

A Reality Check for Australian Thermal Coal Exporters

Coal's Role in Southeast Asia's Growth
is Declining Further

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Key Findings

The great majority of Australian thermal coal exports go to Japan, South Korea and Taiwan, markets now forecast to go into decline.

Vietnam and other Southeast Asian nations have been identified as the new growth markets for Australian thermal coal.

Relatively little Australian thermal coal currently goes to Southeast Asia.

As Vietnam's new US\$15.5 billion energy transition deal further highlights, Southeast Asian markets will be unable to replace Australia's main export destinations as they shift away from reliance on imported coal.



Executive Summary

The Southeast Asia region has been identified as a key growth market by Australian thermal coal exporters. However, this growth is likely to be short-lived. In the case of Vietnam, for example, the December 2022 US\$15.5 billion Just Energy Transition Partnership deal will build on recent renewables construction by supporting its integration and driving its growth while limiting coal power construction. In addition, coal power plants currently under construction in Vietnam are being configured for Indonesian, not Australian, coal. Elsewhere in the region, public finance for coal-fired power plants has been withdrawn and coal-fired power plant construction will be all but complete in a number of countries by 2030. The Southeast Asia market at 16% is a small portion of Australia's thermal coal exports.

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Meanwhile the Australian government's Department of Industry, Science and Resources has forecast that the main export markets of Japan, South Korea and Taiwan are already in decline as they move to renewables and look to decarbonise to meet 2050 net zero emissions targets. Southeast Asia will not be able to replace these three key markets and in the longer term the decline in Australia's thermal coal export market is inevitable.

Southeast Asia Made Up a Small Portion of Australia's Thermal Coal Exports in 2022

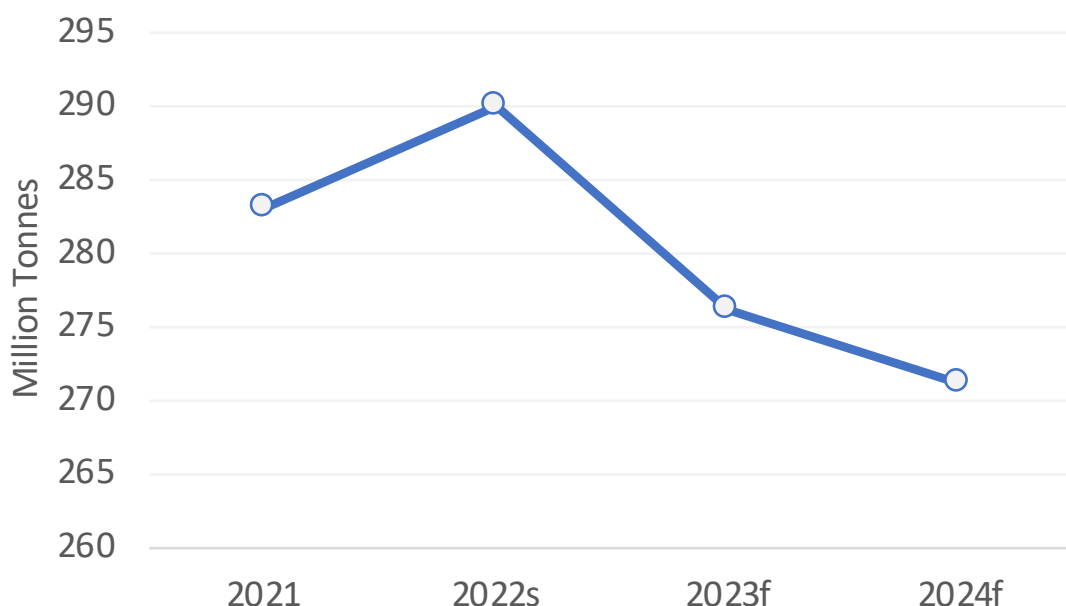


Australia's Key Coal Export Markets Entering Decline

Australia's thermal coal exports declined in 2022 to a 10-year low. According to Department of Industry, Science and Resources estimates, Australia's total thermal coal exports fell by 7.5% in 2022 to 184 million tonnes (Mt).¹ This was due in part to labour shortages² and floods restricting production.³

Although some bounce back in overall exports can be expected in 2023,⁴ imports of thermal coal by Australia's three key markets — Japan, South Korea and Taiwan — are expected to enter permanent decline over the next two years (Figure 1).

