

South and Southeast Asia's Last Coal Plants

AS FINANCING TIGHTENS, THE REGIONS ARE CLOSING THE DOOR ON NEW COAL PROJECTS

Introduction

South and Southeast Asia may be seeing their last new coal plant projects, as this year government officials in Bangladesh, the Philippines, Vietnam, and Indonesia have announced plans to cut up to 62.0 gigawatts (GW) of planned coal power:

- The Bangladesh Energy Ministry has [finalized plans](#) to cancel all coal plants not currently under construction. The plan is awaiting the Prime Minister's approval, and will effectively cancel 22.9 GW of planned coal power.
- The Philippines Department of Energy announced plans for a [moratorium](#) on new coal plant permits. If approved, up to 9.6 GW of planned coal power may be cancelled.
- A preliminary draft of Vietnam's next energy plan (PDP 8) proposes that the country cancel or postpone [half of its planned coal capacity](#), totaling 17.1 GW. The final plan will be released in early 2021.
- Indonesia's Energy Ministry said it may cancel or postpone up to [15.0 GW](#) of planned power plants in its next energy plan (RUPTL 2021–2030), although about 2.3 GW will be renewable projects.

In their current form, Global Energy Monitor estimates the policies will leave 25.2 GW of coal

power capacity remaining in pre-construction planning¹ in the four countries—an 80% decline from the 125.5 GW planned there just five years ago, in 2015 (Figure 1). The exact amount will depend on the final details and negotiations with plant sponsors.

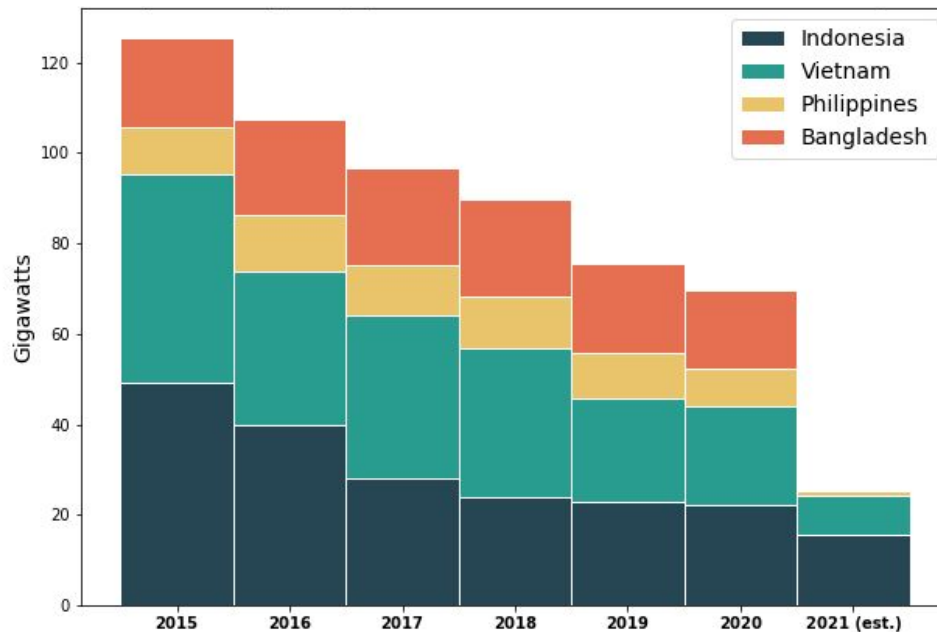
Only 10.1 GW of the remaining pre-construction coal power pipeline in the four countries has secured financial closure, however, meaning planned capacity may shrink even further in 2021 as financing for coal power projects becomes increasingly challenging.

The announcements are notable as South and Southeast Asia has long been regarded as the next center for [coal power growth](#), after China. Yet [lower](#) power demand and [slowed](#) coal plant development from the covid pandemic, coupled with [tightened](#) financing for coal plants and [decreasing](#) costs for solar and wind power, are closing the door on coal in the regions.

In moving away from coal, the four countries are joining India, which cancelled 47.4 GW of coal power in 2019 and another 28.4 GW so far in 2020. Today, India has 30.0 GW of coal power planned for construction, compared to the 238.2 GW it had in 2015.

Taken together, the cancellations are a major blow to coal's hopes in Asia.

