



Indonesia's Just Energy Transition Partnership (JETP)

A retrospective of progress
and navigating changes

Report / June 2025

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Rizky Fauzianto, Andika Akbar Hermawan, Brian O’Hanlon, Wini Rizkiningayu, and Selim Sardag, *Indonesia’s Just Energy Transition Partnership (JETP): A Retrospective of Progress and Navigating Changes*, RMI, 2025, <https://rmi.org/insight/indonesias-just-energy-transition-partnership-jetp>.

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Table of Contents

Introduction: Reflection on Indonesia’s JETP	1
Governance Barriers to Advancing Indonesia’s Energy Transition	3
Energy Planning Complexities in Indonesia’s Power Sector	3
The Need for a Comprehensive Framework Aligned with National Strategies	4
Challenges in Realizing JETP Financing Commitments	4
New Visions, New Leadership	6
Leadership Transition: From Lessons Learned to Closing Targeted Gaps.	6
Aligning the JETP with Indonesia’s “Move Up the Value Chain” Vision	8
Reconciling Growth, Energy Security, and Decarbonization	9
Leveraging New JETP Leadership for Convening Power and Collaboration	10
Shift Focus From “Coal Exit Only” to Ensuring Secure and Affordable Clean Energy	12
Major Policy Hurdles Hindering Coal Retirement Efforts	12
Optimizing Coal Retirement with Repurposing along with Renewables	13
Ensuring Workforce Development in the Energy Transition	15
Building Homegrown Transition Strategies through Local Integration.	16
Conclusion: From Pledge to Pathway — Reframing Indonesia’s Energy Transition through the JETP	18
Endnotes	19

INTRODUCTION

Reflection on Indonesia's JETP



When Indonesia's Just Energy Transition Partnership (JETP) was launched in 2022, it introduced something unprecedented in Southeast Asia: a mechanism for financing the early retirement of coal, paired with cleaner power development, while ensuring financial protection for asset owners, investors, and the government. This was a major innovation — not just in ambition, but also in structure. It created the foundation for dialogue across ministries, financial institutions (FIs), and civil society, and offered a way to align climate action with financial risk management. The JETP also uncovered the need to transition and set a policy precedent for decarbonizing captive coal — which has been a growing phenomenon as Indonesia pursues its industrial and development goals.

But while the JETP succeeded in building institutional and financial architecture, it too often unfolded outside the broader context of Indonesia's development goals. The early narrative centered on emissions targets and coal retirement, without consistently linking these efforts to national priorities: job creation, industrial growth, and energy security. The result was a climate-first platform with limited domestic resonance.

Today, the JETP stands at a crossroads. Political conditions have shifted. The Coordinating Ministry of Maritime Affairs and Investment (CMMAI), which drove early momentum, is no longer the central actor. Implementation now falls to the Coordinating Ministry of Economic Affairs (CMEA) and the Ministry of Energy and Mineral Resources (MEMR) — technically capable but politically constrained agencies. Meanwhile, international dynamics have evolved, with Germany assuming the International Partnership Group (IPG) chair.

This moment offers both a challenge and an opportunity. The right response is not to lower ambition, but to reposition the JETP within Indonesia's national development arc. That means moving from a narrative and program of action with a solely coal-to-clean focus to becoming a driver of economic and development growth through well-planned clean, secure, and affordable energy transition.

Indonesia's policy priorities are entering a new phase. With aspirations for 7%–8% annual economic growth, an anticipated surge in electricity demand, and intensified efforts to climb the industrial value chain, the policy focus is shifting. Among the important questions about Indonesia's energy transition that must be addressed are: Can decarbonization accelerate — not delay — industrial growth? How does energy transition translate into good jobs and investment? Can clean energy become a competitive advantage, not a cost burden? The JETP must answer these questions directly — or risk becoming irrelevant to domestic stakeholders.

To sustain support, the JETP could consider being redefined as a platform for prosperity, if stakeholders wish to align more closely with national development goals. That means embedding the energy transition within Indonesia's broader strategy for development. Instead of viewing emissions reduction as the goal, it should be positioned as the means to deliver industrial competitiveness, energy reliability, and long-term affordability.

Doing so requires more than technical tweaks. It demands political alignment, institutional coherence, and clarity of purpose. Ministries, the state-owned utility (PLN), local governments, and FIs must act on a shared vision: that clean energy isn't a foreign imposition, but a sovereign strategy for growth. This retrospective is not a critique of the JETP's intent. Early progress was real and necessary — the JETP catalyzed long-overdue reforms and brought new actors into the room. But Indonesia's energy transition cannot proceed on external terms alone. It must reflect the country's own aspirations for prosperity, global competitiveness, and citizen welfare. With new leadership, the time is right to reposition the JETP not just as a climate mechanism, but also as a development engine — one that enables Indonesia to grow faster, cleaner, and fairer.



Lessons from Early JETP Efforts

The JETP represents an important milestone in Indonesia's energy transition journey, where financial support for various stakeholders, including owners, investors, and the government, formed the backbone of this effort. Since the signing of the US\$20 billion commitment in November 2022, the funding has grown to US\$21.6 billion,¹ and the initiative has established a transparent governance platform, facilitating over 200 stakeholder consultations with more than 100 civil society organizations (CSOs) and mobilizing both public and private funding for mostly renewable energy (RE) projects. However, bureaucratic challenges continue to hinder the timely implementation of these projects and the initial emphasis on coal transition, while crucial, was perceived as insufficiently integrated into Indonesia's broader development agenda. Drawing from early JETP experiences, there are key lessons to consider for future improvement strategies:

Governance barriers to advancing Indonesia's energy transition

Challenges related to government structure have impeded Indonesia's progress in energy transition. Even with the CMMAI acting as a champion ministry, driving the energy transition agenda among different government agencies proved to be challenging. With CMMAI no longer overseeing energy transition efforts, the governance challenge becomes more pronounced, especially because the JETP Secretariat and MEMR lack the authority to oversee PLN. Furthermore, the JETP Secretariat does not have the mandate to oversee negotiations between the state-owned development financing institution (PT SMI) and financiers regarding funding arrangements, nor the authority to influence other ministries in implementing adaptive policy reforms. The absence of coordinated policies among government agencies coupled with relatively weak policy enforcement have resulted in the construction of power plants without corresponding demand and industrial development to effectively utilize the electricity generated. This misalignment has contributed to the oversupply of electricity in Indonesia. Addressing this governance gap requires stronger interagency mandates, empowered coordination bodies such as the National Energy Transition Task Force, and clearer lines of authority for the JETP Secretariat.

