BRIEFING, November 2021

With China's withdrawal from overseas coal, the pipeline for new coal in Asia could drop to 22 GW — all of which will likely not be built

Key Messages

China's recent pledge to "not build new coal-fired power projects abroad" solidifies a global financial trend away from coal, as several private and governmental institutions, most notably from Japan and South Korea, have made similar announcements. Without Chinese financial support, most coal-fired power plants will struggle significantly to secure the massive up-front capital necessary for construction. The withdrawal of Chinese financing may seal off the coal-fired development pipeline once and for all.

- If implemented on all projects that have yet to secure financing, China's announced withdrawal from overseas financing for coal-fired power plants will have a major impact on coal power projects in Asia that have not yet begun construction.
- Prior to China's announcement, over 65 gigawatts (GW) of coal-fired power plants were planned for construction in Asian countries outside of China and India. If all power plants dependent on Chinese support are cancelled, it would remove two-thirds of these planned projects, leaving only 22 GW remaining in just eight countries.
- For some countries, such as Bangladesh and Sri Lanka, the impact of China's announcement is substantial, with nearly all coal-fired projects being cancelled.
- National energy policies have also made a dent in the coal pipeline, with over 5.3 GW of projects in Indonesia having been cancelled or postponed by such plans. The remaining projects are captive plants linked to industrial facilities.
- If the remaining 22 GW of planned coal capacity is cancelled, it would save over US$27 billion in capital costs that could be spent on zero-carbon technologies, energy efficiency, and grid expansion and modernization. It would also avoid adding approximately 103 million tons of CO_2 emissions annually — the equivalent of Bangladesh's total CO_2 emissions in 2019.
- The impact of investors' pledges on the pipeline has been immediate: not a single coal power station in the pre-construction stage reached a financial close in 2021. Of the 22 GW remaining, only one-third have secured financing, and many are facing local opposition and serious financing obstacles, making their completion increasingly unlikely. To avoid sunken cost, meet COP26 commitments, and jumpstart the renewable energy transition in the region, countries will need to reassess coal projects that remain in the pipeline.

Introduction

As countries pivot away from coal towards cleaner and increasingly cost-competitive renewable energy, the pipeline of coal outside of India and China is collapsing. The total capacity of projects in pre-construction — which include those announced, seeking environmental and regulatory approvals, as well as financing, and those that have secured approvals and financing but have not yet begun construction — shrunk by 76% since the Paris Agreement.

Major historical financiers' pledges to cease overseas coal support, alongside new and more ambitious national climate and energy policies, could result in another wave of coal cancellations in South and Southeast Asia. Most notably, China — the largest backer of coal in the developing world — confirmed in its updated NDC that it will "not build new coal-fired power projects abroad." Prior to China's announcement, there were over 65 gigawatts (GW) of coal plants in pre-construction status in Asian countries outside of China and India.[1] If all power plants dependent on Chinese support are cancelled, it would remove two-thirds of these planned pre-construction projects, **leaving only 22 GW of coal plants in the planning and permitting phase in just eight countries**. With all G20 countries recently committing to end public coal financing this year, the 22 GW of coal plants will struggle to secure funding.

While the timetable and eligibility of China's overseas coal exit have not been defined, the impact of investors' withdrawals has been immediate: not a single coal power station in the pre-construction stage reached financial close in 2021. This is a significant decrease from US$11 billion invested in coal in 2020 and US$10 billion in 2019. In 2020, at least US$8 billion of funding was provided by Chinese, Japanese, and Korean state-owned enterprises and development banks. Earlier this year, South Korea and Japan also committed to ending overseas financing for coal-fired power, followed by a commitment from all G20 countries at the 2021 climate talks.

Without support from these international institutions, just 22 GW of pre-construction coal projects in Bangladesh, Indonesia, Laos, Pakistan, the Philippines, Sri Lanka, Thailand, and Vietnam remain (See *Table A-1*). Less than 30% of this capacity has secured financing: Several projects have been allocated or securitized under national energy plans, but in the face of dwindling direct financing for new coal, these projects will likely require significant government subsidies and private domestic financing to get built. This will prove to be a challenge as most domestic banks in these countries — with the exception of the Philippines — are not sufficiently capitalised to fund large coal plants.