Figure 1: Thermal Coal Imports in Australia's Main Markets – Japan, South Korea, Taiwan



Source: Department of Industry, Science and Resources, *Resources and Energy Quarterly*, December 2022, Table 6.1.

Notes: f = forecast; s = estimate.

Even before the Japanese government announced its 2050 net zero emissions target, Japan was already on track for a significant reduction in coal-fired power capacity in the long term due to the age profile of its operating coal power fleet. This has now been confirmed by Japan's latest power plan, which increases the focus on renewables and will see reliance on coal- and LNG-fired power reduce significantly. Under the plan, coal's share of the power generation mix will drop from 32% in 2019–2020 to 19% in 2030. This suggests that Japan's consumption of coal will fall by almost

¹ Department of Industry, Science and Resources. [Resources and Energy Quarterly](#). December 2022, p. 68.

² IEEFA. [Coal cost trends: Higher labour costs could continue into the long term](#). 15 November 2022.

³ IEEFA. [Coal cost trends: Climate impacts on coal mining likely long term](#). 24 November 2022.

⁴ Argus Media. [Viewpoint: Australian thermal coal rebound faces snags](#). 10 January 2023.

54 million tonnes per annum (Mtpa) by 2030 according to calculations by Argus Media, a drop of 46%. To fill the gap, renewable energy will make up 36–38% of the power mix by 2030, up from 18% in 2019–2020.⁵ The government is also prioritising rapid reopenings of nuclear power plants, which could see coal imports decline even faster from 2024.⁶

South Korea — which is also targeting net zero emissions by 2050 — plans to expand the share of renewables and nuclear power in its energy mix and decrease coal power generation, putting coal imports on a downward long-term trajectory.^{7, 8} Under South Korea's 2022–2036 Basic Plan for Power Supply, the share of coal in the power mix will drop to 19.7% in 2030 and 14.4% in 2036, down from 34.3% in 2021 and 41.9% in 2018. Three proposed coal power plants will be scrapped and 17 retired. The share of LNG in the mix will be slashed to 9.3% by 2036, down from 29.2% in 2021. In their place, nuclear power's share in the power mix will rise to 34.6% by 2036, up from 27.4% in 2021, and renewable energy's share is planned to reach 30.6% in 2036, up from 7.5% in 2021. Renewable energy capacity is planned to reach 108.3 gigawatts (GW) in 2036, up from 29.2GW in 2022.⁹

Taiwan is set to convert existing coal plants to using gas, abandoning plans to upgrade its coal fleet as its coal imports pass their peak.¹⁰ In March 2022, Taiwan's National Development Council (NDC) — the government's planning body — revealed its 2050 net zero carbon emissions roadmap. Taiwan plans to fully decarbonise its power sector by 2050 with renewable energy providing 60–70% of power generation.¹¹

Meanwhile, China has partially ended its ban on imports of Australian coal¹² but this is unlikely to alter the outlook for Australian thermal coal exports. The big-picture trend is China's clear plan to become self-sufficient for thermal coal in the medium term. In 2021, President Xi Jinping announced that China's coal consumption would peak in 2025 and decline thereafter.¹³ China is increasing domestic coal production and rail capacity with the intention of replacing imports. It produced a record 4.5 billion tonnes of coal domestically in 2022, up 9% on the previous year. Production is expected to increase again in 2023 as China targets energy security. A further 260Mt of new mining capacity was approved in 2022.¹⁴ Moreover, 2022 was another record year for Chinese renewable energy installation with additions of 125GW of solar and wind power.

