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Playing With Matches—Who Should Take Responsibility for PLN's Financial Mess?

IPP Sponsors, ECAs, and Credit Rating Agencies Ignored the Risks

Executive Summary

For PT Perusahaan Listrik Negara (PLN), Indonesia's state-owned power company, the next few months promise to be a period of high stress as it seeks to ease the burden of escalating payments to independent power producers (IPPs) and relieve mounting cash flow problems. The COVID-19 pandemic has been the catalyst, but PLN's financial crisis has been years in the making due to poor system planning and aggressive fossil fuel baseload capacity additions on fixed terms. The result is a punishing mix of fixed financial obligations for independent power projects (IPPS) that are now delivering capacity on terms that the company cannot afford. (See our report PLN in Crisis—Time for Independent Power Producers to Share the Pain?)

The two key questions now are how PLN will navigate this financial maze and how this will affect the ecosystem of project sponsors, equipment suppliers, financial intermediaries, and funders that have flocked to these deals. All sides are guilty of having ignored the many strategic risks associated with coal power lock-in that the Government of Indonesia (GoI) is belatedly struggling to address. In addition to Indonesian taxpayers and ratepayers, we see three groups that must be monitored carefully to track PLN's rescue efforts—the IPPs; the export credit agencies (ECAs) that provided key guarantees to support bank financing and bond issues; and the credit rating agencies (CRAs) that have long taken a permissive view of PLN's high-risk growth strategy.

PLN's financial crisis has been years in the making due to poor system planning.

Delay, Defer, and Cut

As PLN seeks to conserve its shrinking cash flow, it will face several challenges. Based on IEEFA forecasts, PLN is expected to report an operating loss before subsidy of IDR 28.7 trillion (USD 1.9 billion) and could require a subsidy of as much

as IDR 92.7 trillion (USD 6.0 billion) in 2020 and 137.6 trillion (USD 8.9 billion) in 2021. In a depressed demand scenario, which now has to be the base case, PLN's cash burn will be even worse, putting immense pressure on the GoI to find solutions. PLN has reportedly begun to engage the IPPs in the hopes of sharing the burden by easing fixed power purchase payments that are expected to rise from an estimated IDR 120 trillion (USD 7.8 billion) in 2020 to IDR 164.5 trillion (USD 10.7 billion) in 2021.[1] These will not be easy negotiations. PPAs are notoriously complex contracts and the IPP sponsors, ECAs, and PLN have agreed to formulas for establishing obligations and managing risk.

Renegotiation can mean many things and all parties will have to weigh the cost of giving concessions against the impact of putting PLN at further risk of financial duress. Across the Asian region, it's not uncommon to come across ambiguous references to similar situations where PPA terms have changed to accommodate new realities. In China, when previously "guaranteed" contracts are suddenly renegotiated, it's ironically referred to as "national service"—as if the cutbacks were simply a cost of doing business at the highest levels. In Indonesia's case, it's premature to guess how the many complicated legal and political issues will have to be addressed and whether there will be improved accountability at the end of the process.

Nevertheless, it's clear that PLN and the IPPs will need to find common ground. For investors and power sector planners, it will be crucial to know what to watch for as this process moves forward. There is little transparency concerning the actual terms of PLN's power purchase agreements (PPAs). One important issue is whether the circumstances surrounding COVID-19 qualify as a so-called "*force majeure*" event that eliminates liability when the parties cannot meet their obligations due to a natural disaster or catastrophe. In this case, COVID-19 would have to be seen as having cut power demand so severely that normal operations and power offtake could not reasonably be expected.

Does the COVID-19 crisis qualify as a so-called "force majeure" event that limits liability?

