Smoke out

China's pledge to stop funding overseas coal plants casts doubt on scores of facilities from Indonesia to Vietnam, nudging them towards greener sources of energy

BY ***PEI-HUA YU***

WHEN PRESIDENT XI Jinping pledged at the United Nations General Assembly last month that China would no longer build new coal-fired power plants abroad, the announcement was hailed as a significant step amid increasing climate concerns. But it has also cast doubt on the fate of Chinese-funded coal-plant projects already in the pipeline, and what it means for the power-supply plans of various countries.

According to data collected by *This Week in Asia*, nearly 70 coal-fired power plants across Southeast and South Asia that were in the planning stages are now at risk of being cancelled. Analysts say China's moratorium will also effectively leave those regions without any new coal power plants, with the exception of India.

Compared to the rest of the world, the Asian region is generally still heavily reliant on coal, with the cheap but highly-pollutive fuel making up about 50 per cent of its energy mix.

In Southeast Asia, oil forms the largest element in the energy mix while coal has been the fastest growing, underpinning economic growth but also driving up emissions and affecting public health, according to the International Energy Agency's 2019 report.

"The announcement is clearly a significant moment. With South Korea and Japan having shifted away from overseas coal finance, China was the last major public financier still considering coal projects in developing nations," said Simon Nicholas, an analyst with the US-based Institute for Energy Economics and Financial Analysis.

"This promise brings forward the end of coal power development in such nations. The countries that were previously considering coal-fired power will see wind and solar ambitions increase. This process has already begun."

China is the largest public financier of overseas coal plants. The Export-Import Bank of China and the China Development Bank accounted for 50 per cent of global public commitments to overseas coal-fired power plants, for which funding was actually provided between 2013 and 2018, according to the Global Development Policy Centre at Boston University.

While China and India are the heaviest users of coal in Asia, coal-fired plants also make up a significant proportion of the power-generation infrastructure in the Philippines, Bangladesh, Pakistan, Indonesia and Vietnam. These countries have signalled their determination at various levels to phase out coal, turning down new projects and instead seeking to expand renewable power generation amid falling costs of new technologies.

The global pipeline of proposed coal power plants has collapsed by 76 per cent since the Paris Agreement in 2015, according to European climate-change think tank E3G. The Japanese and South Korean governments also promised earlier this year to end new public financing for coal projects abroad.

"To the practitioners in the power industry, [Xi's] pledge came as an emotional surprise. Some anticipated the government would rescue the industry in some ways to ensure employment. But industry-wide, the demise of coal has long been anticipated," said Changsu, a Beijing-based researcher who focuses on overseas power markets and previously worked at the international department of a Chinese state-owned electricity enterprise.

"Since one or two years ago, the banks have internally stopped considering financing overseas coal power projects, without making any public announcement. The power giants have all shifted their focus to clean energy. Many employees of the coal power industry switched to another industry or have planned to do so."

While China's ambitious Belt and Road Initiative (BRI), launched in 2013 to boost trade through the financing of energy and infrastructure projects, once had a strong emphasis on coal projects, community opposition against dirty fuels in host countries has grown.

Christoph Nedopil Wang, director of the Green Finance and Development Centre at the Fudan University Fanhai International School of Finance in China, said that since last year, China had not announced any funding for new coal-fired power plants overseas.

"In the first half of 2021, no Chinese financing has been provided for any coal-related activities in the Belt and Road countries," he said.

Research published earlier by Wang – formerly the director of the International Institute of Green Finance at the Central University of Finance and Economics – found that energy and transport accounted for 65 per cent of all BRI investment in the first half of this year. Within the energy sector, more than half went to cleaner energy sources such as gas and hydropower.

Last year, Chinese overseas investments in solar, wind and hydropower exceeded investments in fossil fuels for the first time since the BRI was launched in 2013, according to Wang's research.

While shifting away from coal may necessitate some initial adjustments, China's decision will not be lamented in the long run because Asian countries are also cottoning on to the importance of using cleaner energy, observers say.

SWIFT REACTION

Although Xi's pledge was a single sentence and its details have not been announced, Chinese companies and financiers have responded quickly.