Energy planning complexities in Indonesia's power sector

A key challenge for Indonesia's energy planning process has been the availability of reliable data. PLN and MEMR have overestimated achievable targets due to reliance on top-down forecasting and legacy growth assumptions. The demand forecasting methodology is based solely on historical data. Additionally, the planning framework has been shaped by an ambition for rapid economic growth to overcome the middle-income trap. However, this approach has not sufficiently incorporated key considerations such as energy efficiency progress, cultural factors influencing energy consumption patterns, and the pace of industrial parks development.

Given the historical tendency of energy planning efforts in Indonesia to deviate from projected targets, it is imperative to establish a mechanism for concurrent and periodic updates across relevant institutions. Strengthening energy planning through such mechanisms will enhance Indonesia's ability to respond effectively to evolving challenges and uncertainties in its economic and developmental landscape.

The need for a comprehensive framework aligned with national strategies

The early focus on coal transition underscored Indonesia's commitment to carbon reduction. However, this approach lacked a direct connection to broader national goals, such as economic growth, job creation, and energy security. A holistic approach — such as the coal repurposing framework that can be applied to the power sector transition roadmap issued by the Government of Indonesia (GOI) — MEMR Regulation No. 10/2025 — is essential to effectively balance economic needs and decarbonization objectives. By repurposing coal assets, Indonesia can facilitate gradual decarbonization while preserving industrial value, employment opportunities, and regional economic development. Such an integrated framework would bridge environmental goals and socio-economic priorities, fostering a resilient energy transition pathway.

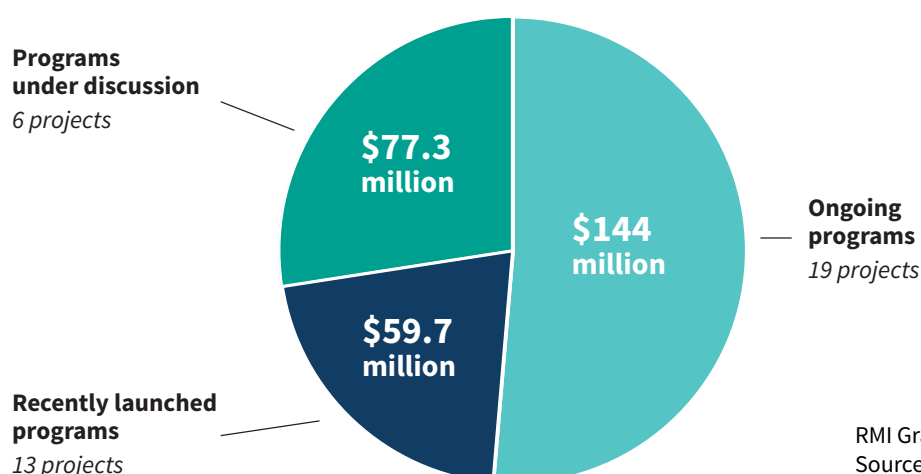
However, the coal repurposing framework developed by the JETP Technical Working Group (TWG) is at odds with the latest PLN Electricity Supply Business Plan (RUPTL) 2025–2034. For instance, biomass co-firing, identified in the framework as a last resort due to its limited decarbonization potential, is central to PLN's coal phase-down strategy despite its limited emissions reduction potential and risks of undermining deeper decarbonization pathways. Legal and financial considerations drive PLN's reliance on co-firing, highlighting a misalignment between external frameworks and national priorities. It is essential to recalibrate external frameworks to align with Indonesia's strategy, even if it involves reevaluating existing strategies about decarbonization pathways.

Challenges in realizing JETP financing commitments

Regarding the JETP funding, financing commitments from the IPG and the Glasgow Financial Alliance for Net Zero (GFANZ) have been slow to materialize. These delays hinder the timely implementation of JETP projects and diminish stakeholder confidence. Additionally, the effectiveness and success of the JETP will be primarily influenced by the degree of concessionality in the funding package — as subsequent disclosures revealed that US\$20 billion in pledged funding is largely comprised of commercial loans, while grants account for approximately 1.4% (US\$281.6 million) of the total package (see Exhibit 1).² Therefore, overcoming these challenges and sustaining momentum in energy transition efforts will require strategic utilization of concessional funds to effectively mobilize private sector investment, along with streamlined financing mechanisms and enhanced coordination.

Exhibit 1

Grant and technical assistance (TA) status under the JETP, June 2024



RMI Graphic.
Source: [Indonesia JETP Secretariat](#)

New Visions, New Leadership

Leadership transition: from lessons learned to closing targeted gaps

More than two years after the JETP was announced, progress is mixed. While several important pilot initiatives are underway, finance has been slow to disburse, primarily due to the lack of deal flow. Additionally, data gaps persist, particularly around tracking emissions reductions. There are also ongoing debates among national planners on how to balance coal retirement targets with current industrial and economic development priorities. As elaborated in the previous section, the initial phase of the JETP surfaced valuable lessons for both the GOI and the IPG, yet it also exposed coordination, data, and policy gaps that now must be closed. Germany's assumption of the IPG chairmanship provides the political momentum — and diplomatic cover — to reset expectations on both sides. The change in IPG leadership presents an opportunity to adjust JETP priorities and better integrate with Indonesia's broader growth agenda.

