prodeco and Colombian Natural Resources — exports were down 47 per cent year-on-year. Colombia’s exports are estimated at 55 million tonnes in 2020, down 21 per cent, but rise to 75 million tonnes in 2022.

South Africa’s exports return to growth
South Africa produced 250 million tonnes of thermal coal in 2019, and exported 79 million tonnes — making it the world’s 4th largest exporter. South Africa’s exports returned to growth in the September quarter 2020, lifting 11 per cent year-on-year. This followed two quarters of contraction, associated with COVID-19 containment measures and weak demand.
The return of Indian demand — a major destination for South African exports — put the wind in the sails of the nation’s coal sector in the September quarter. Across 2020, South Africa’s thermal coal exports are estimated to have declined by 6.2 per cent to 75 million tonnes.

By 2022, South Africa’s exports are expected to return to 79 million tonnes (Figure 6.9). South African exports to India are expected to rise, and miners will increasingly target other Asian markets — such as Pakistan — as European thermal coal use falls. A modest decline in domestic use of thermal coal should also support export volumes. This was outlined in the South African government’s October 2019 plan to reduce coal-fired power generation capacity from 37 Gigawatts now to 33 Gigawatts by 2030.

US exports to decline due to cost and infrastructure challenges

The US exported 34 million tonnes of thermal coal in 2019. The US is considered a price-sensitive swing supplier in the seaborne thermal coal market, with most US producers operating at higher costs.

US exports continued their decline in the September quarter 2020, falling 36 per cent year-on-year, as a number of producers idled mines. The US coal sector was already under pressure, due to low natural gas prices, falling demand domestically and in Europe, and a lack of infrastructure on the US west coast (near Asian markets).

In November 2020, Peabody Energy Corporation — the world’s largest coal producer and an operator of mines in both the US and Australia — announced that it may need to declare bankruptcy unless creditors agree a plan to restructure its debts. The company’s announcement is partly related to falling revenues for its thermal coal products. These challenges are expected to result in US thermal coal exports falling by 35 per cent to 22 million tonnes in 2020.

6.6 Australia

A volatile time for thermal coal exports

In the September quarter 2020, Australia’s thermal coal exports suffered their largest quarterly fall since records going back to 1988. Exports were down 15 per cent year-on-year, reflecting weak prices and concerns over delays unloading cargoes in China (Figure 6.10). China imported half as much Australian thermal coal in the September quarter 2020 as in the same period last year. In the months of September and October, Australia’s exports to China were the lowest in almost a decade.

In the December quarter, high winds associated with the La Niña weather system damaged a coal loader at the Port of Newcastle on 16 November. The two-loader port handles 33 per cent of Australia’s thermal coal exports and the damaged loader will be offline for repairs, potentially restricting export volumes in the December quarter and part of the March quarter 2021.

In December, the nation’s largest coal miner, Glencore, announced plans to close four Australian mines by 2023 as these mines’ currently-developed resource are exhausted. In the Hunter Valley, it will close Liddell, Intega and Glendell. In the Bowen Basin, the metallurgical and thermal coal mine Newlands will close. These mines represent 11.5 million tonnes a year, or around 4 per cent of Australia’s thermal coal production. Offsetting this decline in production is the ramp up of Glencore’s million tonne a year United-Wambo joint venture with Peabody.

In August, Glencore had announced immediate plans to reduce its overall Australian output by about 12 per cent relative to its 2019 output. The cuts will focus on lower quality coals that face the largest oversupply, and follow temporary operational stops at some Glencore mines. Glencore and Yancoal announced that, in support of efforts to curtail output and cut operating costs, they would be laying off 84 contractors at their joint Hunter Valley Operations mine in December. This decision does not affect
permanent employees, who number around 1,200.

In August 2020, Peabody announced that it would halve the workforce at its 2.5 million tonne per annum Wambo underground thermal and semi-soft coking coal mine in New South Wales. This decision followed a two-month temporary closure since June.

A significant proportion of Australian thermal coal production was loss-making in the December quarter. On a calorific-value-adjusted basis, an estimated one-quarter to one-third of Australian thermal coal exports are cash negative at prices of US$50 a tonne for Newcastle 6,000 kcal NAR coal. However, prices are showing signs of recovery and a number of factors should minimise the risk of widespread mine closures if prices do not persist at current lows beyond 2020:

- Some Australian thermal coal is exported on contracts that provide Australian miners with an annual fixed price. The 2020–21 Japanese fiscal year (April to March) benchmark contract price settled at US$68.75 a tonne, well above both the prevailing spot price at the time and the forecast for average spot prices of US$52 a tonne for the same period (see Section 6.2 Prices).
- Mines may run at loss for a time — given the costs associated with shutting down production — until prices recover. The costs associated with placing a mine on care and maintenance are relatively high in Australia, compared with costs in nations such as Indonesia, South Africa and Colombia.
- Mines may have ‘take-or-pay’ clauses in contracts with rail and port facilities, under which they incur costs whether or not they produce. Mines may continue to produce even if their costs are above prices, if take-or-pay costs are greater than those losses from producing.