PLN's earlier PPAs offered generous terms to project sponsors to offset credit risks that were associated with perceived Indonesian risks prior to 2017. When Indonesia gained investment grade status in May 2017, the Ministry of Energy and Mineral Resources (MEMR) revised the PPA regulations to place more risk on the IPP sponsors. According to Pricewaterhouse Coopers (PwC), this meant that "Under the previous regulation *force majeure* risks were generally borne by the party most able to bear them, generally meaning that IPPs were not subject to damages from events

[1] IEEFA. PLN in Crisis—Time for Independent Power Producers to Share the Pain? April 2020.

beyond their control. The new regulations, however, appear to place PLN and IPPs in a risk-sharing position if [say] an FM event arises from a natural disaster."[2]

PwC's analysis suggests that if a *force majeure* event occurred after 2017, PLN would not be obligated to make "deemed dispatch" payments. In recognition of potential losses to the sponsors, the term of the PPA could be extended. Nevertheless, the project sponsors would still be exposed to obligations to lenders that would have to be addressed by other parties including the ECAs if they provided guarantees. In the 2017 PPA revisions, MEMR also toughened performance penalties and moved from a build-own-operate (BOO) model to build-own-operate-transfer (BOOT) that requires the project sponsor to transfer the facility to PLN at the end of the project term.[3]

Taken together, these 2017 revisions to the PPA regulations suggest that MEMR intended to take steps to put more risk on project sponsors. What's less clear is whether the tougher regulations actually made their way into the PPAs that were subsequently negotiated. According to some practitioners, this may not have been the case. If true, this would suggest that despite efforts to balance risk more competitively, PLN may have been under pressure to accept more FX-risk on required PPA payment obligations in an effort to secure more favorable USD-denominated pricing and to keep up the pace on the government's 35 GW target. If true, the move would have very negative financial consequences for PLN, given the 11.0% depreciation of the rupiah since the beginning of the year. Moreover, it suggests that despite sustained interest in new IPP opportunities, project sponsors have managed to avoid competing aggressively on the key risk elements of IPP terms.

The inherent complexity of PPAs and the diverse interests of different IPP sponsors will play a meaningful role in how negotiations proceed. Despite the uncertainty about what may take place in crowded conference rooms, it may be more worthwhile to consider which IPPs may be the focus of any discussion. Logic suggests that the group of IPPs that may be most at risk as PLN tries to limit its cash burn would be some of the biggest IPPs that have crowded into the Java-Bali grid over the past decade, as well as those rushing to complete construction in both Java and Sumatera. Many of these IPPs share common characteristics: Deep pockets, local influence, sovereign links, and reputations that could be damaged if they are seen to profiteer at Indonesia's expense.

[2] PwC Power in Indonesia, Investment and Taxation Guide 2018, p. 50
[3] Note that the BOOT clause for renewable power projects was ended in February 2020 although it remains in place for fossil fuel power projects.

Table 1: Significant Recently Commissioned and Pending IPPs

Project Sponsors	Disclosed Ownership Interests (MW) *	% of Total	Country	Disclosed Project Participation
PJB and subsidiaries	2,212	13.1%	Indonesia	Jawa-7, Jawa-8/ Cilacap expansion, Jawa-3, Batang Toru Peaker, Sumsel-6, Sumbagsel-1, Riau-1, Sumbagut 1, 3, 4, Riau 2, Sumut 2
China Shenhua	1,925	11.4%	China	Jawa-7, Sumsel -1
Marubeni	1,446	8.6%	Japan	Jawa-1/Cirebon 2 (expansion), Jawa-1, Jawa-3, Cirebon 3
Indonesia Power	1,020	6.1%	Indonesia	Jawa 9-10
Sumitomo Corp	1,000	5.9%	Japan	Jawa-4/ Tanjung Jati 5 &6 / Tanjung Jati B
Barito Pacific	980	5.8%	Indonesia	Jawa 9-10
YTL	960	5.7%	Malaysia	Jawa-3 / Tanjung Jati A
China Huadian	882	5.2%	China	Sumsel 8 Mine Mouth, Riau-1
Pertamina Power	704	4.2%	Indonesia	Jawa-1
Adaro	680	4.0%	Indonesia	Batang
J-Power	680	4.0%	Japan	Batang
Itochu	640	3.8%	Japan	Batang
PTBA	540	3.2%	Indonesia	Sumsel 8 Mine Mouth
PT SSP	510	3.0%	Indonesia	Jawa-8/ Cilacap expansion
Kansai Electric	500	3.0%	Japan	Jawa-4/ Tanjung Jati 5 &6 / Tanjung Jati B
United Tractors	500	3.0%	Indonesia	Jawa-4/ Tanjung Jati 5 &6 / Tanjung Jati B
Sojitz	352	2.1%	Japan	Jawa-1
China Datang & Sumberdaya Sewatama	304	1.8%	China	Nagan Raya 3 & 4
Indika	250	1.5%	Indonesia	Jawa-1/Cirebon 2 (expansion)
Bakrie Brothers	240	1.4%	Indonesia	Jawa-3 / Tanjung Jati A
Oceanwide	204	1.2%	China	Banyuasin
Power China	140	0.8%	China	Bengkulu
Ratchaburi	135	0.8%	Thailand	Riau Gas
Shanghai Electric	12	0.1%	China	Banyuasin
Samtan	20	0.1%	Korea	Jawa-1/Cirebon 2 (expansion)
KEPCO/Korea Midland Power	10	0.1%	Indonesia	Jawa-1/Cirebon 2 (expansion), Cirebon 3
Chubu	10	0.1%	Japan	Jawa-1/Cirebon 2 (expansion)