¹ Pre-construction planning refers to coal plant projects that are actively planned but not under construction.

FIGURE 1. Coal power capacity planned for construction, 2015-2021

Coal power capacity planned for construction declined from 125.5 GW in 2015 to 69.5 GW by December 2020, and is expected to fall to 25.2 GW in 2021, once pending coal plant restrictions in the countries are finalized.

Source: Global Energy Monitor, Global Coal Plant Tracker, December 2020.

Financing Tightens, Investors Retreat

Coal projects that are not cancelled will face an ever shrinking market for coal plant financing. Since 2015, banks and companies in Singapore, South Korea, and Japan have been the source of 44% (US\$22.6 billion) of the US\$51.8 billion in coal power capacity funding that reached financial close in Bangladesh, Indonesia, Philippines, and Vietnam (Table 1). Yet financial institutions in all three countries have recently announced that they will no longer finance coal plants.

In 2019, the three major Singaporean banks – DBS Bank, OCBC Bank, and United Overseas Bank – [announced](#) that they will stop financing new coal-fired power plants. DBS and OCBC however made exceptions for coal projects in which they were already involved, specifically [Van Phong 1](#) and [Vung Ang 2](#) in Vietnam and [Jawa 9 and 10](#) in Indonesia.

In Japan, [16 financial institutions](#) now have policies that to various degrees restrict finance for coal-fired power plants. This includes recent [announcements](#) by major Japanese banks Mizuho, Sumitomo Mitsui, and Mitsubishi UFJ Financial Group (MUFG); the [withdrawal](#) from three overseas coal projects by [Marubeni](#) since its September 2018 announcement to stop funding new coal projects; and an [October announcement](#) by Mitsui that it would sell all its stakes in coal-fired power plants – in Indonesia, China, Morocco, and Malaysia – by 2030.

In July, Japan's environment minister [said](#) the country will in principle limit its public coal plant financing to ultra-supercritical coal plants in countries with a decarbonisation strategy. Campaigners are pushing for Japan to go further and end all coal financing, [including](#) plants already under consideration such as [Vung Ang 2](#) in Vietnam, [Indramayu](#) in Indonesia, and [Matarbari](#) in Bangladesh.

TABLE 1. Coal Plant Funding since 2015 in South, Southeast Asia

	Bangladesh	Indonesia	Philippines	Vietnam	Total
Japan	\$2,937.0	\$9,480.7	\$88.9	\$5,303.3	\$17,809.9
Singapore	\$0.0	\$869.3	\$44.5	\$393.1	\$1,306.9
South Korea	\$0.0	\$1,731.3	\$0.0	\$1,763.0	\$3,494.3
Total	\$2,937.0	\$12,081.3	\$133.4	\$7,459.4	\$22,611.1
All Coal Plant Financing	\$9,671.0	\$23,427.0	\$6,071.5	\$12,677.2	\$51,846.7
Percentage of Financing	30%	52%	2%	59%	44%

Coal plant funding (USD millions) that has reached financial close since 2015 by financing country (rows) and receiving country (columns). "All coal plant financing" includes all coal plant funding since 2015, with "percentage of financing" the percent total from the financing countries shown. Funding includes debt financing (loans and bonds from banks) and equity provided by companies involved in the project.

Source: Global Energy Monitor, Global Coal Plant Tracker, December 2020.

In mid-November, Samsung Life and Samsung Fire & Marine of South Korea – the two biggest coal investors in the country – [said](#) they would no longer invest in corporate bonds or underwrite insurance for coal plants. In October 2020, state-owned utility Korea Electric Power Corporation (KEPCO) [ruled](#) out further involvement in overseas coal plants, while Samsung C&T Corp [said](#) its board had decided to halt any new coal-related investments, although both companies will continue their involvement in already announced projects, including [Vung Ang 2](#) in Vietnam and [Jawa 9 and 10](#) in Indonesia.

Altogether, [four financial institutions](#) in South Korea plus the export credit agencies [KEXIM and K-SURE](#) have policies restricting coal plant financing, but often with loopholes, leading to growing political pressure to close the nation's coal finance taps. In

2020, MPs from South Korea's ruling Democratic Party proposed four [bills](#) to ban all South Korean public financial institutions from investing in overseas coal. The prospect of these bills passing is still uncertain, but they are a strong signal to the market that coal-related business is no longer promising in the country.

