



The Role of the Just Energy Transition Partnership (JETP) in Indonesia in Making Finance Flows Consistent with Low Greenhouse Gas Emissions and Climate-Resilient Development

Policy Paper

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Executive summary

The third long-term goal of the Paris Agreement – ‘making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development’, Article 2.1c – shows that the international community has established a collective objective that reflects the comprehensive financial effort required to effectively combat climate change (Whitley, Thwaites, Wright, and Ott, 2018). Article 2.1c emphasizes the need for a holistic approach to climate finance, encompassing both public and private sources, as well as domestic and international ones.

Unlike the other goals of the Paris Agreement, for which dedicated spaces for negotiation exist, the conversation on how to operationalize Article 2.1c has lagged behind, and no consensus exists at the moment around what this operationalization entails. However, the Parties agreed to continue exploring how to operationalize Article 2.1c as a result of CMA 5 in Dubai last year (2023).

In 2022, the Government of Indonesia and the International Partners Group (IPG),¹ together with the Glasgow Financial Alliance for Net Zero (GFANZ),² launched the Just Energy Transition Partnership (JETP) in Indonesia. JETP Indonesia has been marked as the largest current just energy transition financing package, with USD 20 billion in commitments: these comprise USD 10 billion pledged by the IPG and an additional USD 10 billion of private financing mobilized by GFANZ (JETP Indonesia Secretariat, 2023).

The efforts to drive a just energy transition in Indonesia will likely shift financial flows towards supporting low

greenhouse gas emissions and climate-resilient development and thus align with Article 2.1c. This work aims to explore how Article 2.1c can be operationalized in Indonesia, particularly in the power sector, through the Just Energy Transition Partnership (JETP). The paper uses the existing framework developed by Whitley et al.³ in 2018 to operationalize Article 2.1c and adapts it to the context of the Indonesian JETP. The paper analyses the Comprehensive Investment and Policies Plan (CIPP), which was developed by the JETP Indonesia Secretariat and was formally launched on 21st November 2023. The paper also provides an analysis of how the finance flows under the JETP in Indonesia align with Article 2.1c of the Paris Agreement.

The CIPP seeks to drive action in the Indonesian energy sector towards a series of goals as reflected in the Joint Statement of JETP Indonesia⁴ by the IPG members and the Government of Indonesia, which was agreed in 2022. The goals include:

- peaking power sector emissions by 2030 at an absolute value of no more than 290 Mt CO₂ and achieving net-zero emissions in the power sector by 2050
- accelerating the deployment of renewable energy so that renewable energy comprises at least 34% of all power generation by 2030
- accelerating the early retirement of coal-fired power plants (CFPPs)
- accelerating the widespread deployment of energy efficiency and electrification tools, technologies, and reforms
- accelerating the development of a vibrant and competitive local industry in renewable energy and energy efficiency
- delivering a just energy transition by developing a robust plan, with a special focus on women, youth, and vulnerable populations that earn a living in the coal industry or in jobs connected with the coal industry
- restricting the development of captive CFPPs and implementing potential zero-emission and renewable solutions for power generation facilities outside Java and Bali, provided that the solutions are affordable, reliable, accessible, and timely
- freezing the existing pipeline of planned on-grid CFPPs and reaffirming a full moratorium on any new on-grid coal power generation capacity
- aligning local content requirements with the roadmap for domestic renewable manufacturing capability
- mobilizing sufficient capital to achieve the targets through a combination of instruments, some of which will be used to de-risk and catalyse private investments

Accordingly, the CIPP has identified five key investment areas to expedite the transition in the country's power sector: (1) development of the transmission network, (2) early retirement and managed phase-out of CFPPs, (3) acceleration of dispatchable renewable energy (DRE), (4) acceleration of variable renewable energy (VRE), and (5) development of the renewable energy supply chain.

¹ The IPG members are Japan, the USA, Canada, Denmark, the EU, the Federal Republic of Germany, the French Republic, Norway, the Republic of Italy, the United Kingdom of Great Britain, and Northern Ireland.

² GFANZ consists of financial institutions including Bank of America, Citi, Deutsche Bank, HSBC, Macquarie, MUFG, and Standard Chartered.

³ The framework: <https://www.wri.org/research/making-finance-consistent-climate-goals>

⁴ The Joint Statement: https://ec.europa.eu/commission/presscorner/detail/en/statement_22_6892

The CIPP has also highlighted the energy trilemma involved in developing the Just Transition Framework, which includes the three competing interests of energy security, energy equity, and environmental sustainability; this underscores the need for a just and equitable approach to energy transition in Indonesia (JETP Indonesia Secretariat, 2023). The CIPP defines just transition as:

an energy transition in which the resulting social, economic, and environmental risks and opportunities are equitably distributed among stakeholders according to their capacity and conditions affirmatively enable vulnerable underserved stakeholders to participate in decision-making that mitigates the risks and captures benefits from opportunities.

The Just Transition Framework consists of three main foundations: human rights, gender equality, and accountability. Two pillars, i.e. Leave No One Behind and Sustainability and Resilience, support the second level of the framework. Then the two pillars feed into a set of standards – level three of the framework – that represent various areas in which JETP investments may have impacts. The nine standards are consistent with Good International Industry Practice (GIIP).

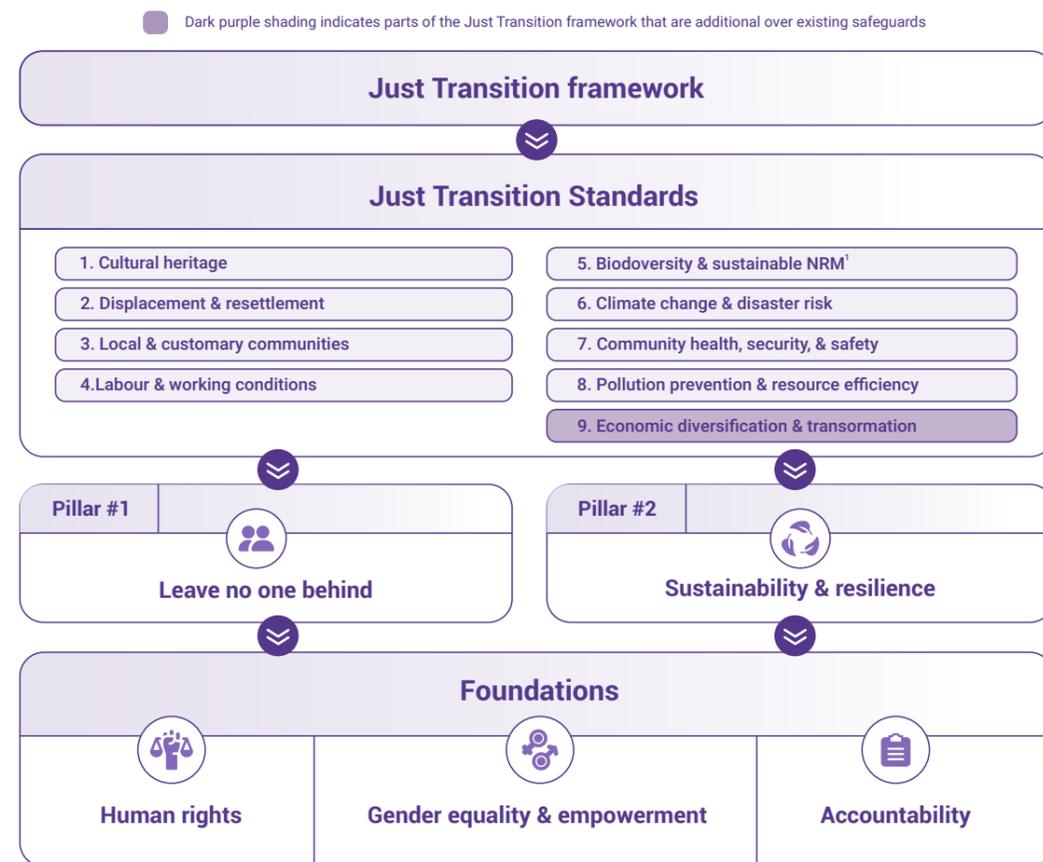


Figure 1: JETP Indonesia's Just Transition Framework (JETP Indonesia Secretariat, 2023)



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The JETP's Just Transition Framework will be operationalized in two stages: the assessment stage and the intervention stage. The assessment stage will be conducted at the project level, where potential negative impacts will be identified and managed. The intervention stage will be conducted at the project, subnational, or national level. The intervention itself will respond to identified risks and opportunities from the assessment stage, and will include a range of actions, from the introduction of new policies to programme-based intervention related to just transition.

To support Indonesia's just transition, an estimated investment cost of at least USD 97.3 billion is required in the period 2023–2030 and USD 580.3 billion in the period 2023–2050 (JETP Indonesia Secretariat, 2023). However, the finance mobilized under JETP Indonesia will be USD 20 billion (mobilized within three to five years). This means that the promised finance mobilized by the partnership only covers around 3% of what is needed in the period 2023–2050. The CIPP highlights other potential financing sources, such as capital markets, blended finance, philanthropy, and carbon finance, that could address the finance gap and support implementation of the JETP or the achievement of Indonesia's broader climate targets. However, it does not specify how the state budget can be used to support the implementation of the JETP.

Assessment of JETP-related policies provides mixed results. Many of the policies are likely to enable the transition. However, in some cases, the policies could have negative impacts on emissions and thus not be aligned with the goals of the Paris Agreement; nevertheless, these policies often address justice elements, such as access and affordability, making it hard to definitively evaluate their overall contribution to a just energy transition. Two such examples are presented below (the full table is available in the main study):

Summary of Table 6 Applying the framework to JETP Indonesia's relevant policies and regulations

<p>The Mining Law (Law No. 4/2009, amended by Law No.</p>	<p>Undecided</p>	<p>This regulation contributes negatively to greenhouse gas emissions when it is implemented together with Ministry of Energy and Mineral Resources (MEMR) Regulation No. 11/2020 regarding the Benchmark Prices for Mineral and Coal Sales: when both regulations are implemented, this results in increased subsidies for CFPPs.</p> <p>However, the intention of this regulation is to secure the coal required for domestic use, avoiding competition with coal export demand. Securing coal for domestic use does help to ensure Indonesia's electricity supply. Nonetheless, from the greenhouse gas emissions perspective, electricity that is generated by CFPPs has negative impacts.</p> <p>Because the original intention was to ensure Indonesia's energy security and provide electricity for its people (which is considered to fulfil the 'just' elements), it is difficult to decide whether this law aligns with the Paris goals or not.</p>
<p>MEMR Regulation on Procedures for Determining Benchmark Prices for Mineral and Coal Sales (MEMR Regulation No. 17/2010, which was amended by MEMR Regulation</p>	<p>Undecided</p>	<p>The domestic coal price is usually applied together with the domestic market obligation (DMO) (as reflected in the Mining Law) to ensure the availability of coal for CFPP operations in Indonesia. Applying the domestic price obligation (DPO) has raised the level of subsidy that the Indonesian government needs to provide, but at the same time doing so provides affordable electricity for Indonesian people. However, this has caused electricity from CFPPs to become cheaper than renewables.</p> <p>From the greenhouse gas emissions reduction perspective, this regulation provides subsidies for coal use in Indonesia, which is misaligned with the Paris goals. However, provision of affordable electricity has a justice element. Therefore, the authors find it difficult to categorize this regulation.</p>



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The finance available from the IPG and GFANZ for the Indonesian JETP does not include any finance for renewable energy supply chain enhancement, despite its significance for, in particular, achieving the target of 34% renewable energy in Indonesia by 2030, as stated in the Joint Statement of JETP Indonesia. As for the financing of the 'just' elements of the JETP, it is not clear whether the JETP will ensure that these elements are implemented, since finance is only committed for the assessment level and not for the intervention level. Additionally, the financial instruments used in the JETP include a very limited proportion of grants compared to concessional and non-concessional loans. The finance flows through the JETP to support Indonesia's decarbonization efforts are therefore considered inadequate, in terms of both quantity and quality, and could result in an additional fiscal burden for Indonesia.

The issue of energy transition cannot be solved by focusing only on the energy sector. The energy transition affects the workforce, human rights, and the environment, as well as the industrial sector. Thus, the involvement of various cross-sectoral ministries is crucial, and a commitment to implementing the just energy transition needs to be reflected at a higher level of policy and/or regulations. Given that Indonesia continues to struggle to tackle core developmental issues, such as poverty, the transition to low-greenhouse-gas-emission development in the energy sector must not be pursued at the risk of perpetuating existing inequalities that stem

from the traditional energy system. The JETP, therefore, should include an approach that focuses on expansion of access, local industry empowerment, and capacity building.

For domestic financial flows, Indonesia has policy levers that could enable the finance flows in the country to align with the Paris Agreement objectives. However, the implementation of these policy levers will need to be done properly, with a clear pathway, planning, and monitoring and evaluation mechanisms.

The chances of making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development will be highly affected by the designed pathway. In the case of Indonesia, the energy transition roadmap is still being developed. Discussion of finance flows should not be separated from technical decision-making on how to achieve low greenhouse gas emissions and resilient development. In developing pathways to low greenhouse gas emissions and climate-resilient development, it is crucial to include the 'just' elements. This is to ensure that all measures taken on climate change also consider sustainable development and poverty eradication, as reflected in the preamble of Article 2.1. At a minimum, in developing such a pathway policymakers need to consider the impact of measures taken on human rights, the environment, and the workforce.