Source: MEMR, IEEFA research.
Note: Ownership interests do not cover all projects. They are provided only where ownership shares could be confirmed from third-party sources.

The list of significant Indonesian IPP sponsors that have focused on fossil fuel IPP opportunities in the Java-Bali and Sumatera grids reads like a recent history of Asian infrastructure investment trends—and offers important clues about how any IPP renegotiations might progress. Three things stand out. The first is the dominance of Japanese and Chinese energy trading and power equipment companies in the mix. Japanese companies, particularly Marubeni, have for many years been active engineering, procurement and construction (EPC) players, serving as a conduit for the sale of Japanese power equipment in South East Asia. They have recently moved into more profitable but higher-risk sponsorship roles to lock in a market for their generating equipment as well as lucrative operations and maintenance contracts.

The second trend is the recent and aggressive push for Indonesian IPP market share by large Chinese and South Korean power companies. While Japanese companies have focused on the Java-Bali grid because of its better-developed demand dynamics and grid structure, Chinese state-owned enterprises (SOEs) China Shenhua and China Huadian have focused on remote mine-mouth coal-fired power projects in Sumatera that often require heavy investment in special-purpose grid connections. (see IEEFA The Case for System Transformation in Indonesia) While Korean companies are not as heavily represented in this list as project sponsors, they have

had a market impact in recent years with KEXIM supporting Hyundai Heavy's EPC role in the 1,000MW Cirebon 2 project which is due to be completed in 2022. They have also pursued a role in the controversial 2,000MW Java 9 & 10 project-–a project that would certainly compound the Java-Bali grid's overcapacity problem.

Table 2: Project Sponsors by Country of Origin

Project Sponsors by Country	Ownership Interests (MW)	% of Total
Indonesia	7,656	45.4%
Japan	4,628	27.5%
China	3,467	20.6%
Malaysia	960	5.7%
Thailand	135	0.8%
Korea	30	0.2%

Source: MEMR, IEEFA research.

Finally, it's important to highlight the leading role of two PLN subsidiaries as Indonesian project sponsors, PT Pembangkit Java-Bali and Indonesia Power, as well as a short list of influential local energy and industrial companies. While the goal of IPP programs in emerging markets is typically to mobilize foreign technology and concessionary financing, Indonesian equity ownership in IPPs reflects a policy initiative dating back to 2016 when PLN assigned its subsidiaries to kickstart priority projects. The result was that PLN turned to its subsidiaries to negotiate on a bilateral basis with potential project sponsors, hoping to identify project sponsors that could deliver the full package of EPC and funding benefits from foreign companies and ECAs. Rather than prioritizing price competition via an auction process, PLN opened the door to consortia that could quickly assemble qualified suppliers and mobilize ECA backing.