⁵ Argus Media. [Japan cuts 2030 coal/gas power share targets](#). 21 July 2021.

⁶ Department of Industry, Science and Resources. [Resources and Energy Quarterly](#). December 2022.

⁷ Ibid.

⁸ World Nuclear News. [South Korea increases expected contribution of nuclear power](#). 12 January 2023.

⁹ S&P Global. [South Korea to cut LNG in power mix to 9.3% in 2036, sharply raises role of nuclear energy](#). 12 January 2023.

¹⁰ Department of Industry, Science and Resources. [Resources and Energy Quarterly](#). December 2022.

¹¹ Bloomberg. [Taiwan Vows \\$32 Billion Clean Energy Spree as it Lags on Targets](#). 30 March 2022.

¹² Australian Financial Review. [China resumes Australian coal imports: reports](#). 2 February 2023.

¹³ S&P Platts. [China to curb coal demand growth in economic plans as part of climate targets](#). 23 April 2021.

¹⁴ Reuters. [China coal output slips in Dec on COVID; rises to record in 2022](#). 17 January 2023.



Australian thermal coal producers have identified Vietnam and the developing Southeast Asia region more broadly as replacement markets for Australian thermal coal exports.

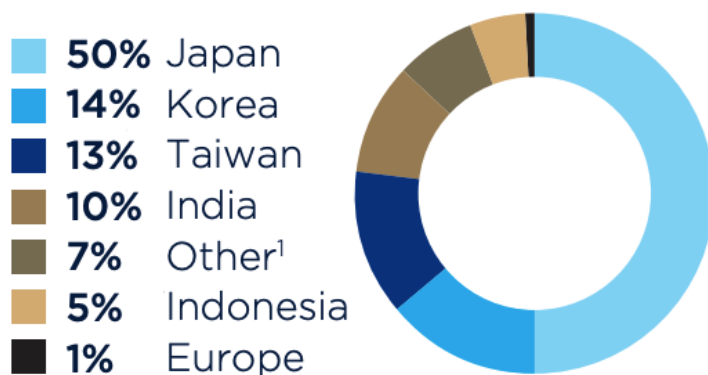
Australian thermal coal producers have identified Vietnam and the developing Southeast Asia region more broadly as replacement markets for Australian thermal coal exports as the traditional Japan, South Korea and Taiwan markets go into permanent decline.

The major Southeast Asian countries importing Australian coal include Singapore (5%), Vietnam (4%), Thailand (3%) and Malaysia (3%). Minor importers from Australia include the Philippines, Cambodia, Hong Kong and Indonesia (1% total). Excluding Singapore, which is a trading hub for onward destination ports in other areas, IEEFA calculates the region makes up 10.9% of Australian exports.

Southeast Asia currently comprises a small percentage of Australian thermal coal exports both overall (Figure 1) and at the company level (Figure 2).

Figure 2: Whitehaven Coal Sales Destination

Whitehaven's sales



Source: Whitehaven Coal, *Annual Report 2022*, p. 1.

Note 1: Other coal sales destinations include Malaysia, New Caledonia, Vietnam and Thailand.

As Australia's three key thermal coal markets of Japan, South Korea and Taiwan enter permanent decline, the opportunity to increase exports to replacement markets in Vietnam and the Southeast Asia region is diminishing.

Any coal trade growth to Southeast Asia may be short-lived and will not replace the scale of Australia's traditional Japan, South Korea and Taiwan markets.

