Aluminium

Australia's aluminium sector

11%
of global primary aluminium exports are **Australian**

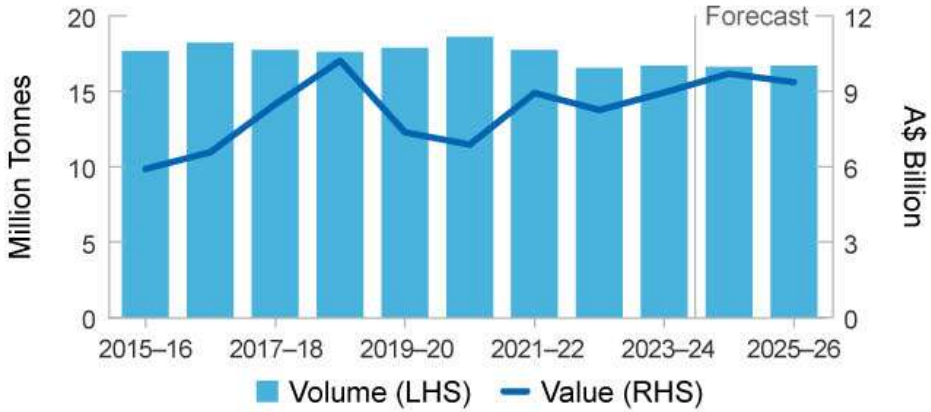
$16 billion
primary aluminium, alumina and bauxite **exported,** 2023

Over 98%
of Australian bauxite is **exported to China**

Major Australian bauxite deposits, Gt

*High Purity Alumina

Australian alumina exports



Outlook

Prices **set to rise** with Russian aluminium ban and possible rising US–China trade tensions

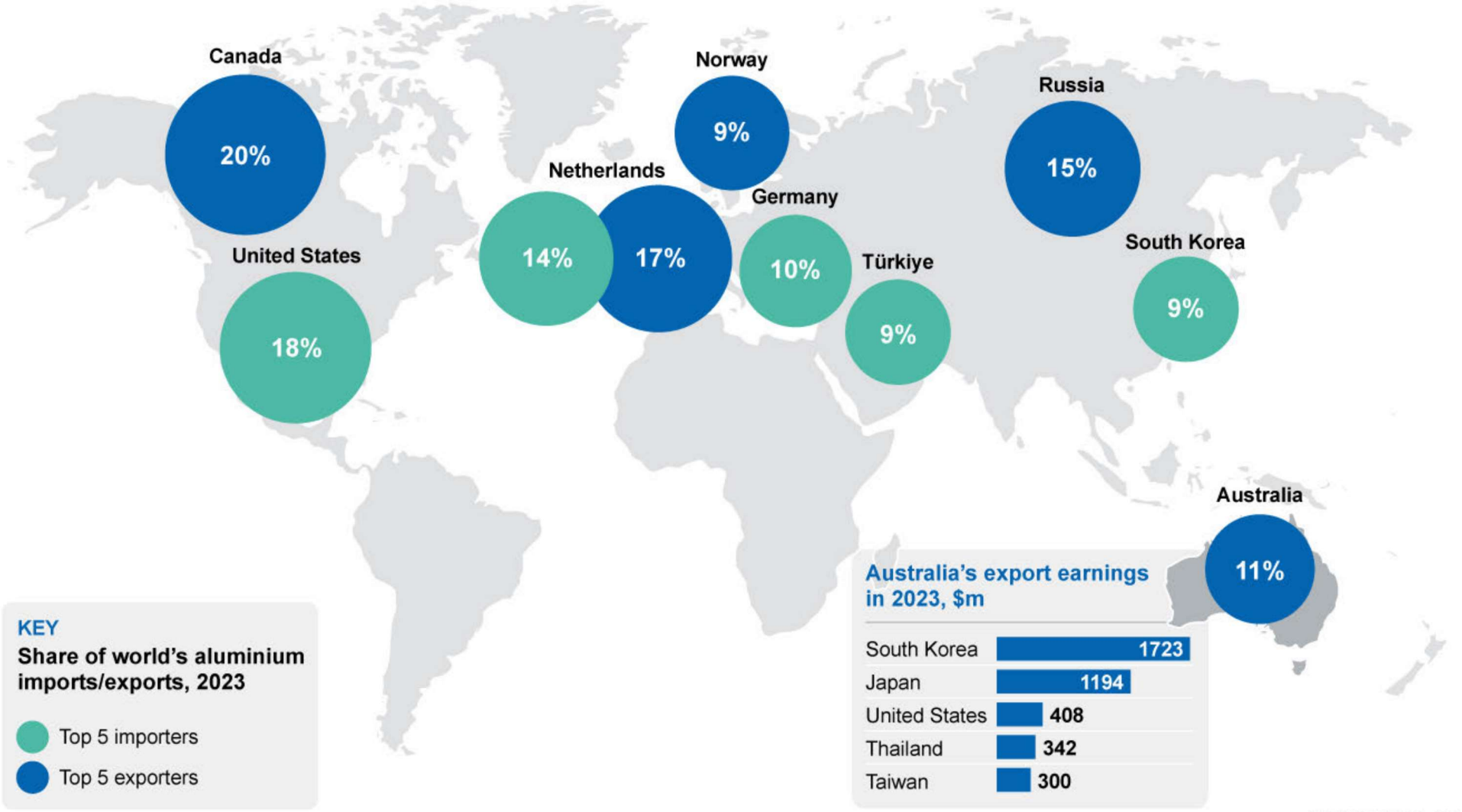
Australia's alumina exports set to reach nearly **$10 billion** in 2024-25

The Australian bauxite industry is on track to be a **$2 billion** export industry by 2024-25

Growing **global demand** for energy efficient cars and new tech support aluminium use & exports

SOURCE: DISR; OCE

Aluminium TRADE MAP



SOURCE: WBMS; ABS

11.1 Summary

- The London Metal Exchange (LME) primary aluminium spot price reached a two-year high in May 2024, as countries imposed sanctions on Russian aluminium exports. As the market adjusts to the ban and looks at the possibility of rising trade tensions between the US and China, aluminium prices are expected to rise over the outlook period (to end 2026).
- Australia's primary aluminium output is forecast to be 1.6 million tonnes (Mt) a year in 2024 and onwards. However, Alcoa's decision to curtail output at its Kwinana alumina refinery in WA by the end of the June quarter 2024 is likely to take Australian alumina output below 19 Mt a year. Mine expansions and new mines are expected to boost Australian bauxite output to 107 Mt by 2025–26.
- Higher aluminium prices and production ramp-ups at existing bauxite operations are likely to boost Australia's aluminium, alumina and bauxite exports to $18 billion by 2025–26.