Diagnosing the missing links between GOI and IPG/finance institutions

The early stages of the JETP revealed three systematic roadblocks. First, critical datasets around load forecasting, generation supply, power plant financial profiles, and emissions remain scattered across multiple agencies, hampering unified energy planning and investor confidence. In the absence of a secure, interministerial platform, collaboration among different government entities and verification of datasets become difficult, impeding the progress of Indonesia's transition. The JETP can serve to connect the various GOI agencies that hold valuable data sources to effectively pool data and facilitate collaborative discussion. Other jurisdictions have more publicly available data — distributed in a way that protects national security while encouraging innovation. A lack of data access can lead to delays in project preparation, and prompt investors to attach a risk premium to every forecast they cannot independently verify.

Second, the TWG support for the Comprehensive Investment and Policy Plan (CIPP) paid significant focus to the surge in electricity demand that will come from Indonesia's industrial development. Nickel smelters and aluminum refineries plan to build 6.5 and 2.7 gigawatts (GW) of captive power by 2030, most of the capacity coming from coal-fired power plants (CFPP). Most of this development sits outside PLN's grid system planning, presenting challenges in meeting JETP's emissions targets.

Third, renewables remain cost disadvantaged because policies such as local content requirements increase capital expenditure, fossil fuel subsidies distort operating costs, and subtransmission bottlenecks force developers to factor in curtailment risk. A refreshed partnership must now tackle these three barriers head on. Data-driven decisions will be instrumental in ensuring the success of the JETP CIPP. As for the GOI and IPG working more effectively, the two main pathways to improved collaboration are policy development and financing enablement.

Bridging the policy gap

The IPG would like to see policy that enables RE development transitioning from coal, as laid out in Exhibit 2.

Exhibit 2

Policy reforms to enable RE development

Reform	Opportunity	2023–25 Status
Local-content requirement (LCR) relaxation	International partners urged Indonesia to align or ease its local content rules for RE equipment, which were seen as a barrier to rapid RE deployment.	Reg. MEMR 11/2024 The MEMR regulation exempts projects with >50% foreign-development finance from strict LCRs.
State-owned enterprise (SOE) asset optimization and PLN reform	The JETP partners pressed for reforms to Indonesia's power utility PLN and other SOEs to enable the energy transition. Key asks included improving PLN's financial viability and allowing early coal plant retirements (via asset disposal). Until early 2025, the early decommissioning of PLN-owned coal plants risked being classified as a "state financial loss" under Indonesia's SOE Law and anti-corruption statutes, creating strong disincentives for PLN and other SOEs to voluntarily retire underperforming assets — even when such actions would improve system efficiency or reduce emissions.	Reg. PER-2/MBU/03/2023 The Ministry of SOE (MSOE) regulation allows divestment or write-off of coal assets "in the public interest." However, broader unbundling is still pending. SOE Law No. 1/2025 Under a new SOE Law effective February 2025, SOE profits or losses belong to the SOE itself, not to the state. The law also emphasizes that SOE profits or losses include but are not limited to those arising from the management of SOE assets in investment and/or operational activities.
Power sector transition roadmap	The IPG and GFANZ asked Indonesia to develop a detailed power sector transition roadmap, including coal retirement for its fleet and timeline for plant closures.	Reg. MEMR No. 10/2025 The regulation introduces an explicit regulatory pathway for early coal retirement, mandating structured evaluations, interministerial approvals, and funding safeguards to mitigate legal risk. It establishes that early retirement decisions — when based on a ministry-assigned study and accompanied by financing agreements — can serve as the legal basis for PLN's action, including amendments to power purchase agreements (PPAs).

RMI Graphic. Source: Analysis

Bridging the financing gap

On the financing side, there is a gap between what the GOI needs to enable and accelerate the development of bankable projects and what the IPG/GOI has committed to this far. Progress has been made, albeit slowly. Many international banks have expressed interest but await clearer policies and bankable projects. The Indonesian government has clearly expressed its view that JETP funding should come with preferential terms — grants or ultra-low-interest loans — rather than adding unsustainable debt. To date, JETP pledges do not match that ideal, consisting largely of standard development bank loans and private investments that expect market returns. Indonesia is pushing for a better financing mix and support to bridge this gap: it has called for larger grant components, interest rates below commercial levels, and more truly concessional credit to fulfill its just, reliable, and sustainable energy transition goals.

As reported in the CIPP that was published in 2023, achieving JETP targets will require US\$97 billion by 2030. The JETP could consider extending its role to unlocking additional financing by leveraging public funds to de-risk private investments and attract blended finance at scale. The alignment between financing and policy influence under the JETP will create an opportunity to ensure that policy reforms are in sync with investment. This collaborative framework should be used to strengthen technical assistance for regulators and build institutional capacity within key entities such as PLN and relevant government agencies. This effort is needed to ensure they are equipped to design, implement, and manage a rapidly evolving energy portfolio.

Aligning the JETP with Indonesia’s “move up the value chain” vision

Indonesia’s evolving political vision is centered on economic growth and international competitiveness: the country’s vast mineral endowment should underpin Southeast Asia’s growing ecosystem for producing batteries, electric vehicles, and low-carbon metals. Reliable, affordable, and clean electricity is therefore becoming a determinant of global competitiveness, not merely an environmental credential. Indonesia wants to move up the value chain — transitioning from an exporter of raw materials to a regional industrial powerhouse — and the JETP can play a key role in execution of this economic strategy.