Coal-fired Capacity Growth Curtailed

Vietnam

Vietnam has invested heavily in renewable energy in recent years. In 2019–2021, Vietnam deployed 24GW of solar, wind and hydropower. This is five times the amount of coal power built during the same period (4.9GW) and more than the entire fleet of coal power generation.¹⁵ In 2022, for the first time, Vietnam’s hydro and renewable energy output exceeded that from thermal power stations.¹⁶

Still, there are hurdles to the uptake of solar and wind projects in Vietnam. According to the International Energy Agency (IEA) Renewables 2022 report, take-up is being hampered by policy uncertainty, which has led to boom and bust cycles in the scale-up of renewables in Vietnam. It also notes that:

“Increased investment in grid infrastructure, especially in Viet Nam, is also needed to achieve faster solar PV expansion. Simplifying permitting procedures, easing local-content requirements and implementing standardised bankable PPAs [power purchase agreements] should propel international investment.”¹⁷

However, coal-fired power development in Vietnam has faced even stronger headwinds in recent years.

In December 2022, Vietnam and the International Partners Group (including the European Union, United Kingdom, United States, France, Germany, Italy, Canada, Japan, Norway and Denmark) announced a Just Energy Transition Partnership (JETP). The JETP will mobilise an initial US\$15.5 billion of public and private finance over the next three to five years to support Vietnam’s green transition.¹⁸



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The JETP aims to bring forward Vietnam’s peak emissions target from 2035 to 2030, reduce annual power sector peak emissions from 240 metric tons of carbon dioxide equivalent emissions (mtCO₂e) to 170mtCO₂e and increase the power mix contribution from renewables to 47% by 2030, up from the current plan of 36%. It also targets a reduced peak coal-fired power capacity of 30.2GW, down from 37.0GW.¹⁹

¹⁵ Ember. [Data Explorer: World electricity generation by source](#).

¹⁶ Vietnam Energy Online. [Ten outstanding events of Vietnam’s energy industry in 2022](#). 13 January 2023.

¹⁷ IEA. [Renewables 2022: Analysis and forecast to 2027](#). December 2022, p. 70.

¹⁸ European Commission. [Political Declaration on establishing the Just Energy Transition Partnership with Viet Nam](#). 14 December 2022.

¹⁹ Ibid.

This is not the first time that the coal-fired capacity target has been reduced in Vietnam. In the March 2021 draft of the long-term Power Development Plan VIII (known as PDP8), coal power capacity was capped at 46.4GW. It was reduced to 36.3GW in the November 2022 draft under the base case scenario, with the planners even acknowledging a potential 30.1GW scenario where several coal-fired power projects may not materialise and must be replaced by wind power capacity.²⁰

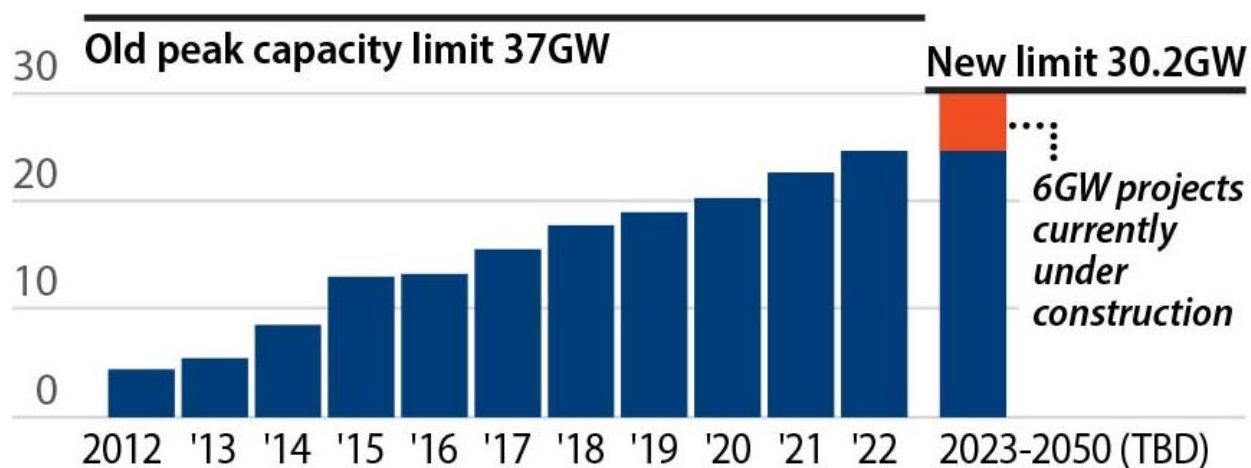
Despite these policy shifts away from coal-fired electricity to renewable energy, the PBP8, which is in draft, still plans to import 55 million metric tons of coal by 2025 and 95 million metric tonnes by 2030.²¹