1

Introduction

The existence of Article 2.1c of the Paris Agreement shows that the international community has established a collective objective that, for the first time, reflects the comprehensive financial effort required to effectively combat climate change. The commitment outlined in Article 2.1c of the Paris Agreement represents one of the Agreement's three long-term objectives. The other two goals, stated in Article 2.1a and Article 2.1b, focus, respectively, on limiting the rise in global average temperature to well below 2°C – in fact, pursuing a rise of no more than 1.5°C above pre-industrial levels – and enhancing capacity to adapt to the impacts of climate change. Article 2.2, which also addresses the Paris Agreement's long-term objectives, emphasized that Article 2.1 in general (including Article 2.1c) must be implemented in a manner that reflects the principles of equity and of common but differentiated responsibilities and respective capabilities (CBDR-RC), in light of varying national circumstances.

The objectives of the Paris Agreement, as stipulated in Article 2.1:

- ***Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change. – Article 2.1a***
- ***Increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development, in a manner that does not threaten food production. – Article 2.1b***
- ***Making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development. – Article 2.1c***

By acknowledging the importance of financial resources and their alignment with climate objectives – not only in relation to greenhouse gas emissions, but also to ensuring a just transition – the Parties are demonstrating their commitment to pursuing a sustainable and resilient future. The inclusion of Article 2.1c in the Paris Agreement thus emphasizes the need for a holistic approach to climate finance, encompassing both public and private sources, as well as domestic and international flows.

While the operationalization of Article 2.1a and Article 2.1b has its own negotiation agenda under the United Nations Framework Convention on Climate Change (UNFCCC), the conversation on how to operationalize Article 2.1c has lagged far behind. Through Decision 1/CMA.4 paragraph 68,⁵ the Parties agreed to initiate the Sharm El-Sheikh Dialogue, with the main objective being to facilitate an exchange of views and enhance understanding of the scope of Article 2.1c of the Paris Agreement and its complementarity with Article 9 of the Paris Agreement. The Dialogue was expected to involve the participation of the Parties, relevant organizations, and other relevant stakeholders. To date, however, the Parties have not yet agreed on how to operationalize Article 2.1c of the Paris Agreement.

1.1. About this paper

This paper was initiated by the Indonesia Research Institute for Decarbonization (IRID) and Germanwatch, to examine how Article 2.1c can be operationalized in Indonesia, particularly in the power sector through Indonesia's JETP. We consider that the efforts for a just energy transition will shift financial flows to support reductions in greenhouse gas emissions and climate-resilient development and thus align with Article 2.1c. Efforts for a just energy transition will cover many areas in the energy sector (such as transportation, cooking, and electricity); however, this paper will focus only on the power sector under the JETP in Indonesia.

1.2. Methodology and limitations

The authors used desk research and focus group discussions, which involved government representatives and also non-government stakeholders such as civil society organisations (CSOs) and private sectors representatives, to collect some of the information required for this paper. The authors also studied the Article 2.1c Operationalization Framework, which was released by the Overseas Development Institute (ODI), the World Resources Institute (WRI), The Rocky Mountain Institute (RMI), and E3G and addresses how to operationalize Article 2.1c of the UNFCCC Paris Agreement.⁶ However, the framework considers only financial policies and regulations, and does not view sectoral policies and regulations as forming part of pathways towards low greenhouse gas emissions and climate-resilient development. Nevertheless, the framework does recognize the importance of pathways, as the pathways that consist of mitigation and adaptation objectives are critical for shaping finance and, thus, financial flows.

⁵ UNFCCC (2022), available at: https://unfccc.int/sites/default/files/resource/UNFCCC_Climate%20Finance_Decisions%20Booklet_2022.pdf?download#page=105

⁶ The framework: <https://www.wri.org/research/making-finance-consistent-climate-goals>

■ About the framework

The Article 2.1c Operationalization Framework (or 'the framework') is presented as a cycle, in which different phases of development and implementation of government tools to shift and mobilize finance, track progress, and increase ambition (Whitley et al., 2018) are interconnected. The framework has three phases: (1) driving action, (2) tracking progress, and (3) raising ambition.

Driving action covers the tools the government can deploy to make finance consistent with the Paris goals:

- create a suitable investment environment through financial policies and regulations
- align price signals and public resources through the effective use of fiscal policy and budgets
- harness public finance to shape wider investment
- use information instruments (often voluntary) to increase transparency and establish standards

Table 1 elaborates several examples of how tools deployed by the government can make finance consistent with the Paris goals, under the driving action phase.

Identifying and applying tools to shift and mobilise finance towards low-GHG and climate-resilient development.



Figure 2: The framework to operationalize Article 2.1c (Whitley et al., 2018)



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In the tracking progress phase, policymakers can track the progress and assess the consistency of finance using existing tracking approaches, or develop a new approach that is built on the existing approach.

In the raising ambition phase, the objective is to use the information from the tracking progress phase to increase ambition. In the UNFCCC context, the process of documenting collective progress is called the Global Stocktake. The results from the Global Stocktake, as mandated by Article 14 of the Paris Agreement, should be used by Parties to update their Nationally Determined Contributions (NDCs) and an updated NDC should represent a progression from the previous NDC submitted.

Policy Lever	Rationale	Examples	Notes
Financial policies and regulations	Primarily influence behaviour through force of law	Lending requirements, mandates of supervisory authorities, standards, plans and strategies, regulatory frameworks disclosure requirements	When mandatory and enforced
Fiscal policy levers	Primarily influence behaviour through price	Taxes, levies, subsidies, feed-in-tariffs, price support or controls, public procurement, budget support	Including for establishment of public funds and finance institutions and state-owned enterprises
Public finance	Primarily influence behaviours by shifting financial risk	Grants, debt, equity, guarantees, insurance, public budget and spending	From public pension funds, and public finance institutions
Information instruments	Primarily influence behaviours through awareness	Certification and labelling, transparency initiatives, awareness campaigns, corporate strategies, green bond guidelines, measuring, reporting and verification (MRV) systems, plans and strategies	Where voluntary

Table 1: The Article 2.1c Framework to ensure that financial flows align with the Paris Agreement (adapted from Whitley et al., 2018)

Climate-positive and -negative lenses

The authors also used the lenses concept, developed by Feyertag, Watson, and Ryfisch (2023), by looking at how existing policies and regulations can be categorized as climate positive, climate negative, or enabling.

Climate-positive and climate-negative lenses analyse the volume of financial flows, which provides quantifiable information. For example, they indicate how much of the available finance flows to Paris-aligned pathways (positive lens) and how much of the available finance

flows to Paris-misaligned actions (negative lens). The enabling lens does not look at quantitative information, instead it analyses the existing regulations and policies that create the enabling environment for finance to flow towards specific goals, and therefore can provide a more transformative impact than the other two lenses. Applying the enabling lens enables Parties to identify policies and regulations that have become barriers to alignment of financial flows with the Paris goals.

Lenses	Overview	Application
Climate-positive lens	<p>Strengths: Quantifiable</p> <p>Weaknesses: It may not consider country-specific Paris-aligned pathways, especially in poorer countries or in adaptation sectors where data availability remains an issue.</p>	Used to track public and private finance flows that support Paris-aligned development pathways , beyond those made under Article 9 of the Paris Agreement.
Climate-positive lens	<p>Strengths: Quantifiable and helps incentivize Paris alignment of finance flows by highlighting laggards and raising awareness of Paris misalignment.</p> <p>Weaknesses: May not recognize invisible barriers to mobilizing Paris-aligned finance, such as high costs of capital.</p>	Used to track public and private finance flows that are Paris misalignment , to incentivize their alignment.
Enabling lens	<p>Strengths: Potential to have more transformative impact by identifying bottlenecks and regulatory barriers.</p> <p>Weakness: May not capture real-economy investment decisions.</p>	Considers whether conditions (for example, regulatory environments) are conducive to attracting Paris-aligned capital .

Table 2: Existing lenses for assessing Article 2.1c implementation (adapted from Feyertag, Watson, and Ryfisch, 2023)

1.3 Scope

The Indonesian JETP plays an important role in Indonesia's decarbonization efforts and also those of the wider world, as reflected in the Intergovernmental Panel on Climate Change (IPCC) Special Report on 1.5°C. The report highlighted the fact that, to achieve global net-zero emissions, the world requires mitigation pathways that are characterized by, inter alia, decarbonization of electricity and electrification of energy end use.

The implementation of the JETP is crucial as it was intended to help developing countries with their decarbonization efforts and thus help them to implement Paris-aligned activities. Making sure that all finance flows through JETP are consistent with the agreed objectives, as reflected in JETP's Indonesia Joint Statement,⁷ will provide an example of how to operationalize Article 2.1c through international partnership.

The work detailed in this paper was carried out by analysing the final version of the CIPP of the JETP in

Indonesia, which was launched on 21st November 2023. However, it is important to note that the CIPP is a living document that will be updated regularly, to accurately capture shifts in the dynamics of power supply and demand, prevailing costs, available technologies, and the policy and legal environment (JETP Indonesia Secretariat, 2023).

This paper also provides analysis on how finance flows under the JETP in Indonesia align with the Paris goals in accordance with Article 2.1c. The analysis uses the framework as elaborated in Section 1.2.1 and Section 1.2.2, above. However, regarding the phases of the framework described in Section 1.2.1, the authors used only the driving action phase, not the tracking progress or raising ambition phase.

The authors also used the climate-positive, climate-negative, and enabling lenses, as reflected in Section 1.2.2, in their analysis.



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⁷ The Joint Statement of the IPG members and Indonesia on the JETP: <https://www.whitehouse.gov/wp-content/uploads/2022/11/Joint-Statement.pdf>



2

The JETP in Indonesia

2.1. Background

On 16th November 2022, the Government of Indonesia and the IPG, together with GFANZ, launched the JETP in Indonesia. The Indonesian JETP has been marked as the largest current just energy transition financing package, with USD 20 billion in commitments: these comprise USD 10 billion pledged by the IPG and an additional USD 10 billion of private financing mobilized by GFANZ (JETP Indonesia Secretariat, 2023).

In accordance with the Joint Statement of the Government of Indonesia and the IPG members,⁸ the Government of Indonesia was required to develop the CIPP, which needs to accommodate the following:

- **peaking power sector emissions by 2030 at an absolute value of no more than 290 Mt CO₂** (down from a 2030 baseline value of 357 Mt CO₂) and immediately declining thereafter on an ambitious trajectory and **achieving net-zero emissions in the power sector by 2050**, including with the accelerated retirement of coal plants, conditional on international support

- accelerating the **deployment of renewable energy so that renewable energy comprises at least 34% of all power generation by 2030**

- **accelerating, with IPG support, the early retirement of CFPPs**, as prioritized and identified by the Indonesian Government in the JETP Investment and Policy Plan as a necessary element to achieve the above targets

- **accelerating the widespread deployment of energy efficiency and electrification** tools, technologies, and reforms, including through standards to access the resulting energy and cost savings with support from the IPG

- **accelerating the development of a vibrant and competitive local industry in renewable energy and energy efficiency**, as appropriate and as feasible, by investing in local technological capacity and knowledge in collaboration with the IPG

- **delivering a just energy transition** by developing a robust plan, in consultation with relevant stakeholders, to identify and support the segments of Indonesia's population most vulnerable to potential negative impacts of the transition: workers, and all societal groups with a special focus on women, youth, and vulnerable populations that earn a living in the coal industry or in jobs connected with the coal industry

- **restricting the development of captive CFPPs** in accordance with Presidential Regulation No. 112/2022 and collaborating to find and implement potential zero-emission and renewable solutions for power generation facilities outside Java and Bali, including captive power facilities, provided that the solutions are affordable (priced similar to or better than the non-renewable alternatives), reliable (can provide baseload), accessible, and timely (can be deployed within a timeline similar to or better than that of the non-renewable alternatives) to balance the imperative of the industrial development and economic growth of Indonesia with the commitment on net zero

- **freezing the existing pipeline of planned on-grid CFPPs** included in the current Rencana Umum Penyediaan Tenaga Listrik (RUTPL) or National Electricity Supply Business Plan 2021–2030, and **reaffirming a full moratorium** on any new on-grid coal power generation capacity in accordance with Presidential Regulation on Renewable Energy (Perpres 112/2022)

- **aligning local content requirements with the roadmap for domestic renewable manufacturing capability** in order to achieve the renewable goals in the RUPTL and to scale renewable deployment to support robust domestic renewable energy manufacturing capability; the progression of local content requirements should take into account the size and scale of a viable domestic market

- **mobilizing sufficient capital to achieve the targets through a combination of instruments** that may include grants, concessional loans, market-rate loans, guarantees, and technical assistance, some of which will be used to de-risk and catalyse private investments

- **mobilizing USD 20 billion over the next three to five years through the partnership**, of which USD 10 billion will be mobilized by the IPG members. Working closely with the Government of Indonesia and the IPG, the **GFANZ Working Group members will work to mobilize and facilitate at least USD 10 billion in private finance** in support of an ambitious transition path and investment plan. Private sector finance will be subject to catalytic public finance and, with collective ambition by all Parties, **including enhanced engagement by the multilateral development banks (MDBs)**, public sector finance has the potential to generate significantly more in private finance than the above amount. These resources are subject to concurrence with the JETP Investment and Policy Plan, which includes a competitively tendered pipeline of projects, including continued progress in improvements to the country's policies and enabling environment, in line with budgetary procedure and terms, responsive to progress by the Indonesian Government and relevant actors, and transparently reported. **The continuation of the partnership is expected to be contingent on no new coal power capacity in instances where timely, zero-emission, affordable, and reliable alternatives are available**, including developing a strategy to avoid new captive coal and to successfully identify investments in renewable electricity supply as alternatives for all new captive projects.