11.2 World consumption

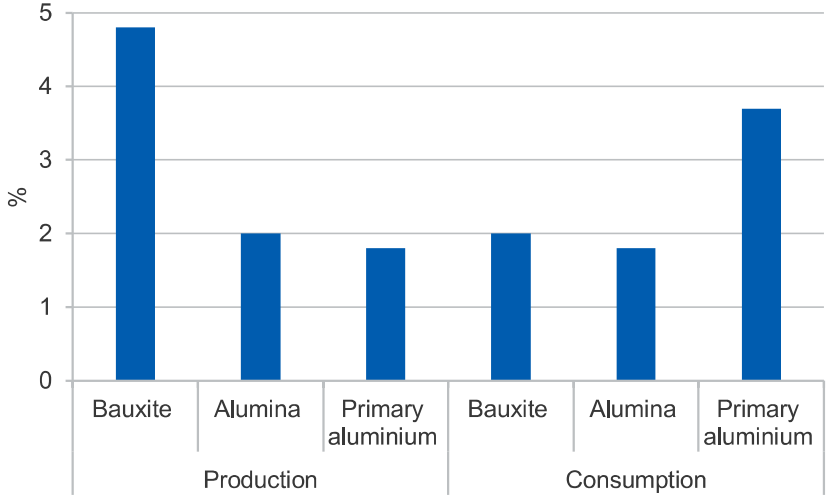
China led higher global consumption in the March quarter 2024

Global primary aluminium consumption rose by 5.5% year-on-year in the March quarter 2024 to 17 million tonnes (Mt), driven by a 6.4% year-on-year rise in Chinese primary aluminium consumption. Helping demand was strong passenger vehicle sales, with 5.68 million units sold in China in the March quarter 2024, up 11% year-on-year.

In Europe, subdued activity in the housing and construction sectors — the sectors worst affected by high interest rates — cut primary aluminium consumption by 5.6% year-on-year in the March quarter 2024. Italy and Greece's primary aluminium demand fell by 27% and 16% year-on-year in the March quarter 2024 to 154,000 and 87,000 tonnes, respectively.

World secondary aluminium consumption rose by 3.6% year-on-year in the March quarter 2024 to 6.5 Mt, as automotive makers in Asia, Europe, and the US sourced secondary — rather than primary — aluminium to cut input costs. In Asia, secondary aluminium usage in South Korea and Japan rose by 5.7% and 2.8% year-on-year in the March quarter 2024, respectively, while in the US, secondary aluminium consumption grew by 2.1% year-on-year. Amongst major European buyers, demand for secondary aluminium in Italy rose by 2.3% year-on-year in the March quarter 2024.

Figure 11.1: World aluminium/alumina/bauxite production and consumption, average year-on-year growth, 2025 to 2026



Source: World Bureau of Metal Statistics (2024); Wood Mackenzie (2024); Department of Industry, Science and Resources (2024)

World alumina consumption rose by 2.9% year-on-year to 34 Mt in the March quarter 2024. China remained the world's largest alumina consumer, accounting for 59% of global alumina usage, and drove most of the gain (up 3.4% year-on-year). Outside of China, alumina consumption in Canada and India rose by 6.0% and 1.9% year-on-year in the March quarter 2024, respectively.

World bauxite usage was virtually unchanged year-on-year in the March quarter 2024 at 86 Mt. China remained the world's largest bauxite consumer, accounting for 55% of global use.

Aluminium, alumina, and bauxite demand to rise over the outlook period

Strong growth in China's manufacturing sector lifts primary aluminium demand in 2024.

In an attempt to stabilise the property market, the Chinese Government is now encouraging local governments to buy unsold properties and turn them into affordable housing, is reducing deposits required from first home buyers, and has scrapped minimum interest rates on home loans. These initiatives are intended to lift confidence in the Chinese property sector. A recovery in this sector would drive up demand for aluminium, which is used intensively in the latter stages of construction.

On 21 June 2023, the Chinese Government's passenger electric vehicle (PEV) subsidy was extended to 2025, with half of this subsidy available until 2027. This extension will support aluminium demand from the Chinese automotive industry. Overall, world primary aluminium demand is forecast to rise by 4.8% year-on-year in 2024 to 72 Mt.

Beyond 2024, world primary aluminium consumption is forecast to grow at an annual average rate of 3.7% to 78 Mt by 2026 (Figure 11.1). Demand will be boosted by the rising sales of energy-efficient vehicles, which are more aluminium-intensive. In China, strong demand from the clean energy sector — where aluminium is used in the making of solar components and wind turbines — is expected to boost aluminium consumption. In Western economies, lower interest rates in 2025 and 2026 are likely to boost aluminium-intense housing and commercial building activity.

Rising primary aluminium prices and the use of low carbon aluminium are expected to boost secondary aluminium consumption. World secondary aluminium demand is forecast to rise by 3.6% year-on-year in 2024 to 26 Mt, and then by 4.9% a year over the outlook period to 2026.

Alumina demand is driven by primary aluminium production, which is forecast to lift by an average 1.8% a year between 2025 and 2026. In line with this, world alumina consumption is forecast to grow by 2.0% year-on-year in 2024 to 138 Mt.

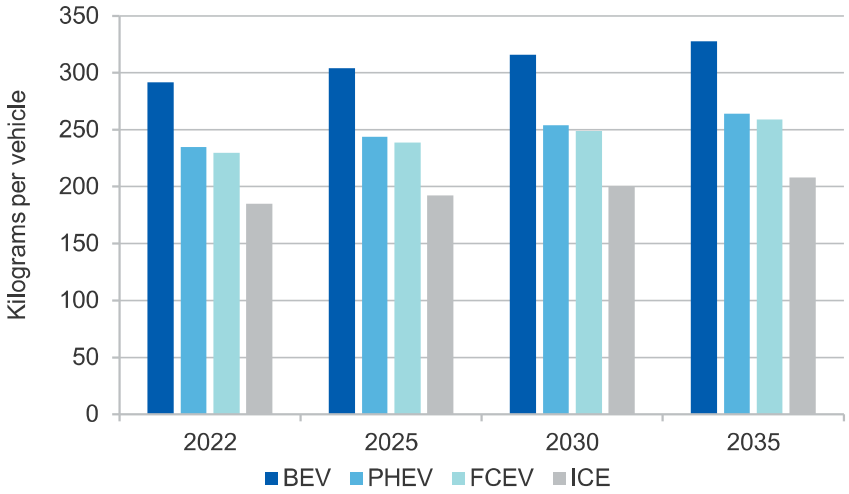
After 2024, world alumina demand is forecast to grow at 1.8% annually over the outlook period (Figure 11.1).

Global alumina production drives bauxite demand, which is projected to lift by an average 2.0% a year between 2025 and 2026. World bauxite use is forecast to increase by 1.1% in 2024 to 360 Mt, and then grow at an average annual rate of 2.0% over the outlook period to 2026 (Figure 11.1).

Energy transition provides opportunities for aluminium

The energy transition appears likely to provide enormous opportunities for the aluminium industry. Vehicle aluminium intensity — including electric vehicles (EVs) and internal combustion engine (ICE) vehicles — is projected to increase for the next 10 years. Aluminium usage per battery EV is projected to rise from 292 kilograms in 2022 to 328 kilograms in 2035. Aluminium usage per ICE vehicle is also projected to rise from 185 kilograms in 2022 to 208 kilograms in 2035 (Figure 11.2).