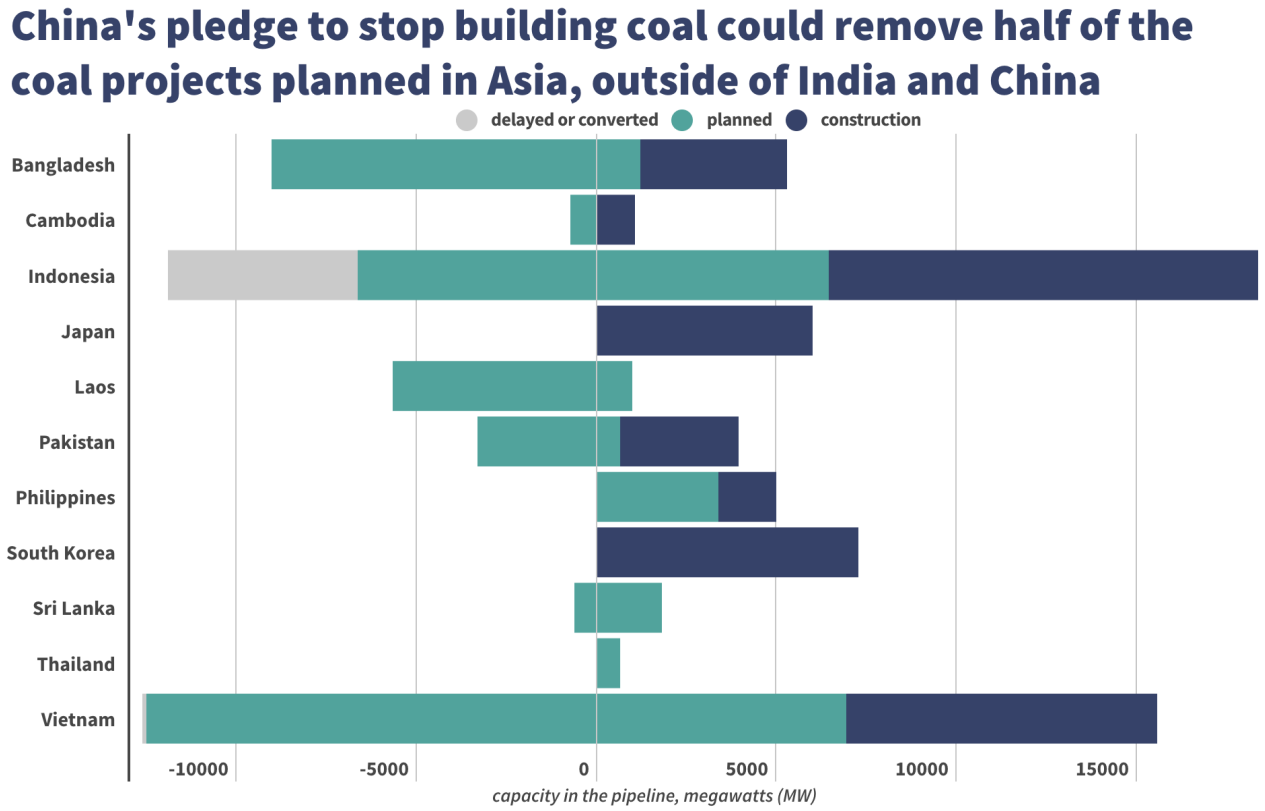
While the outlook is grim for planned coal plants, there are approximately 43 GW of coal projects in construction. This prospective additional capacity is already unneeded and risky to build. COP26 and the lead up to the event focused on ending the world's reliance on coal to meet the Paris Agreement target of limiting warming to 1.5C. The grim economic viability of new coal and unpredictable fuel costs, the environmental and health concerns, and the existing fossil fuel overcapacity should have host countries doubling down on cancelling all planned coal projects.

[1] The pre-construction pipeline in China is equivalent to 160 GW, with another 100 GW under construction. Coal-fired power generation in China is expected to peak before 2030, making coal power capacity additions unlikely. The current pipeline is the largest in the world and increasingly out of step with the rest of the world. In India, the pre-construction pipeline is 21 GW, a major reduction from previous years and indicative of reduced appetite for the fuel.

The continued development of coal-fired power is more illogical than ever, especially in the face of a worsening climate crisis and continuous improvements in the efficiency and affordability of zero-carbon power. Asian countries must take this opportunity to halt coal-fired power development and shift investments toward renewable energy and a just energy transition.