Some of the mines that are uneconomic at current thermal coal prices do not rely on their thermal coal sales for the bulk of their revenue, since they mainly produce metallurgical coal (Figure 6.11). However, low metallurgical coal prices could threaten the viability of some of these mines (see metallurgical coal chapter).

Australia’s thermal coal export volumes are forecast to edge down from 213 million tonnes in 2019–20 to 199 million tonnes in 2020–21. Low prices are expected to result in weaker production at higher-cost mines during the first half of 2020–21 (Figure 6.12).

Thermal coal export earnings are forecast to decline by $5.8 billion to $15 billion in 2020–21, due to lower prices and slightly lower export volumes (Figure 6.11). From around US$60 a tonne in the December quarter 2020, the benchmark Newcastle 6,000 kcal spot price is expected to rise slowly, reaching around US$65 a tonne at the end of the outlook period.

Australian thermal coal export earnings are forecast to rise by around $1.9 billion to $16 billion in 2021–22, driven by a surge in export volumes and a slow but steady lift in prices.
Investment activity largely on hold

Beyond the outlook period, investment in future Australian thermal coal projects is highly uncertain, as highlighted in the 2020 edition of the Resources and Energy Major Projects publication. Weak market conditions in 2020 have resulted in capital expenditure reductions, write-downs, and FID deferrals. There are 53 thermal coal projects in the pipeline which, if progressed, would have a total investment value of $64–74 billion. 34 of these projects are at the feasibility stage, but many have not progressed for years. Among just 6 projects with committed investment, 2 are new ‘greenfields’ projects and 4 are mine expansions. For example, Mandalong Southern Extension and United-Wambo are expansions designed to extend the life of existing mines and/or improve the productivity of existing operations.

An expanding list of lenders and investors have announced plans to cease financing thermal coal projects. Some pension and equity funds are also divesting from, or limiting their exposure to, thermal coal, narrowing the range of investment financing options available to coal projects.

For details of coal exploration expenditure, see section 5.6 in the metallurgical coal chapter.

Revisions to the outlook for Australian thermal coal exports

Since the September 2020 Resources and Energy Quarterly, Australia’s forecast thermal coal export volumes have been revised down by 9 million tonnes in 2020–21, due to the estimated impact of China’s informal coal import restrictions in the December quarter. Value in that year is largely unchanged as higher prices offset the drop in volumes. Earnings in 2021–22 are $0.4 billion lower as a result of a stronger Australian dollar.

Figure 6.11: Export margins of Australian thermal coal mines

Notes: The margin curve incorporates the following assumptions: a price of US$50 a tonne for Newcastle 6,000 kcal NAR coal; an adjustment to mine costs based on this calorific content; an exchange rate of 1 AUD = US$0.65; ‘Thermal’ refers to mines that produce 100 per cent thermal coal; ’Mostly thermal’ more than 70 per cent; ‘Thermal/met 30-70 per cent; ‘Mostly met’ 1-30 per cent.

Source: AME Group (2020); Department of Industry, Science, Energy and Resources (2020)

Figure 6.12: Australia’s thermal coal exports

Source: ABS (2020); Department of Industry, Science, Energy and Resources (2020)
Table 6.1: World trade in thermal coal

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Notes: \(s\) Estimate  \(f\) Forecast

Source: International Energy Agency (2020); IHS Markit (2020); Department of Industry, Science, Energy and Resources (2020)
## Table 6.2: Thermal coal outlook

<table>
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<tr>
<th>World</th>
<th>Unit</th>
<th>2019</th>
<th>2020&lt;sup&gt;a&lt;/sup&gt;</th>
<th>2021&lt;sup&gt;f&lt;/sup&gt;</th>
<th>2022&lt;sup&gt;f&lt;/sup&gt;</th>
<th>2020&lt;sup&gt;s&lt;/sup&gt;</th>
<th>2021&lt;sup&gt;f&lt;/sup&gt;</th>
<th>2022&lt;sup&gt;f&lt;/sup&gt;</th>
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<tr>
<td>Contract prices&lt;sup&gt;b&lt;/sup&gt;</td>
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<tr>
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<td>14,573</td>
<td>16,202</td>
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Notes: <sup>b</sup> Japanese Fiscal Year (JFY), starting April 1, fob Australia basis. Australia—Japan average contract price assessment for steaming coal with a calorific value of 6700 kcal/kg gross air dried; <sup>c</sup> In current JFY US dollars; <sup>d</sup> fob Newcastle 6000 kcal net as received; <sup>e</sup> In 2020 US dollars; <sup>f</sup> Forecast; <sup>h</sup> In 2020–21 Australian dollars; <sup>s</sup> estimate

Source: ABS (2020) International Trade in Goods and Services, Australia, Cat. No. 5368.0; IHS (2020); NSW Coal Services (2020); Queensland Department of Natural Resources and Mines (2020); Company Reports; Department of Industry, Science, Energy and Resources (2020)