Figure 11.2: Aluminium intensity per vehicle



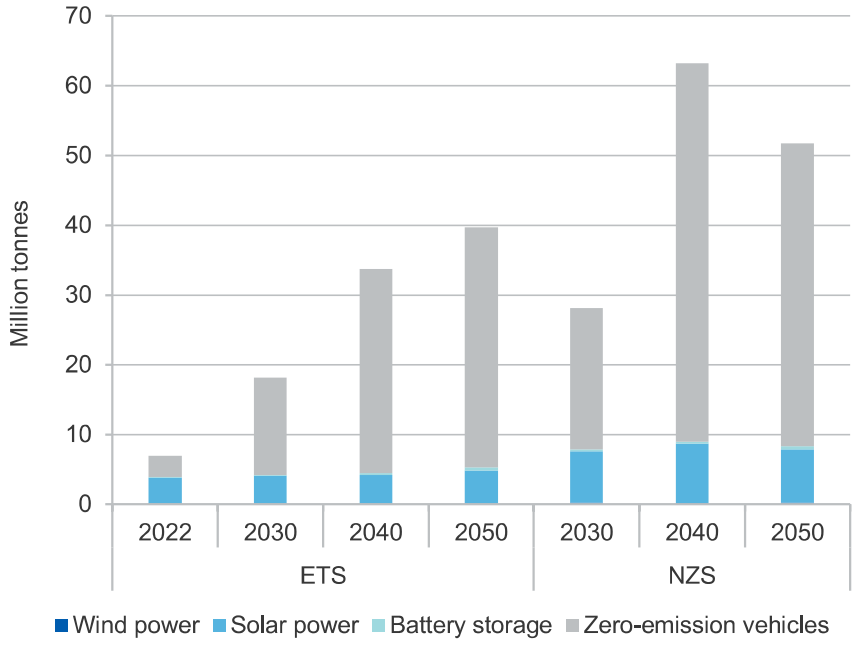
Notes: BEV: Battery electric vehicles, PHEV: Plug in hybrid electric vehicles, FCEV: Fuel cell electric vehicle, ICE: Internal combustion engine.

Source: BloombergNEF, *Transition Metals Outlooks* (2023)

Aluminium demand is expected to skyrocket over the period to 2050. Solar power and zero emission vehicles are expected to be the two largest contributors to rising aluminium demand in coming decades. Their combined demand for aluminium is projected to increase from 18 Mt in 2030 to 39 Mt in 2050 (under the ETS) and from 28 Mt in 2030 to 51 Mt in 2050 (under the NZS) (Figure 11.3).

It is estimated EV sales will rise from 14 million units in 2023 to over 26 million units in 2026. With an estimated average aluminium content of 292 kilograms per EV, aluminium usage in EVs is forecast to increase from 4.1 Mt in 2023 to 7.7 Mt in 2026.

Figure 11.3: Aluminium demand under economic transition and net zero scenarios



Notes: ETS: Economic transition scenario, NZS: Net zero scenario
Source: BloombergNEF, *Transition Metals Outlooks* (2023)

11.3 World production

Aluminium and alumina output grew in the March quarter 2024

World primary aluminium production increased by 2.9% year-on-year in the March quarter 2024 to nearly 18 Mt, propelled by higher output in China — the world's largest aluminium producer. China produced over 10 Mt of primary aluminium in the March quarter 2024, up by 3.4% year-on-year. In Europe, primary aluminium output in France and Romania increased by 102% and 16% year-on-year in the March quarter 2024, as smelters responded to higher demand and lower energy costs.

World secondary aluminium production decreased by 2.1% year-on-year in the March quarter 2024 to nearly 7.7 Mt, due to lower output from Germany and Italy. Over this period, Italy's secondary aluminium fell by 30% year-on-year, while Germany's secondary aluminium production fell by 24% year-on-year.

World alumina supply rose by 1.2% year-on-year in the March quarter 2024 to nearly 34 Mt, driven by higher output in Australia (refer *Australia section*) and Indonesia. Production in Indonesia rose by 34% year-on-year, as Indonesian refiners raised output to accommodate higher aluminium production.

World bauxite production fell by 5.9% year-on-year in the March quarter 2024 to 91 Mt, due to lower output in Guinea — the world's largest bauxite producer. Production in Guinea fell by 32% year-on-year in the March quarter 2024 to 20 Mt, with output affected by an explosion at the main fuel depots in December 2023. Over this period, production in Australia rose by 7.2% year-on-year to 25 Mt (see *Australia* section).

China drives higher aluminium, alumina and bauxite output

Production ramp-ups in China and India are expected to boost global primary aluminium output by 2.0% year-on-year in 2024 to 71 Mt. China's primary aluminium output is forecast to reach 42 Mt in 2024, up 2.2% year-on-year. Outside of China, primary aluminium production in India is forecast to increase by 2.0% year-on-year to 4.2 Mt in 2024.

After 2024, world primary aluminium production is forecast to rise by 1.8% a year over the outlook period, reaching 74 Mt by 2026. The gains will be driven by China, as more output is produced from greenfield aluminium smelters. China's primary aluminium production is forecast to reach over 43 Mt by 2026. This is close to the capacity cap of 45 million tonnes per year which was introduced by the Chinese Government in 2017 in response to environmental and oversupply concerns.

Ongoing challenges in Yunnan's hydropower supply pose downside risks to the Chinese aluminium production outlook. Yunnan is China's fourth largest aluminium producing province. On 16 April 2024, the Yunnan provincial authority issued a warning of extreme drought conditions in Yanshan county over the coming months. As a result, some local aluminium smelters have cut production by 10-40%.

In March 2024, the US Department of Energy awarded up to US$500 million to Century Aluminium under the Inflation Reduction Act. With the help of this funding, Century Aluminium plans to build the first new US primary aluminium smelter in 45 years.

In April 2024, Vinacomin (a Vietnamese state-owned miner) announced a plan to invest US$7.3 billion to ramp up its bauxite and alumina production to meet the rising demand for aluminium in Vietnam. The investment will go to two bauxite exploration projects and five refining projects in the central highland province of Dak Nong. The timeframe for completion of these projects is still unknown.

Higher output from China, the US and Europe is expected to contribute to a 4.0% year-on-year rise in global secondary aluminium output in 2024 to nearly 33 Mt (Figure 11.1). Output in China is forecast to increase by 5.1% year-on-year in 2024, the US (up by 6.2% year-on-year) and Europe (up by 2.8% year-on-year). After 2024, world secondary aluminium output is forecast to rise by 4.9% a year, reaching 36 Mt by 2026. Rio Tinto's 30,000 tonnes a year Arvida recycling facility in Quebec, Canada, is expected to be commissioned in the March quarter 2025.

Rising output from new and existing refineries in China and Indonesia is expected to bring global alumina output up by 2.3% year-on-year in 2024 to 143 Mt (Figure 11.1). Indonesian output is forecast to rise by 11% year-on-year in 2024 to 2.5 Mt, driven by the commencement of the 2 Mt a year Mempawah alumina refinery in H2, a joint venture between the China Aluminium Company and its Indonesian partners, PT Indonesia Asahan Aluminum and PT Antam Tbk.