As Singapore, Japan, and South Korea reel in their coal plant financing, South and Southeast Asian countries may instead look to Chinese banks, which have increasingly played the role of [lender of last resort](#) for coal. Chinese banks and companies have financed 30% (US\$15.5 billion) of the US\$51.8 billion in coal power capacity funding that has reached financial close since 2015 in Bangladesh, Indonesia, Philippines, and Vietnam (Table 2).

Yet even the Chinese government has been [reeling in](#) its overseas lending, particularly for [coal](#), and is now [debating](#) restrictions on overseas coal financing. In December 2020, a group of international advisers [proposed](#) that the country consider in its decision making process any overseas project's environmental and climate footprint, with the lowest rating automatically given to coal projects. If adopted, the procedure would replace the current

approach of complying with host countries' environmental regulations, which are often considered inadequate.

The financing restrictions come as China, Japan, and South Korea have all recently [strengthened](#) their pledges under the Paris climate agreement, with South Korea and Japan committing to be carbon-neutral by 2050, and China by 2060.

TABLE 2. Coal Plant Funding from China since 2015 in South, Southeast Asia

	Bangladesh	Indonesia	Philippines	Vietnam	Total
China	\$5,274.0	\$6,653.5	\$85.0	\$3,531.1	\$15,543.6
All Coal Plant Financing	\$9,671.0	\$23,427.0	\$6,071.5	\$12,677.2	\$51,846.7
Percentage of Financing	55%	28%	1%	28%	30%

Coal plant funding (USD millions) that has reached financial close since 2015 by funders from China (row) and receiving country (columns). "All coal plant financing" includes all coal plant funding since 2015, with "percentage of financing" the percent total from China. Funding includes debt financing (loans and bonds from banks) and equity provided by companies involved in the project.

Source: Global Energy Monitor, Global Coal Plant Tracker, December 2020.

Contracting Coal Plans

Bangladesh

Bangladesh's [2016 Master Plan "Revisited"](#), released in November 2018, was heavily reliant on coal.

Under the plan, coal power was projected to grow from 0.5 GW in 2018 to 25.5 GW by 2040, whereas renewable capacity would rise from 0.3 GW to just 7.9 GW over the same period.

Yet many of the coal projects struggled to get off the ground, with only five projects totaling 4.7 GW currently under construction, and operating coal power capacity rising to just 1.2 GW as of 2020.

Public opposition to building large coal power complexes in the densely-populated country has been fierce. Four people have been killed by police and more than 100 injured protesting the [S. Alam coal plant](#).

The economic outlook for coal projects that have advanced is increasingly dim. The decline in power demand from the covid pandemic means the Bangladesh Power Development Board (BPDB) is now paying capacity payments for idled coal plants,

leading to [significant losses](#) for the BPDB and the need for large government subsidies and power tariff increases.

This year, the Bangladesh Energy Ministry announced [plans](#) to cancel all but five coal-fired power stations under construction totaling 5.4 GW: [Payra](#), [Rampal](#), [S Alam](#), [Barisal](#), and phase I of [Matarbari](#). Once approved, the Ministry's plan will put an end to the 22.9 GW of remaining coal projects in the country's pipeline, although to date [most](#) are planned to be replaced with methane gas and petroleum.

The Philippines

The Philippines has 10.0 GW of operating coal-fired capacity, half of which has been added since 2015. Coal accounts for [40%](#) of the country's power capacity, far more than any other energy source.

Like Bangladesh, the country's recent and aggressive pursuit of coal power has led to fierce public opposition, often [involving](#) members of the country's powerful Catholic Church. Many provinces have [banned](#) coal plants within their borders.

While coal was perceived years ago to be a low-cost power option, the Philippines has some of the [highest-priced electricity](#) in the [Association of Southeast Asian Nations](#). More than [three-quarters](#) of the Philippines' coal demand is imported, making the country subject to volatile fuel prices and foreign exchange risk, the costs of which utilities can pass on [to consumers](#).

By 2019, the federal government under president Rodrigo Duterte responded to the public pressure against coal, backtracking on its previous [support](#) and [pledging](#) instead to "fast-track" renewable energy and "reduce dependence" on coal.