The precise status of these PLN-backed projects—and whether they would actually be regarded as IPPs for purposes of any negotiations—is unclear. If questions surface about PLN's role as a project sponsor, it may prove relevant to any effort to engage with the Bank of China or KEXIM. It would be most important for one of the operating projects—1,000MW Java 8—and also for the Java 9 & 10 project, which is still seeking financing. The key question would be whether PLN's ownership rights, which reportedly come with conditions that have permitted it to avoid making cash equity commitments equivalent to other sponsors, would make it difficult to find common ground on any burden sharing.

In the meantime, the sponsors from the Indonesian energy sector may feel pressure to accommodate PLN's requirements to a greater extent than the foreign parties they have joined as partners. Indeed, it would be normal for major coal companies such as Adaro, Indika, and Bakrie to be highly motivated to focus on their long-term market share when considering any requests for concessions. This could make them more open to any scenario that would preserve dispatch and support coal sales, even if it required some concessions that reduced medium-term cash flows to the sponsors.

ECAs – Credibility and Non-Performing Loans

One of the hallmarks of PLN's 35GW fast track program has been the common ground among capacity-hungry PLN and North Asian power equipment providers, sovereign-backed export credit agencies, and regional banks. It's been a simple scenario: The North Asian equipment suppliers have wrapped their arms around a market that offered one of the last opportunities to offload coal-fired power equipment. For the ECAs, the Indonesian opportunity was pure national interest. The big power projects were seen as a way to deepen links to Asia's largest natural resource economy and a key strategic partner in Southeast Asia.

The focus on securing strategic natural resources, promoting national companies, and supporting infrastructure projects is a simple formula that many developed countries have employed, using a range of financial incentives from concessionary loans to guarantees to cover repayment and foreign exchange risk. It's a competitive game, however, and although the Japanese dominate the league tables, the addition of China through its Belt and Road Initiative (BRI), and South Korea with its New Southern Policy appears to have triggered a classic race-to-the-bottom that encouraged the participants to mistake deals closed for good outcomes for Indonesia.

How JBIC's Energy and Natural Resources Finance Group Sees Its Role

The key to strengthening the relationship with resource countries lies not only in the cooperation in resource development projects, but also in the establishment of comprehensive and sustained partnerships while meeting the needs of these countries in relation to various fields such as: infrastructure development, industrial diversification, employment creation, technology transfer and reduced environmental burden through the use of renewable energy and energy saving technology. JBIC will maintain and strengthen the multi-layered and positive relationships with the governments of resource countries by making comprehensive efforts to support projects in infrastructure development and manufacturing sectors of the resource countries.

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Source: JBIC 2019 Annual Report.

Table 3: Pending ECA Project Exposure

	Project Exposure	Potential Total Capacity (MW)
JBIC	Jawa-1/Cirebon 2 (expansion), Jawa-1,Jawa-4/ Tanjung Jati 5&6 / Tanjung Jati B, Batang, Cirebon 3	7,420
KEXIM	Jawa-1/Cirebon 2 (expansion), Jawa 9-10	3,000
China Development Bank	Jawa-7, Jawa-8/ Cilacap expansion	3,000
CHEXIM	Bengkulu, Sumsel 8 Mine Mouth	1,400
ADB	Jawa-1, Riau Gas	2,035

Source: IEEFA data.
Note: This list excludes IPPs that commenced operations prior to 2019. Not all projects in the pipeline are financed.

As the outlook for PLN's finances and the financial viability of the IPP pipeline comes under scrutiny, it will be natural for bond investors and other market participants to question how the ECAs misanalyzed the financial pressures on the GoI, the Indonesian power market, and PLN. With PLN now struggling to reconcile the cost of aggressive capacity expansion with the COVID downturn and limited potential for tariff relief, it's time to ask how the many skilled bankers, lawyers, and credit risk professionals seem to have formed an unrealistic view of PLN's financial resources. This is ironic given that the power markets in Japan, South Korea, and China are all struggling with a combination of the effects of energy transition, excess capacity, and declining returns.