Coal power plant capacity in Vietnam has grown significantly over the past decade, from 5GW in 2010 to 20GW in 2020.²² However, Vietnamese coal imports are likely to peak sooner and be lower than previously thought as pre-construction stage plants have largely been abandoned.²³

The JETP deal effectively caps growth in coal power capacity to 30.2GW (Figure 3) — equivalent to existing operations plus projects currently under development (6GW). These projects are due for completion during the 2020s, also curbing growth in capacity.

Figure 3: Vietnam Coal Plant Capacity and New JETP Deal Limit

40 GW installed coal-fired capacity



Source: Global Energy Monitor, January 2023, IEEFA analysis.

²⁰ For March 2021 draft: Ministry of Industry and Trade's Submission No. 1682 to Prime Minister on ratification of PDP8, dated 26 March 2021. For November 2022 draft: Ministry of Industry and Trade's Submission No. 7194 to Prime Minister on ratification of PDP8, dated 11 November 2022.

²¹ Vietnam Investment Review. [Responsive shift required in Vietnam's energy policy](#). 18 January 2023.

²² World Bank. [Vietnam: Country Climate and Development Report](#). July 2022, p. 39.

²³ Department of Industry, Science and Resources. [Resources and Energy Quarterly](#). December 2022.

Other Markets in the Southeast Asia Region

It's a similar story for coal across the Southeast Asia region. In the Philippines, coal consumption is expected to peak about 2030. In Thailand coal plant construction “has largely come to a halt”.²⁴

The Philippines, which is heavily reliant on coal for 55% of its energy needs, has plans for an additional 1.7GW of coal power projects either permitted or under construction, due to be installed by 2025. However, the tide may be turning. Korea Electric Power Corporation (KEPCO), the largest electric utility in South Korea, has announced plans to sell out of its 2.1GW coal power plant in Cebu and instead focus on renewable energy projects in the country.²⁵ Elsewhere in the Philippines, in Mindanao, a fossil-fuel dominated island, plans for adding renewables to balance the energy mix by 2028 have been announced by the Mindanao Development Authority.²⁶ Philippines traditional financier Rizal Commercial Banking Corporation (RCBC) has announced it will end its financing of coal projects in 2031, the maturity date of current projects. Instead, RCBC will target investment in renewables “to help finance 12 additional renewable energy projects with combined capacity of 1.6 gigawatts”.²⁷

In August 2022, state-owned power utility Tenaga Nasional Berhad (TNB) — Malaysia's largest power provider — announced plans to accelerate the closure of some of its coal-fired power plants to speed up its energy transition towards renewable energy.²⁸ TNB is targeting a 50% reduction in coal-fired power capacity by 2035 and zero carbon emissions by 2050, by which time it plans to install more than 14GW of renewable energy.

However, installed plant capacity is only part of the coal demand story. The IEA's Coal 2022 report sees near-term growth in coal consumption of approximately 4% per annum on average in Southeast Asia, mainly due to increased utilisation of coal-fired power plants owing to increased power consumption requirements. The increase is being led by Vietnam, the Philippines and Malaysia.²⁹

The IEA's outlook for the region identifies short-term increased coal demand as close to 50Mt (Figure 4, right-hand panel). This is on the back of their forecast for high growth in electricity consumption in the region. The IEA anticipates electricity demand will continue to rise by 4–6% per year until 2025. Most of that additional demand will be met by fossil fuels, with renewables meeting about a third of that demand growth.³⁰

²⁴ Ibid, p. 63.