The potential dent of China's announcement on the coal pipeline

China's updated NDC confirms President Xi's earlier announcement around its overseas coal support, although no further guidance has been given as to the scope of its pledge. But with record-high cancellations in the last 5 years, most projects are on the chopping block. There is a transparency issue to these overseas deals, but if the pledge covers the breadth of China-backed coal projects in South and Southeast Asia that have not yet entered construction nor secured loans or financing, over 38 GW of pre-construction capacity would be scrapped from the pipeline.



Most of these cancellations would occur in Vietnam, where two-thirds (12.5 GW) of the 19 GW of projects in pre-construction status are linked to Chinese financing. Bangladesh and Indonesia, where the issue of fossil fuel overcapacity has made their grids increasingly unreliable and costly, could see cancellations amounting to 9 GW and 6.6 GW respectively. This is equivalent to 88% of planned coal-fired projects in Bangladesh, and 36% in Indonesia.

The highest share of potential cancellations in proportion to their existing pre-construction pipeline would occur in Laos, Bangladesh, and Cambodia. Cambodia would have its only remaining planned coal project, the 700 megawatt (MW) Botum Sakor power station, cancelled. Similarly, 85% of the coal pipeline in Laos would likely be affected by Chinese withdrawal. Both countries have virtually all of their operating, constructed, and planned coal power capacity linked to China, underscoring the role

China played as lender of last resort for coal in developing Asia. Government and coal developers in these two countries have expedited the approval and permitting of coal projects in the past few years, but without Chinese financing, all of the remaining capacity is unlikely to move forward.

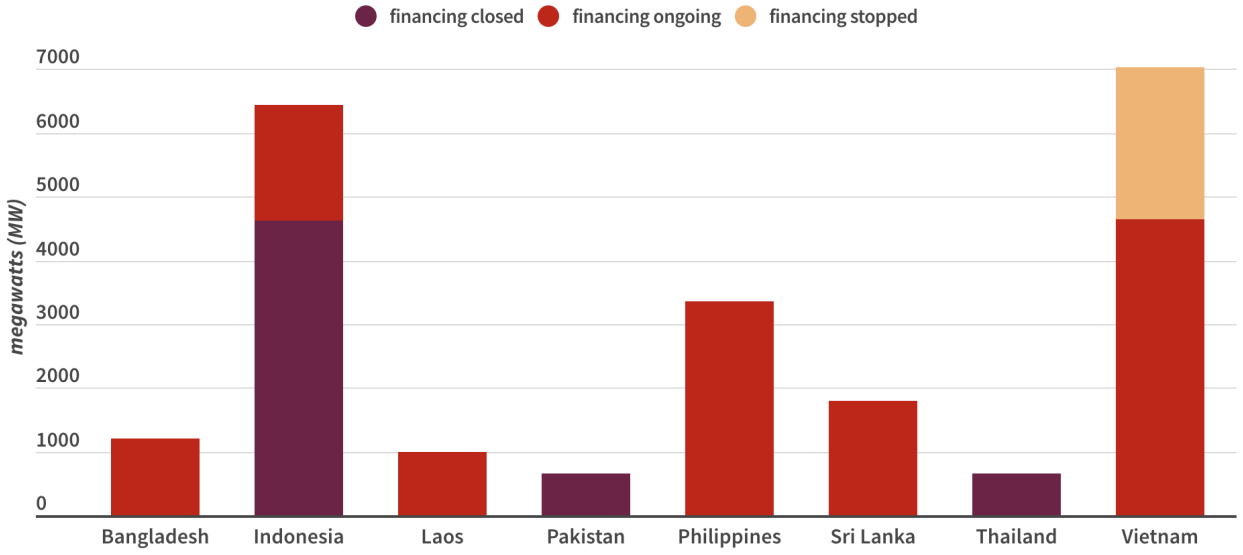
Shaving off the remaining pipeline

As the global pipeline of coal continues to shrink and China's announcement places almost two-thirds of Asia's planned capacity under question, a substantial 22 GW of planned coal-fired power plants could still be built outside of India and China. Notably, this capacity would be built on top of the 43 GW of coal projects already under construction. Given the momentum away from coal, there are serious doubts over the likelihood and necessity for many of these proposals to proceed.

If these projects are built, they would emit approximately 103 million tons of CO_2 annually, contributing more than Bangladesh's total CO_2 emissions in 2019.