Concessional and blended finance from the JETP can accelerate RE buildout that directly feeds new green industrial parks in Sulawesi and North Kalimantan. Dedicated solar, wind, and geothermal plants would displace the coal or captive diesel power traditionally used in mineral processing, bringing nickel smelting emissions down and immediately enhancing the export competitiveness of downstream products. In parallel, the captive power study that JETP Secretariat plans to publish in Q3/Q4 2025 offers a roadmap for integrating clean electricity into existing smelters — turning an environmental liability into a commercial advantage.

Market signals already validate this strategy. Buyers across automotive, battery, and technology supply chains offer offtake agreements for sustainably produced metals and are willing to pay a premium for verifiable low-carbon content. Several critical minerals companies in Indonesia have demonstrated the ability to produce minerals with low-carbon processes when the necessary infrastructure is in place. Aluminum brands such as Norsk Hydro and Rio Tinto with life-cycle footprints under 4 tons of CO₂ (tCO₂)/ton of aluminum sell at premium prices.³ Although carbon differentiated nickel markets are less mature, a few companies in Kalimantan and Sulawesi whose operations already emit well below the global average provide robust measurement, reporting, and verification (MRV) and third-party certification systems are in place to validate carbon performance.

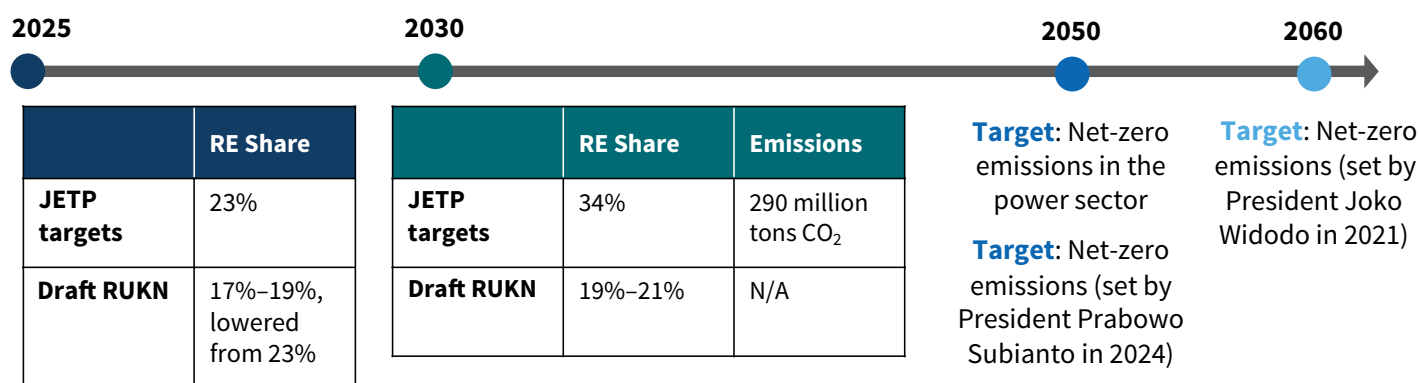
The JETP agenda embraces skills development and technology transfer. Earmarked grant components can fund vocational programs in RE manufacturing and grid digitization, while technology partnerships with German, Japanese, and Korean firms bolster local capability. Clean energy deployment thus becomes both a climate solution and a competitive asset, anchoring Indonesia's reputation as a reliable supplier of low-carbon commodities.

Finally, the advancement of policy reform is another lever to mobilize private green capital well beyond the JETP envelope, strengthening its hand in climate diplomacy and normalizing private sector participation throughout the clean energy value chain. Credibility in international markets will also hinge on robust certification. Building a Green Nickel Standard aligned with EU Batteries Regulations and the Chinese battery safety standard (GB 38031–2025) and operationalizing a blockchain-enabled traceability platform by 2026 would position Indonesia as a first mover in transparent, responsibly sourced minerals — a status that could command favorable trade terms long after concessional finance has run its course.

Reconciling Growth, Energy Security, and Decarbonization

Indonesia entered the JETP with an official goal of 23% RE in its primary energy mix by 2025. However, realizing this goal has been challenging. In early 2024, the government unveiled a draft update to the National Electricity Master Plan (RUKN)⁴ that lowers the near-term renewable targets — down to about 17%–19% by 2025, and from 31% (previous plan) to 19%–21% by 2030. This proposal, pending legislative approval, reflects more modest expectations and has drawn concern from observers, as it implies coal will continue to dominate longer than called for by the international community. By contrast, under the JETP, Indonesia set a more ambitious conditional target for the power sector: 34% of electricity generation from renewables by 2030. The difference between these figures highlights a policy gap — the JETP goals are higher than what some domestic plans currently project (see Exhibit 3). On a positive note, Indonesia did issue Presidential Regulation 112/2022 on RE, instructing PLN to maximize renewables in its RUPTL. Since then, PLN has updated its latest plan in RUPTL 2025–2034 to prioritize solar, wind, geothermal, and other renewables. It sets a target of 61% of 69.5 GW of additional power capacity by 2034 to come from clean energy.

Exhibit 3 Comparison of RE and emissions targets set by the National Energy Master Plan (RUKN) and the JETP CIPP



RMI Graphic. Source: Indonesia JETP CIPP, RUKN, Bloomberg



Some progress is nevertheless notable. Presidential Regulation 112/2022 imposed a moratorium on new coal power plants except for those already in the approved pipeline or deemed vital for certain industries with captive plants. At the 2022 G20 Summit, Indonesia pledged to retire coal entirely by 2040 — a full 15 years earlier than its previous timeline. Additionally, at the 2024 G20 Summit in Rio de Janeiro, Indonesia’s newly elected president, Prabowo Subianto, reaffirmed the nation’s commitment while targeting development of over 75 GW of RE capacity by 2040.⁵ The Asian Development Bank (ADB) provided financial support for early retirement of the 660 megawatt (MW) Cirebon 1 plant, which the MEMR officially announced will be retired by 2035,⁶ providing a working template with a replacement power cost benchmark of roughly US\$0.04/kilowatt-hour and US\$35 million earmarked for worker transition. However, the latest RUPTL indicates that Indonesia will add 6.2 GW of new coal-fired capacity over the next decade — a discrepancy that suggests the new JETP leadership will be crucial to reshaping Indonesia climate strategy.