²⁵ The Philippine Star. [KEPCO selling stake in KSPC, SPC Power](#). 19 January 2023.

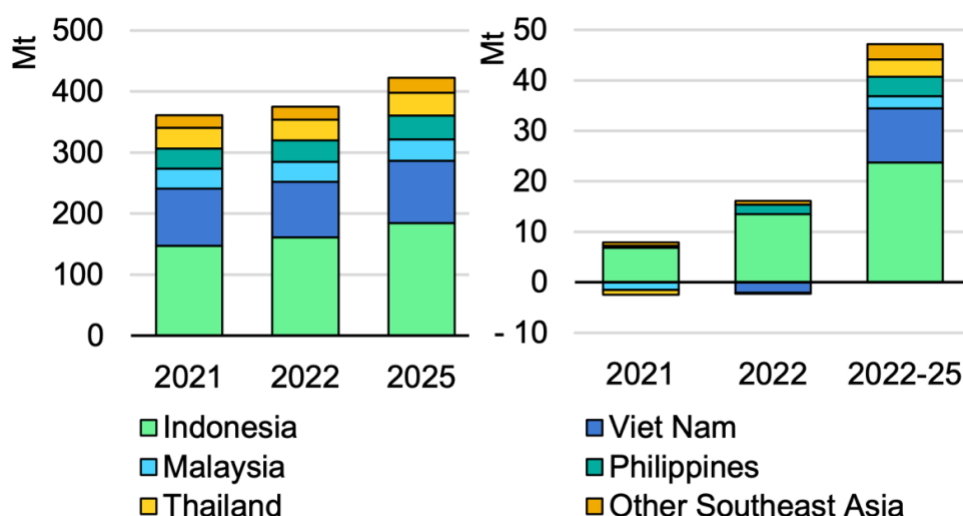
²⁶ Manila Bulletin. [More renewable energy sources expected in Mindanao](#). 18 January 2023.

²⁷ The Philippine Star. [RCBC ramps up green financing](#). 26 January 2023.

²⁸ PV Magazine Australia. [Malaysia energy major targets early closure of coal plants](#). 4 August 2022.

²⁹ IEA. [Coal 2022: Analysis and forecast to 2025](#). December 2022, pp. 31, 60.

³⁰ IEA. [Electricity Market Report 2023](#). February 2023, p. 57.

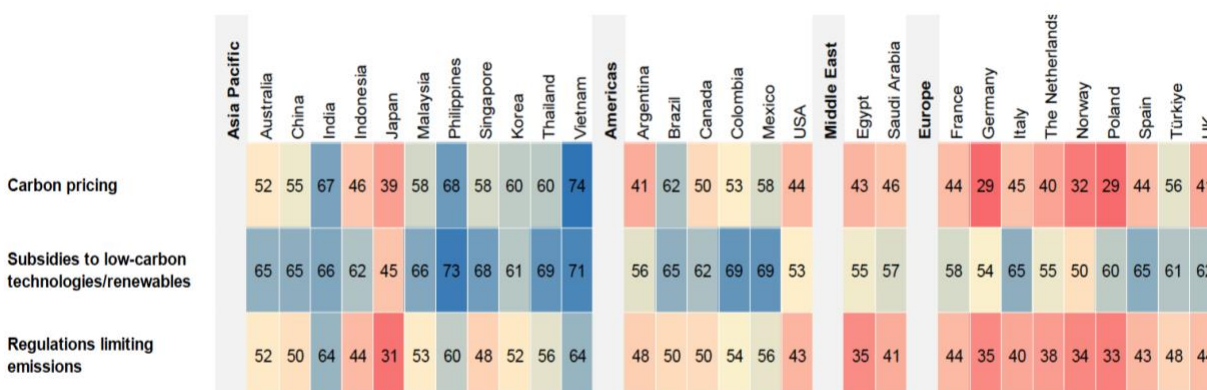
Figure 4: Southeast Asia Coal Consumption Growth by Country, 2021–2025

Source: IEA, *Coal 2022*, p. 32.