Several hours after his speech, Tsingshan Holding Group – one of the world's largest stainless-steel producers, which operates a mammoth industrial estate in Morowali, Indonesia – announced on its WeChat account for subscribers that it would no longer build new coal-fired power plants at its overseas investment projects, and would instead proactively use green and clean energies such as hydro, solar and wind. The privately-owned steel giant also runs manufacturing hubs in India, Zimbabwe and the United States.

The low cost of electricity, generated by the company's self-built coal-fired power plants in the Morowali estate, has helped make its operations there competitive, analysts say. The company did not respond to a request for comment as of press time.

Two days after Xi's announcement, Bank of China, one of the country's four largest state-owned commercial banks, said that from October 1 it would no longer provide financing for new coal power plants or coal-mining projects outside China.

While these developments drew attention, they showed just a fraction of the impact his promise had on the international power industry. As many upcoming projects were at the negotiation stage, firms dropped out without issuing any public statements.

AS LONG AS FINANCING IS CUT OFF, NO COMPANY CAN CONSTRUCT A PROJECT

Changsu, researcher

"Several large coal-fired power projects in the pipeline have been immediately impacted. Chinese enterprises took part in these projects as EPC or EPC-F [engineering, procurement, construction, and financing] contractors-to-be," said Changsu, referring to projects in Vietnam and Indonesia.

"One enterprise was just two months away from signing a contract with the Vietnamese government, but it has decided to drop out. Some enterprises have signed BOT [build-operate-transfer] or joint-development contracts, while others have even signed financing agreements but are now considering whether to implement them. The projects are all in trouble."

Xizhou Zhou, vice-president of global power and renewables at IHS Markit, said Chinese money for international coal projects around the world came mostly from state-owned banks such as China Development Bank and the Export-Import Bank of China – and "if Xi said something, private banks would not want to challenge that".

"Financing is the key to the feasibility of a coal-fired power project," Changsu said. "The banks in the host countries generally lack the capital to finance coal power projects. As long as the financing is cut off, no company, state-owned or private, will be able to invest or construct a project."

However, Wang of Fudan University said the statements from Xi and local governments, taken together, now paved the way for a multibillion-dollar market for renewable-energy investments from China, offering "great opportunities in employment, clean energy and affordable energy" overseas.

ABSENCE OF DETAILS

During his speech at the UN, Xi pledged: "China will step up support for other developing countries in developing green and low-carbon energy, and will not build new coal-fired power projects abroad."

In the absence of further guidelines, observers and analysts have parsed his words for meaning, while calling for clarity on the operational impact and timeline for his pledge to be implemented.

"Are financing, design, and export of equipment all counted as 'build'? Is a project that is about to break ground counted as a new one? Is a project whose materials have not been shipped from China counted as a new one? These are questions raised not only by environmental groups in countries with heavy Chinese coal investment but also by the Chinese energy industry," said Xiaojun Wang, the executive director of Manila-based NGO People of Asia for Climate Solutions.

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Nguyen Thi Hang, a programme manager at the Green Innovation and Development Centre (GreenID) in Vietnam, said the group hoped the pledge would be implemented right away. "When will it take effect? Will it apply to all types of coal projects?" she said.

Pius Ginting, executive coordinator of the Association of People's Emancipation and Ecological Action (AEER), an Indonesian environmental NGO, pointed to the significant role of Chinese capital in the development of mine-mouth power plants on the island of Sumatra.

The use of local, low-quality lignite coal on the island was made possible largely due to funds from Chinese financial institutes and investments from Chinese state-owned power companies, according to AEER's research.

"The use of the low-quality coal in a region rich in clean-energy resources increases greenhouse-gas emissions and is not in line with the Indonesian government's commitment to the Paris Agreement," he said. "It is good news that the Bank of China has announced it will not finance new coal power and mining projects. The other Chinese banks and companies should follow suit."

ALTERNATIVE ISSUES

Countries worldwide are grappling with the transition to cleaner energy, as major producers of fossil fuels reduce their output under pressure from environmental advocates and investors. But as the recent power crunch has shown, a mix of high demand for energy on the back of an economic rebound from the pandemic, shortages of power supplies, and unpredictable output from renewable sources can fuel volatility in the energy system.

In developing Asian countries where renewable-energy infrastructure is lagging behind other regions, there are worries that shifting away from fossil fuels too quickly would compromise economic growth, spark inflation in energy prices and worsen inequality. Yet, in general, the governments and people are also keenly aware of the environmental costs of inaction.