Leveraging new JETP leadership for convening power and collaboration

JETP’s new leadership, building on confirmed funding and grants from IPG and FIs, offers a chance to recalibrate — not to discard climate priorities, but to synchronize with Indonesia’s goals for industrial growth, infrastructure development, and workforce transitions. As noted, frequent and constructive engagement between IPG/GFANZ and the GOI can help strengthen the GOI’s political commitment to aligning with climate goals to reduce emissions. Germany could consider reframing leadership around “shared prosperity through clean growth,” in alignment with evolving priorities and not just emissions control. For instance, focusing the narrative on air pollution from coal plants, as well as how the cost parity of RE projects will affect affordability for ratepayers, can push the GOI to focus on policy reforms and even push for institutional reforms.

With its convening power, the JETP can help to harmonize efforts among the GOI, IPG, multilateral institutions, and private financiers to address regulatory bottlenecks, unlock investment, and accelerate

project delivery. It also has a unique opportunity to build investor confidence by facilitating joint announcements, priority pipelines, or de-risking instruments, sending a strong market signal to bolster clean energy development.

The strategy must evolve from externally imposed climate conditionality to shared ownership of economic transformation. Indonesia is not resistant to energy transition, but it is highly sensitive to the terms, sovereignty, economic growth, and value capture. In that context, emissions reduction targets (e.g., the JETP's 2030 coal peak and 2050 net-zero targets for the power sector) should be framed as industrial enablers, and not as constraints. To boost the narrative around Indonesia's economic development, the goals of the JETP could be connected to tangible industrial outcomes to enhance relevance for stakeholders, such as:

- Renewable-powered industrial parks (for EV batteries).
- Technology partnerships to establish domestic solar panel manufacturing.
- Emissions-linked financing that rewards domestic value-added processing (e.g., preferential rates or export guarantees for products with green nickel certification)
- Green trade corridors
- Joint R&D that gives Indonesia more than just capital

Lastly, Indonesia's energy transition will only keep its momentum if the JETP ecosystem nurtures a genuinely multilayered coalition. Philanthropic institutions, local CSOs, regional think tanks, and the JETP leadership each bring advantages. Foundations can supply patient grant capital for high-risk pilots and CSOs can provide ground truthing and community buy-in while regional platforms disseminate lessons at speed. Collectively, these efforts help to align financial mechanisms, stakeholder engagement, and policy innovation to drive a just energy transition in Indonesia.



Shift Focus from “Coal Exit Only” to Ensuring Secure and Affordable Clean Energy

As highlighted earlier in this report, Indonesia’s energy transition needs more than funding — it requires strong political will and strategic focus to reform systemic barriers and make renewables competitive with fossil fuels. The recent issuance of MEMR Regulations No. 5/2025 and No. 10/2025, along with the RUPTL 2025–2034, strengthen initiatives to clarify guidelines for PPAs for RE, establish Indonesia’s power sector transition roadmap, and raise targets for new additional renewable capacity, respectively. However, further measures are required to fully address the systemic risks and attract the scale of private investment needed. International experience and investor feedback indicate persistent concerns over project bankability, off-taker risk, and unpredictable permitting. Moreover, inflexible procurement processes and legacy power system constraints, such as rigid procurement mandates and take-or-pay obligations for coal, continue to limit new renewable build-out, especially at the utility scale. Without sustained reform and strategic coordination, these issues will continue to inflate costs and delay project delivery.

Ultimately, scaling Indonesia’s clean energy adoption is not just a matter of lowering financing costs, but also reshaping the investment ecosystem to be coherent, credible, and competitive. The recent issuance of MEMR policies signals important institutional progress. Yet, these reforms must now be fully implemented and reinforced by political alignment across stakeholders, particularly in removing legacy constraints. The transition must be governed not by ad-hoc exceptions, but by a rules-based framework that consistently prioritizes fossil fuel transition to clean energy. By doing so, Indonesia can turn regulatory momentum into real market transformation, attracting capital at scale, accelerating project delivery, and achieving an energy transition that is not only just and reliable, but also affordable.

Major policy hurdles hindering coal retirement efforts

Despite the progress and efforts, several entrenched policies in the energy sector are still at odds with transition objectives. Among these are the domestic market obligation (DMO) for coal with its price cap — domestic price obligation (DPO) — and PLN’s take-or-pay (ToP) contracts. Addressing these hurdles is imperative to leveling the playing field between coal and renewables.

Coal DMO and DPO

The DMO policy requires coal mining companies to supply 25% of their production to the domestic market, and the DPO caps the coal price for power generators at a fixed level of US\$70 per ton.⁷ The DMO was intended to ensure affordable coal for electricity, but the policy has distorted the market. By capping the coal prices at an artificially low level, the policy makes coal power appear the cheapest option for electricity in the short term, undercutting the competitiveness of renewables. The DMO price cap also shifts volatility risks to the government — things such as budgetary strain from subsidies, domestic supply distortions, and revenue loss from restrictions. When global coal prices spiked (e.g., in 2021–2022), mining companies preferred to pay penalties or lobby for leniency rather than sell at a loss domestically, leading

to a shortage.⁸ Indeed, enforcement has been problematic. Many companies meet the volume target only on paper or coal gets diverted when international prices are high. PLN nearly ran out of coal in early 2022, prompting emergency measures. Such incidents reveal that the DMO/DPO policies are not sustainable long term and can backfire on energy security.

