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IEEFA.org

# Vietnam's PDP8 Signals Policy Confusion About the Economics of Coal

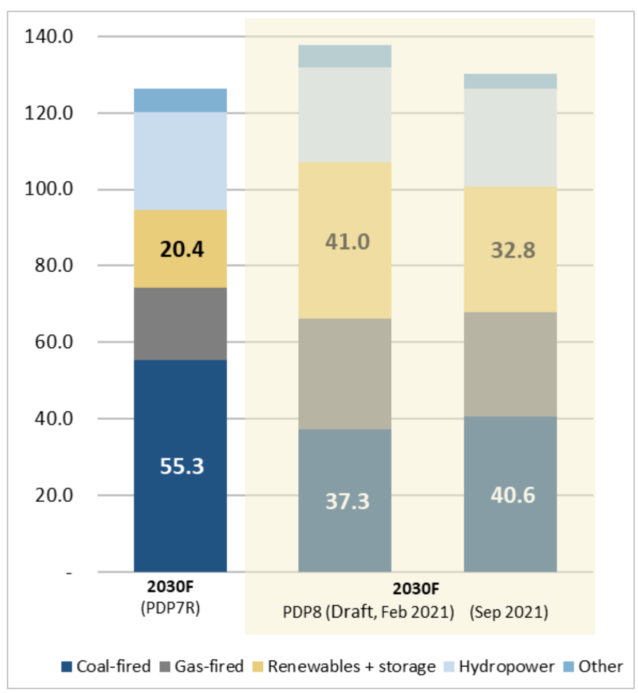
## *Wishful Thinking on New Coal Financing Might Set the Country up for Big Disappointment*

## Executive Summary

A new draft version of Vietnam's much-delayed Power Development Master Plan 8 (PDP8) began to circulate earlier this month with revisions that put the country's closely watched energy transition at risk. In a surprising shift, the planners have raised the installed capacity target for coal-fired power by 3 gigawatts (GW) to 40GW by 2030, with an additional, and final, 10GW to be deployed by 2035. To make room for this pivot back to coal, the planners sacrificed 6GW of wind power that was expected to come online by 2030. Offshore wind was removed entirely from PDP8's base case scenario.

The development marks an unexpected turn of events for a country that commentators agree is poised to benefit from the investment needed to drive down the cost of industrial-scale renewables. Instead, insiders have reverted to a baseload-heavy coal strategy which may bring new funding and project implementation risks. Between 2016-2020, coal power project sponsors delivered only 52% of the capacity expected in the master plan, undermining the security of the power supply for Vietnam's fast-growing economy. For Vietnam's energy planners, the lessons from this mistake are still fresh. This naturally raises questions about how Vietnam's top decision-makers are reading technology and financing trends that are now shaping power markets, especially after China's recent announcement that it will no longer finance overseas coal-fired power projects.[1] By opting to push ahead with an expanded coal power pipeline, Vietnam risks shunning globally recognized clean project

**Figure 1: Vietnam Pivots Back to Coal Power**
Target of Installed Capacity by Generation Source (in GW)




[1] UN News. China headed towards carbon neutrality by 2060; President Xi Jinping vows to halt new coal plants abroad. 21 September 2021.

sponsors who have credibility in delivering cost-competitive projects.

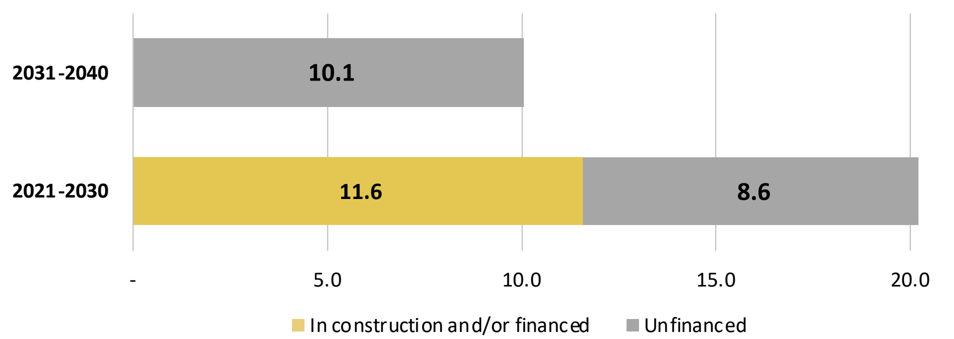
Vietnam has the autonomy to adopt a soft approach to decarbonization at this stage of the country's development. Still, its energy planners might have underestimated the strategic impact of the sector's reliance on overseas financing and the trends reshaping global capital flows. In particular, any plan to launch an aggressive build-out of new coal power will feel the impact of policy shifts. This includes the cut off of access to capital for new coal power projects that previously turned to Asian and North American governments and banks for financing.