Zhou of IHS Markit noted that the demand for a reliable supply of energy for manufacturing industries was understated, and alternatives to current energy sources – such as battery-storage technology – were not yet mature enough to be deployed at a scale to back up wind and solar.

"We estimate that if solar and battery storage were used to meet all of the incremental demand over the next decade, it would require 70-130 gigawatts of batteries. In contrast, the whole world installed about 5GW of battery storage capacity in 2020, the highest year on record," he said. "Battery storage will be much more mature, scalable and much cheaper, but the future may be five to 10 years away from now."

Many countries see gas as a potential "transition fuel", but Zhou noted that the alternative faces challenges such as high costs, a long lead time for liquid-natural-gas infrastructure and uncertainty over the role of gas in a net-zero-emissions world.

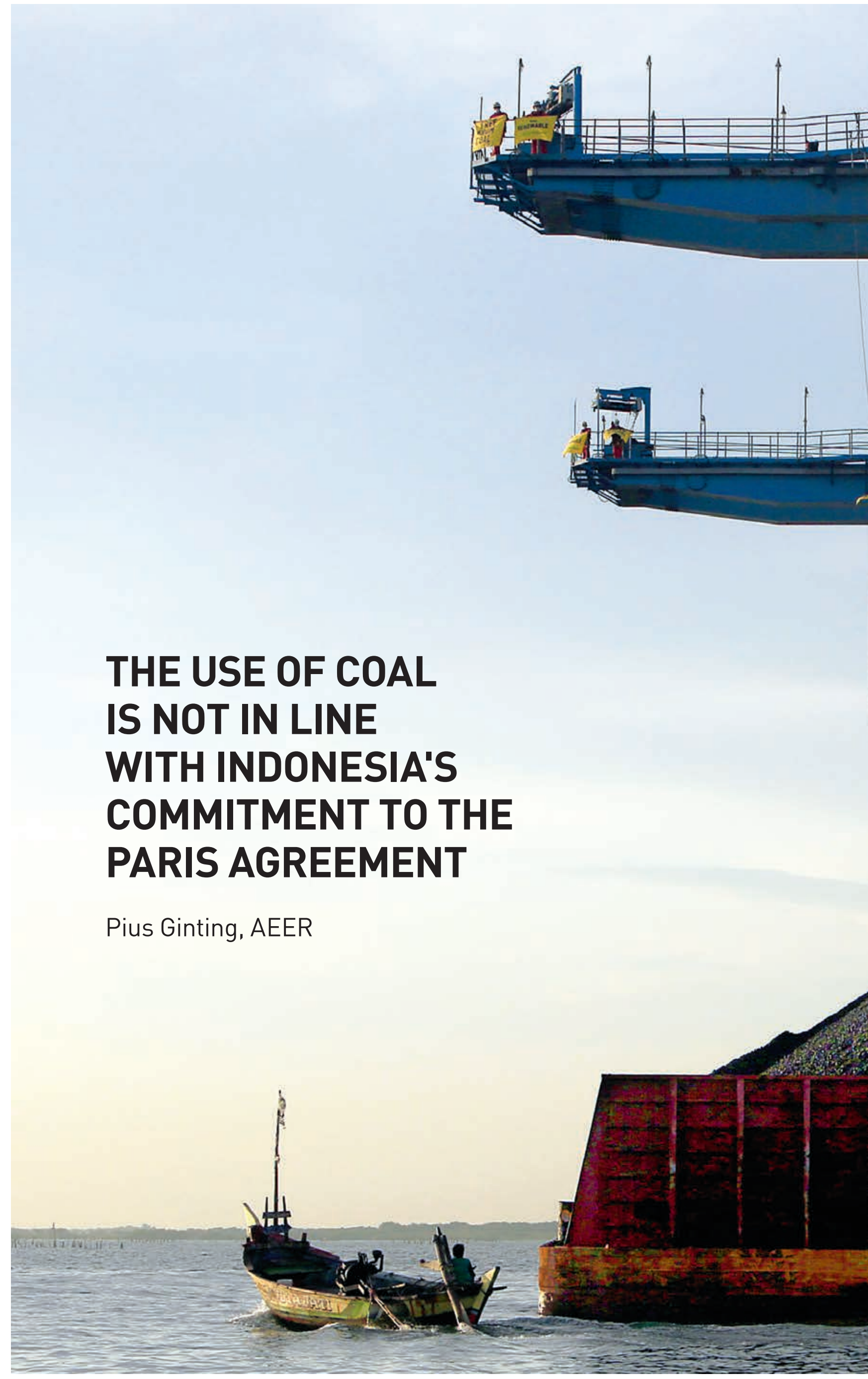
Changsu noted that as more solar and wind capacity is added to regional power systems, pumped-storage hydroelectricity would be an increasingly favourable option to abate the fluctuating output of intermittent energy sources.