After 2024, world alumina output is forecast to rise by 1.8% a year over the outlook period, reaching 148 Mt by 2026 (Figure 11.1). The gains are forecast to be driven by China and Indonesia. It is expected that eight new alumina refineries will be built in Indonesia in the coming years, with a total capacity addition of around 10 Mt.

Higher output from Australia — the world's second largest bauxite producer — is expected to push global bauxite output up by 0.9% year-on-year in 2024 to 395 Mt. Output from Guinea and Indonesia is expected to be lower in 2024. Growth has been affected in the short-term by an explosion at the main fuel depots in Guinea and by Indonesia's bauxite export ban. In 2024, Guinea and Indonesia's bauxite output are forecast to fall by 3.7% and 33% year-on-year, respectively.

After 2024, world bauxite production is forecast to increase by 4.8% a year, reaching 434 Mt by 2026 (Figure 11.1). Australia and Guinea are expected to contribute most to this rise. In Guyana, the expansion of Bosai Minerals Group's Metallurgical Bauxite Project is currently underway. Once completed, it will increase Bosai's bauxite production from 1 Mt to 3 Mt a year.

Green aluminium, alumina and bauxite

The push to lower the industry's carbon footprint continues in all stages of the sector, both in Australia and offshore.

In Brazil, the aluminium industry emits around 5.5 tonnes of carbon equivalent emissions per tonne of primary aluminium produced, much lower than the global average of 15 tonnes. The industry has plans to cut

these emissions further by increasing the use of renewable energy and more recycling. Hydro's subsidiary Hydro Rein commissioned a solar power plant in March 2024 to supply power to its Alunorte alumina refinery. The company is also developing a hybrid and wind power project to supply energy to both its Paragominas bauxite mine and Alunorte alumina refinery.

Bosnian aluminium firm Aluminij signed a deal with Glencore in May 2023 to build a 60 MW solar power project and aluminium recycling facility to produce green aluminium (green aluminium is made without the use of fossil fuels and may include recycled aluminium). The plant is expected to be commissioned in 2025.

Nissan Motors, a Japanese automotive maker, will use green aluminium from Kobe Steel for its mass-produced vehicles in the Japanese and North American markets in the fiscal year ending March 2024. Around 10% of the weight of Nissan's vehicles is made up of aluminium parts.

The future is recycled

The increasing use of low carbon aluminium and rising primary aluminium prices attribute to higher production and consumption of secondary aluminium. World secondary aluminium production and consumption are forecast to grow at an average annual growth rate of 4.6% and 4.5% between 2024 and 2026, respectively. The share of secondary aluminium production in global aluminium production is forecast to rise from 21% in 2023 to 24% in 2026.

The Austrian Institute of Technology is leading the European Union (EU) project *RecAL (Recycling Technologies for Circular Aluminium)*, which focuses on sustainability, the circular economy and resource efficiency in the aluminium industry.

In May 2024, Aluminium Bahrain — one of the world's largest aluminium smelters outside China — launched its low carbon aluminium product line with two variants: EternAl-30 and EternAl-15 with a 30% and 15% recycled content.

In the United Kingdom (UK), the aluminium packaging recycling rate hit 68% in 2023, to 162,357 tonnes. Over this period, the aluminium beverage can recycling rate was 81%, with more than four in five beverage cans collected and recycled.

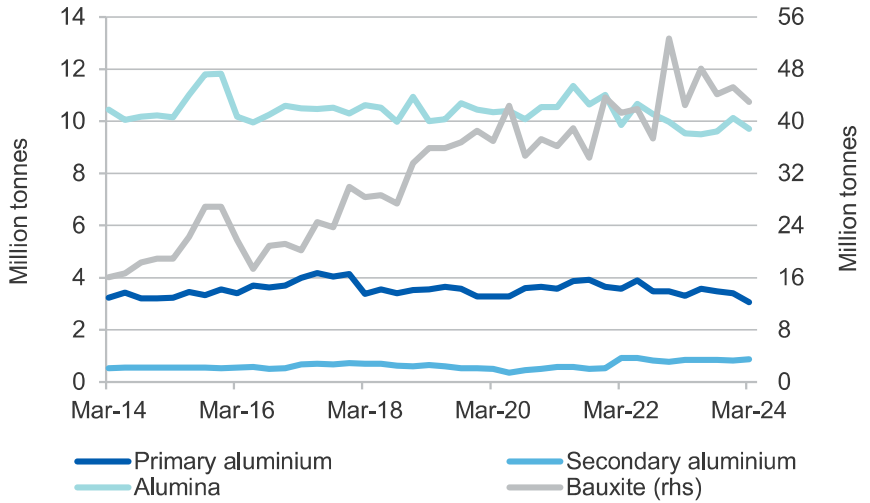
11.4 World trade

Higher alumina and bauxite exports in the March quarter 2024

World primary aluminium exports fell by 8.1% year-on-year in the March quarter 2024 to 3.0 Mt, largely due to lower exports from Russia (Figure 11.4). The fallout from Russia's invasion of Ukraine has continued with Russian primary aluminium exports declining by 88% year-on-year in the March quarter 2024 to 56,000 tonnes.

Offsetting the fall in aluminium exports from Russia were higher primary aluminium exports from Norway (up 25% year-on-year in the March quarter 2024) and Canada (up 21% year-on-year in the same period).

Figure 11.4: World aluminium, alumina and bauxite exports



Source: World Bureau of Metals Statistics (2024); UN Comtrade (2024); Department of Industry, Science and Resources (2024)

World secondary aluminium exports rose by 4.1% year-on-year in the March quarter 2024 to 880,000 tonnes, driven by higher exports from Europe (Figure 11.4). Exports from the Netherlands and Poland increased by 63% and 30% year-on-year in the March quarter 2024, respectively.

World alumina exports increased by 6.8% year-on-year in the March quarter 2024 to 10 Mt (Figure 11.4). Over this period, exports from Australia — the world's largest alumina exporter — rose by 17% year-on-year (see *Australian exports and production* section). Contributing to the rise in global alumina exports was an increase in exports from Indonesia, rising 34% year-on-year in the March quarter 2024.

World bauxite exports increased by 8.2% year-on-year in the March quarter 2024 to nearly 46 Mt (Figure 11.4). This was propelled by a 55% year-on-year rise in Australia (see *Australia's exports and production* section). Over the same period, bauxite exports from Guinea — the world's largest bauxite exporter — rose by only 0.5% year-on-year. Societe Miniere de Boke (SBM)-Winning, Guinea's leading bauxite producer and exporter, is planning to invest up to US$1 billion over the next 5 years to upgrade its terminals and buy more vessels to lift exports.

China's imports of primary aluminium rise

Higher imports by China led to an 8.7% year-on-year rise in global primary aluminium imports in the March quarter 2024 to 4.4 Mt. Over this period, China imported 758,000 tonnes of primary aluminium, up 244% year-on-year (Figure 11.6). Russian primary aluminium accounted for 58% of China's total primary aluminium imports. With low carbon aluminium produced from Siberian hydropower, Russian aluminium is attractive to Chinese buyers. Outside of China, US primary aluminium imports rose by 13% year-on-year in the March quarter 2024 to 759,000 tonnes.