**Of the 30GW of coal-fired power in the pipeline, IEEFA estimates less than 12GW are realizable capacity.**

Based on this change in capital market lending habits, the forecast coal capacity now expected to come online in the draft PDP8 seems unrealistic. Of the 30GW of coal-fired power in the pipeline, IEEFA estimates only less than 12GW are realizable capacity because they represent projects that are already under construction or have reached financial close. The remaining 19GW will have to face the test from more climate-conscious investment mandates that global investors and governments have recently implemented. The exodus of Japanese and South Korean export credit agencies and major banks from coal financing poses a particular challenge to Vietnam's new ambition to continue seeking finance for coal deals that conflict with carefully monitored public commitments.

**Figure 2: Vietnam's 19GW of Unfinanced Coal Power Pipeline**

Incremental Coal Power Capacity Target (in GW)




*Source: IEEFA's estimates, Draft PDP8 (September 2021).*

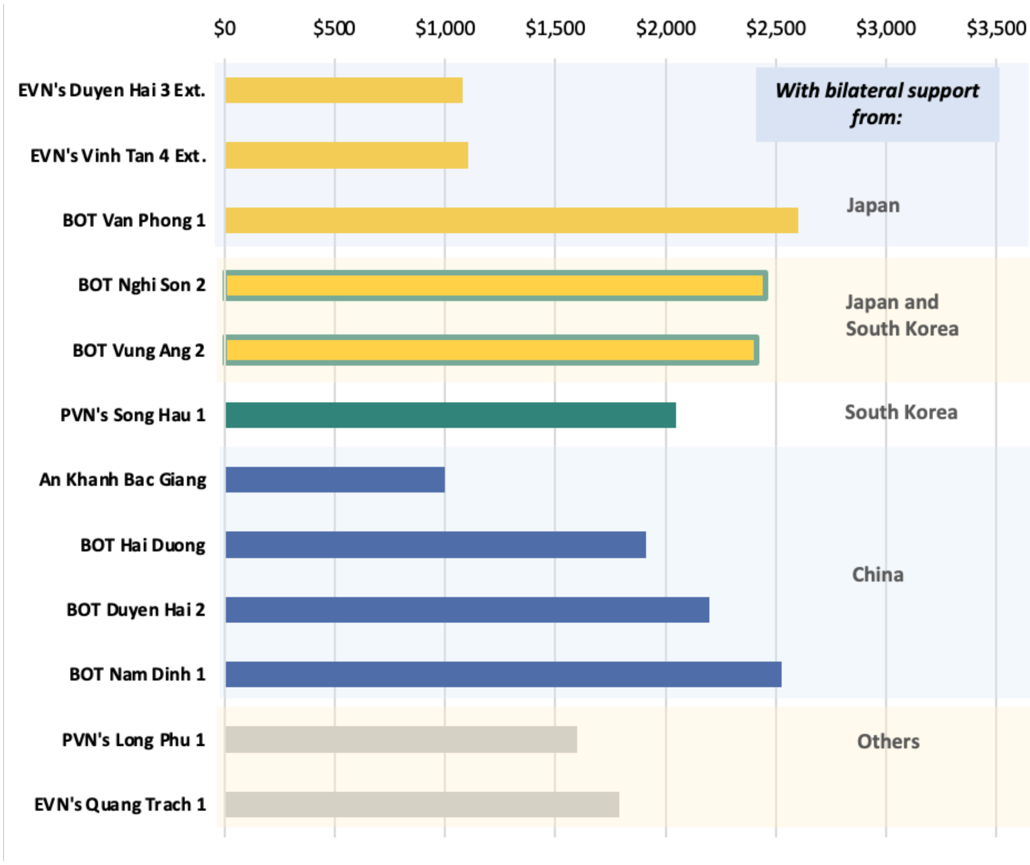
## *Vietnam's Coal Money – A Review*

Similar to other coal-centric developing economies, Vietnam's coal power fleet is heavily exposed to a handful of financing sources. The governments of Japan, South Korea, and China, via their export credit agencies and policy banks, have facilitated state-guaranteed credits to coal power projects in Vietnam to support their equipment suppliers and contractors. Public finance has been vital for de-risking projects, enabling them to crowd-in commercial finance they would otherwise struggle to secure.

A review of 12 coal power projects that concluded financing arrangements between 2015-2021 alone suggests that ten of them are backed by public financing from Japan, South Korea and China. This is irrespective of the project's sponsor and ownership.

**Figure 3: Vietnam's Coal Power Plants Bank on Bilateral Support**

Projects With Financial Closure Between 2015-2021 by Total Investment Value (in million USD)




*Source: IEEFA analysis.*

The Japan Bank for International Cooperation (JBIC) funded three build-operate-transfer (BOT) projects (Nghi Son 2, Van Phong 1, Vung Ang 2) owned or partly owned by Japanese firms, and led the co-financing for Vietnam Electricity's (EVN) Duyen Hai 3 and Vinh Tan 4 plant extensions. Similarly, the Export-Import Bank of Korea (KEXIM) supported BOT projects Nghi Son 2 and Vung Ang 2, both co-sponsored by the Korea Electric Power Corporation (KEPCO), and provided a credit facility to PetroVietnam's Song Hau 1 project.