Analysts and members of civil-society organisations also note that proper financing is needed to bring about the transformation of power systems, and countries will need significant support to develop clean-energy projects and enhance the adaptability of power systems.

Hang of GreenID pointed to the need for high-quality investment. "People [in Vietnam] have concerns over the quality of the technology from China. For example, people are concerned about how long solar panels will last and whether the panels will cause environmental problems after they expire," she said.

But Sara Jane Ahmed, a finance adviser to the Vulnerable Group of Twenty ministers of finance of the Climate Vulnerable Forum, said Xi's pledge offered clarity in safeguarding climate goals ahead of the UN Climate Change Conference scheduled to take place from October 31 to November 12.

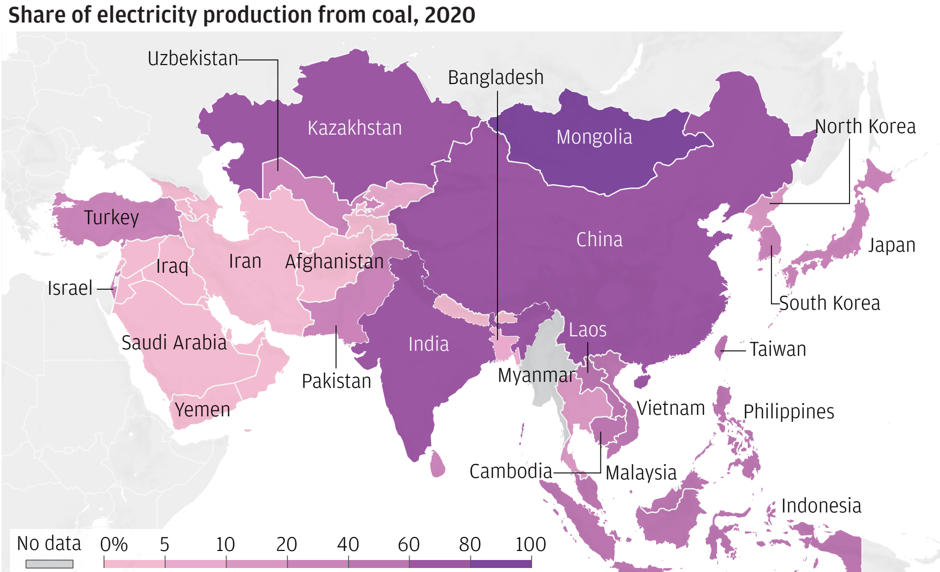
"It is important to complement the pledges made by China as well as the host countries towards the transition," she said. "It is high time for other countries like the US and Australia to do their part, too, [in stopping] their funding of the expansion of gas production overseas."