On top of that, they would divert over US$27 billion in capital costs away from zero-carbon technologies, energy efficiency, and grid expansion and modernization investments.[2] Assuming that they would be able to operate over 40 years, the eight countries that would host this planned capacity could spend an additional US$42 billion in fuel costs and operating and maintenance costs. The 30 to 50 year lifetime of coal plants are also incompatible with several of these countries' net-zero commitments, which would then necessitate premature retirements, leading to sunken costs and stranded assets. Furthermore, these costs do not include fixed capacity payments that are often negotiated into power purchasing agreements, which utilities need to pay regardless of whether plants are generating power to service demand.

Less than a third of the 22 GW of remaining planned coal projects not backed by China have secured financial closure



Definition of financing status: *CLOSED projects have finalized loan and financing agreements; ONGOING projects have yet to gain complete financial support; STOPPED projects are on hold or cancelled*

Due to disruptions in project timelines from COVID-19 and difficulty in securing financing, there may be a number of projects that have been greenlighted but have yet to break ground and can thus be

[2] Assuming 1200 USD cost per kilowatt for coal plants in South and Southeast Asia, as estimated by the IEA.

halted and converted. For example, satellite photography shows that the controversial Jawa-9 and 10 plants, which would add 2 GW to Indonesia's highly-polluting Banten Suralaya coal cluster, reached financial close with KEPCO but have not begun construction. In Vietnam, the 650 MW Bac Giang plant is said to be in construction, but satellite imagery does not show any progress being made at the site.

Without any clear funders for new coal, it is important to scrutinize the remaining projects that could still be built. Vietnam and Indonesia — the countries with the highest capacity still planned regardless of a China withdrawal — elected to retain a significant number of coal-fired power plants in their new national energy plans. In Indonesia, where over 7.4 GW are captive power plants that are built under agreements with firms for their own use, plants are not affected by national energy plans which make it likely to proceed. Notably, Laos' 1 GW Sekong EPIC plant is expected to export power to Thailand, Cambodia, and Vietnam, and has shareholders from Vietnam and Singapore.

The following section takes a closer look at six of the countries that retain a significant coal pipeline. Given the increasingly poor investment and utilization of coal in the region and unneeded coal plants on already congested grids, projects without clear timelines for construction and operation with little likelihood of securing financing should be scrapped.

Bangladesh

Bangladesh has made strong moves to cease coal expansion in the country, citing negative environmental impacts and challenging financing conditions. Its 8th Five-Year Plan (8FYP) identifies two key growth areas in power sector development: renewable energy, where "overwhelming reliance on fossil fuel needs to be reduced to keep pace with the progress made globally," and improvements to energy sector finances. A new Power Sector Master Plan (PSMP) was scheduled for release in 2021 but is delayed for revision. The plan is expected to lay out a framework for addressing fuel pricing, large government subsidies for power, and increases in tariffs for fossil fuel brought about by excess and costly coal, oil and gas plants, much of which were built in the last decade.

This year, the Bangladesh Energy Ministry announced plans to cancel fifteen coal-fired power plants — 10 plants were cancelled in June 2021, and another 6 in November 2021. This effectively removed 3.9 GW of projects involving Chinese SOEs. With China's announcement, an additional 8.6 GW of China-backed coal is likely to be scrapped,[3] leaving only two pre-construction projects: Unit 2 of the Barisal power plant and the 1.2 GW Matarbari-2 plant. Although the former remains in the government's energy plan, it is dependent on financing and engineering, procurement, and construction (EPC) support from PowerChina and seems unlikely to proceed. This leaves the Matarbari-2 plant as the only remaining pre-construction coal project in the country with a chance of moving forward. Phase 1 of the project was funded by the Japan International Cooperation Agency (JICA), and JICA is considering funding Phase 2 as well. But given Japan's commitment to end overseas coal finance, this project will also struggle to move forward. In addition, the project faces considerable pushback from local groups, as the project is located in Cox's Bazar, a popular domestic tourism site with the world's longest continuous beach.

The Philippines

The Philippines' Department of Energy (DOE) declared a moratorium on new coal permits on undeveloped "greenfield" sites in October 2020, which resulted in 2.8 GW being officially cancelled, in

[3] Includes Patuakhali power station (BCPCL); Patuakhali power station (RPCL/NORINCO), Phulbari Coal Project (Sinohydro); Phulbari Coal Project (China Gezhouba)

addition to almost 1 GW considered cancelled due to a lack of progress in the last 4 years.[4] Today, the country's pipeline for coal is limited to 1.6 GW of coal-fired power under construction and another 3.4 GW in the planning stages.