ToP contract

The PLN's ToP obligations are also a major hurdle for the transition. While such terms helped attract investment in coal plants in the past, they now hinder the transition. Currently, many of PLN's PPAs with independent power producers (IPPs) contain long-term ToP clauses, which require PLN to pay for a minimum amount of electricity, whether the demand exists or not. These contracts often extend for 30 years, including fuel cost pass-through to PLN. In regions like Java-Bali, where oversupply persists, PLN encounters a financial obligation to pay IPPs even when demand is low or when renewables could be generated. With the ToP clause, the country may still prioritize running contracted coal plants to avoid paying for idle capacity. This can lead to financial strain from overcapacity, higher long-term costs, curtailment of RE, and reluctance to add more renewable capacity that would add to excess capacity. The newly introduced "deemed dispatch" provision in MEMR No. 5/2025 is a step forward, as it allows compensation for curtailed renewables, but the root issue of rigid ToP obligations will still need systemic resolution.

Taken together, these policies create a structural bias that favors coal and disincentivizes RE. The DMO policy makes coal look cheaper than it is; ToP contracts financially prioritize coal generation even in surplus; and the legal risks of asset write-downs paralyze coal retirement decisions. Without addressing these issues, Indonesia's net-zero targets will remain constrained, not due to technical infeasibility, but because of embedded policy misalignments. Reforming these structural barriers is not only about retiring coal plants to reduce emissions and unlocking RE investments; it is also about recalibrating the power system to reflect Indonesia's long-term interests: affordability, resilience, and climate responsibility. Removing these distortions is essential if the country is to shift from fossil lock-in toward a cleaner, more competitive energy future.

Optimizing coal retirement with repurposing along with renewables

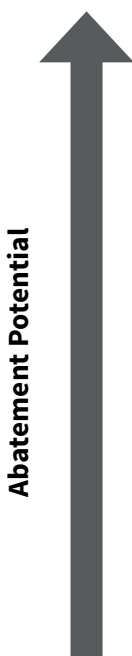
Retiring coal is only one side of the equation; the other is scaling reliable, low-cost clean energy alternatives. To maintain affordability and grid reliability during this transition, Indonesia must accelerate the deployment of renewables — especially solar, wind, hydro, and geothermal — and invest in enabling infrastructure like storage and transmission. Falling technology costs have already made solar photovoltaic (PV) and wind power competitive with new coal, and cheaper in many cases, when accounting for avoided fuel and operating costs. Under the JETP scenario, RE share in the energy mix is projected to be 44% by 2030.⁹ This requires rapid mobilization of capital, streamlined permitting, and coordinated grid planning to ensure renewable projects can be built, connected, and dispatched efficiently.

Yet the addition of renewables alone may not be enough to support a steep coal decline without risking supply disruptions. That is why coal repurposing strategies play a critical supporting role. Instead of waiting for renewables to fully replace baseload coal, Indonesia can use repurposing to gradually phase out emissions while maintaining system flexibility and capacity. These strategies include: (1) early retirement and replacement with clean generation; (2) flexible operation of remaining coal plants to make room for variable renewables; and (3) lower-emissions continuous output (LECO) as a "last resort" through biomass or ammonia co-firing or carbon capture, utilization, and storage (CCUS) (see Exhibit 4). These are

prioritized based on their carbon abatement potential and cost-effectiveness. Early retirement eliminates emissions altogether but requires sufficient replacement capacity and financing; flexible generation allows coal plants to run only when needed, cutting emissions and integrating renewables; and LECO offers incremental reductions at plants that must keep running in the near term.

Exhibit 4

Three prioritized repurposing strategies based on the highest carbon abatement potential



Strategy	Technological examples	Definition
Early retirement and replacement	Renewable energy replacement	Decommissioning and repurposing existing CFPP infrastructure when technically, economically, and legally viable.
	Synchronous condenser	
Operational flexibility	Flexible coal generation	If decommissioning isn't viable, retrofitting coal plants for flexible or ancillary services can support RE integration and reduce coal reliance.
	Energy storage system (battery, thermal, etc.)	
LECO	Co-firing with biomass or ammonia	LECO is a "last resort" strategy, used when coal plants are essential for resource adequacy, aiming to reduce emissions compared to business as usual.
	Carbon capture, utilization, and storage (CCUS)	

RMI Graphic. Source: [RMI](#)

Each strategy fits a specific role in ensuring a just and secure transition. For instance, older coal units operating in oversupplied grids with high operating costs are well-suited for early retirement and replacement with RE. In contrast, coal plants located in areas with limited renewable potential or those with relatively low operating costs, but without sufficient capacity factors to justify continuous operation, may be better utilized in a flexible generation role, reducing their output while supporting grid reliability. On the other hand, LECO strategies, such as biomass co-firing, may be appropriate for plants expected to maintain relatively high utilization and low operating costs, serving as a transitional measure until cleaner alternatives become viable. This approach, matching each plant with the tailored pathway, allows Indonesia to keep the lights on without locking in long-term fossil dependence. These strategies also help PLN avoid costly overcapacity and create operational space for new renewables to enter the grid.

While biomass co-firing — one of the LECO strategies — has been included as part of Indonesia's coal transition strategy, the country's current heavy reliance on this approach presents a risk of locking in suboptimal pathways. PLN has proposed expanding biomass co-firing to over 50 coal units as a central decarbonization measure, aiming for blend rates of up to 10%–20%.¹⁰ However, positioning biomass as the primary lever for emissions reduction could delay or displace more transformative strategies such as early

retirement or flexible operation, both of which offer greater potential to permanently reduce carbon output and restructure the power system. Moreover, aggressive biomass demand without strong safeguards may lead to unintended trade-offs, including competition with food systems, unsustainable land use, and pressure on forests if dedicated energy crops expand. These risks are particularly salient in areas already experiencing deforestation or agricultural encroachment. Without robust sustainability criteria, transparent sourcing, and governance mechanisms, PLN's biomass-first approach may undermine long-term climate goals and prevent Indonesia from unlocking deeper, systemic decarbonization.