THE USE OF COAL IS NOT IN LINE WITH INDONESIA'S COMMITMENT TO THE PARIS AGREEMENT

Pius Ginting, AEER

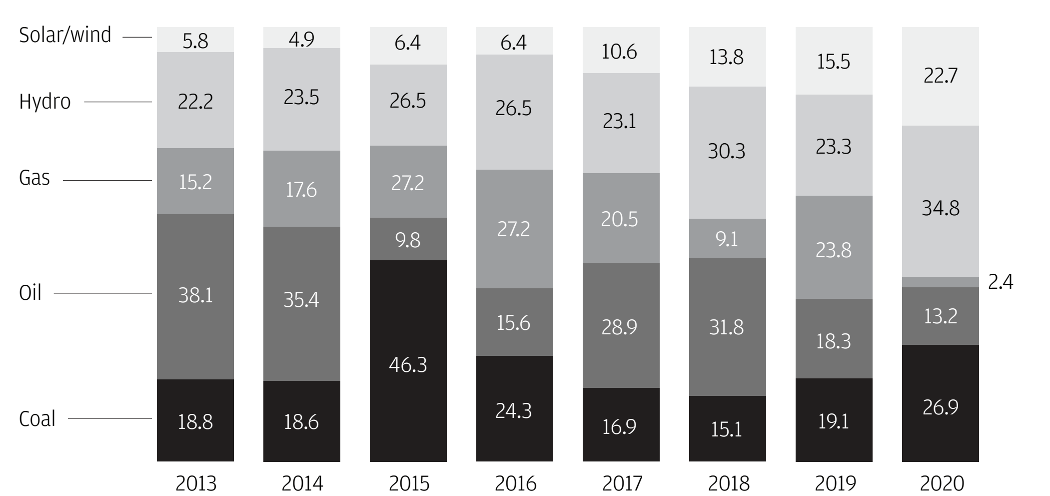
Share of electricity production from coal, 2020



SOURCE: Our World in Data SCMP

China's energy investments in the Belt and Road Initiative

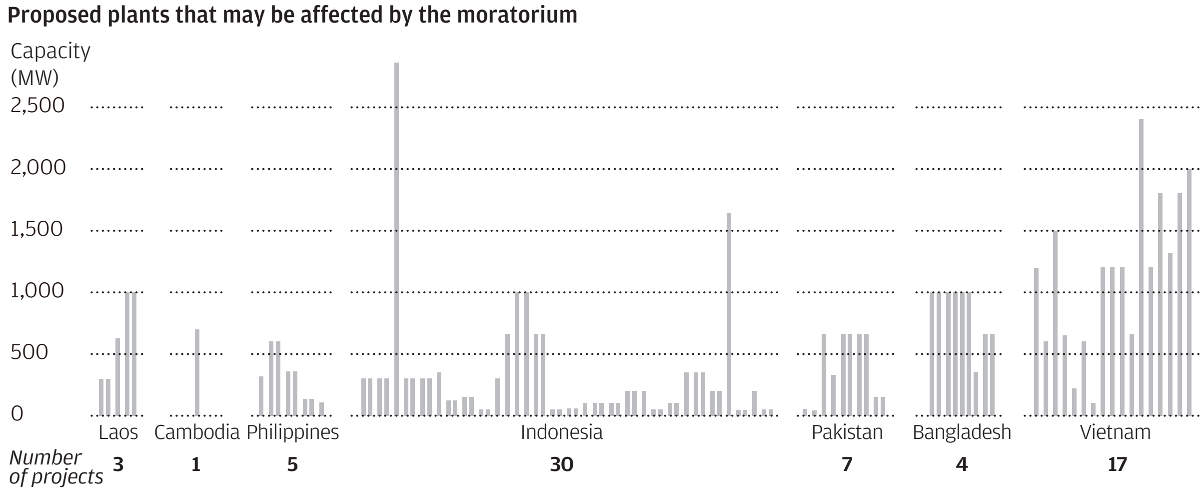
Energy investments (%)



SOURCE: IIGF Green BRI Center SCMP

GREENPEACE ACTIVISTS TRY TO BLOCK THE LOADING OF COAL AT A POWER PLANT IN CIREBON, INDONESIA. Photo: EPA

Proposed plants that may be affected by the moratorium



Note: The coal power projects on the list are yet to reach financial closure. The involvements of Chinese actors - including financiers, contractors and investors - in these projects vary. Some projects have Chinese actors as potential bidders, financiers, investors, and/or contractors. Some projects are just evaluated by Chinese firms at an early stage. The list is based on the publicly available information and does not represent views or investment advice from the sources or the SCMP.

Sources: Changsu, GreenID Vietnam, Institute for Energy Economics and Financial Analysis (IEEFA), Global Energy Monitor (GEM)

SCMP

Planting doubts

Xi's coal pledge is good for the environment, but it leaves these countries with some thinking to do

BY ***PEI-HUA YU***

CHINESE PRESIDENT XI Jinping's pledge to the United Nations that China will no longer build coal-fired power plants overseas will leave many projects awaiting financial closure at risk of cancellation.

Countries that have included significant new coal capacity in their near-term national power-supply plans are likely to be hit hardest. Among these countries are Vietnam, Indonesia, Pakistan, Bangladesh and Cambodia.