What accounts for this collective due diligence failure? Perhaps the most obvious mistake that frequently appears in funding documents associated with the Indonesian power market is the tendency to rely on power sales forecasts from MEMR. While the catalyst for PLN's current crisis is the COVID downturn, PLN's stressed financials are a direct result of having consistently overestimated demand growth.

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As we noted in our recent report, "MEMR's exaggerated demand growth forecasts have resulted in persistent downward demand revisions averaging 34.2% over an eight-year period. These systematic planning problems have arguably created a bias toward rushed and uncoordinated decision-making. For example, RUPTL forecasts for growth in power sales in 2019 started at 10.2% as recently as 2015 but fell to 5.8% in the 2019 document. The reality, confirmed by MEMR Director-General Rida Mulyana in early March, was growth of just 4.5%1in 2019 and a further drop to 3.8% in January 2020."[4]

[4] IEEFA. PLN in Crisis--Time for IPPs to Share the Pain? p. 3

Given MEMR's poor forecasting track record, it would be natural to expect the many infrastructure finance experts that guide the ECAs' work to have spent more time with the numbers to accurately assess both the risks and the opportunities. Instead, if documents from the Asian Development Bank are at all representative, a positive bias seems to have been the norm.

This is precisely the type of due diligence failure that should trigger a fundamental reassessment of the risks associated with inflexible project financing strategies that misallocate risk and encourage baseload lock-in that many fast-growing but volatile power markets cannot manage. This is something that pillar development banks such as the ADB should be particularly alert to, given their broad mandate. The narrow agenda of country-level ECAs is well understood, but new power technology, enhanced grid investment, and market design initiatives can encourage competition and system flexibility. These are market attributes that would insulate PLN from growth risks and help the ECAs find better alignment with long-term opportunities in markets like Indonesia. To make this leap, however, the ECAs will need to take an honest look at the role that they have played in the situation that PLN now faces.

Asian Development Bank: Description of Indonesia's Power Demand Outlook

The Ministry of Energy and Mineral Resources (MEMR) anticipates power demand to exceed current forecasts, resulting in a shortage that could undermine the country's sustainable growth potential if not addressed adequately. Every year, MEMR issues a rolling 10-year plan prepared by Perusahaan Listrik Negara (PLN), the national electric utility, to prioritize new power investments. The National Electricity Business Plan—or Rencana Umum Penyediaan Tenaga Listrik (RUPTL), as it is known in Bahasa Indonesia—for 2018-2027–indicates that, during this period, 56 gigawatts (GW) will be added to PLN's network.

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Source: Proposed Loan and Administration of Loan PT. Jawa Satu Power Jawa-1 Liquefied Natural Gas-to-Power Project (Indonesia), August 2018.

How might Indonesian negotiators work with the multilateral development banks and Asian ECAs to address the burden that PLN is now facing? Two steps seem crucial:

1. There needs to be an acknowledgement that the traditional ECA infrastructure finance model is broken. Instead of partnering with Indonesia to finance a more flexible and innovative power system, the ECAs are focused on partnering with equipment providers and banks, aggravating the bias toward fossil-fuel lock-in. As the risk of non-performing loans (NPLs) rears its ugly head, it's time for the ECAs to break with the past and work with borrowers on new solutions. Even JBIC has begun to offer a mea culpa. In comments on 22 April, JBIC's Governor stated that JBIC was going to step

back from funding coal power projects.[5] Leading Japanese commercial banks have also signalled a new policy direction away from coal.

2. Indonesia's Ministry Of Finance needs to build on its reputation for leadership in blended finance and find a way to pair burden sharing with an opportunity for the ECAs and development banks to support Indonesia's need for truly sustainable power infrastructure. Misdirected incentives associated with the implementation of the 35GW program must now be corrected. New opportunities such as targeted investment in de-bottlenecking and demand response solutions for PLN's grid could be a viable starting point. More ambitious initiatives, such as international auctions for utility-scale renewables projects could set clear standards for procurement and pricing. Such a partnership could help PLN work with the ECAs to develop more flexible credit enhancement tools that would be a better fit for the Indonesian market. At the same time, this would offer scalable opportunities to regional banks eager to enhance their green credentials.