Moving to flexible operations may require technical and contractual adjustments. Most Indonesian coal plants were built and financed under PPAs that incentivize steady output. Such arrangements historically made the fleet inflexible, as independent power producers were paid even if the power wasn't needed. To enable flexibility, contract terms need to be renegotiated so that plants can ramp down without financial penalty. On the technical side, retrofitting may be needed to allow lower minimum loads and more frequent cycling. Typical flexibility retrofit costs range from ~US\$120,000–US\$600,000/MW of capacity, depending on the plant's age and technology.

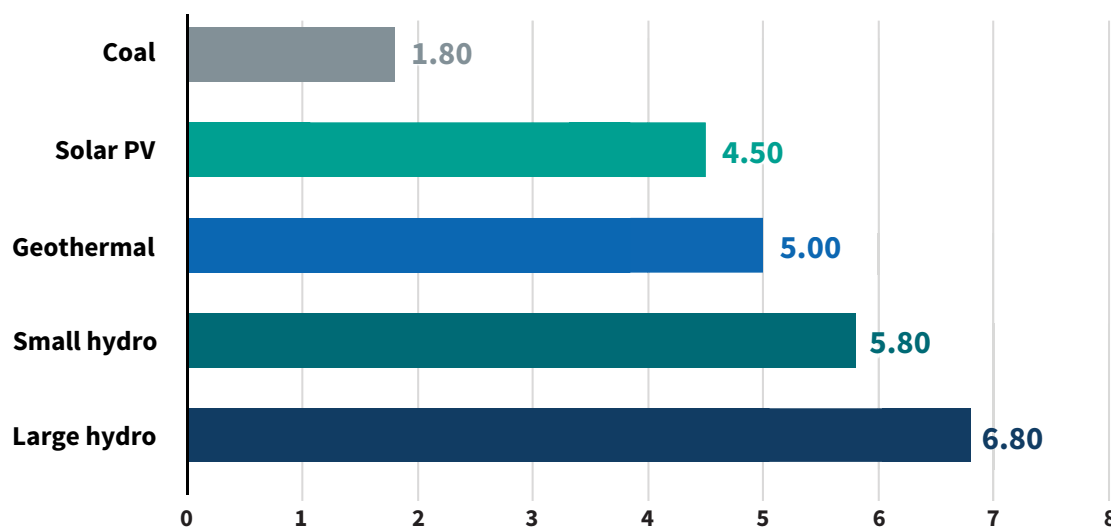
In summary, coal repurposing aligns with the goals and mechanisms of the JETP as well as the latest RUPTL. Early retirement contributes directly to meeting the JETP emissions cap, flexible operation supports integration of higher penetration of RE by 2030, and biomass co-firing provides a near-term emissions buffer. JETP concessional funding can support each of these measures through compensation for early closures, refinancing of flexible units, or transition finance for co-firing retrofits. Together, RE scale-up and coal repurposing are not competing priorities, but complementary strategies. By deploying both in a sequenced, region-specific manner, Indonesia can achieve a faster, cheaper, and more reliable energy transition delivering climate benefits without compromising economic growth or energy security.

Ensuring workforce development in the energy transition

It is crucial to emphasize that the country's climate action should go hand-in-hand with the socio-economic aspirations — energy transition is not only to establish environmental stewardship but also to drive job creation (see Exhibit 5). Rationalizing the transition to achieve these aspirations is critical for the country. RE, for instance, is poised to be a net creator of jobs in Indonesia. Investments in solar, wind, geothermal, hydro and associated grid infrastructure are typically more labor-intensive per unit of energy than the coal sector. Under the current transition scenario, installing about 52 GW of new renewable capacity by 2030 could generate about 383,000 jobs in construction and operations, not including transmission jobs. When factoring in the massive transmission expansion needed, the power sector transition could yield over 600,000 new direct jobs by 2030.¹¹ The early retirement of coal plants will eliminate some jobs, but coal generation employs fewer workers per unit of capacity than renewables, and many plants are already scheduled to retire under Indonesia's long-term energy plan.

Exhibit 5

Job creation based on different energy generation output (jobs/gigawatt-hour)



Note: Small hydro is <10 MW; large hydro is ≥ 10 MW.
RMI Graphic. Source: [Global Green Growth Institute \(GGGI\)](#)

All in all, truly aligning these transition efforts with national goals means ensuring no one is left behind. A just transition for coal workers and affected communities is not just a moral imperative but also a political one. Abrupt coal mine and plant closures without support would harm thousands of workers and communities reliant on the coal industry. Thus, the transition must consider reskilling, social protection, and regional economic diversification. The government needs to develop a robust plan to ensure that the energy transition improves equity and does not exacerbate social inequalities.

Building homegrown transition strategies through local integration

Indonesia's energy transition cannot rely solely on top-down mandates. A truly effective shift must be "homegrown," rooted in local needs, capabilities, and leadership. This means empowering provincial and municipal governments to create their own transition roadmaps aligned with national goals but adapted to local realities. National ministries should support this with clear guidance, technical assistance, and funding incentives that reward subnational progress in clean energy deployment.

Cross-ministerial coordination — led by a coordinating ministry such as CMMAI in the past and involving MEMR, MSOEs, Ministry of National Development Planning (BAPPENAS), and the Ministry of Finance — is key to aligning financial tools, regulatory reforms, and development planning. SOEs also play a central role in executing the transition. These actors must be aligned to drive the coal-to-clean energy transition ecosystem. The Energy Transition Mechanism, a platform involving PLN, PT SMI, government, and development partners, is one example of integrated action that should be replicated across the transition landscape.