VIETNAM

Although Vietnam has shelved around half of its planned coal power plants since 2016, it recently increased its installed coal capacity target for 2030 in its latest draft power-supply plan, which was released before Xi's address to the UN General Assembly on September 21.

According to data compiled by the Green Innovation and Development Centre in Vietnam, 18 proposed coal power projects – with installed capacity totalling 20.4GW – are now unlikely to reach financial closure after China's moratorium.

Coal power projects in Vietnam have faced delays, propelling the government to bring in renewable energy to meet the power-demand boom.

Power demand in Vietnam grew on average 9.2 per cent per year from 2016 to 2020, according to IHS Markit.

Chinese financiers, contractors and investor firms are active in both the fossil-fuel and clean-energy sectors in Vietnam.

"Vietnam has gradually taken over some of mainland China's manufacturing, owing to rising Chinese costs.

"In 2018, the power shortage was pretty severe in Vietnam. A lot of solar came online in 2019, and that helped. But the supply was still very tight," said Xizhou Zhou, vice-president of Global Power and Renewables at IHS Markit.

"We expect 5GW of pre-construction coal projects to ultimately come online in the country. This is in addition to more than 8GW that are already under construction.

"If these 13GW of plants were to be cancelled, we would likely see an 18 per cent supply gap by 2030 for the country, with major implications for the country's economy and the global supply chain," Zhou said.

INDONESIA

Indonesia, the world's top exporter of thermal coal, relies on coal to generate more than 60 per cent of its power, while clean-energy development in the country has long been afflicted by an unfriendly tariff scheme.

Coal has been a vital source of financing for political campaigns and public revenue.

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While Japanese and Western firms were traditional players in the market, the presence of Chinese coal-power EPC (engineering, procurement and construction) contractors expanded after state electricity company Perusahaan Listrik Negara (PLN) introduced the first fast-track programme in 2006 to boost power supply, according to Changsu, a Beijing-based researcher of overseas power markets. In the second decade of the century, Chinese actors increasingly took part in power projects as investors.

At least forty-one per cent of already-operating coal power plants (13 GW out of 31.9 GW) and 27 per cent of those still in the pipeline (3.8 GW out of 13.8 GW) are partially or fully financed by Chinese institutes, according to analysis by Elrika Hamdi, an energy finance analyst with the US-based Institute for Energy Economics and Financial Analysis (IEEFA), based on PLN's latest long-term power-supply plan.

The statistics did not include the power plants in industrial estates not connected to PLN's grid, she added.

"Since 2020, Indonesia has begun to discuss a new bill for renewables and improved the feed-in tariff scheme with a ministerial regulation," said Yuyun Indradi, executive director of Indonesian environmental organisation Trend Asia.

"The news of Xi's overseas coal moratorium brings more hope for renewable energy."

Simon Nicholas, an analyst with the IEEFA, said that PLN's latest long-term business plan showed a much greener vision of the power-supply plan, with renewables projected to reach 51.6 per cent by 2030.

"This shows seriousness from the government side; they will no longer build new coal [plants], aside from those whose contracts have been signed," Nicholas said.

"But bear in mind that most of China's pipelines in Indonesia are already commissioned, with a sizeable amount still under construction or in the planning stage. We would have to wait and see the existing pipelines in Indonesia that have not yet reached financial closure, such as the 2 x 300MW Jambi-2 or the ones whose financing is still unclear, like the 2 x 300MW Nagan Raya 3-4."

"As the country phases out fossil fuels, we do need to pay attention to the implications for the government's fiscal health and for the communities on the ground whose jobs depend on coal," said Rishikesh Ram Bhandary, Assistant Director, Global Economic Governance Initiative of Boston University Global Development Policy Centre (GDP Centre).

PAKISTAN

Although blessed with substantial lignite coal reserves in the Thar Desert, Pakistan had not used the resource as a source of power until 2015, when Chinese investment came flooding in as part of the newly inaugurated China-Pakistan Economic Corridor (CPEC), said Haneea Isaac, a Pakistan-based researcher with IEEFA.