In the development of the CIPP, the Government of Indonesia established a JETP Indonesia Secretariat, which it launched on 16th February 2023. The JETP Indonesia Secretariat then established and coordinated working groups to formulate the CIPP (JETP Indonesia Secretariat, 2023):

1. **technical working group**, led by the International Energy Agency (IEA), with the objective of consolidating the energy transition pathway for Indonesia's power sector; members include the RMI, the World Bank, the Institute for Essential Services Reform (IESR), and the Danish Energy Agency
2. **finance working group**, led by the Asian Development Bank (ADB), to identify financing needs, requirements, and modalities; members include GFANZ, Climate Policy Initiative, KfW Development Bank, Agence Française de Développement (AFD), and the Japan International Cooperation Agency (JICA).
3. **policy working group**, led by the World Bank, to analyse policy requirements and provide recommendations to support power sector decarbonization; members include MENTARI, the United States Agency for International Development (USAID), the ADB, and the IEA.
4. **just transition working group**, led by the United Nations Development Programme (UNDP), with the objective of developing a Just Transition Framework to guide implementation; members include the ADB, the International Labour Organization (ILO), the World Bank, the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), and the Indonesian Center for Environmental Law.

In developing the CIPP, the JETP Indonesia Secretariat adopted the following principles:

- the CIPP needs to positively contribute towards Indonesia's economy and ensure energy affordability
- the CIPP needs to guarantee energy security and stability, while ensuring a just transition
- the CIPP needs to ensure energy sustainability
- the CIPP needs to maintain long-term financial sustainability for PLN and its subsidiaries

When JETP Indonesia first launched in November 2022, the landscape of private and captive power was not comprehensively documented (JETP Indonesia Secretariat, 2023). Industry dynamics were the main reason for this. For example, demand for nickel has increased in recent years because of the emerging electric vehicles (EVs) and batteries markets: these industries have therefore grown rapidly, particularly in the nickel-rich region of Indonesia. This, of course, has resulted in growing levels of captive power in Indonesia. However, as captive power plants are owned by the private sector, the growth has not been fully visible to the JETP Secretariat: the information on captive power plants used in the development of the CIPP was based solely on the Government of Indonesia's documentation (JETP Indonesia Secretariat, 2023).

Given the complexity of captive power plants in Indonesia, it was agreed that the 2023 version of JETP Indonesia's CIPP would have only an on-grid emissions target and pathway. It was also agreed that after the formal launch of the CIPP, the JETP Secretariat would then begin an extensive study of off-grid systems to better understand how captive decarbonization strategies could work (JETP Indonesia Secretariat, 2023).

2.2. JETP pathways

The targets presented in the Joint Statement of JETP Indonesia were heavily influenced by the Energy Sector Roadmap to Net Zero (NZE) in Indonesia, developed by the IEA in 2022⁹ (JETP Indonesia Secretariat, 2023). The IEA's assessment was that CO₂ emissions in Indonesia's power sector will peak at 290 Mt CO₂ by the early 2030s and will reach net zero by 2050, through the implementation of energy efficiency, renewable energy deployment, and CFPP phase-out. However, the IEA scenario differs from the projections calculated by the MEMR and the *Rencana Umum Ketenagalistrikan Nasional* (RUKN) or National Electricity Master Plan, which suggest the baseline at 357 Mt CO₂, and 487 Mt CO₂ by 2030 instead, due to the adjusted starting baseline of Indonesia's power sector.

It is noteworthy that the current version of CIPP considers only the on-grid emissions target and pathway. This pathway incorporates and builds on many findings from the IEA, the MEMR, and PT PLN (Persero)¹⁰ scenarios, such as transmission interconnection, policy reforms, and reduction of coal in the power mix. The planned study on off-grid decarbonization will be carried out in the first half of 2024 by the JETP Secretariat.

The JETP scenario seeks to surpass the existing domestic plan by PT PLN (Persero) and the MEMR, which aims to reduce projected on-grid emissions to 250 Mt CO₂ by 2030. JETP Indonesia strives for a more ambitious pathway for transitioning Indonesia's power sector to cleaner energy, which will be supported by potential policy reforms and financial support under the JETP. Table 3, below, provides key scenario design features and comparisons for the on-grid electricity sector.



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⁹ An Energy Sector Roadmap to Net Zero (NZE) in Indonesia: <https://www.iea.org/reports/an-energy-sector-roadmap-to-net-zero-emissions-in-indonesia>

¹⁰ PT PLN (Persero) is a state-owned electricity enterprise in Indonesia.

	JETP Scenario* (2023-2050)	Draft RUKN - Retrofit Scenario (July 2023) (2023-2060)	Final Draft RUKN Main Scenario (November 2023) (2024-2060)	PLN Accelerated RE Scenario (2023-60)
Annual demand growth	6.0% (including captive connections)	5.9% (to 2050)	5.1% (to 2050)	4.6% (to 2050)
Demand in 2030/2050	451 Twh / 1315 Twh	431 Twh / 1299 Twh	420 Twh / 1048 Twh	409 Twh / 934 Twh
Electricity Grid	Transmission=RUPTL to 2030; large island interconnection 2029	Transmission=RUPTL to 2030; large island interconnection 2034	Transmission=RUPTL to 2030; large island interconnection 2029	
Coal Power New Additions	11.1 GW (2021-30); announced projects in RUPTL, excluding those assumed canceled or not having reached financial close (2.7 GW)			12.6 GW (2021-30); announced projects in RUPTL, excluding those assumed canceled (1.2 GW)
Early retirements of coal power	1.7 GW by 2040 (funded ETM) Accelerated retirements 2045-50	None		
Flexible utilization of coal power	Yes, with guidance on annual minimum and hourly dispatch analysis	Not demonstrated in the annual results		Partial-application to IPPs
Additional supply policies	No renewables LCR in modeling Renewables PPAs and procurement aligned with market standards Coal price above Domestic Market Obligation cap (on energy equivalent basis)			No renewables LCR in modeling
RE share in 2030/2050	44% / 92%	35% / 84%	25% / 73%	25% / 61%
VRE share in 2030/2050	14% / 36%	12% / 38%	6% / 23%	3% / 48%
VRE capacity in 2030/2050	38 GW / 309 GW	35 GW / 301 GW	16 GW / 150 GW	8 GW / 162 GW
CO ₂ emissions in 2030	250 MT (with emissions constraint)*	306 MT	336 MT	334 MT
Net Zero Emission Year	2050	2057	2060	2060

Notes: Capacity values in the RUKN and JETP scenario are reported as net power capacity with the PLN scenario reports nameplate power capacity; DMO = domestic market obligation; LCR = local content requirement; RE = renewable energy; VRE = variable renewable energy.
*The JETP scenario modelling is conditional and was carried out using MEMR's emissions factor under the intergovernmental Panel on Climate Change (IPCC Tier-2) methodology; using the IPCC Tier-1 emissions factor for

Table 3: Key scenario design features and comparisons for the on-grid electricity sector (JETP Indonesia Secretariat, 2023)



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2.3. JETP's Just Transition Framework

The CIPP document states that the energy trilemma underscores the need for a just and equitable approach to energy transition in Indonesia (JETP Indonesia Secretariat, 2023). The energy trilemma generally entails three competing interests, i.e. energy security, energy equity, and environmental sustainability, with different implications for different countries in accordance with their varying energy profiles. In the Indonesian context, the country aims to address energy security and at the same time attempts to contribute to climate action. However, a formidable challenge is involved in also ensuring energy equity, which is essential to tackle poverty.

The basis of justice in the energy transition context can be traced back to the 1945 Constitution Article 33, which states that 'The earth and water and natural resources contained therein shall be controlled by the State and be utilized for the greatest prosperity of the people'. As a result, the CIPP defines just transition as:

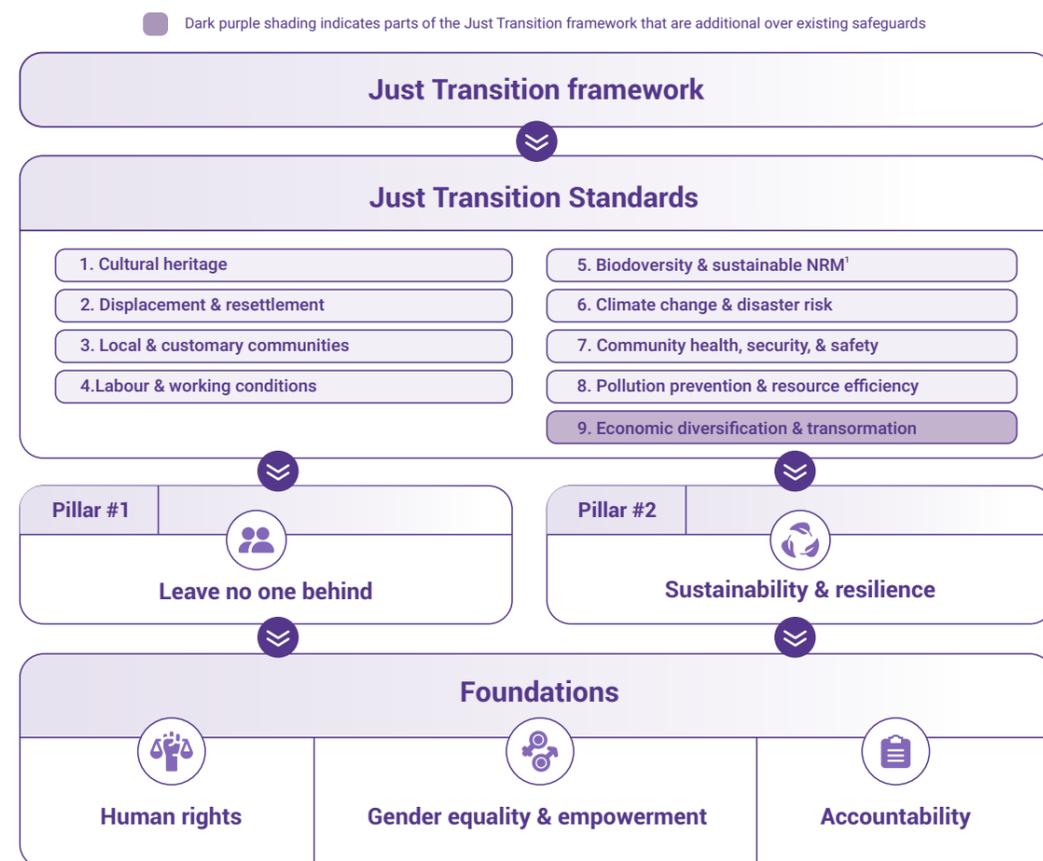
an energy transition in which the resulting social, economic, and environmental risks and opportunities are equitably distributed among stakeholders according to their capacity and conditions affirmatively enable vulnerable underserved stakeholders to participate in decision-making that mitigates the risks and captures benefits from opportunities.

This definition emphasizes risk mitigation and the maximizing of opportunities that arise from the transition, such as socio-economic impacts on the workforce.

According to the CIPP document, several aspects of the legal and regulatory landscape in Indonesia have formed the basis of the Just Transition Framework, such as:

1. Law No. 39 Year 1999 on Human Rights
2. Law No. 8 Year 2016 on Persons with Disabilities
3. Law No. 7 Year 1984 on Ratification of Convention on the Elimination of All Forms of Discrimination Against Women
4. Law No. 32 Year 2009 on Protection and the Management of the Environment
5. Law No. 14 Year 2008 on Public Information Disclosure
6. Law No. 25 Year 2009 on Public Service Regarding Information Request and Public Complaint Handling

The Just Transition Framework consists of the three main foundations of Indonesia's just transition: human rights, gender equality, and accountability. Two pillars, i.e. Leave No One Behind and Sustainability and Resilience, support the second level of the framework. Then the two pillars feed into a set of standards – level three of the framework – that represent various areas in which JETP investments may have impacts. The nine standards are consistent with GIIP.



1. NRM is natural resource management

Figure 3: JETP Indonesia's Just Transition Framework (JETP Indonesia Secretariat, 2023)

The Just Transition Framework in the CIPP builds on existing safeguards from the Indonesian government, such as Environmental Impact Analysis (*Analisis Mengenai Dampak Lingkungan/AMDAL*) and the Land Acquisition and Resettlement Plan. In addition, safeguards owned by the financiers will also be adopted as standards in the framework. While the safeguards, from both the government and the financiers, focus on mitigating risks, the Just Transition Framework fills the gap by enhancing the social, environmental, and economic opportunities arising from the investments.

Operationalizing JETP's Just Transition Framework in Indonesia

The JETP's Just Transition Framework will be operationalized in two stages: the assessment stage and the intervention stage. The assessment stage is intended to identify possible impacts emerging from the project and to develop action plans to manage them, and will be conducted at the project level. In the intervention stage, the identified risks will be overcome and opportunities realized, and this will be done at the project, subnational, or national level. The intervention itself will range from the introduction of new policies to programme-based interventions related to just transition. Nonetheless, under the CIPP's current proposal, the 'just' elements will remain unclear until projects are implemented or completed.