Moody's and S&P Strike Out (Again)

The final enablers in the PLN saga that deserve scrutiny are the credit rating agencies. It's well understood that credit ratings for massive state-linked "corporate" issuers such as PLN will be dominated by their view on the ultimate guarantor—the Government of Indonesia. As a state-owned enterprise, 90% of PLN's rating is determined by the credit rating of the sovereign. Only 10% reflects the so-called baseline or standalone ratings. Unfortunately, it's also notable that the leading ratings agencies—S&P and Moody's—have repeatedly soft-pedalled the strategic risks to PLN, hinting at problems but never providing a clear analytical framework to inform bond investors about the way that MEMR's policy implementation and PLN's financial challenges have the potential to undermine the government's credibility.

By defining their research and ratings in narrow terms, the CRAs have aggravated risks for investors at exactly the wrong time. Their backward-looking metrics have supported a pro-cyclical bias in how credit markets have analysed PLN, and they have neglected to identify the circular nature of credit risks that stem from PLN's growing reliance on the GoI to cover rising IPP costs and associated credit risks. Taken together, this means that incremental risk to PLN's operations has not been properly priced and that the market's ability to assess PLN's credit fundamentals lurches from panic to

The credit-rating agencies have aggravated risks for investors.

[5] Eco-Business. JBIC becomes third Japanese bank in a month to signal move away from coal. April 24, 2020.

calm in tandem with currency volatility. The tragedy for GoI decision-makers is that this financial vise obligates the Ministry of Finance to prioritize PLN's problems at a time when public health and economic stability efforts should be the focus.

The tension in the conventional ratings approaches is evident in reports issued by Moody's over the past year. The most important factor cited by Moody's in its outlook is invariably the GoI's history of support for PLN, evidenced by a high level of guarantees for PLN's borrowing, large commitments in the form of World Bank and ADB loans, and comfort letters for certain IPPs. It's also notable that despite obvious red flags concerning delays in the payment of expected subsidies and compensation to PLN—problems that are ongoing[6]—the CRAs have always maintained a posture of wilful ignorance about rising accounts receivable from the GoI. As a result, for the careful reader, downside risks are acknowledged, but typically without connecting the dots in a way that would make it possible to assess the probability of these risks becoming a reality.

There are two notable points of vulnerability in the rating agencies' approach to assessing PLN's baseline or standalone rating. First, there is a reluctance to address the many credit scenarios resulting in Indonesia's weaker-than-expected demand growth profile. Much like the Asian Development Bank, PLN has overlooked the over-optimistic demand forecasts that underpin the 35GW program and are now resulting in overcapacity in the Java-Bali grid. Second, despite eroding credit fundamentals, there has been little analysis to frame the likelihood of growing risks to PLN's cash flow. Indeed, Moody's describes a sustained cash flow/debt ratio of less than 5% as a possible trigger for a ratings review. Given that PLN's operating cash flow fell 46.7% year-over-year during the first half of 2019, and the company's fundamentals deteriorated through year-end, it seems likely that the 5% barrier could have been breached.

Now that the risks to PLN's financial outlook have been openly acknowledged by PLN CEO Zulkifli Zaini,[7] and the market is pricing in higher risk on outstanding bonds, lenders and bond investors are naturally struggling to understand PLN's fundamentals. It may also be time for the CRAs and bond investors to reassess the risks of excessive reliance on naively conventional analyses of a sector in the midst of profound change, not just in Indonesia, but globally.

[6] Jakarta Post. Government Owes PLN $3b For Two Years of Electricity Subsidies. April 23, 2020.
[7] MarketScreener. Indonesian Utility PLN Says Not Seeking to Delay Debt Payments. April 24, 2020.

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