In October 2021, the DOE released its Energy Plan 2020-2040 (PEP), which retained coal's role in the energy mix until 2040. This makes it possible for all of the pre-construction plants to get built, and even opens the possibility for the moratorium on permits to be lifted in the future.

The dwindled list of plants in pre-construction is already facing difficulty in securing financing. Historically, Japanese, Korean, and Chinese financiers played a small role in funding coal-fired power in the Philippines. The Institute for Climate and Sustainable Cities, a Philippines-based climate advocacy group, has stated that Chinese firms may be involved in five coal-fired power plants in the country, although the extent of that involvement is unclear or limited to EPCs. Several major national corporations, such as Ayala Corp. and San Miguel Corp, will no longer back new coal projects, and some domestic banks have pledged to reduce their exposure to coal assets. The Atimonan power station was seeking financing from local banks with great difficulty; even the EPC agreement has yet to be finalized, with an agreement with a Korean firm cancelled in 2018.

Given the high electricity costs of coal plants (much of it imported) to consumers and the increasing frequency of rotating blackouts due to plant outages and derated coal capacity, the future of these projects and coal's role moving forward should be re-evaluated.

Indonesia

Indonesia's recent net-zero commitments by both its Ministry of Energy and Mineral Resource (MEMR) and its state-owned utility, PLN, are a welcome indication of change in a country where preferential permitting of coal in the last decade has led to an over-construction of baseload power, a debt-ridden national utility (PLN), and an extremely carbon-intensive economy.

The new Electricity Supply Business Plan 2021–2030 (RUPTL) converts or cancels over 1.6 GW of coal, and postpones another 3.6 GW. However, with 12 GW of coal under construction and approximately 6.4 GW still in the pipeline even with a withdrawal of Chinese financing, its net-zero pledges could be severely hindered if more coal is built. Many projects are considered captive power or have reached financial closure, despite the long timelines and poor financial outlook.

Several of these projects are tied to a growing industrial sector. The massive 2.7 GW Nanshan Industrial Park has been linked to Chinese financing and tied to alumina production. Construction on Phase II to IV of the projects has already begun despite some units not having secured permitting or financial close.

Similarly, out of the 12 GW of planned coal-fired power to be constructed in Indonesia, 3.58 GW would be used by Indonesia's growing nickel-refining industry (See *Table 2-A*). That 3.58 GW would be added to the 3.16 GW of coal-fired power already used for nickel refining in the country. After banning exports of unprocessed ores in 2014, Indonesia saw a huge influx of Chinese investment in the nickel-refining process. Most of these facilities are operated by privately-owned Chinese companies, and many were financed by Chinese governmental and state-owned financial institutions. For example, the 1.6 GW

[4] Officially cancelled projects include Calaca power station Units 5 & 6, Subic power station, SMC Ibabang power station, Sariaya power station, and Malubuyoc power station. Power plants considered cancelled due to lack of progress include Batangas power station, Ludo power station, and Jolo power station

Delong Nickel Phase II development secured US$2 billion in debt financing from a consortium of Chinese banks that included the China Development Bank, ICBC, and Bank of China.

Nickel is a key component in the production of both stainless steel and electric vehicle batteries, with the latter application spurring the latest round of industrial investment. Indonesia is projected to more than triple its annual nickel production capacity within the next decade, from 770,000 tonnes per year to 2.5 million tonnes per year. By 2028, Indonesia could comprise 60% of total global production in nickel. Despite this growing capacity, analysts project that rising nickel demand for electric vehicles could lead to global shortages by 2026.

Many of the operating and planned coal plants in Indonesia are built by Independent Power Producers that secure PPAs with PLN, which include capacity payment clauses that require the utility to pay regardless of whether power is needed. An estimate puts the increase in subsidies as a result of more coal at US$6.5 billion in 2020 and US$11.4 billion by 2022. This would divert a significant amount of capital away from new solar and wind power, which are becoming increasingly cheaper to operate and more affordable to build.

Pakistan

Pakistan's operating and planned coal fleet has been hugely supported by the high-priority China-Pakistan Economic Corridor (CPEC). Pakistan's power overcapacity problem driven by coal plants is contributing to a growing financial crisis within Pakistan's power system. The unaffordable surplus coal plants built under CPEC have led the Pakistan government to seek debt relief from China.