Secondary aluminium consumption has declined in many European countries as a result of sluggish construction activity. In Italy, secondary aluminium imports in the March quarter 2024 fell by 17% year-on-year to 45,000 tonnes. Over the same period, secondary aluminium imports from Poland also fell by 9.9% year-on-year to 82,000 tonnes. As a result, global imports of secondary aluminium fell by 8.4% year-on-year in the March quarter 2024 to 855,000 tonnes.

Lower imports from Russia reduced global alumina imports by 1.1% year-on-year in the March quarter 2024 to 8.6 Mt. Over the same period, Russia imported 481,000 tonnes of alumina, down by 24% year-on-year. Russian imports fell as Russian domestic alumina output rose.

Higher imports from China and India led to a 7.3% year-on-year rise in global bauxite imports in the March quarter 2024. Over this period, China and India imported nearly 37 Mt and 2.4 Mt of bauxite, up 3.0% and 316% year-on-year, respectively.

In April 2024, the Guinean Government announced that it would prioritise local processing of bauxite, marking a strategic shift. Possible actions to support the development of a local refining industry include a ban on bauxite exports. It is unclear when any resulting changes from the policy shift will be implemented.

New sanctions on Russian aluminium

On 12 April 2024, the US and UK governments announced new sanctions banning the LME and the Chicago Mercantile Exchange from taking delivery of Russian aluminium produced after 12 April 2024. Russian warrants — the right to purchase Russian aluminium stocks — in existence at the end of 12 April 2024 can still be re-warranted at the same warehouse and moved between warehouses. Glencore bought US$1.1 billion of aluminium from Russian producer Rusal in 2023 as part of their long-term contract. The contract ends in 2024 with no new contract signed.

Russia is the world's second largest exporter of primary aluminium, accounting for 15% of global primary aluminium exports in 2023. The impacts of the ban to date appear to be large, with the share of Russian aluminium in LME on-warrant primary aluminium stocks reducing from 89% in April 2024 to 42% in May 2024 (Figure 11.5).

More Russian aluminium is expected to enter the Chinese market because of the bans. China's imports of Russian aluminium have been rising since

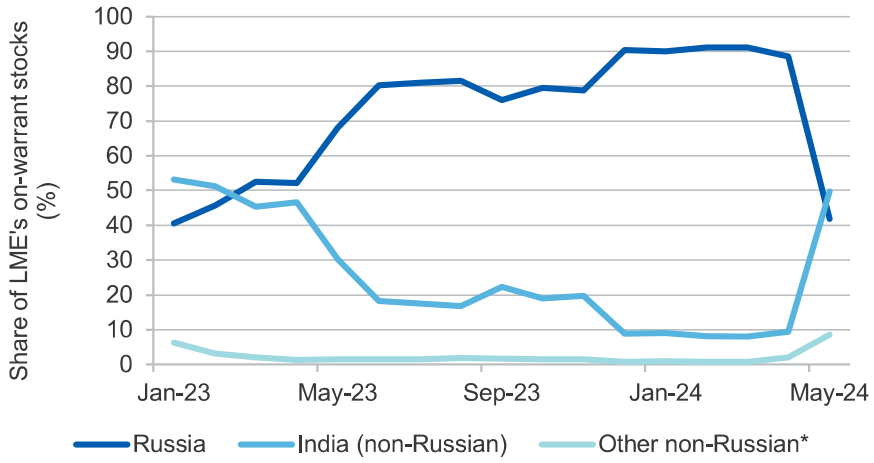
the March quarter 2022 (after Russia's invasion of Ukraine in February 2022). China's imports of Russian aluminium are not expected to slow down in the short term (Figure 11.6).

US announces increased tariffs on Chinese aluminium

On 14 April 2024, the US Government announced a tariff hike on some Chinese exports to the US, including a lift in tariffs on Chinese aluminium from the current rates of 0-7.5% to a new rate of 25% this year. The new tariffs are expected to have a minimal impact on China's aluminium exports, as the US only accounts for 0.2% and 1.3% of China's total primary aluminium and alumina exports, respectively (Figure 11.7). Escalating US-China tensions pose risks for further trade measures, adversely affecting global aluminium trade.

Theoretically, increased tariffs on Chinese aluminium imports provide incentives to US aluminium producers to upgrade technology or develop

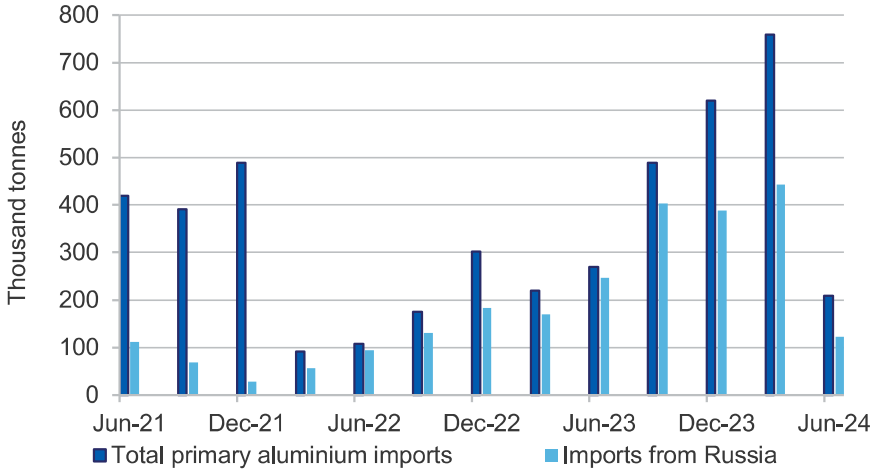
Figure 11.5: LME on-warrant primary aluminium stocks



Notes: Non-Russian includes Australia, Bahrain, Canada, India, Indonesia, Iran, Malaysia, Oman, Saudi Arabia, South Africa, the UAE and the US.

Source: London Metal Exchange (2024)

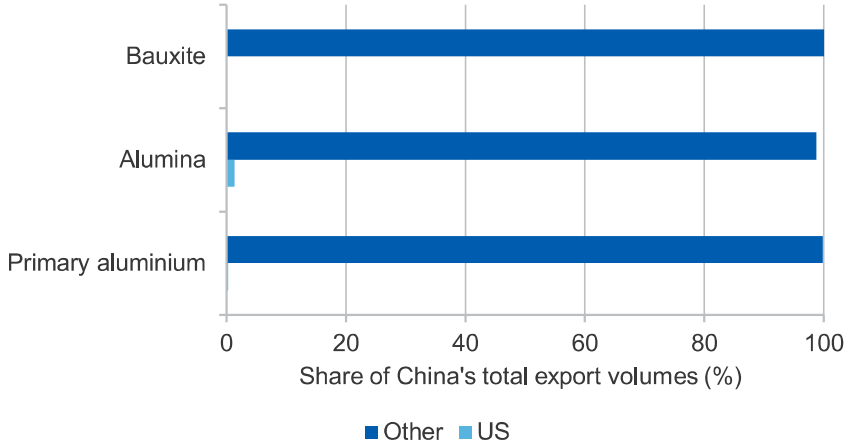
Figure 11.6: China's primary aluminium imports



Note: June quarter 2024 data only includes April

Source: China Customs (2024)

Figure 11.7: China's export to the US and the world, 2023



Source: International Trade Centre (2024)

new capacity. However, such upgrades would not necessarily create long-term competitive installations, given the established technology footprint. Similarly, any development of greenfield smelters — as part of an integrated supply chain using cheap energy sources — would face substantial and potentially prohibitive capital costs.