With regard to financing the 'just' elements, the estimated sum is not available in the CIPP. The just transition assessment cost was estimated to be around 1) USD 18 million for capacity building, a scoping study, and project piloting; and 2) USD 0.5 million per priority project assessment, totalling USD 200.5 million. In total, the estimated cost is USD 218.5 million.

Meanwhile, the estimated funds required to finance the intervention stage addressing the 'just' elements will be calculated on a project basis (JETP Indonesia Secretariat, 2023). Hence, the investment required to fund the 'just' elements of the intervention stage across all levels remains unclear. The CIPP document highlights the need for grant funding to support the operationalization of the 'just' elements across all levels.



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3

Financing the JETP

3.1. Investment focus areas (IFAs) in JETP

The CIPP has identified five key investment areas to expedite the transition in the country's power sector: (1) development of the transmission network, (2) early retirement and managed phase-out of CFPPs, (3) acceleration of dispatchable renewable energy, (4) acceleration of VRE, and (5) development of the renewable energy supply chain.¹¹

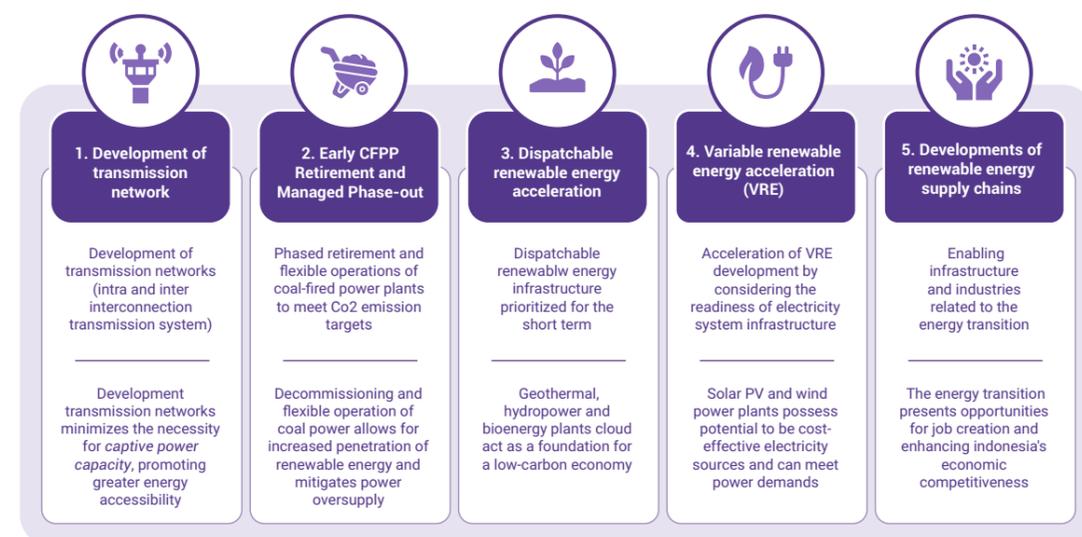


Figure 4: The IFAs of JETP Indonesia (JETP Indonesia Secretariat, 2023)

In order to meet national energy demand and at the same time reduce CO₂ emissions in the power sector, JETP Indonesia plans to reduce CFPP use, notably through managed phase-out. This approach is being taken to speed up the development of renewable energy in Indonesia's power system. These actions will be complemented by the development of the transmission network and the establishment of local renewable energy supply chains. The interventions outlined in the JETP scenario aim to achieve a reduction of 55 Mt CO₂ in the on-grid system by 2030 through various measures.

3.2. Financial allocation

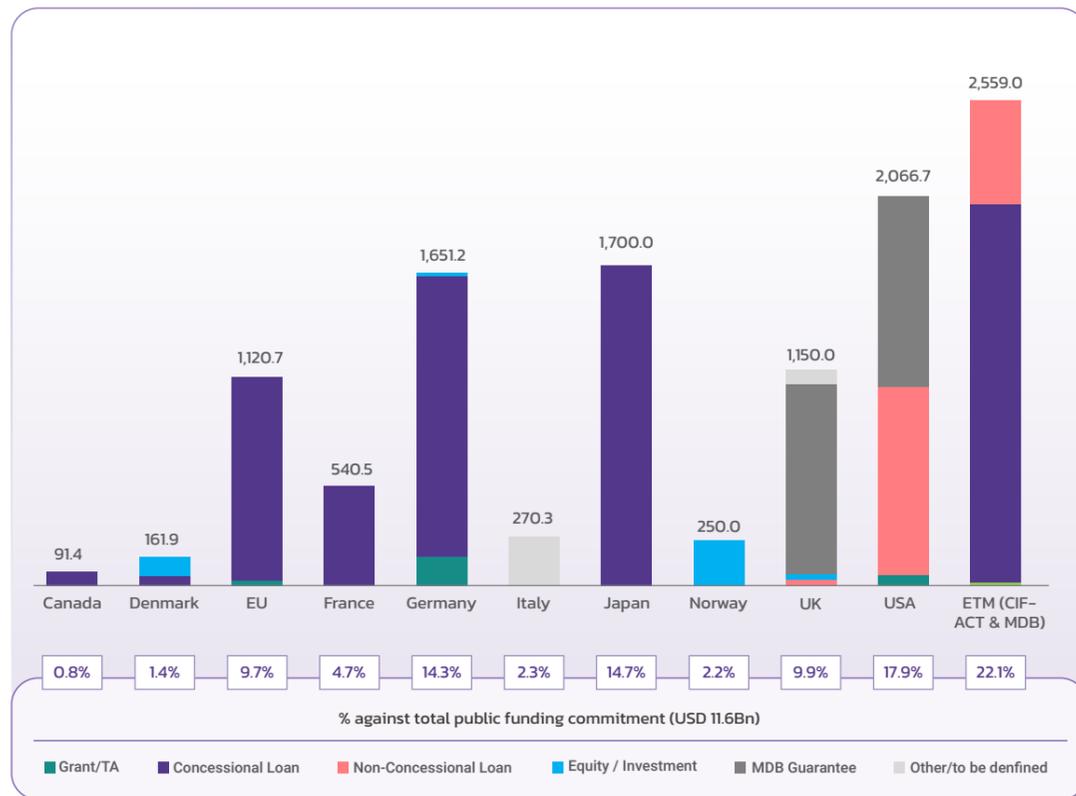
The CIPP has identified the finance needs for the five IFAs in the period 2023–2030. Supporting the just transition in the on-grid power sector through these five IFAs requires an estimated investment of at least USD 97.3 billion in the period 2023–2030 (Table 4) and USD 580.3 billion in the period 2023–2050 (JETP Indonesia Secretariat, 2023). The Joint Statement of JETP Indonesia states that the finance mobilized under JETP Indonesia will be USD 20 billion (USD 10 billion will be mobilized by the IPG members and USD 10 billion from private finance), and it will be mobilized within three to five years of the partnership. That said, the mobilized finance promised by the partnership covers only around 3% of what is needed in the period 2023–2050.

Table 4 Investment required to achieve JETP's power sector pathway (JETP Indonesia Secretariat, 2023)

Focus area	2023–2030	
	Units	Investment needs (USD bn)
IFA1 Transmission lines and grid deployment	~8,000-14,000 kmc	19.7
IFA2 Early CFPP retirement CFPP managed phase-out	1.7 GW 55.8 GWh (2030)	1.1 1.3
IFA3 Dispatchable renewable energy (DRE) deployment acceleration	16 GW	49.2
IFA4 Variable renewable energy (VRE) deployment acceleration	40 GW	25.7
IFA5 Renewable energy supply chain enhancement	N/A	TBD
Just transition Assessment Intervention	N/A	0.2 (minimum) TBD
Total		97.3

¹¹ The plan is for energy efficiency and electrification to be added as the sixth IFA in the upcoming version of the JETP Indonesia CIPP (2024).

The CIPP also identified various financing modalities available to support JETP implementation. First, the private finance or commercial finance pledged by GFANZ for JETP Indonesia is USD 10 billion. The private finance instruments that can be used include commercial debt, equity investment, and capital market instruments. Private finance, according to the CIPP, can be catalysed by public finance and an enabling environment that allows more private finance to flow.



Source: (JETP analysis based on the IPG Submissions and consultations, 2023)

Figure 5: Financial contribution of the IPG members, including from the Energy Transition Mechanism (ETM) (JETP Indonesia Secretariat, 2023)

Second, the public finance that the IPG members have committed – at least USD 10 billion – will include financial instruments such as concessional loans and grants/technical assistance. The CIPP notes that the public finance commitment by the IPG will consist of grants, concessional and non-concessional loans, equity, MDB guarantees, and commercial loans. Concessional loans constitute the largest share of the public funds from the IPG (USD 4.9 billion/55.0%), followed by MDB guarantees (USD 2.0 billion/22.2%), non-concessional loans (USD 1.59 billion/11.7%), equity (USD 0.384 billion/4.3%), and other instruments/to be defined (USD 0.345 billion/3.8%) with grants/technical assistance receiving the lowest share (USD 0.295 billion/3.0%).

Indonesia's Energy Transition Mechanism (ETM)¹² fund has also been added as an additional pool of funds for JETP Indonesia. Under the Climate Investment Funds Accelerated Coal Transition (CIF ACT),¹³ Indonesia' ETM programme will utilize USD 500 million in CIF ACT funding, plus USD 2.059 billion of MDB co-financing.

¹² Further information on the ETM: <https://www.adb.org/what-we-do/energy-transition-mechanism-etm>

¹³ Further information on CIF ACT: <https://www.cif.org/topics/accelerating-coal-transition>

Countries/entities	Grants/technical assistance	Concessional loans	MDB guarantees	Non-concessional loans	Equity	Others/to be defined	Total
Canada	10.0	81.4					91.4
Denmark	1.9	60.0			100.0		161.9
EU	29.6	1,091.1					1,120.7
France		540.5					540.5
Germany	167.2	1,474.5			9.5		1,651.2
Italy						270.3	270.3
Japan		1,700.0					1,700.0
Norway					250.0		250.0
UK			1,000.0	50.0	25.0	75.0	1,150.0
USA	66.7		1,000.0	1,000.0			2,066.7
ETM	20.0	1,999.0		540.0			2,559.0
Total	295.4	6,946.5	2,000.0	1,590.0	384.5	345.3	11,561.7

Table 5: JETP's financial Instruments by source (in USD million) based on IPG submissions and consultations (JETP Indonesia Secretariat, 2023)

The CIPP highlights other potential financing sources, such as capital markets, blended finance, philanthropy, and carbon finance, that could address the finance gap and support implementation of the JETP or the achievement of Indonesia's broader climate targets. However, it does not specify how the state budget can be used to support the implementation of the JETP.



4

Aligning financial flows through the JETP with Article 2.1c of the Paris Agreement

In accordance with the Joint Statement on the JETP, Indonesia must identify the policies required for the successful implementation of the JETP as part of its CIPP. Indonesia has identified the existing policies and regulations that could help leverage financial flows to reduce greenhouse gas emissions through the JETP.

4.1. Aligning JETP Indonesia with Paris-aligned activities

Alignment of finance flows with low greenhouse gas emissions and resilient development does not depend solely on policies and regulations related to financial aspects. The way that sectoral policies are designed may affect finance flows in ways that deter or hinder reductions in greenhouse gas emissions and resilient development. One of the policy reforms suggested by the CIPP relates to the Local Content Regulation (LCR), which is under the authority of the Ministry of Industry (MoI). Other policies that need to be reformed, according to the CIPP, include those related to the DMO and the DPO, which are under the authority of the MEMR.

• The LCR

The LCR was formulated to empower Indonesia's local industries and to strengthen Indonesia's industrial structure, as reflected in Government Regulation No. 29/2018, which is described in Annex A. of this paper. The same regulation encourages the use of domestic goods and services, which can be measured by the percentage of local content used in the production of goods and services. The local content of goods is calculated according to production factors: direct use of materials in production of goods and services, direct worker costs, and factory overheads. As for services, the local content is calculated based on the production costs of workers, facilities (including equipment), and general services.

Currently, the local content requirements are assessed through a points threshold system regulated by the MoI, which has developed detailed guidelines for calculating local content points in the energy sector (JETP Indonesia Secretariat, 2023).

For example, the current local content requirement for solar modules is 40%, and it continues to increase. However, the main challenge in increasing the local content value for these modules is the lack of interest from tempered-glass factories in producing specialized glass for photovoltaics (PV) (JETP Indonesia Secretariat, 2023). Failure to meet the local content requirement entails a penalty, as regulated by MoI Regulation No. 54/2012 (Annex A.5.3.). This may deter investment in power plant projects, particularly renewable-energy-based ones (JETP Indonesia Secretariat, 2023). Another challenge is that for all projects funded by international financial institutions (IFIs), applying the LCR basically contradicts the procurement standard set in the IFIs' procurement procedures, which Indonesia ratified.



Reforming the LCR will be crucial to implementing any just energy transition initiatives, not just the JETP. Another option is exempting all JETP projects from the LCR, but, in parallel, JETP projects and activities need to be able to create an environment where the renewable-based power sector industries can grow. Reforming the LCR could also help to shift financial flows to support reductions in greenhouse gas emissions and resilient development, as this will support the growth of the renewable energy supply chain industries, among other relevant industries.