The country's dependence on coal is raising the cost of electricity and worsening power system debt, which has reached US$16 billion in the first half of 2021. Generous PPAs obtained by the operational plants include huge payment obligations the government must pay to independent coal power operators — something they have begun negotiations to lower.

In December 2020, Pakistan announced that it would not have any more coal-fired power. However, the new Indicative Generation Capacity Expansion Plan (IGCEP) retains a significant amount of fossil fuel, including coal, into 2030.

China's announcement not to build overseas coal plants could remove over 3 GW of coal from the pipeline in Pakistan. This would leave just two plants in pre-construction: the Gwadar power plant, which has yet to secure financing, and Unit 6 of the Jamshoro power station, which has been financed. Gwadar is being built by a Chinese SOE and is a project under the CPEC. Cancellation of the plants is highly likely, despite its inclusion in the most recent IGCEP, as adding 1.3 GW of new coal-fired power on top of the 4.9 GW of coal plants in operation and 3.3 GW in construction would only increase the debt burden in Pakistan's power sector.

Vietnam

Like Indonesia, the coal pipeline in Vietnam remains substantial. It has some of the highest Chinese financial and EPC support by capacity, but also one of the lowest implementation rates from planning to operation. However, this is not due to a withdrawal of funding from other coal-supporting nations. Rather, a high proportion of the pipeline has been significantly delayed or cancelled as Vietnam failed to find sponsors or financing for the projects.

At COP26, the country was a full signatory to the Global Coal to Clean Power Transition Statement to stop permitting and building new coal power plants, and to fully transition from the coal generation

by 2050, a hugely significant move for the country that will likely see a fundamental reshaping of its energy and economic development plans to align with the new pledge. For instance, the most recent draft Power Development Plan (PDP8) allocated over 30 GW of coal plants to be built between 2021 and 2040. A majority of these projects were postponed to after 2030, as the country pledged to prioritize renewable deployment and connectivity on its grid and an already significant number of coal plants coming online in the last five years.

We estimate that 5.8 GW of coal plants not backed by China and preserved in the draft PDP8 may still be in the pipeline, although none of this capacity has secured financing from domestic or international funders.

Notably, the most recent PDP8 draft included Long Phu-3 and the South Korea-backed Vung Ang-3, which were previously shelved. Additionally, approximately 8.6 GW of China-backed coal projects were listed: An Khanh - Bac Giang power station, Cong Thanh power station, Quang Trach-2, Quynh Lap-2, Song Hau-2. But seeing as all of these pre-construction projects appear to have no firm finance, developer, or engineering sources attached, the likelihood they will be built is low. Energy planners should remove them from consideration in meeting future energy demand.

Coal Has No Future

China's withdrawal of financing should sound the death knell for future coal-fired power projects. This is the right move from an economic perspective — coal-fired power can no longer compete economically with lower-carbon alternatives, and existing coal capacity has led to unreliability and financial burden on governments, power utilities, and consumers in the region. Financial institutions have been wary of backing coal-fired power for several years, and without government-backed public financing, most projects will find it virtually impossible to raise the large up-front capital investment required for coal-fired power plants. Even if they can secure financing, the power plants are unlikely to be profitable. Instead, they will tie many countries into capacity payments for what will likely be underutilized units, sapping financial resources away from greener alternatives for decades.

More importantly, halting future coal-fired power development is the right move for human and planetary wellbeing. Newly built coal-fired power has already caused significant harm to communities in Asia, leading to displacement, pollution, environmental destruction, illness, and even death. Coal-fired power significantly contributes to the worsening climate crisis, the effects of which will be most heavily felt in developing countries. The call to "consign coal to history" will continue past COP26 in Glasgow, placing increasing pressure on countries to move away from the fuel faster and more assuredly.

The writing is on the wall: coal-fired power is all but finished. Rather than stubbornly continuing to pursue financing for unprofitable and destructive coal-fired power, the eight countries included in this briefing should scrap all planned coal-fired power and ensure that commitments to halt coal financing from both public and private financiers are upheld and applied to all remaining coal projects. Negotiations around converting coal projects in construction to clean energy should be pursued. Resources to meet future energy demand and socioeconomic development in the region should be devoted towards more affordable, reliable, and zero-carbon alternatives, such as wind and solar.