While there will undoubtedly be some increased demand for coal in the region, it is likely to be short-lived. Power plant capacity growth in Vietnam is impeded beyond the mid to late 2020s and similarly elsewhere in the region, outside of coal-producing Indonesia. Higher load factors on existing coal-fired power plants cannot provide meaningful increases in capacity in the long term. Clearly risks remain for the long-term outlook for coal demand to the region.

Public support for climate action policies is higher in Southeast Asian nations than elsewhere. A 2022 International Monetary Fund (IMF) survey of 30,000 respondents across 28 countries on people's beliefs and preferences for climate mitigation policies placed Southeast Asian countries among the most ready to act (Figure 5).³¹ The IMF survey indicates that beyond government policies and pledges, citizens' support for climate action is strong in these countries.

³¹ IMF. *Public Perceptions of Climate Mitigation Policies: Evidence from Cross-Country Surveys*. 9 February 2023.

Figure 5: Support for Carbon Mitigation Policies (% of favourable responses)

Source: IMF staff calculations based on IMF-YouGov survey.

Note: Each row in this figure shows the share of favorable responses in each country to the questions “Thinking about all of the impacts of a carbon pricing policy, to what extent do you support or oppose such a policy in your country?”, “Thinking about all of the impacts of a subsidy to renewable energy, to what extent do you support or oppose this policy in your country?”, and “Thinking about all of the impacts of regulation, to what extent do you support or oppose this policy in your country?” respectively.

Source: IMF, *Public Perceptions of Climate Mitigation Policies*, p. 11.

Coal Trade Dynamics in Southeast Asia

Indonesia and Australia are the main thermal coal exporters to the Southeast Asia region. Indonesia is targeting record coal production in 2023 for domestic and export needs of nearly 700Mt.³² It remains the world’s largest thermal coal exporter and supplies the majority of the Philippines’ coal needs, and is the second-largest supplier to Vietnam after Australia.

The IEA’s Coal 2022 report shows there has been a move away from reliance on imported coal in the region, especially from Australia. In Vietnam, domestic coal production grew by 8Mt to 51Mt in 2021, reducing its dependency on coal imports. Domestic production is forecast to grow continuously to approximately 57Mt by 2025.³³ According to the Vietnam General Statistics Office, coal imports into Vietnam grew through 2020 but have declined since (Figure 6)³⁴ due to the growth in domestic coal production and the rise of other renewable sources such as hydropower.

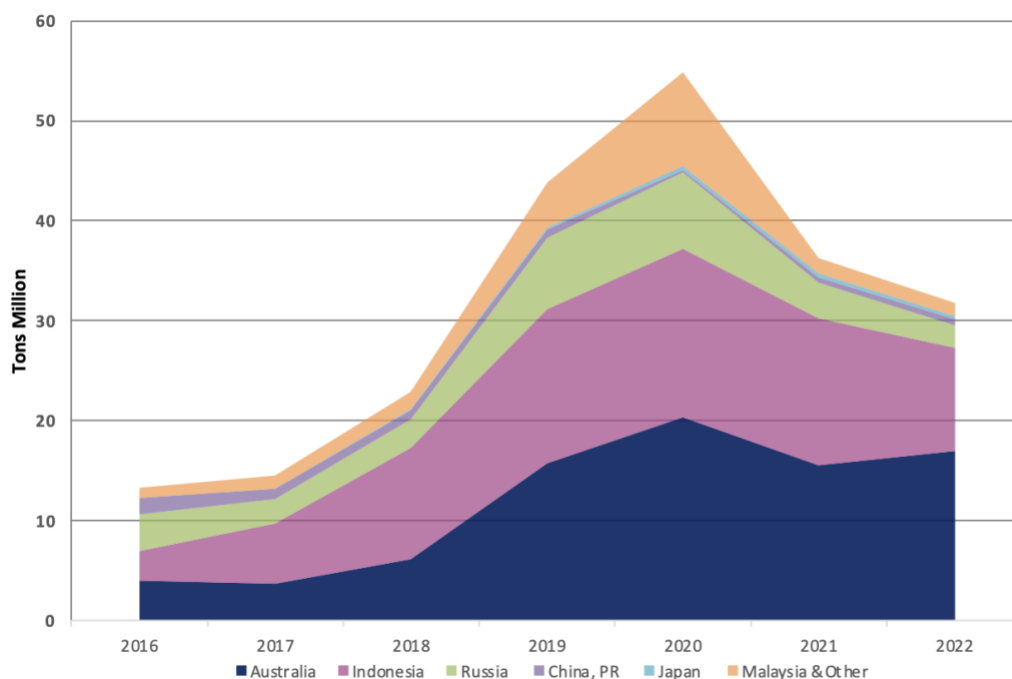
Vietnam is price-sensitive to coal imports as other Asian nations are. The strong demand for power generation together with the high-prices of imported coal creates real challenges for coal-dependent nations to ensure dependable power supply. As noted for other South Asia countries, increasing renewables can shield the effects of fossil-fuel price volatility and reduce energy security and current account risks.³⁵