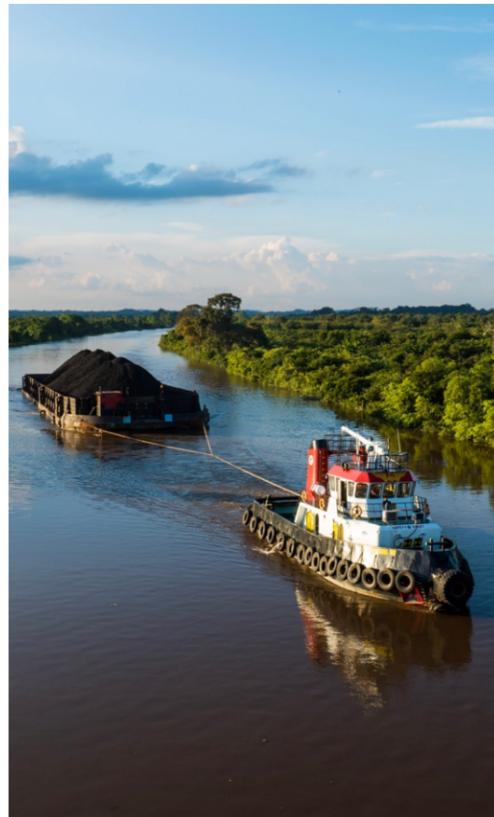
• The DMO and the DPO

The CIPP also suggests the reform of two key regulatory policies that have hindered national decarbonization efforts on the supply side, i.e. the DMO and the DPO. The DMO is a regulation that controls how much coal is available for domestic use including in power plants, while the DPO is a regulation that controls the domestic price of coal. Through these regulations, the price of coal purchased for electricity generation by PT PLN (Persero) in 2022 was USD 50 per tonne. At a coal price of USD 50 per tonne, the cost of electricity generation from CFPPs would be around USD 22–33/MWh, while the cost from natural gas would be USD 56/MWh (JETP Indonesia Secretariat, 2023).

The DMO was basically designed to secure Indonesia's need for coal for domestic use, which is determined by the MEMR based on forecasts submitted by domestic coal users. The current DMO is 25% of total production (JETP Indonesia Secretariat, 2023).

The DPO regulates the price of coal for domestic use, which was intended to be linked with the international market prices. One of the conditions, as reflected in MEMR Regulation No. 17/2010, is that the price is based on the government's monthly reference export price for high-quality coal, or Harga Batubara Acuan (HBA). Since it was introduced, the HBA has consistently been USD 70/tonne. If the HBA rises above USD 70/tonne, the price ceiling comes into effect and prices are scaled down to a maximum of USD 70/tonne. But if the HBA falls below USD 70/tonne, the domestic price will be based on the HBA (JETP Indonesia Secretariat, 2023).

The DMO and the DPO have been used to keep the cost of on-grid CFPP electricity low by securing the supply of coal at a low price. However, with these regulations in effect, coal becomes far more attractive than renewable-energy-based electricity. Aside from that, government subsidies and compensation to PT PLN (Persero)¹⁴ have been growing significantly as energy demands grow. In 2022, Ministry of Finance (MoF) payments for compensation to PT PLN (Persero) totalled approximately USD 3.7 billion (JETP Indonesia Secretariat, 2023).



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Reform of both regulations needs to be carried out carefully, so that the impact on PT PLN (Persero)'s financial stability is minimal, as well as on the government's fiscal health. However, the CIPP proposed maintaining the DMO to ensure the availability of coal for domestic use, removing the price ceiling, and incentivizing the domestic supply.

¹⁴ The difference between subsidies and compensation lies in the context. A subsidy is a payment from the Government of Indonesia to a state-owned enterprise that provides services (in this case, the provision of electricity by PT PLN (Persero)) based on the volume of services provided. The payment is usually made every month and is calculated using the core production cost (Biaya Pokok Produksi (BPP)). Compensation is a payment from the Government of Indonesia to a state-owned enterprise to compensate it for the difference between the production cost and the international cost. Compensation is calculated based on the four economic factors.

• Applying the framework to Indonesia's policies and regulations

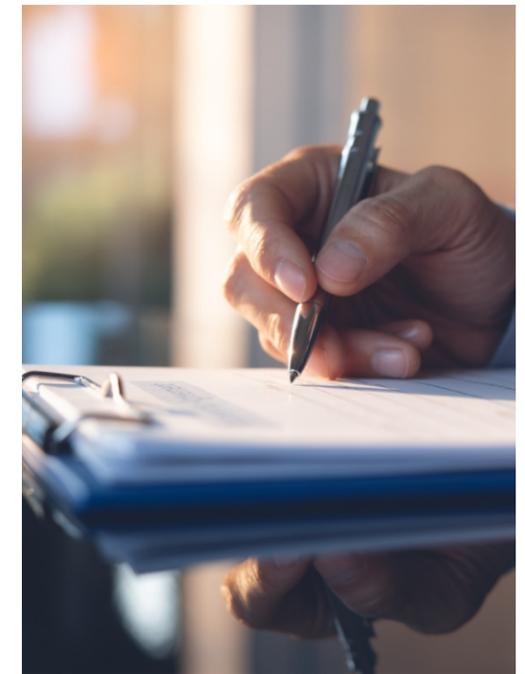
In this section, the authors have applied the framework as indicated in Section 1.2.1, above. However, the analysis has been applied not only to financial policies and regulations but also to sectoral policies and regulations.

Section 4.1.1 and Section 4.1.2 describe how sectoral policies and regulations shape financial policies and regulations, and thus finance flows, as this is often the case.

For instance, Presidential Regulation No. 112/2022 was formulated because Indonesia acknowledged the need for energy transition. The regulation mandated the MoF to then formulate a regulation on fiscal support for energy transition in Indonesia (MoF No. 103/2023, issued in 2023).

Another example is the issuance of the regulations regarding the DMO and the DPO, with the intention of ensuring the provision of electricity at an affordable price and at the same time securing the availability of electricity for the population. However, this has caused electricity from CFPPs to be far cheaper than electricity generated from renewable energy. This has hindered Indonesia's efforts to reduce its greenhouse gas emissions from the power sector through the use of renewable energy. With the current arrangement regarding the DMO and the DPO in place, it is difficult for renewable energy to compete with CFPPs. However, applying the DMO and the DPO helps the country to provide affordable electricity and secure the availability of electricity.

The cases of the DMO and the DPO affirm the importance of including assessment of 'just' elements at the level of policy and regulation, instead of at project level only. In the absence of full consideration of the 'just' elements, the attempt to make finance flows consistent with low greenhouse gas emissions and resilient development will merely focus on sectoral aspects (represented only by the number of tonnes of CO₂-eq reduced), which may negatively impact the social economies of recipient countries – in this case, Indonesia.



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Unfortunately, the current framework for operationalizing Article 2.1c has not yet accommodated the 'just' elements. Therefore, it is quite difficult to assess whether the DMO and the DPO are aligned with the Paris goals, particularly from developing countries' point of view, by applying the framework.

Table 6, below, shows how the policies and regulations relevant to the implementation of JETP Indonesia are assessed using the framework as elaborated in Section 1.2. Although Indonesia has many policies and regulations that are relevant to its climate actions, the assessment in this paper will focus only on those that are indicated in the Joint Statement of JETP Indonesia and some of the proposed policy reforms indicated in the CIPP.

Table 6: Applying the framework to JETP Indonesia's relevant policies and regulations¹⁵

Government tools	Intervention	Climate (+) / Climate (-) / Enabling	Notes
Policy/regulations	<p>Presidential Regulation on Acceleration of Renewable Energy Development for Electricity Supply</p> <p>(Presidential Regulation No. 112/2022 or Perpres No. 112/2022)</p>	Enabling	<p>This Presidential Regulation is mentioned in the Joint Statement of JETP Indonesia as a reference regulation for formulating the CIPP, particularly regarding CFPPs and the acceleration of renewable energy development.</p> <p>The regulation was formulated to increase investment and accelerate the achievement of the renewable energy target in the energy mix, set by the National Energy Policy or <i>Kebijakan Energi Nasional</i> (KEN), and at the same time reduce greenhouse gas emissions in Indonesia through renewable energy.</p> <p>The regulation introduces ceiling prices for various renewable energy projects based on size and geographic location. It also mandates PLN to ensure that renewable energy development does not result in an increased electricity tariff.</p> <p>The regulation also includes the potential for fiscal support from the national budget, as well as other alternative funding sources to expedite the country's energy transition.</p>
	<p>Local Content Regulation as in the Local Industrial Empowerment Regulation and the Utilization of Domestic Products in Power Sector Regulation</p> <p>(Government Regulation No. 29/2018 and MoI Regulation No. 54/2012)</p>	Enabling	<p>The issue of local content was also mentioned in the Joint Statement of JETP Indonesia as requiring consideration in the development of the CIPP. However, in the CIPP, the LCR is mentioned as one of the regulations that need to be reformed for JETP Indonesia to be implemented.</p> <p>Indonesia's LCR is in favour of developing its renewable energy supply chain, as it stipulates the values of local content that need to be met for both goods and services in Indonesia. However, as the renewable energy market in Indonesia is not yet well developed, the LCR is often perceived as a hindrance rather than as an opportunity to grow the renewable energy industries in Indonesia.</p> <p>In the context of the JETP, implementing the LCR contradicts the procurement procedures of IFIs, which has caused issues for Indonesia in accessing multilateral funding, such as from MDBs.</p> <p>However, if the LCR is well formulated, this will shift financial flows – from both international and domestic investment – towards consistency with low greenhouse gas emissions and resilient development.</p>

¹⁵ Further elaboration of the regulations and policies discussed in Table 6 is available in Annex A of this paper.

Fiscal levers			
Fiscal levers	<p>Ministerial Regulation of the MoF on Provision of Fiscal Support through the Framework of Funding and Financing in the Context of Acceleration of Energy Transition in the Electricity Sector</p> <p>(MoF Regulation No. 103/2023 or PMK No. 103/2023)</p>	Enabling	<p>This regulation came after the Presidential Regulation on Acceleration of Renewable Energy Development for Electricity Supply (Presidential Regulation No. 112/2022) was issued and after the Joint Statement of JETP Indonesia was agreed. Therefore, although it is not mentioned in the Joint Statement, this regulation provides clarity regarding fiscal support for Indonesia's energy transition in the electricity sector.</p> <p>MoF Regulation No. 103/2023 was mandated by Presidential Regulation No. 112/2022, and it regulates financial provision and financing mechanisms, including blended finance, through the Energy Transition Platform.</p> <p>This regulation states that the national budget can be one of the sources through which the Energy Transition Platform funds energy transition in Indonesia. Article 6 of the regulation states that the platform will be used for renewable energy development that meets the criteria – among others, projects that are classified as green or yellow according to Indonesia's Green Taxonomy, issued by the Financial Services Authority or <i>Otoritas Jasa Keuangan</i> (OJK). The same article also states that the platform will be used to fund projects that are committed to applying the environmental, social, and governance (ESG) principles in providing electricity.</p> <p>This regulation also assigns PT Sarana Multi Infrastruktur (SMI) (Persero) as the country's platform manager on just energy transition. One of the tasks of the platform manager is to seek financial sources other than the national budget to fund the platform. The platform manager can undertake financial cooperation with IFIs to create blended finance mechanisms by utilizing all available instruments.</p>
	<p>The Mining Law</p> <p>(Law No. 4/2009, amended by Law No. 3/2020)</p>	Undecided	<p>This regulation contributes negatively to greenhouse gas emissions when it is implemented together with Ministry of Energy and Mineral Resources (MEMR) Regulation No. 11/2020 regarding the Benchmark Prices for Mineral and Coal Sales: when both regulations are implemented, this results in increased subsidies for CFPPs.</p> <p>However, the intention of this regulation is to secure the coal required for domestic use, avoiding competition with coal export demand. Securing coal for domestic use does help to ensure Indonesia's electricity supply. Nonetheless, from the greenhouse gas emissions perspective, electricity that is generated by CFPPs has negative impacts.</p> <p>Because the original intention was to ensure Indonesia's energy security and provide electricity for its people (which is considered to fulfil the 'just' elements), it is difficult to decide whether this law aligns with the Paris goals or not.</p>

	MEMR Regulation on Procedures for Determining Benchmark Prices for Mineral and Coal Sales (MEMR Regulation No. 17/2010, which was amended by MEMR Regulation No. 19/2018 and MEMR Regulation No. 11/2020)	Undecided	The domestic coal price is usually applied together with the domestic market obligation (DMO) (as reflected in the Mining Law) to ensure the availability of coal for CFPP operations in Indonesia. Applying the domestic price obligation (DPO) has raised the level of subsidy that the Indonesian government needs to provide, but at the same time doing so provides affordable electricity for Indonesian people. However, this has caused electricity from CFPPs to become cheaper than renewables. From the greenhouse gas emissions reduction perspective, this regulation provides subsidies for coal use in Indonesia, which is misaligned with the Paris goals. However, provision of affordable electricity has a justice element. Therefore, the authors find it difficult to categorize this regulation based on the three lenses available.
Public finance	Presidential Regulation on Acceleration of Renewable Energy Development for Electricity Supply (Presidential Regulation No. 112/2022 or Perpres No. 112/2022)	Enabling	The regulation states that to enable a just energy transition (Article 3 paragraph 9), the national budget can also be used to fund such activities. However, the regulation does not state how much of the national budget can be used for this purpose.
	Ministerial Regulation of the MoF on Provision of Fiscal Support through the Framework of Funding and Financing in the Context of Acceleration of Energy Transition in the Electricity Sector (MoF Regulation No. 103/2023 or PMK No. 103/2023)	Enabling	Article 3 paragraph 1 of this regulation states that the use of the national budget is permitted as fiscal support to operationalize the Energy Transition Platform.
Information	Green Taxonomy v.1	Enabling	The Green Taxonomy is mentioned in the Ministerial Regulation of the MoF on Provision of Fiscal Support through the Framework of Funding and Financing in the Context of Acceleration of Energy Transition in the Electricity Sector. The Green Taxonomy will be used to classify energy transition projects into green or yellow projects. The Green Taxonomy helps the financial services sector classify sustainable activities when creating financial products. It is expected that the Green Taxonomy can assist the regular monitoring process in the distribution of credit/financing/investment to the sustainable sector and prevent the potential for inaccurate reporting of sustainable activities (greenwashing). In February 2024, Indonesia launched Indonesia's Sustainable Taxonomy as an improved version of its Green Taxonomy. However, the published Sustainable Taxonomy only covers the power sector, with other sectors to follow in the near future.