Aluminium is a versatile material and is used in numerous goods to which new US tariffs now apply. China is a major producer/consumer and exporter/importer of global primary aluminium, alumina and bauxite (Figure 11.8). While the full indirect effect of the tariff increases is not yet apparent, there is potential for global demand to slow and prices to fall in the short term, adversely affecting Australian export earnings.

Over 98% of all Australian bauxite exported goes to China (Figure 11.9). Given this high dependence, any reduction in China's primary aluminium and alumina demand is likely to impact Australian bauxite exports.

The overall impact of the higher US tariffs on China for Australian primary aluminum and alumina exports is expected to be minimal. China is not a major export destination for Australian primary aluminium and alumina, accounting for just 1.8% and 5.3% of Australia's total primary aluminium and alumina export earnings in 2023, respectively (Figure 11.9).

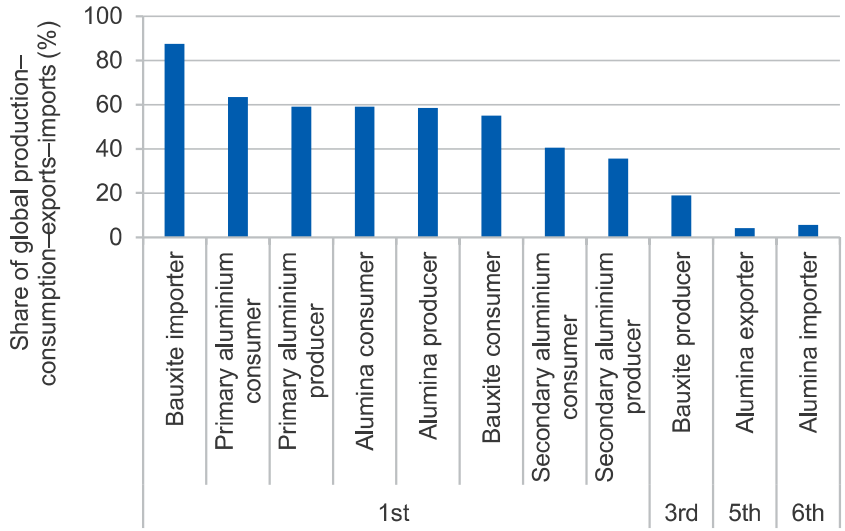
Australia exported 104,000 tonnes of primary aluminium to the US in 2023, with a value of $408 million, accounting for 7% of Australia's total primary aluminium exports (Figure 11.9).

Australian alumina exporters are expected to benefit from the US Government's decision. If the US responds to the higher tariffs by restarting idled aluminium capacity, demand for alumina will likely rise. Australia exported 268,000 tonnes of alumina to the US in 2022, with a value of $120 million.

Mexico removes tariffs on aluminium imports

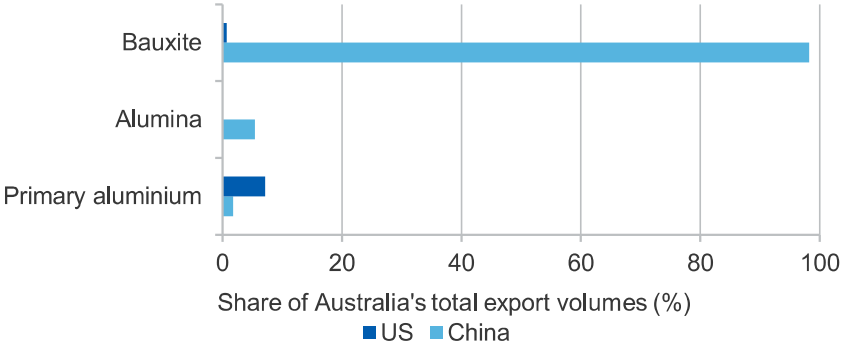
In early May 2024, Mexico removed tariffs on aluminium imports — which were levied at a rate of 35% — amid shortages of aluminium for the automotive and electronic industries. Mexico imports most of its aluminium

Figure 11.8: China's world rankings, 2023



Source: World Bureau of Metal Statistics (2024); Department of Industry, Science and Resources (2024)

Figure 11.9: Australia's exports to China and the US, 2023



Source: ABS (2024) International Trade in Goods and Services, 5368.0; Department of Industry, Science and Resources (2024).

from Asia, with China accounting for 42% of Mexico's total aluminium imports. Australia exported around 1 kilotonne of primary aluminium to Mexico for A$3.7 million. Mexico accounts for 0.07% of Australia's total primary aluminium exports in 2023.

11.5 Prices

LME's ban of Russian aluminium pushes prices higher

The LME spot price reached a two-year high of US$2,695 a tonne on 29 May 2024 as the markets responded to the move to ban Russian aluminium from LME warehouses after 12 April 2024. The price has risen by 4.9% so far in 2024, to US$2,452 a tonne on 25 June 2024 — compared to an average US$2,258 a tonne in the second half of 2023. The LME aluminium spot price is forecast to rise by 6.2% year-on-year in 2024 to average US$2,390 a tonne (Figure 11.11).

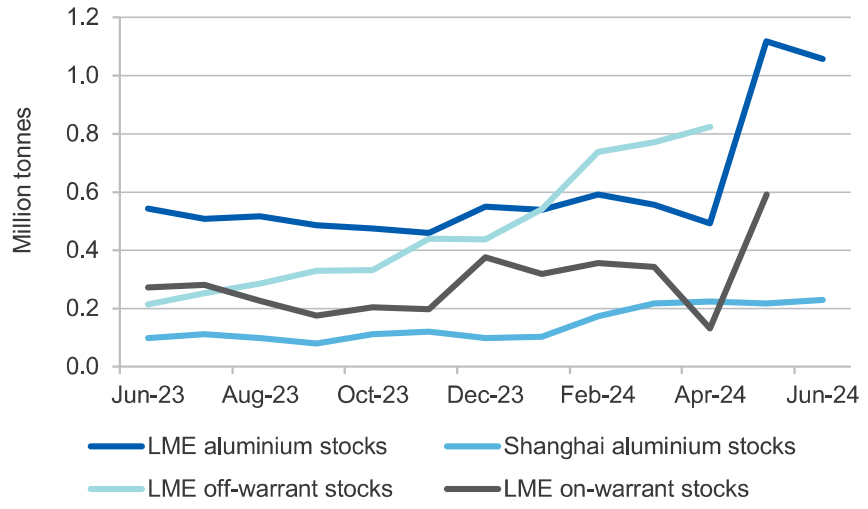
The markets are expected to adjust to the ban of Russian aluminium and the new US tariffs on Chinese aluminium exports in H2 2024. The ban on Russian aluminium is already impacting LME stock holdings. Large amounts of Russian aluminium appear to have been held off-warrant in the LME warehouses prior to 13 April 2024. However, since 13 April 2024, holders of Russian aluminium have switched their holdings back on-warrant. As a result, LME aluminium stocks rose from 490,750 tonnes in April 2024 to 1.1 Mt in June 2024 (Figure 11.10).