China's funding has been equally prominent, although less noticeable, quietly supporting coal power projects sometimes sponsored by non-Chinese developers. China Eximbank and China Development Bank have backed the lending to BOT projects including Hai Duong, Duyen Hai 2 and Nam Dinh 1, and to privately-held An Khanh Bac Giang.

The reliance on foreign funding reflects the limited role that domestic banks have played in supporting Vietnam's coal power plants because they are constrained by inadequate long-term funding, high interest rates, and single borrower limits.[2] In the few instances when they have been involved, the banks—typically the four majority-state-owned banks—have partnered to meet sectoral and single client exposure limits. For example, EVN's 660MW super-critical Duyen Hai 3 plant extension was built with only USD214 million of domestic capital, or a fifth of the total investment needed. The balance came from JBIC and a consortium of Japanese commercial banks. EVN's most recent coal power project, the 1.2GW Quang Trach 1, closed its financing with the state-owned Vietcombank, only after obtaining prime ministerial approval to waive the bank's lending limit to EVN and related entities, set by law at 25% of the bank's equity.

With limited domestic funding, Vietnamese policymakers will face a much less accommodating funding scenario internationally. Governments of Japan, South Korea, and China have faced a backlash from global investors, asset managers and activists, for their poor climate track record and their support for polluting coal power plants in developing countries, including Vietnam, over the past decade. Such pressure has led to high-level announcements by senior officials, such as South Korean President Moon Jae-in, JBIC Governor Maeda Tadashi, and most recently, Chinese President Xi Jinping, that these countries would cease funding new overseas coal projects.[3] [4] [5] Japan's largest commercial banks such as Mitsubishi, Sumitomo Mitsui, Mizuho have also released coal exit policies.

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[2] World Bank. Vietnam Maximizing Finance for Development in the Energy Sector. December 2018.
[3] Reuters. South Korea's Moon vows to end new funding for overseas coal projects. 23 April 2021.
[4] Eco-Business. JBIC becomes third Japanese bank in a month to signal move away from coal. 24 April 2021.
[5] UN News. China headed towards carbon neutrality by 2060; President Xi Jinping vows to halt new coal plants abroad. 21 September 2021.