■ Assessing JETP financial flows

As presented in the CIPP, the USD 20 billion that is to be mobilized through the JETP has been allocated based on the IFAs. However, based on the allocation plan through the existing IFAs, several issues have emerged, particularly regarding the extent to which the JETP could be implemented in a just manner.

First, the allocation of the financial flows mobilized through the JETP is intended to support Indonesia to significantly reduce greenhouse gas emissions in the power sector. However, at the current stage, no finance flows from the JETP are directed towards renewable energy supply chain enhancement, despite its significant role, particularly its importance for achieving the target of 34% renewable energy in Indonesia as stated in JETP Indonesia's Joint Statement. Given Indonesia's policies and regulations on local content, achieving the 34% target will depend heavily on growth of the renewable energy supply chain. Investment in Indonesia's renewable energy supply chain thus becomes crucial to allow Indonesia's renewable energy industries to grow and thus meet the agreed target reflected in JETP Indonesia's Joint Statement.

Second, it is not clear whether the JETP will ensure that the 'just' elements are implemented, since there is a commitment only to the 'just' elements as reflected in the CIPP at the assessment level, and not at the intervention level. Therefore, there is no certainty whether JETP Indonesia will be implemented in a just manner.

Third, Table 5, on the sources of funding and instruments, shows that the volume of grants is very small compared to concessional and non-concessional loans. Use of loans – whether concessional or commercial – does not favour developing countries seeking to reduce their greenhouse gas emissions because it adds to their debts, which over time will increase as a result of developing countries' limited fiscal space. Although Indonesia is among the developing countries that have committed to reducing greenhouse gas emissions, in the absence of sufficient support, it will be difficult for Indonesia to mitigate the impact on its social economy, let alone eradicate poverty. The quality of the finance itself does not align with Article 9 of the Paris Agreement,

particularly paragraph 1, which states that 'Developed country Parties **shall provide** financial resources to assist developing country Parties with respect to both mitigation and adaptation in continuation of their existing obligations under the Convention'.

The JETP does allocate financial flows to technical issues, which could help Indonesia to achieve net-zero emissions; however, Indonesia will require much greater financial flows to ensure that the transition, both technical and social-economic, is implemented in a sustainable and just manner in the long term.

Table 7, below, presents a comparison between the finances needed to implement the JETP in the period 2023–2030 and the financial resources provided by the IPG, based on communication with the JETP Indonesia Secretariat. The JETP Indonesia Secretariat has split the funding from the IPG into two qualitative categories: designated and non-designated. 'Designated' means that a specific scope for the funds had already been finalized or was being designed/proposed at the time of confirmation with the IPG (JETP Indonesia Secretariat, 2023). The non-designated funds are those that do not have a specifically defined allocation, which means they can be more flexibly allocated according to the JETP's investment needs.

Eligible areas	Needs (in USD million) ¹⁶	Designated (in USD million)	Non-designated (in USD million)
All IFAs eligible		598.1	1,844.2
All IFAs eligible except early retirement of CFPPs			4,351.4
Transmission	19,700 (IFA 1)	394.4	
Transmission and renewable energy		377.2	553.6
Early retirement of CFPPs	2,400 (IFA 2)	1,451.0	32.4
Early retirement of CFPPs and renewable energy		221.6	
Renewable energy	74,900 (IFA 3 and IFA 4)	850.7	383.9
Renewable energy and renewable energy supply chain			150.0
Just transition	218.5 (minimum for assessment only)	349.3	
Just transition and renewable energy		3.8	
Renewable energy supply chain enhancement (IFA 5)	TBD		
Total	97,300	4,246.1	7,315.6

Table 7: JETP's Financial Flows

¹⁶ As reflected in Table 4.

By comparing finance needs and the funding provided, Table 7 shows a significant gap in funding to support Indonesia's efforts to decarbonize the power sector. Regarding the type of finance, it shows that the proportion of grants provided is very low compared to loans. That being the case, the finance flows through JETP to support Indonesia's decarbonization efforts are inadequate, in terms of both quantity and quality.

Although the intention of JETP Indonesia (and those of other developing countries) is to enable developing countries to reduce their greenhouse gas emissions, and related finance flows will thus appear 'climate positive', the funding available is of insufficient quantity and quality, preventing developing countries from reducing their greenhouse gas emissions even by transitioning away from CFPPs, let alone from fossil fuels. The debt incurred as a result of such initiatives will add to developing countries' fiscal burden. Thus, it is difficult to say whether the finance flows of JETP Indonesia are consistent with pathways towards low greenhouse gas emissions and climate-resilient development. To achieve this consistency, all finance needs must be met in terms of both quantity and quality, thus avoiding (1) an increase in the debt burden of developing countries as a result of decarbonization efforts, or (2) negative social-economic impact in developing countries.

■ Integration of 'just' elements in Article 2.1c

As in other developing countries, transitioning to a more sustainable mode of economy remains a challenge for Indonesia. As one of the coal-dependent countries, Indonesia must include socio-economic aspects in its energy transition costs, such as the cost of social protection instruments for affected communities and workers, as well as financial support for vulnerable groups at risk of welfare loss. Although the government has been calling for low-carbon development, discussion on resolving the just dimension is still lagging behind (Elliot and Setyowati, 2020).

Indonesia continues to struggle in tackling core developmental issues, such as poverty. Therefore, the transition to low-greenhouse-gas-emission development in the energy sector must not proceed at the risk of perpetuating existing inequalities stemming from the traditional energy system. Although policy that specifically frames just transition in the Indonesian context is not yet in place, there are relevant sectoral policies that incorporate the socio-economic and development aspects crucial to a just energy transition. The common approach is through expansion of access, local industry empowerment, and capacity building.

In the context of JETP Indonesia, to ensure the 'just' elements are implemented in all JETP projects, the Just Transition Framework will be applied. However, at the current stage, instead of being used to select projects, the Just Transition Framework is used only after the project has already been selected. The finance flows for the 'just' elements in the JETP are dedicated only for assessment and not allocated for the interventions required to ensure the implementation of the 'just' elements, as elaborated in Section 2.3, above.

This means that in JETP Indonesia there is currently no funding dedicated to conducting the upskilling or reskilling required for affected workers. Nor is there any funding dedicated to community consultations to ensure the participation of affected workers and the communities surrounding the projects. Other costs the JETP needs to consider include social protection costs, particularly for affected workers and communities. Although finance flows through JETP may not be enough to cover all these costs, it is crucial to acknowledge that these aspects are an equally important part of all just energy transition actions.



5

Way forward: Recommendations

Based on the above analysis, the authors have divided the recommendations into three parts: on use of the Article 2.1c framework, on JETP Indonesia, and on aligning finance flows in Indonesia.

5.1. Use of the Article 2.1c framework

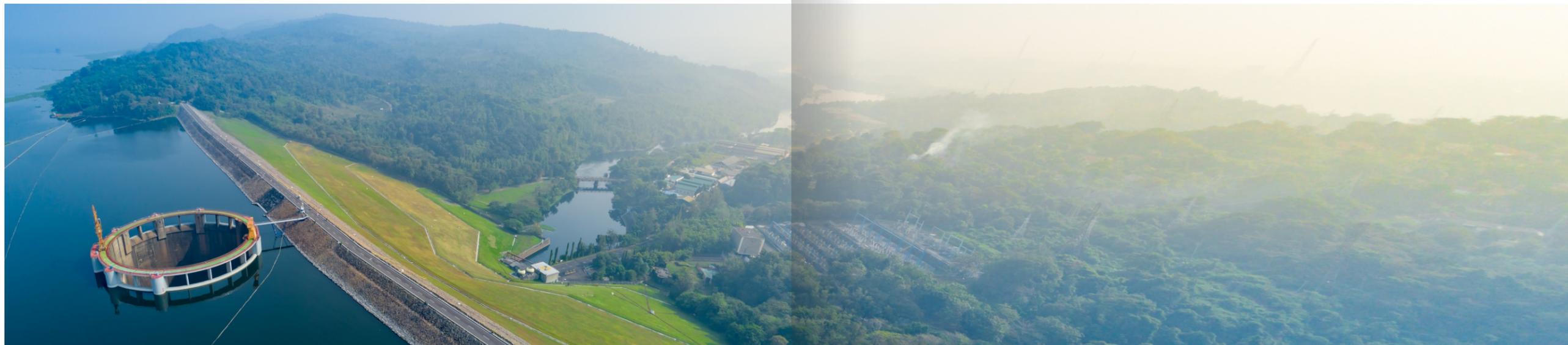
- The chances of making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development will be highly affected by the designed pathway. In the case of Indonesia, although the Government of Indonesia has issued PMK 103/2023 on Financing Energy Transition in Indonesia, the operationalization of the regulation is highly dependent on Indonesia's energy transition roadmap, which is still being developed. Hence, discussion of finance flows should not be separated from technical decision-making on how to achieve low greenhouse gas emissions and resilient development. The framework should thus consider how to analyse sectoral policies and regulations and not just financial policies and regulations.
- The framework needs to be improved, particularly to assess the 'just' elements at the level of policy and regulation. For example, the regulations on the DMO and the DPO in Indonesia were intended to ensure access to affordable electricity for the people. Without the DMO and the DPO, Indonesia may have difficulty providing electricity for the whole country at an affordable price. Without the DMO in place, more of Indonesia's coal may be exported and domestic energy demands may not be met. Without the DPO, Indonesia will need to buy coal at the international market price, which may make electricity unaffordable for most of Indonesia's population. It is therefore difficult to determine whether subsidies for fossil fuels in developing countries are aligned with the Paris goals or not. At the same time, the Paris goals need to be achieved in the context of sustainable development and poverty eradication, as reflected in the preamble of Article 2.1 of the Paris Agreement.



- To ensure that finance flows are consistent with low greenhouse gas emissions and resilient development, the use of the framework for international financial flows such as those for JETPs should be applied to the whole chain of finance flows, including on the contributor side. Applying the framework to contributor countries will show how the financial policies and regulations that affect finance flows from contributor countries to developing countries are aligned with Article 2.1c of the Paris Agreement, particularly in terms of the quantity and quality of finance.

- Making finance flows consistent with low greenhouse gas emissions and resilient development may be achieved through policies and regulations that are not specific to finance. For instance, in the context of Indonesia, the LCR plays an important role in leveraging funding, including from MDBs. Nevertheless, as it currently contradicts the procurement procedure of the MDBs, accessing funding from MDBs becomes a challenge. Still, the LCR was formulated with the intention of growing Indonesia's domestic industries, which is required for Indonesia to meet growing demand. If, then, the policies and regulations on local content need to be reformed, it will be necessary to maintain a balance between meeting Indonesia's need for its industries to grow and widening opportunities to access funding. However, this is also a case where flexibility from multilateral financial institutions such as MDBs may be required. Flexibility from such financial institutions to accommodate developing countries' circumstances and needs may make it easier for developing countries to access available funding for initiatives to reduce greenhouse gas emissions and achieve resilient development.

- The framework should not be used to determine the level of eligibility of recipient countries for funding from international sources, nor to determine recipient countries' capacity to manage domestic financial flows. Although it is important for recipient countries to have proper financial infrastructure, at this stage achieving the necessary financial infrastructure remains a challenge. Assessment of recipient countries' existing financial policies and regulations should be seen as a part of developing countries' process of achieving the Paris goals. It is due to the absence of sufficient financial infrastructure that developed countries (or contributor countries) need to increase developing countries' (or recipient countries') capacity, including via relevant policy reform, by providing financial support that is aligned with the Paris Agreement. Thus, the role of contributor countries, as reflected in Article 9 of the Paris Agreement, is vital.



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5.2. JETP Indonesia

- As the finances that Indonesia needs in order to achieve a just energy transition are far beyond the existing pledges of JETP Indonesia, the implementation of the JETP needs to be carried out based on careful calculations of precise need and available funding. Rather than working on multiple projects at one time, the IPG members and the Government of Indonesia should work on a demonstration project on energy transition, in order to identify the real social-economic impacts and the real finances required. Once they know the real finance needs, the Government of Indonesia and IPG members can define the right instruments to mobilize the finance needed for the whole chain of just energy transition activities. This will mitigate the possible negative impacts of working on multiple projects at a time, particularly the socio-economic impact, which has not yet been well calculated.