³² Argus Media. [Viewpoint: Indonesia raises 2023 coal output target](#). 4 January 2023.

³³ IEA. [Coal 2022: Analysis and forecast to 2025](#). December 2022, p 46.

³⁴ Vietnam General Statistics Office. [Import-Export archive](#).

³⁵ IEEFA. [Renewable energy may provide South Asia relief from energy price shocks](#). 14 February 2023.

Figure 6: Vietnam Coal Imports Trend by Country, 2016–2022

Source: *Vietnam General Statistics Office, IEEFA analysis.*

Despite an overall decline in coal imports in Vietnam over the past two years, Australia's share of imports has increased to just over half of total coal imported. Australia's main competitor is Indonesia. Newly built and under-construction coal plants have been designed to use Indonesian coal and imports of Indonesian coal are expected to rise as coal plants currently under construction are completed.³⁶ Remaining growth in demand for thermal coal imports into Vietnam looks set to be dominated by Indonesia.

Conclusion

Southeast Asia is among the fastest growing regions in the globe. This growth has fuelled demand for electricity, which has historically relied on fossil fuels with coal fired-power accounting for approximately 43% of consumption.

Australia's thermal coal exporters who are highly exposed to major markets such as Japan, Korea and Taiwan consider Southeast Asia an attractive market for future growth.

Vietnam is a bellwether for other coal-dependent countries in the region. It has a strong track record of adding coal capacity, having added 2GW of coal-fired power per year over the past decade.

³⁶ Department of Industry, Science and Resources. [Resources and Energy Quarterly](#). December 2022, p. 63.

However, this run appears to be coming to an end. A JETP funding deal for Vietnam announced in December 2022 targets a reduced peak coal-fired power capacity of 30.2GW, constraining new capacity at only that currently in construction or development. It is highly likely that Vietnam will hit peak coal-fired capacity prior to 2030.

Despite the historical large growth trend in coal plant capacity in Vietnam and an increase in overall coal consumption in the region of approximately 15Mt in 2022, Australia's exports to Vietnam have declined slightly over the past two years. Moreover, under-construction plants have been designed to use Indonesian coal and the use of Indonesian coal is expected to rise as these projects come online.

More generally, coal exports from Australia to Southeast Asia have stagnated over the past few years.

The IEA predicts that thermal coal imports in Southeast Asia will continue to grow to 2025, primarily in Vietnam, the Philippines and Malaysia.³⁷ While Australian exporters may participate in some of this growth in the short term, the longer-term coal outlook contains little growth prospect for Australia. Any coal-trade growth may be short-lived and will not replace the scale of Australia's traditional Japan, South Korea and Taiwan markets.

³⁷ IEA. [Coal 2022: Analysis and forecast to 2025](#). December 2022, p. 60.

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