APPENDIX

Methodology

When analyzing coal-fired power plants that are in the construction, permitting, or planning stages, we consider two aspects of the project's status. First, we look at the project's physical and regulatory progress. Projects typically move from an initial announcement to the permitting phase, which can involve site preparation or construction of supporting infrastructure, like roads. Once physical construction of the power station has begun, the project typically has a high likelihood of reaching completion. For this analysis, we focus on power plants that are in pre-construction: announced, pre-permit, and permitted power plants.

We also consider a project's financial status. Typically, for a power station to begin and complete construction, it must secure financial closure, which entails both the signing of a financing agreement and a readiness to disburse funds for construction. Any project that has not reached financial close is categorized as "financing." When financial institutions pull out of previously agreed financial deals, the transaction is marked as "stopped." Given that both public and private financing for coal-fired power has almost completely dried up, projects that have not yet reached financial closure will struggle significantly to secure funding in the future.

Projects not linked to Chinese institutions, that have not reached financial closure, and have not been removed from national energy plans, are those considered to be "remaining" in the pre-construction pipeline as part of the 22 GW of projects analysed in this study.

Table 1-A: *Remaining Projects in Pre-Construction*

Country	Unit	Status	Finance Status	Capacity, MW
Bangladesh	Matarbari power station Unit 3	Announced	Financing ongoing	600
	Matarbari power station Unit 4			600
Indonesia	BUMI Sangatta power station Unit 1	Announced	Financing ongoing	200
	BUMI Sangatta power station Unit 2			200
	Delong Nickel Phase II power station Unit 2	Pre-permit	Closed	135
	Delong Nickel Phase II power station Unit 3			135
	Delong Nickel Phase II power station Unit 4			135
	Delong Nickel Phase II power station Unit 5			135
	Delong Nickel Phase II power station Unit 6			135
	Delong Nickel Phase II power station Unit 7			135
	Delong Nickel Phase II power station Unit 8			135
	Delong Nickel Phase II power station Unit 9			350
	Delong Nickel Phase IIpower station Unit 10			350
	East Halmahera power station Unit 1	Pre-permit	Closed	45
	East Halmahera power station Unit 2			45
	KIPI Bika Global power station	Announced	Financing ongoing	200
	KIPI power station Unit 1	Announced	Financing ongoing	200
	KIPI power station Unit 2			200

	Nanshan Industrial Park Phase I Unit 6	Pre-permit	Financing ongoing	30
	Nanshan Industrial Park Phase II Unit 1			150
	Nanshan Industrial Park Phase II Unit 2			150
	Nanshan Industrial Park Phase II Unit 3			150
	Nanshan Industrial Park Phase II Unit 4			150
	Nanshan Industrial Park Phase II Unit 5			150
	Nanshan Industrial Park Phase II Unit 6			150
	Nanshan Industrial Park Phase III Unit 1			150
	Nanshan Industrial Park Phase III Unit 2			150
	Nanshan Industrial Park Phase III Unit 3			150
	Nanshan Industrial Park Phase III Unit 4			150
	Nanshan Industrial Park Phase IV Unit 1			150
	Nanshan Industrial Park Phase IV Unit 2			150
	Nanshan Industrial Park Phase IV Unit 3			150
	Nanshan Industrial Park Phase IV Unit 4			150
	Nanshan Industrial Park Phase IV Unit 5			150
	Nanshan Industrial Park Phase IV Unit 6			150
	Nanshan Industrial Park Phase IV Unit 7			150
	Nanshan Industrial Park Phase IV Unit 8			150
	PT Walsin Nickel Unit 1	Announced	Financing ongoing	350
	Weda Bay Nickel Mines	Announced	Financing ongoing	380
	Youshan Nickel Smelter Unit 1	Announced	Financing ongoing	250
Laos	Sekong power station (EPIC)	Announced	Financing ongoing	1000
Pakistan	Gwadar power station Unit 1	Permitted	Financing ongoing	150
	Gwadar power station Unit 2			150
	Jamshoro power station Unit 6	Permitted	Closed	660
Philippines	Atimonan power station Unit 1	Permitted	Financing ongoing	600
	Atimonan power station Unit 2			600
	Lumiere Ibabang power station Unit 1	Pre-permit	Financing ongoing	355
	Lumiere Ibabang power station Unit 2			355
	Masinloc power station Unit 4	Pre-permit	Closed	315
	Masinloc power station Unit 5			315
	Misamis Oriental power station Unit 4	Permitted	Financing ongoing	135
	Misamis Oriental power station Unit 5			135
	SMC Mariveles power station Phase I Unit 2	Pre-permit	Financing ongoing	150
	SMC Mariveles power station Phase I Unit 3			150
	SMC Mariveles power station Phase I Unit 4			150
	Zamboanga power station	Pre-permit	Financing ongoing	105
Sri Lanka	Foul Point power station Unit 1	Announced	Financing ongoing	300
	Foul Point power station Unit 2			300
	CEB Long Term Generation Expansion Plan	Announced	financing ongoing	1200
Thailand	Mae Moh power station Units 8-9 Replacement	Pre-Permit	financing ongoing	655
Vietnam	Ha Tinh Formosa Plastics Steel Complex Unit 6	Pre-permit	Financing ongoing	150
	Ha Tinh Formosa Plastics Steel Complex Unit 7			150
	Ha Tinh Formosa Plastics Steel Complex Unit			