"Back in 2013, Pakistan was facing huge power shortages and lots of transmission and distribution problems. The government decided to bring in indigenous coal to reduce the reliance on imported fuel," said Hina Aslam, associate research fellow at the Sustainable Development Policy Institute in Pakistan. "China was the country that brought in the investments, replacing the country's long-standing groups, diversifying the power-generation mix and decreasing the generation costs."

THE PAYRA POWER PLANT, BACKED BY THE BANGLADESH-CHINA POWER COMPANY, IS THE LARGEST COAL-FIRED PROJECT IN BANGLADESH. Photo: SCMP Pictures

"Chinese financiers and investors not only provided the capital needed for extensive coal mining and power development in the country but also through Chinese EPC contractors brought in the technology that made widespread mining exploration possible," Haneea said.

The current administration, which came to power in 2018, has shown greater ambitions towards renewable energy.

At the December 2020 Climate Ambition Summit, Pakistan's Prime Minister Imran Khan said there would be "no more power from coal" – though he did not offer details.

Two projects that have been agreed under CPEC but not yet reached financial closure are likely to be affected by the overseas coal moratorium: the 300MW Imported Coal Based Power Project in Gwadar and the Thar Mine Mouth Oracle Power Plant (1,320MW) with Surface Mine, according to Azhar Lashari, a project leader at the Rural Development Policy Institute in Pakistan.

> **THIS SHOWS SERIOUSNESS FROM THE GOVERNMENT SIDE**
>
> Simon Nicholas, IEEFA

"Without any further details [of the prime minister's pledge], it is unclear whether this meant that current CPEC projects already planned would be scrapped or whether this just meant that no further projects would be proposed," Nicholas of IEEFA said.

"We will have to watch CPEC coal-power proposals like the Gwadar and the Oracle Thar Block VI projects to assess the implications of Xi's pledge."

BANGLADESH

Bangladesh traditionally relied on domestic natural gas for its power supply, while the discussion to bring coal into the power mix took place as the gas fields neared depletion, said Bhandary of the GDP Centre.

However, analysts say most of the remaining coal power project plans in Bangladesh are unlikely to proceed because of the government's financial constraints and its plans to boost renewable energy.

Bangladesh has more proposed coal power plants in need of public funding than other countries, with the bulk of the proposed funding coming from Chinese state-owned financiers and enterprises, according to US-based Global Energy Monitor (GEM)'s Global Coal Public Finance Tracker.

The moratorium was likely to reduce the capacity of Bangladesh's current pipeline of new coal plants (10,190MW) by over 90 per cent, making the country one of the two most affected by Xi's pledge, said GEM's programme director for coal, Christine Shearer.

The Bangladeshi government's shift towards a greener energy vision began before Xi's UN address.

In December 2020, the Bangladeshi Sustainable and Renewable Energy Development Authority published a draft of the country's first National Solar Energy road map.

In March, the Bangladeshi government cancelled the plan to build 10 of the nearly 30 proposed coal-fired power plants.

"The policy implementation to accelerate the energy transition in Bangladesh is still in its early stages, but the prime minister in the 'Mujib Climate Prosperity Plan' has clearly indicated a determination to shift away from the current reliance on the obsolete and expensive fossil fuels towards a transformative economic vision to maximise the use of modern energy technology," said Sara Jane Ahmed, a finance adviser to the Vulnerable Twenty Group of Ministers of Finance, a partnership of 48 climate-vulnerable countries currently chaired by Bangladesh.

"Key to reaching the outcome is grid modernisation and storage-capacity increase. China has the financial resources, technology and experience to support both areas."

CAMBODIA

Cambodia has defied the regional trend in that its government decided to ramp up the role of coal in its power-supply plan after a drought in 2019 induced severe power shortages. In 2018, hydro accounted for around 50 per cent of the power-generation mix.

In 2020, the Cambodian government approved two coal power projects and signed a memorandum of understanding with Laos to purchase power from two proposed coal plants in the neighbouring country.

"Chinese investment and businesses have been involved in almost all of Cambodia's 1.5GW of coal power operating or near completion, and it's likely the remaining 3.1GW of coal for Cambodia would include Chinese investment and developers," said Bridget McIntosh, the country director of EnergyLab Cambodia.

"President Xi Jinping's announcement comes at a time when the power system was about to be locked into too much of one source of power that is inflexible, polluting and expensive.

"EPC contracts that are dependent on closing finance and 'conditions precedent' clauses can be impacted," she said.