## Table 1: List of Selected Major Banks and Insurers in Asia with Announced Coal Exit Policies

| Global Financial Institution | Type | Country and/or Headquarters | Coal Finance Restrictions | Date of Latest Policy |
|---|---|---|---|---|
| Sumitomo Mitsui Banking Corporation (SMBC), a subsidiary of Sumitomo Mitsui Financial Group (SMFG) | Bank | Japan | No new financing for all coal-fired power plants, including ultra-supercritical (USC) power plants. | 2021-05 |
| Mitsubishi UFJ Financial Group (MUFG) | Bank | Japan | No financing for new or existing coal mining and coal-fired power plants. | 2021-04 |
| The Norinchukin Bank | Bank | Japan | Tightened policy for coal-fired power generation sector. | 2020-07 |
| Toho Bank | Bank | Japan | No financing for new coal-fired power plants. | 2020-05 |
| Mizuho Financial Group | Bank | Japan | No financing for new coal power projects and will end all loans for coal by 2050. | 2020-04 |
| Sumitomo Mitsui Trust Bank (SMTB) | Bank | Japan | No financing for new coal-fired power plants. | 2018-07 |
| Resona Holdings | Bank | Japan | No financing for new coal-fired power plants. | 2019 |
| RHB Bank Bhd | Bank | Malaysia | Will exit coal financing by 2022. | 2021-06 |
| Malayan Banking Berhad (Maybank) | Bank | Malaysia | No financing for new coal activities. | 2021-05 |
| CIMB | Bank | Malaysia | Will phase out coal from its portfolio by 2040. | 2020-12 |
| DBS Bank | Bank | Singapore | No financing for new coal mining and coal-fired power plants. | 2021-04 |
| OCBC Bank | Bank | Singapore | No financing for new coal-fired power plants. | 2019-04 |
| United Overseas Bank (UOB) | Bank | Singapore | No financing for new coal-fired power plants. | 2019-04 |
| Korea Development Bank (KDB) | Bank | South Korea | South Korean government's pledge to end state-backed financing of new coal-fired power plants overseas. | 2021-04 |
| Hana Financial Group | Bank | South Korea | No more financing for projects related to building coal-fired power plants at home and abroad. | 2021-03 |
| NongHyup Financial Group | Bank | South Korea | Will stop coal investments | 2021-02 |
| Hanwha Group | Insurer / Reinsurer | South Korea | Six financial divisions will not fund the construction of any coal-fired power plants, nor will they underwrite bonds issued by special purpose companies (SPCs) that have been established to build coal-powered plants locally or abroad, and will not underwrite general bonds that would finance the construction of coal-fired plants. | 2021-01 |
| Woori Bank | Bank | South Korea | No financing for new projects or bond investment into establishing coal power plants and retrieving all capital invested in existing coal projects after maturity date. | 2020-12 |
| Samsung Life Insurance | Insurer / Reinsurer | South Korea | Will stop any new coal-related business, including investment, construction, and trading. Ongoing projects will be gradually closed or withdrawn from. Can still invest in a firm generating < 50% of revenue from thermal coal power projects. | 2020-10 |
| Shinhan Financial Group Co., Ltd | Bank | South Korea | Will phase out investment in the coal industry and committed to net zero carbon future. | 2020-10 |
| KB Financial Group | Bank | South Korea | No financing for new coal-fired power plants. | 2020-09 |
| DB Insurance | Insurer / Reinsurer | South Korea | No financing for new coal-fired power plants. Will stop underwriting existing plants. | 2021-06 |
| AIA | Insurer / Reinsurer | Asia Pacific | Will divest all directly managed equity and fixed income exposure to coal mining and coal-fired power businesses by end of 2021 for equity and 2028 for fixed income; and will not permit any new investments within businesses involved directly in mining coal or generating electricity from coal. | 2021-03 |

*Source: IEEFA analysis.*[6]
*Note: This is selected data from IEEFA's full list of over 150 global banks and insurance companies with announced divestment from coal mining and/or coal-fired power plants. Data as of September 2021.*

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[6] IEEFA. Finance is leaving thermal coal. Database as of September 2021.

The global investment community is increasingly focused on how these institutions are implementing their coal exit policies.  For example, any indication that Japanese or South Korean financial institutions are tempted to grant exemptions to new fossil fuel power plants equipped with carbon capture and storage could become a catalyst for controversy. Even if permitted, Vietnam's energy planners should be mindful that abated coal power plants would have significantly higher costs and performance risks, likely rendering electricity tariff cost prohibitive for EVN and its ratepayers.