Finally, a locally grounded transition must also deliver tangible local benefits. Policies could consider encouraging the use of local labor, supply chains, and community development programs. Local transition forums, comprising government, civil society, youth, and utilities, can provide feedback loops to adapt policies based on on-the-ground realities. Indonesia's energy transition will only succeed if it is co-designed, co-owned, and co-implemented, blending national direction with local leadership to create a resilient and inclusive pathway forward.

CONCLUSION

From Pledge to Pathway – Reframing Indonesia's Energy Transition through the JETP

The early implementation of the JETP surfaced a core tension: while it aimed to accelerate emissions reduction, it was not fully reconciled with Indonesia's broader aspirations — energy security, industrial competitiveness, and inclusive growth. The focus on coal retirement and renewables scale-up, while crucial, was not backed by enabling policies or institutional alignment. Market distortions (such as DMO/DPO), rigid procurement mandates, grid bottlenecks, and weak inter-agency coordination revealed deeper systemic barriers that hinder scale and speed. Three foundational insights emerge. First, Indonesia's transition cannot be separated from its economic and political fabric — where coal plays a role not just in generation but in jobs, fiscal strategy, and industrial expansion. Second, transition is not just a technical shift but an institutional transformation. The limited mandate of the JETP Secretariat and fragmented governance structures have posed challenges to progress. Third, the financial architecture is skewed: with just 1.4% of the US\$20 billion in grants, questions of affordability and fairness loom large in a “just” transition narrative.

Still, the last two-plus years have generated critical learning. The JETP is evolving from a climate finance pledge into a platform that can reshape how Indonesia governs and invests in its energy system. Strategic pivots are underway — from symbolic climate commitments to joint ownership of economic transformation, and from abstract decarbonization goals to tangible industrial and social outcomes. There is growing emphasis on coal repurposing, flexible grid planning, concessional finance, and localized transition strategies. The leadership transitions — both within Indonesia and the IPG — offer a window to reposition the JETP. With Germany stepping into the IPG chair and Indonesia's new administration reaffirming energy priorities, this is a moment to re-anchor the JETP in Indonesia's development vision. Reforms to reduce capital costs, remove procurement rigidities, and align SOE regulations are key. Equally, a just transition must center local voices: provinces, municipalities, and communities need the resources and autonomy to shape transition pathways that work for their contexts.

To deliver on its promise, the JETP could evolve into a delivery platform that helps to: (1) enhance institutional coordination for policy and implementation alignment, (2) optimize energy planning with reliable data, (3) improve financial mechanisms for effective resource mobilization, and (4) advance coal repurposing strategies for managed transition. The path ahead is not without challenges — financial constraints, political complexity, and global volatility will persist. But Indonesia's fundamentals remain compelling: a dynamic economy, rich renewable potential, and growing technical capacity. With recalibrated strategy, catalytic finance, and inclusive governance, the JETP can still become more than a model for coal retirement — it can chart a new course for equitable, sovereign-led energy transitions across the Global South.

Endnotes

- 1 “What is the sources and types of financing of JETP Indonesia?,” JETP Indonesia Secretariat, accessed June 8, 2025, <https://jetp-id.org/about/what-is-the-sources-and-types-of-financing-of-jetp-indonesia>.
- 2 “JETP Grant Mapping,” JETP Indonesia Secretariat, accessed June 8, 2025, <https://jetp-id.org/news/jetp-grant-mapping>.
- 3 “Hydro REDUXA 4.0 Low-carbon aluminium,” Norsk Hydro ASA, last modified April 2020, https://www.hydro.com/globalassets/01-products--services/low-carbon/hydro_redux_folder_pm_extrusion_ingot_april2020_net.pdf.
- 4 *Rencana Umum Ketenagalistrikan Nasional (RUKN) 2025–2060*, Ministry of Energy and Mineral Resources (MEMR), 2025, https://gatrik.esdm.go.id/assets/uploads/download_index/files/28dd4-rukkn.pdf.
- 5 Norman Harsono, “Indonesia’s Prabowo Vows to Retire All Coal Plants In 15 Years,” Bloomberg, November 21, 2024, <https://www.bloomberg.com/news/articles/2024-11-21/indonesia-s-prabowo-vows-to-retire-all-coal-plants-in-15-years>.
- 6 “Cirebon-1: Indonesia’s First Coal-to-Renewables Milestone,” Centre for Research on Energy and Clean Air (CREA), accessed June 8, 2025, <https://energyandcleanair.org/publication/cirebon-1-indonesias-first-coal-to-renewables-milestone/>.
- 7 *Comprehensive Investment and Policy Plan (CIPP)*, JETP Indonesia Secretariat, November 21, 2023, https://jetp-id.org/storage/official-jetp-cipp-2023-vshare_f_en-1700532655.pdf.
- 8 *Comprehensive Investment and Policy Plan (CIPP)*, 2023.
- 9 *Comprehensive Investment and Policy Plan (CIPP)*, 2023.
- 10 *Enhancing Indonesia’s Power System: Pathways to meet the renewables targets in 2025 and beyond*, IEA, 2022, <https://iea.blob.core.windows.net/assets/247b5328-2cd7-4fbb-a800-dd1c71f6e562/EnhancingIndonesiasPowerSystem.pdf>.
- 11 *Comprehensive Investment and Policy Plan (CIPP)*, 2023.

Rizky Fauzianto, Andika Akbar Hermawan, Brian O’Hanlon, Wini Rizkiningsayu, and Selim Sardag, *Indonesia’s Just Energy Transition Partnership (JETP): A Retrospective of Progress and Navigating Changes*, RMI, 2025, <https://rmi.org/insight/indonesias-just-energy-transition-partnership-jetp>.

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