- The type of finance that is provided through the JETP in Indonesia does not help Indonesia even to transition away from coal, let alone from fossil fuels. The financial instruments used in the JETP are mostly loans, with a very small volume of grants involved. Aside from the types of instruments used, the fact that there is no allocation dedicated to implementing the ‘just’ elements makes it even more difficult for Indonesia to implement all activities identified in the CIPP. This may create an additional fiscal burden for Indonesia, not only via the debts resulting from the USD 20 billion, but also via the shortfall in finances required to implement the just energy transition as a whole, which Indonesia will have to meet. In this case, the nature of the finance provided through the JETP does not align with Article 9 of the Paris Agreement (particularly paragraph 1) or Article 4 of the Convention (particularly paragraph 3).

Due to the highly insufficient quantity and quality of the JETP finance flows, it is difficult to say that they are consistent with pathways to low greenhouse gas emissions and resilient development. JETP finance flows should be considered as enabling recipient countries to implement the pathways only when the quantity and quality of the funding are sufficient and do not increase the financial burden of recipient countries by adding to their debt.

5.3. Aligning financial flows in Indonesia

- The issue of energy transition cannot be solved by focusing only on the energy sector. The energy transition has impacts beyond the energy sector, including on the workforce, human rights, and the environment. In Indonesia’s case, the industrial sector also plays an important role in ensuring that a just energy transition is implemented. Thus, in governing the just energy transition in Indonesia, the involvement of various cross-sectoral ministries is a must, and a commitment to implementing a just energy transition needs to be reflected at the highest level of policy and/or regulation. This can be in the form of law or government regulation. The CIPP has indicated that a national energy transition taskforce will be established; this will be led by the Coordinating Ministry for Maritime and Investment Affairs, which will ensure that Indonesia’s energy transition is achieved accordingly.

- For domestic financial flows, Indonesia has policy levers that could enable the finance flows in the country to align with the Paris Agreement objectives of low greenhouse gas emissions and climate-resilient development. However, these policy levers need to be implemented properly, with clear pathways, planning, and monitoring and evaluation mechanisms.

- In developing pathways to low greenhouse gas emissions and climate-resilient development, it is crucial to include the ‘just’ elements. This is to ensure that all measures taken on climate change also consider sustainable development and poverty eradication, as reflected in the preamble of Article 2.1. At a minimum, in developing such a pathway policymakers need to consider the impact of measures taken on human rights, the environment, and the workforce.

- To ensure that all energy transition efforts in Indonesia apply the ‘just’ elements, Indonesia needs to improve its Green Taxonomy¹⁷ and its enforcement. Assessment of new projects and investments related to energy transition should measure not only the reductions in greenhouse gas emissions that projects achieve but also how the projects address their impact on human rights, the environment, and the workforce as a part of the ‘just’ elements. This improved taxonomy should guide and address enforcement of financial institutions’ policies on the environment, social, and governance (ESG), which would thus form a set of requirements that must be met by project developers when disbursing funds.

¹⁷ In February 2024, Indonesia launched Indonesia’s Sustainable Taxonomy as an improved version of its Green Taxonomy. However, the published Sustainable Taxonomy only covers the power sector, with other sectors to follow in the near future.

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Annex A: Indonesia's strategies, policies, and regulations

This annex presents Indonesia's JETP-related strategies, policies, and regulations. They are clustered under the headings of climate, energy, electricity, finance, and industry. However, not all strategies, policies and regulations covered in this annex are assessed using the framework, as indicated in Section 1.2 of the paper. The assessment of strategies, policies and regulations, as described in Section 4 of the paper, only applies to those that were mentioned in the Joint Statement of JETP Indonesia and some policies that need to be reformed for JETP to be implemented in Indonesia.

A.1. Climate policies

NDC

Indonesia submitted its intended NDC before the Parties concluded the Paris Agreement, and this was then converted into its first NDC. Since then, Indonesia has conducted several reviews of its NDC and submitted the updated versions to the UNFCCC Secretariat.

Type of NDC	Date of Issued	Emission Reduction Target
Intended NDC	2015	29% unconditional 41% conditional
First NDC	November 2016	29% unconditional 41% conditional
Updated NDC ¹⁸	April 2021	29% unconditional 41% conditional
Enhanced NDC	September 2022	31.89% unconditional 43.20% conditional

Table 8 Indonesia's submitted NDCs (IRID, 2023a)

Although Indonesia's NDCs in 2016 and 2021 had the same emissions reduction target, there are several differences between them, particularly in relation to the calculation of reductions in greenhouse gas emissions. The differences are as follows:

¹⁸ Republic of Indonesia. (2021). Updated Nationally Determined Contribution: <https://unfccc.int/sites/default/files/NDC/2022-06/Updated%20NDC%20Indonesia%202021%20-%20corrected%20version.pdf>

- The updated NDC enhanced Indonesia's ambition on adaptation as elaborated in the programmes, strategies, and actions to achieve economic resilience, social and livelihood resilience, and ecosystem and landscape resilience.

- The updated NDC enhanced clarity on mitigation by adopting the Paris Agreement rule book (or Katowice Package) on information to be provided in NDCs, as well as updated policies that potentially contribute to additional achievement of NDC targets.

The updated NDC included an account of the national context that relates the existing situation and milestones, along with national development for the period 2020–2024, and indicative pathways towards the long-term vision (Visi Indonesia 2045 and the Long-Term Strategy for Low Carbon and Climate Resilience 2050).

- The updated NDC also included an elaborated chapter on the transparency framework at the national level (with the National Registry System as the backbone of the transparency framework) and means of implementation (finance, technology development and transfer, and capacity building).

Indonesia's latest NDC – the enhanced NDC (ENDC), submitted in 2022 – reflects the progression beyond the previous NDC (the updated NDC). The ENDC was submitted to the UNFCCC Secretariat on 23rd September 2022 with a greenhouse gas emissions reduction target that was increased from 29% to 31.89% unconditionally and from 41% to 43.20% conditionally. The plan is for the targets to be achieved through five sectors: forest and other land uses (FOLU), energy, waste, industrial processes and product use (IPPU), and agriculture, as reflected in 9, below.

Sources	GHG Emission Level 2010* (Mton CO2-eq)	GHG Emission Level 2030			GHG Emission Reduction				Annual Average Growth BAU (2010-2030)	Average Growth (2000-2012)
		(Mton CO2-eq)			(Mton CO2-eq)		% of Total Bau			
		BaU	Cm1	Cm2	Cm1	Cm2	Cm1	Cm2		
Energy*	453.2	1,669	1,311	1,223	358	446	12.5%	15.5%	6.7%	4.50%
Waste	88	296	256	253	40	43.5	1.4%	1.5%	6.3%	4.00%
IPPU	36	69.6	63	61	7	9	0.2%	0.3%	3.4%	0.10%
Agriculture	110.5	119.66	110	108	10	12	0.3%	0.4%	0.4%	1.30%
Forestry and Other Land Uses (FOLU)**	647	714	214	-15	500	729	17.4%	25.4%	0.5%	2.70%
Total	1,334	2,869	1,953	1,632	915	1,240	31.89%	43.20%	3.9%	3.20%

Notes: Cm1 = Counter Measure 1 (unconditional mitigation scenario)
Cm2 = Counter Measure 1 (conditional mitigation scenario)

* Including fugitive
** Including emission from estate and timber plantations

Table 9 Indonesia's greenhouse gas emissions reduction target as reflected in its ENDC (Republic of Indonesia, 2022)

In the ENDC, Indonesia has increased its greenhouse gas emissions reduction target for the energy sector from 314 Mt CO₂-eq (updated NDC) to 358 Mt CO₂-eq (ENDC), which will be conducted unconditionally, while the conditional greenhouse gas emissions reduction target remains the same at 446 MTCO₂-eq. Based on this figure, Indonesia has increased its commitment to reduce greenhouse gas emissions through its own resources and thus without international support.

However, an assessment by Climate Action Tracker (CAT) views Indonesia's ENDC as 'critically insufficient',¹⁹ which indicates that although Indonesia has increased its emissions reduction targets, they are still not ambitious enough to contribute sufficiently to achieving the Paris Agreement targets. The assessment concludes that, given Indonesia's available resources, its ENDC could be more ambitious. Note that CAT's assessment does not include the FOLU sector.

Long-term Strategy on Low Carbon and Climate Resilience (LTS-LCCR)

Article 4.19 of the Paris Agreement states that:

All Parties should strive to formulate and communicate long-term low greenhouse gas emission development strategies, mindful of Article 2 taking into account their common but differentiated responsibilities and respective capabilities, in the light of different national circumstances.

In response to the article, Indonesia formulated a Long-Term Strategy for Low Carbon and Climate Resilience (LTS-LCCR), which was submitted to the UNFCCC in 2021. The document elaborates several scenarios that can be implemented in Indonesia, as part of the efforts to achieve the objectives of the Paris Agreement.

Three scenarios were presented in the document:

- extension of the unconditional commitment of the NDC, or the current policy scenario, called CPOS; this scenario describes a condition whereby Indonesia's first NDC is implemented beyond 2030
- a transition scenario, called TRNS
- a low-carbon scenario compatible with the Paris Agreement target, called LCCP

¹⁹ Climate Action Tracker: <https://climateactiontracker.org/countries/indonesia/>

The CPOS scenario indicates that Indonesia's greenhouse gas emissions will continue to grow, even after the implementation of its NDC by 2030. The transition scenario results in a decrease in greenhouse gas emissions, but it will not be sufficient to reach net-zero emissions by 2050. Hence, the scenario is not compatible with the Paris Agreement target. The LCCP scenario shows that a rapid decrease in greenhouse gas emissions will occur after 2030, and will lead Indonesia to achieve net-zero emissions around 2050.

Implementing the LCCP scenario in the energy sector will require Indonesia to reduce emissions from the energy sector to close to zero and increase removals in the FOLU sector. This will require transformational changes in the energy system.

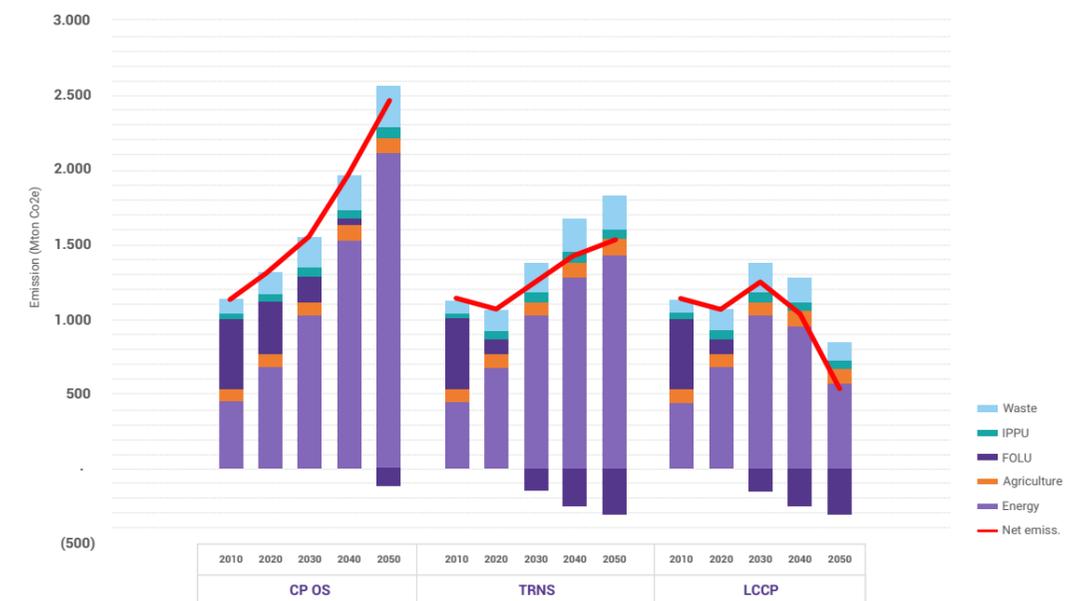


Figure 6: The LTS-LCCR Indonesia on three scenarios (Republic of Indonesia, 2021)

Low Carbon Development Indonesia (LCDI)

In 2019, the Ministry of National Development Planning released Low Carbon Development Indonesia (LCDI),²⁰ a strategy to foster a green investment climate, improve cross-sectoral collaboration in decision-making, and establish Indonesia as a leader in low-carbon development. This strategy is intended to shift the Indonesian economic paradigm towards an economy that is resilient, just, and low carbon. The initiative is expected to mainstream low-carbon perspectives throughout all national development plans. The LCDI was subsequently incorporated into Indonesia's National Medium Term Development Plan (*Rencana Pembangunan Jangka Menengah Nasional (RPJMN)*) 2020–2024,²¹ outlining the role of the green economy as the foundation of Indonesia's development programme.