## *China – Lender of Last Resort?*

Until recently, the default view of local analysts has been that Chinese banks and their equipment providers would fill in the funding gap left behind by their North Asian counterparts. This was already a high-risk bet, and President Xi Jinping's speech at the United Nations (UN) General Assembly on September 21 has lowered the odds even further.

Following the footsteps of his South Korean counterpart, President Xi made the official declaration on the international podium that China "[would] not build new coal-fired power projects abroad" as it steps up support for developing nations to develop green and low-carbon energy.[7]

**China has declared that it would "not build new coal-fired power projects abroad".**

While details remain vague for the time being, this is nevertheless a meaningful development that can guide industry actions across China and globally.[8] It should not have come has a complete surprise to observers of China's coal-power investment track record in recent years, however.

Even before the UN announcement, recent statements from the Chinese government were already pointing to a policy shift away from environmentally harmful projects, and more emphasis on green investments and better alignment with international standards. The *"Green development guidelines for overseas investment and cooperation"* updated in July by the Ministry of Commerce and Ministry of Ecology and Environment has raised expectations that Chinese policy banks and export credit agencies would be more incentivized to channel their capital to greener

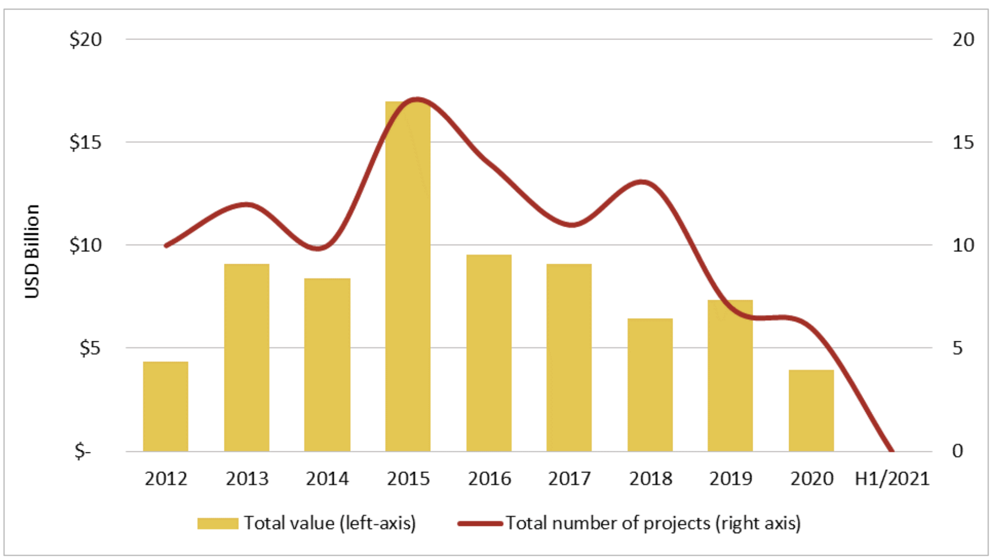
[7] UN News. China headed towards carbon neutrality by 2060; President Xi Jinping vows to halt new coal plants abroad. 21 September 2021.
[8] Only a few days after President Xi's announcement, Bank of China became the first state-owned bank to pledge to end financing foreign coal mining and power plants, effective from October 2021. Source: South China Morning Post. Bank of China pledges to end funding for foreign coal mining and power plants. 25 September 2021.

assets, or at least to be prepared for stricter regulations in the future.[9]

These policy statements align with research confirming that Chinese banks have already pivoted away from funding high-risk coal projects. Furthermore, central government planners are now more focused on new markets for China's cost-competitive renewables equipment providers. Data has shown that China's overseas coal project investments have been shrinking since 2015, with no new investment in the first half of 2021.[10] In July, China's largest bank, the Industrial and Commercial Bank of China (ICBC), announced its withdrawal from a USD3 billion coal power project in Zimbabwe, marking the first time "a Chinese bank has proactively walked away from a coal-power project".[11] In a public remark, the bank's chief economist also said that ICBC would "establish a roadmap and timeline for the gradual withdrawal of coal financing."[12]

## Figure 4: China's Overseas Coal-Related Investments and Construction Projects Has Been in Decline

Total Value and Number of Projects by Year




*Source: American Enterprise Institute's China Global Investment Tracker.*

Several high-profile projects in Vietnam could see their fates put at risk, including Nam Dinh 1, Song Hau 2, An Khanh Bac Giang, Cong Thanh, and Vinh Tan 3. These are projects still at the pre-investment phase but with previously confirmed backing from Chinese banks or sponsors.