	10			
	Hai Ha CHP power station Unit 1	Pre-permit	Financing ongoing	50
	Hai Ha CHP power station Unit 2			50
	Hai Ha CHP power station Unit 3			50
	Hai Ha CHP power station Unit 4			150
	Hai Ha CHP power station Unit 5			150
	Hai Ha CHP power station Unit 6			150
	Hai Ha CHP power station Unit 7			150
	Hai Ha CHP power station Unit 8			150
	Hai Ha CHP power station Unit 9			300
	Hai Ha CHP power station Unit 10			300
	Hai Ha CHP power station Unit 11			300
	Hai Ha CHP power station Unit 12			300
	Long Phu-2 Unit 1	Pre-permit	Financing ongoing	660
	Long Phu-2 Unit 2			660
	Long Phu-3 Unit 1**	Shelved	Stopped	600
	Long Phu-3 Unit 2**			600
	Long Phu-3 Unit 3**			600
	Na Duong-2 power station Unit 1	Pre-permit	Financing ongoing	110
	Na Duong-2 power station Unit 2	Pre-permit	Financing ongoing	110
	Pha Lai-3 power station	Pre-permit	Financing ongoing	660
	Vung Ang-3 Unit 1**	Shelved	Financing ongoing	600
	Vung Ang-3 Unit 2**			600
	Quang Tri-1 Unit 1	Pre-permit	Stopped	600
	Quang Tri-1 Unit 2			600

***Projects not included in the estimated 22 GW of remaining power plants*

Table 2-A: *Indonesian Coal-Fired Power for Nickel Refining*

Area	Power Station	Capacity, MW	Status	Developer	Financing
Delong Nickel Industrial Area	Delong Nickel Phase I	530	Operating	Jiangsu Delong Nickel Industry Co	Unknown
	Delong Nickel Phase II	135	Operating	Xiamen Xiangyu Group, Jiangsu Delong Nickel Industry Co	US$2.04 billion from 8 Chinese banks
		1645	Pre-permit		
Weda Bay Industrial Park (IWIP)	Weda Bay Power Station	750	Operating	Tsingshan Holding Group, Zhejiang Huayou Cobalt Co., Zhenshi Holding Group	Unknown
	Youshan Nickel Power Station	250	Announced	Tsingshan Holding Group, Zhejiang Huayou Cobalt Co.	Unknown
	Weda Bay Nickel Mines Ltd. power station	380	Announced	Nickel Mines Ltd., Shanghai Decent Investment Group (SDI)	Developer Equity
Morowali Industrial Park (IMIP)	PT Walsin Nickel power station	350	Announced	Walsin Lihwa	Unknown
	Sulawesi Mining power station	1030	Operating	Dingxin Group, Bintang Delapan	US$1.8 billion from 4 Chinese banks
		600	Construction		
		700	Pre-permit	Dingxin Group, Bintang Delapan, Tsingshan Holding Group, Zhejiang Huayou Cobalt Co., Zhenshi Holding Group	US$320 million from CHEXIM (has not reached financial close)
	Xinxing Ductile power station	38	Operating	Xinxing Ductile Iron	Unknown
		135	Construction		
Kawasi Industrial Park	PT HPL power station	600	Operating	Harita Group, Ningbo Lygend	US$625 million from 9 private banks
	MSP Pulau Obi power station	114	Operating	PT Megah Surya Pertiwi	Unknown