In October of 2020, the Philippines Department of Energy (DOE) announced plans for a [moratorium](#) on permits for coal plants on undeveloped "greenfield"

sites. The policy appears to shut the door on any future coal plant proposals, as well as many current proposals totaling up to 9.6 GW – although the exact amount of cancellations will be determined by a set of guidelines that will be released soon. In November 2020, an expansion of the existing [Calaca power station](#) was cancelled, with the president of Meralco [noting](#) the recent moratorium on coal projects.

Any coal plants not cancelled by the DOE policy will likely still need to secure financing: only 0.3 GW of coal power not under construction in the Philippines has reached financial close. In December, Rizal Commercial Banking Corporation became the first bank in the Philippines to [declare](#) it will no longer finance new coal-fired power projects.

Vietnam

The coal fleet in Vietnam has grown faster than in almost any other country, adding two-thirds (11.8 GW) of its current 18.0 GW of operating coal power capacity since 2015.

Yet many coal projects in the country have been [stalled](#), often owing to strong public opposition and difficulty securing financing. The long development times for coal projects have [raised concerns](#) that such projects won't be built quickly enough to meet Vietnam's growing power demand.

Vietnam's Power Development Plan 7 (PDP 7), originally published in 2011, planned for [75 GW](#) of new coal power by 2030. In 2016, the amount was lowered to 55 GW ([PDP 7R](#)). This year, drafts of the [PDP 8](#) lay out plans for just 18 GW of coal power by 2030, including coal plants that are already licensed or under construction.

If enacted, the draft PDP 8 will cancel seven coal plant projects totaling 9.5 GW and postpone six coal projects totaling 7.6 GW to after 2030. New coal plants will also be subject to stricter efficiency standards. The [Mekong Delta planning region](#) and

[Nghe An province](#) have asked that proposed coal plants within their borders be cancelled under the PDP 8. Meanwhile, projects such as [Nam Dinh](#) are struggling to get construction off the ground before the PDP 8 is finalized.

Most coal plants with a license will still need to secure financing, as only 22% (1.9 GW) of the 8.7 GW of licensed capacity in the country has reached financial close.

Indonesia

Indonesia has commissioned 22.7 GW of coal power capacity since 2010 and currently has 10.7 GW under construction – amounts that exceed all other countries except China and India. The quick ramp-up of coal power has been part of a [national plan](#) to mine and use domestic coal, as a way to diversify away from costly oil and diesel plants.

Yet even with the large amount of coal plant commissioning and construction, Indonesia's Ministry of Energy has consistently scaled back its coal expansion plans due to [lower than expected](#) power demand, [delays](#) in commissioning, and trouble [securing coal plant financing](#).

Its 2015 ten-year energy plan envisaged [42.1 GW](#) of new coal capacity being built over the next ten years; by [2019](#), this was reduced to 24.7 GW of new coal power. The state-owned utility PLN may cut or postpone an additional [15 GW](#) of power projects in the 2021–2030 plan, mainly coal.

Most coal plants in the country have been built with [guaranteed tariffs](#) that have locked PLN into fixed payments for decades, long after just running a coal plant is projected to [cost more](#) than building new wind and solar power. As the amount of coal plants increase, so too do the subsidies needed to cover the growing payments, projected to reach an estimated US\$6.5 billion in 2020 and US\$11.4 billion by 2022, [according](#) to financial think tank IEEFA.

This year, Indonesia's Business Minister called for [reductions](#) in granting new power plant licenses. Most projects granted a license will still need to secure financing: of the 19.7 GW of planned coal plants currently without a license, just 20% (3.9 GW) have reached financial close.

In December 2020, Indonesia's Energy and Mineral Resources [said](#) it is reviewing the prospect of replacing the 4.0 GW [Suralaya coal plant](#) with solar capacity paired with batteries, as part of a [government plan](#) to retire up to 11.0 GW of coal units at 20 years of age and replace them with renewable capacity.

Background on Global Energy Monitor

Global Energy Monitor is a nonprofit research organization developing information on fossil fuel projects worldwide. Through its Global Coal Plant Tracker (GCPT) project, Global Energy Monitor has provided biannual updates on coal-fired generating capacity since 2015. GCPT data is used by the International Energy Agency (IEA), the OECD

Environment Directorate, UN Environment Programme, U.S. Treasury Department, and World Bank. GCPT data is licensed by Bloomberg LP and UBS Evidence Lab, and is used by the Economist Intelligence Unit and Bloomberg New Energy Finance.

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