It remains to be seen how China will implement its overseas coal exit strategy. Global observers and countries that have relied on China for coal financing will no

[9] China Dialogue. What China's new guidelines on 'green development' mean for the Belt and Road. 18 August 2021.
[10] American Enterprise Institute. China Global Investment Tracker. July 2021.
[11] Bloomberg. Biggest China bank abandons $3 billion Zimbabwe Coal Plan. 30 June 2021.
[12] South China Morning Post. Is Chinese bank ICBC's coal exit a power move for a greener belt and road? 13 June 2021.

doubt await details on matters such as the effective date, its coverage, and increasingly important, exemption instances.

Regardless, one issue remains certain. From a geopolitical perspective, placing too much confidence in China or any one partner to back controversial projects to meet energy security goals is likely to be a high-risk strategy. With a much narrower pool of capital available, Vietnamese senior officials could put themselves in an undesirable position at the negotiation table by harboring false expectations. Policymakers should also expect questions about whether the Vietnamese government and EVN are prepared to offer concessionary terms to get these coal projects across the line to offset rising carbon abatement costs that could undermine traditionally fixed project financing terms.

This raises a potentially awkward question about how regulators will handle the new moving parts in the coal financing puzzle. Will they have the authority to insulate project sponsors from Vietnam's upcoming emissions trading scheme, and as a result potentially limiting the effectiveness of the market, or will they accept a higher, emissions-adjusted cost of electricity?

Plans to develop coal power assets in-house should also be assessed with care. Unlike its peers from Indonesia or the Philippines, EVN does not have the luxury of accessing international capital markets for cheap funding, given Vietnam's low sovereign credit rating. Equally important, global investors will also be reluctant to support EVN's commitment to coal lock-in at a time when cost-competitive clean alternatives are readily available.

## *Choosing the Right Solution*

The Vietnamese government's pivot back to coal raises questions about whether key insiders are aware of the new economics of energy transition. Cost pressures are a natural policy concern, but it appears that PDP8 planners have made a common modelling mistake by focusing on a narrow menu of outdated generation choices and overlooking system-level options that improve long-term economic outcomes for consumers. In particular, they have opted for coal power at its face value, overlooking externalities and underestimating the risks associated with the development and use of emissions-heavy power.

**The focus should be on devising policies that incentivize the market to deliver cost-competitive renewables.**

Instead of opting for a baseload-only strategy dependent on more coal power plants, Vietnam should focus on devising policies that incentivize the market to deliver more cost-competitive renewables. Lack of experimentation with reverse auctions for new solar and wind power plus storage has robbed EVN of more cost-competitive options for system development.

For a dynamic economy highly exposed to global investment and consumer markets, Vietnam has a lot to gain by building credibility for its decarbonization effort. The growing pool of sustainable finance has the potential to unlock the new sources of capital that Vietnam needs to scale-up renewable energy and grid infrastructure to generate reliable and affordable electricity.

Over the past year, Vietnam has dominated headlines as the Southeast Asian country where investors believe has made the greatest strides in renewable energy adoption. There is broad agreement that steady progress on curtailment and power market reform would open the door to larger investments offering more cost-competitive terms.

With the United Nations Climate Change Conference COP26 looming ahead, the pivot back to coal seems certain to raise uncomfortable questions about whether Vietnamese policymakers have misjudged global political and financial trends. Until PDP8 gets its final sign-off, there is still a limited window of opportunity for them to set the record straight.

# About IEEFA

The Institute for Energy Economics and Financial Analysis (IEEFA) examines issues related to energy markets, trends and policies. The Institute's mission is to accelerate the transition to a diverse, sustainable and profitable energy economy. www.ieefa.org

# About the Author

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