The phasing out of production in Australia's Kwinana alumina refinery has pushed the free on board (FOB) Western Australia alumina price up by 47% so far in 2024, at US$510 a tonne on 25 June 2024 — compared to an average of US$335 a tonne in the second half of 2023. The production curtailment at Kwinana alumina refinery is likely to keep the Western Australia alumina price at historically high levels, averaging US$380 a tonne (FOB) in 2024, up 11% year-on-year (Figure 11.11).

Higher aluminium prices expected in the short term

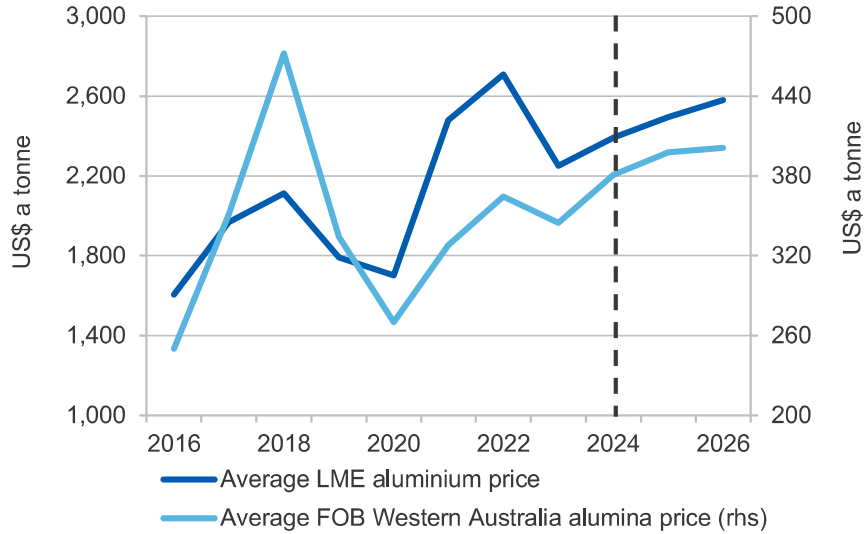
After 2024, the LME aluminium price is forecast to rise, averaging US$2,495 and US$2,580 a tonne in 2025 and 2026, respectively

Figure 11.10: Exchange aluminium stocks



Source: London Metal Exchange (2024); Bloomberg (2024)

Figure 11.11: Primary aluminium and alumina prices



Source: Bloomberg (2024); Department of Industry, Science and Resources (2024)

(Figure 11.11). Growing global demand for new, energy-efficient cars and technologies will lift aluminium usage and keep stocks relatively low. The FOB Western Australia alumina price is forecast to increase in 2025 and 2026, reaching US$400 a tonne in 2026 (Figure 11.11).

11.6 Australian exports and production

Higher alumina and bauxite exports boosted earnings in the March quarter

Australia's aluminium, alumina and bauxite (AAB) exports increased by 9.0% year-on-year in the March quarter 2024 to $4.2 billion, driven by higher alumina and bauxite export volumes and values. Over this period, Australia exported 4.0 Mt of alumina and 7.9 Mt of bauxite, up 4.9% and 13% year-on-year, respectively. In terms of values, alumina export earnings were up by 13% year-on-year in the March quarter 2024 to nearly $2.2 billion. Bauxite export earnings rose by 46% year-on-year in the March quarter 2024 to $0.42 billion.

Export earnings set to rise

An expected rise in aluminium prices and bauxite exports in 2024 is likely to boost Australia's AAB export earnings to $17.3 billion in 2023–24, up 8.0% year-on-year (Figure 11.12).

The risk to the 2023–24 assessment is Rio Tinto's force majeure announcement in mid-May 2024, due to gas shortage, on third party contracts for alumina exports from its alumina refineries in Queensland. This unforeseeable circumstance prevents Rio Tinto from fulfilling its sales of alumina to third parties.

Over the outlook period, Australia's AAB exports are forecast to reach $18 billion by 2025–26, with the price of primary aluminium forecast to rise in 2025 and 2026 (Figure 11.12).

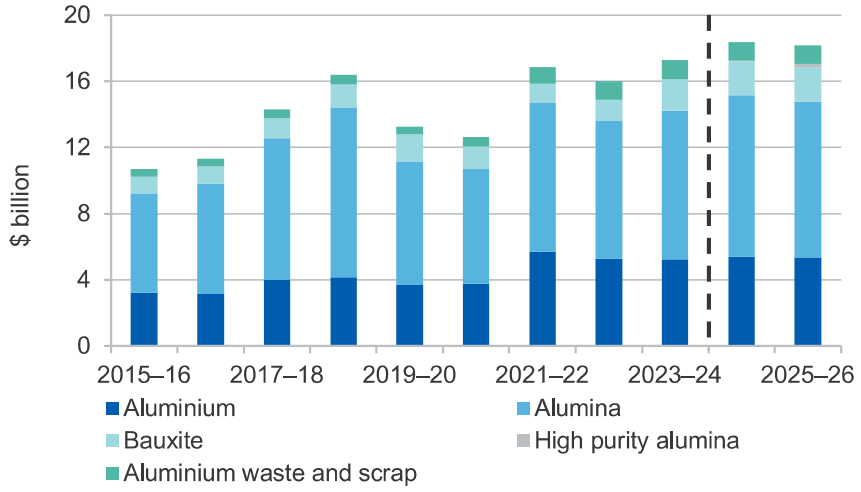
Australia's aluminium and bauxite production rose in the March quarter

Australia's primary aluminium output increased by 0.7% year-on-year in the March quarter 2024 to 386,000 tonnes, driven by a 7.7% year-on-year rise at Rio Tinto's Boyne Island smelter in Queensland and a 4.4% year-on-year rise at Rio Tinto's Bell Bay aluminium smelter in Tasmania. As a result, Australia's primary aluminium output is estimated to increase by 2.3% year-on-year in 2023–24 to nearly 1.6 Mt.

Australia's alumina output fell by 1.3% year-on-year in the March quarter 2024 to 4.5 Mt, partially driven by lower production at Rio Tinto's Yarwun alumina refinery in Queensland. Australia's alumina output is estimated to increase by just 0.3% in 2023–24 to 19 Mt. Production at Rio Tinto's QAL and Yarwun alumina refineries in Queensland is expected to be lower in the June quarter 2024, due to a disruption to gas supply.

Australia's bauxite production rose by 7.2% year-on-year in the March quarter 2024 to nearly 25 Mt, driven by a 20% year-on-year rise at Rio Tinto's Gove bauxite mine in the Northern Territory and a 9.8% year-on-year rise at Rio Tinto's Weipa bauxite mine in Queensland. As a result, Australia's bauxite output in 2023–24 is estimated to have risen by 7.5% year-on-year to 106 Mt.

Figure 11.12: Australian aluminium/alumina/bauxite exports

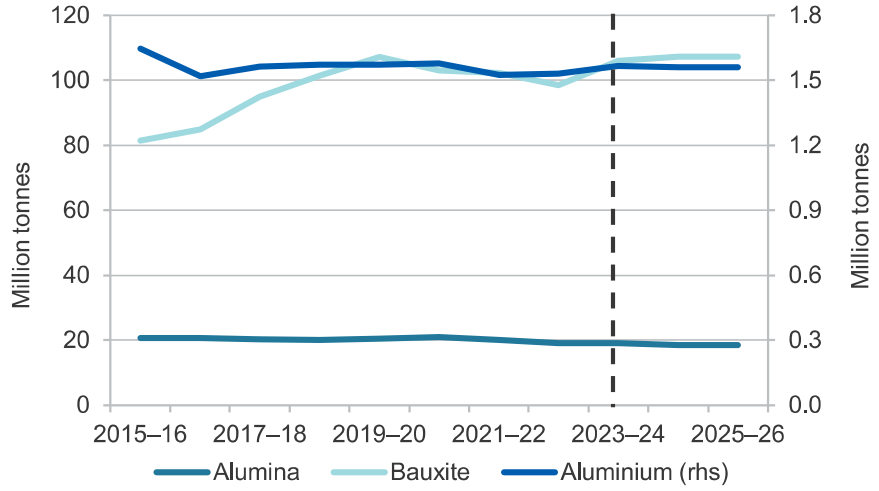


Source: ABS (2024) International Trade in Goods and Services, 5368.0; Department of Industry, Science and Resources (2024).

Higher bauxite output forecast over the outlook period

No expansions or major disruptions are expected at existing aluminium smelters in Australia over the outlook period. Australia's primary aluminium output is forecast to be around 1.6 Mt a year (Figure 11.13).

Figure 11.13: Australian aluminium/alumina/bauxite output



Source: Department of Industry, Science and Resources (2024)

The production curtailment at Alcoa's Kwinana alumina refinery in WA, starting in July 2024, is likely to reduce Australian alumina output from 19 Mt in 2023–24 to 18.5 Mt a year from 2024–25 and beyond (Figure 11.13).

Australia's bauxite output is forecast to increase by 0.6% a year in 2024–25 and 2025–26, reaching 107 Mt in 2025–26 (Figure 11.13). The expansion of Metro Mining's Bauxite Hills mine in Queensland — from 3.5 million tonnes a year to 7 million tonnes a year — and higher production in other bauxite mines, will be the main drivers of this increased output.

As part of its *Future Made in Australia* initiative, the Australian Government announced on 17 April 2024 it will provide $400 million in new loans to Alpha HPA in Queensland to support Stage Two of its HPA First project.

In May 2024, Alpha HPA made a final investment decision on Stage Two of the HPA First project. Construction is expected to commence in H2 2024, creating 300 jobs during construction. Once completed the expansion will boost the plant's production to 10,430 tonnes of HPA a year and make Alpha HPA the world's largest HPA producer.

The Australian Government also provided $94 million, under the *Powering the Regions Fund*, to the Queensland Alumina Limited refinery to install a low temperature digestion circuit into its existing high temperature unit to reduce coal and gas consumption.

Impact Minerals' Lake Hope high purity alumina pre-feasibility study is on track for completion by the end of 2024.

In June 2024, Rio Tinto announced to purchase nearly 12% stake in Boyne Island aluminium smelter in Queensland from Mitsubishi Corporation. The acquisition is expected to be finalised in the second half of 2024 and will increase Rio Tinto's share in Boyne Island aluminium smelter to nearly 74%.

Revisions to the outlook

The forecasts for Australia's AAB export earnings in 2024–25 and 2025–26 have been revised up from the March 2024 *Resources and Energy Quarterly (REQ)* — by $823 million and $117 million, respectively. The revision reflects an upwards revision to forecast LME aluminium price over the outlook period.

Table 11.1: Aluminium, alumina and bauxite outlook

						Annual percentage change		
World	**Unit**	**2023**	**2024 [f]**	**2025[f]**	**2026[f]**	**2024[f]**	**2025[f]**	**2026[f]**
Primary aluminium								
Production	kt	69,962	71,384	72,819	73,934	2.0	2.0	1.5
Consumption	kt	69,000	72,310	75,142	77,740	4.8	3.9	3.5
Prices aluminium[c]								
- nominal	US$/t	2,249	2,390	2,495	2,580	6.2	4.4	3.4
- real[d]	US$/t	2,316	2,390	2,446	2,479	3.2	2.3	1.3
Prices alumina spot								
- nominal	US$/t	344	381	398	401	10.5	4.4	0.9
- real[d]	US$/t	355	381	390	385	7.4	2.4	-1.2
Australia	**Unit**	**2022–23**	**2023–24[s]**	**2024–25[f]**	**2025–26[f]**	**2023–24[s]**	**2024–25[f]**	**2025–26[f]**
Production								
Primary aluminium	kt	1,532	1,567	1,561	1,561	2.3	-0.4	0.0
Alumina	kt	18,971	19,023	18,484	18,564	0.3	-2.8	0.4
Bauxite	Mt	98.5	106.0	107.3	107.3	7.5	1.3	0.0
Consumption								
Primary aluminium	kt	151	135	114	114	-10.4	-16.1	0.0
Exports								
Primary aluminium	kt	1,440	1,474	1,495	1,495	2.3	1.5	0.0
- nominal value	A$m	5,281	5,232	5,417	5,368	-0.9	3.5	-0.9
- real value[e]	A$m	5,497	5,232	5,253	5,066	-4.8	0.4	-3.6
Alumina	kt	16,566	16,711	16,636	16,708	0.9	-0.5	0.4
- nominal value	A$m	8,308	8,980	9,735	9,398	8.1	8.4	-3.5
- real value[e]	A$m	8,646	8,980	9,441	8,869	3.9	5.1	-6.1
Bauxite	kt	34,113	40,542	45,075	45,075	18.8	11.2	0.0
- nominal value	A$m	1,284	1,921	2,059	2,096	49.6	7.2	1.8
- real value[e]	A$m	1,336	1,921	1,997	1,978	43.8	4.0	-0.9
Total value								
- nominal value	A$m	16,005	17,279	18,358	18,178	8.0	6.2	-1.0
- real value[e]	A$m	16,658	17,279	17,803	17,154	3.7	3.0	-3.6

Notes: Total nominal and real values of Australian exports include primary aluminium, aluminium waste and scrap, alumina, high purity alumina and bauxite. **c** LME cash prices for primary aluminium; **d** In 2024 calendar year US dollars; **e** In 2023–24 financial year Australian dollars; **f** Forecast; **s** Estimate. Sources: ABS (2024) International Trade in Goods and Services, 5368.0; Bloomberg (2024); London Metal Exchange (2024); Department of Industry, Science and Resources (2024); World Bureau of Metals Statistics (2024).