The LCDI examines four development scenarios:

- Baseline Scenario**, where there are no new low-carbon policies or interventions in the period 2020–2045. However, under this scenario, the impact of environmental degradation towards society and economy remains a concern.
- Low Carbon Development Scenario – Middle** (*Skenario Pembangunan Rendah Karbon – Menengah*), where new low-carbon policies for 2020–2045 are introduced: this is intended to be consistent with Indonesia's unconditional first NDC to reduce emissions from 2020–2030 by 29% against the 2030 business as usual scenario. The total investment required for this scenario is USD 14.8 billion per year in 2020–2024 (1.15% of GDP) and USD 40.9 billion per year in 2025–2045 (1.39% of GDP). The implementation of this scenario includes acceleration on energy intensity reductions compared to historical trend. Efforts to meet the renewable energy target as stated by Indonesia's energy policy are also required.
- Low Carbon Development Scenario – High** (*Skenario Pembangunan Rendah Karbon – Tinggi*) – this includes more ambitious policy intervention compared to the previous scenario. This scenario aims to achieve the conditional NDC, i.e. 43% emissions reduction by 2030 against the 2030 business as usual scenario. The total investment required for this scenario is USD 22 billion per year (1.7% of GDP) in 2020–2024, and USD 70.3 billion per year in 2025–2045 (2.34% of GDP). In this scenario, efforts to reduce energy intensity and increase the implementation of renewable energy by 2045 are required.
- Low Carbon Development Scenario – Plus** (*Skenario Pembangunan Rendah Karbon – Plus*) – this extends the Low Carbon Development Scenario – High for 2020–2024 and incorporates even more ambitious policy interventions beyond that period. In the energy sector, for instance, this scenario will require the implementation of actions that are not yet included in the National Medium Term Development Plan 2020–2024, such as increasing energy efficiency and waste reduction, particularly in cities.

In relation to the power sector, the LCDI highlights the significant financial burden associated with coal dependency. This expense is not limited to the operational cost of PT PLN (Persero) as Indonesia's state-owned enterprise on electricity; it also includes the externalities emerging from the whole value chain, including greenhouse gas emissions, air pollution, and health-related concerns affecting the surrounding community. Furthermore, the LCDI suggests that transitioning towards low-carbon resources will enhance cost-effectiveness as renewable energy is expected to be more affordable than coal.

²⁰ National Medium Term Development Plan 2020–2024: https://perpustakaan.bappenas.go.id/e-library/file_upload/koleksi/migrasi-data-publikasi/file/RP_RKP/Dokumen%20RPJMN%202020-2024/Lampiran%201.%20Narasi%20RPJMN%202020-2024.pdf

²¹

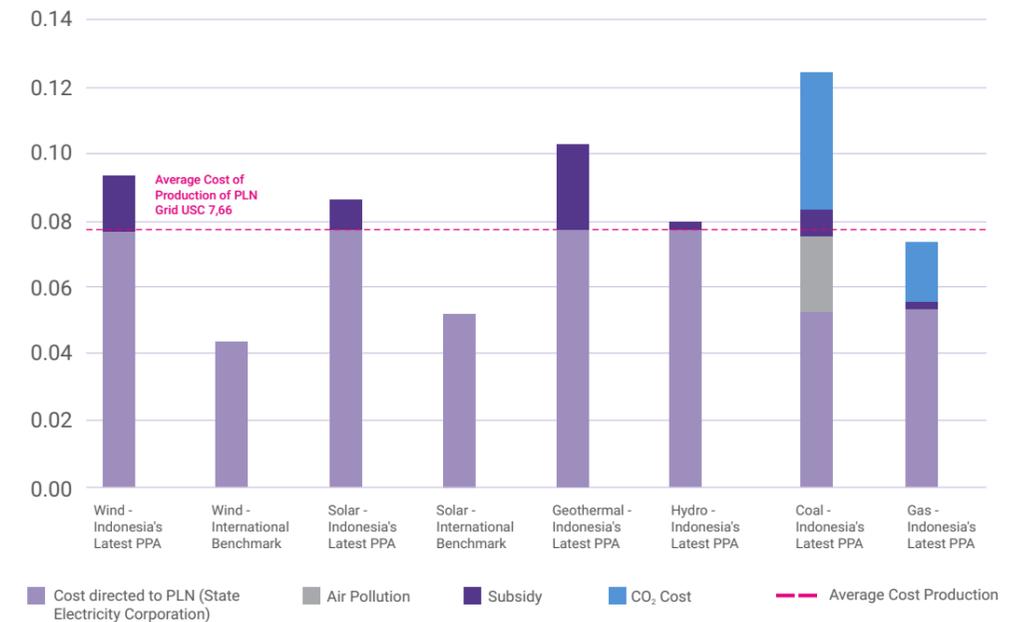


Figure 7: The relative cost of coal and renewable energy as calculated in the LCDI (Ministry of National Development Planning, 2019)

A.2. Energy-related policies

Energy Law (Law No. 30/2007)

Law No. 30/2007 on Energy plays a pivotal role in shaping Indonesia's energy policies. It serves as the primary regulatory framework for energy matters within the national legal context. The law highlights the issues of national energy security, environmental preservation (which is linked with sustainable development), and energy resilience. The law establishes guidelines not only for expediting the adoption of clean energy but also for green energy development in Indonesia. In addition, it holds significance in the landscape of renewable energy politics because it delves into the implementation of feed-in tariffs and continuation of the renewable energy sector. On top of that, this law has mandated the establishment of the National Energy Council or *Dewan Energi Nasional* (DEN), which was assigned to developing (1) the National Energy Policy or *Kebijakan Energi Nasional* (KEN), and (2) the National Energy General Plan or *Rencana Umum Energi Nasional* (RUEN).

- National Energy Policy (Kebijakan Energi Nasional (KEN))**
(Government Regulation No. 79/2014)

As mandated by the Energy Law, Government Regulation No. 79 of 2014 on National Energy Policy was issued. The National Energy Policy (KEN) encourages an energy management approach based on the principles of justice, sustainability, and environmental preservation. In general, Indonesia's KEN has introduced a paradigm shift in Indonesia's energy sector: from a commodity-based paradigm, i.e. where energy is considered a mere export commodity, to a more strategic one, i.e. its critical importance in supporting national development aspirations is recognized. In accordance with the KEN, Indonesia's energy policies are directed towards:

- Ensuring the availability of energy resources to meet national demand** – the indicated measures identified by the KEN include utilizing both fossil fuels and renewable energy resources; increasing national energy production; advancing national energy system reliability; limiting energy exports; maintaining a balance between fossil fuels additional capacity and maximum production rate; and ensuring the guarantee of environmental carrying capacity
- Establishing priorities for energy development in Indonesia:** energy development that considers the balance between energy economics, energy security, and environmental sustainability; ensuring access to electricity, household gas, and energy for transportation, industry, and agriculture; the development of local energy resources; and energy development to meet national demand
- Utilizing national energy resources** – this is based on holistic considerations of national capacity, continuity, economy, and environmental sustainability
- Maintaining national energy reserves** that consist of strategic reserves, energy buffer reserves, and operational reserves

In addition to the above primary policies, the KEN also includes supporting policies to address specific needs associated with the main policies. These supporting policies aim to establish enabling conditions for efficient, sustainable, and resilient national energy management. The supporting policies address the following:

- energy conservation, energy resources conservation, and energy diversification** – the policy requires energy conservation to be applied in all energy value chains, from exploration to production, transportation, distribution, and end-use level
- health, safety, and environment** – this means that national energy management must be aligned with national sustainable development aspirations, natural resources conservation, energy resources conservation, and environmental pollution control; the policy also underscores that national energy management must consider its impacts on health, work safety, livelihood, and environment
- price, subsidy, and energy incentives** – energy prices must be determined by economic justice considerations: with energy subsidies, it must be properly targeted towards the low-income economy; the energy incentives, both fiscal and non-fiscal, provided by local and central government are intended to accelerate renewable energy development programmes
- infrastructure, access for people, and the energy industry** – the government, both local and national, holds a prominent role in the development and advancement of energy infrastructure, ensuring people's fair access to energy, and strengthening the national energy industry
- research, development, and implementation of energy technology** – the research, development, and deployment of energy technology is oriented to providing support to the local energy industry
- institution and financing** – the government strengthens national energy institutions to ensure the goals of energy provision and utilization are met

- National Energy General Plan (Rencana Umum Energy Nasional (RUEN))**
(Presidential Regulation No. 22/2017)

The National Energy General Plan was formulated as Presidential Regulation No. 22 year 2017, which was mandated by Energy Law Article 12 paragraph 2 and Article 17 paragraph 1. The RUEN has served as the primary guidance and point of reference for:

- The development plan formulated by national and local government**
- The National Electricity Master Plan or Rencana Umum Ketenagalistrikan Nasional (RUKN) and the National Electricity Supply Business Plan or Rencana Umum Penyediaan Tenaga Listrik (RUPTL)**
- The establishment of the State Budget and Regional Revenues and Expenditures Budget by the MEMR or its agencies and by local government**
- The establishment of strategic plans by the MEMR or its agencies**
- The Provincial General Energy Plan (Rencana Umum Energy Daerah Provinsi (RUED-P)) by provincial government**
- The MEMR and local government's coordination of a cross-sectoral energy plan**
- Community participation in the implementation of national development in the energy sector**

The RUEN also addresses the imperative of accelerating renewable energy resources within Indonesia's national energy portfolio. The National General Energy Plan also adopts a renewable energy target in Indonesia's national primary energy mix of approximately 23% and 31% by 2025 and 2030, respectively. Moreover, according to the projections outlined in the KEN, the target for renewable energy power generation capacity is set at 45.2 GW and 167.7 GW in 2025 and 2050, respectively.



Figure 8: Indonesia's renewable energy target as presented in the RUEN (Republic of Indonesia, 2017)

A.3. Electricity-related policies

• *Electricity Law (Law No. 30/2009)*

The Electricity Law (Law No. 30/2009) was developed to regulate Indonesia's power sector. Article 1 paragraph 1 of this law states that the power sector includes all matters concerning the supply and utilization of electric power as well as efforts to support electric power. Through the Electricity Law, Indonesia aims to ensure the availability of electricity in sufficient quantity, of good quality, and at a reasonable price to improve the welfare and prosperity of its people fairly and equitably, to achieve sustainable development.

According to this law, the electricity supply is controlled by the state, and thus will be implemented by government and local government based on the principle of regional autonomy, through state-owned and regionally owned enterprises. However, private entities, cooperatives, and non-governmental organizations can also participate in the electricity supply business.

The Electricity Law also states that every electricity-related activity shall comply with environmental law, policies, and regulations.

• *National Electricity Master Plan (Rencana Umum Ketenagalistrikan Nasional (RUKN))*

The current version of the RUKN (2023–2060)²² was formulated to support the National Medium Term Development Plan 2020–2024 in defining priorities, aligning with the net-zero emissions target by 2060, and adapting to the policy changes related to CFPP development. The master plan adopted three main assumptions: first, that GDP growth would be 6% higher in 2045; second, that population growth would reach 0.5%; and third, that a ratio of 100% electrification would be achieved by 2024.

According to the RUKN, the provision of national electricity needs to be undertaken in the context of:

- meeting national electricity demand
- expanding electricity provision across the country, particularly in less developed areas, by prioritizing the development of local energy resources
- synergising the electricity supply with development of local energy sources by developing economic clusters cohesively (Reusable Energy Based Economic Development (REBED))
- integrating the electricity supply with area development, which potentially allows energy to be produced through industrial development (Reusable Energy Based Industrial Development (REBID))
- development of electricity generation in the context of ASEAN regional cooperation

In an attempt to facilitate strong investment in the power sector, the master plan indicates the government's commitment to minimizing the power sector's investment risks through enacting laws and regulations to secure the operations of business entities, respect contractual agreements, and ensure law enforcement. In addition, bureaucratic reforms have included simplified licensing procedures, which has expedited the procurement process and also provided subsidies to PT PLN (Persero)²³; this has enabled the cash flow required for meeting obligations with other parties, which includes benchmark setting for the Electricity Production Cost (*Biaya Pokok Penyediaan* (BPP)) by PT PLN (Persero).

The government offers two types of financial support to accelerate national electricity provision. The first is a Subsidiary Loan Agreement (SLA), which provides access to low-interest investment loans. In its implementation, the government will oversee the amount of loans granted. The second is a state capital participation (*Penyertaan Modal Negara* (PMN)), which allows state-owned enterprises to fund planned projects. The PMN is allocated to projects that are seen as having the potential to accelerate the national electrification ratio, convert diesel power plants to renewable energy, develop capacity for electricity distribution, and develop capacity for renewable energy power plants.

However, since the government and PT PLN (Persero) have a limited financial capacity, private entities are expected to invest in the development of power infrastructure, with the following conditions on the eligibility of projects:

- They require considerable financial support.
- They have significant construction risks, especially in locations that require land acquisition.
- The fuel supply requirements are high, or they do not yet have gas supply capacity and/or infrastructure.
- They intend to develop renewable-energy-based power generation.
- They are developed by several investors/developers within the same area.

²² The current version of the RUKN is still in draft: https://gatrik.esdm.go.id/assets/uploads/download_index/files/eed9c-draft-ruk-n-cover.pdf

²³ PT PLN (Persero) is one of Indonesia's state-owned enterprises. It is specifically assigned to managing the issue of electricity provision in Indonesia.

■ *The National Electricity Supply Business Plan (Rencana Usaha Penyediaan Tenaga Listrik (RUPTL))*

The RUPTL is the guiding document for PT PLN (Persero) to develop its operational areas in its electricity supply business plan. The latest RUPTL is labelled the 'greenest' RUPTL since it includes initiatives for decarbonization to achieve net-zero emissions in the power sector. One key action involves the acceleration of the renewable energy mix in the power sector to 23% by 2025, through the following measures:

- acceleration of the commercial operational date (COD) of **geothermal power plants** (1.4 GW) and **wind power plants** (4.2 GW) by expediting permits, exploration, and land acquisition
- pursuit of a **de-dieselization programme**, with 588 MW of diesel power spread across various locations converted into 1.2 GWp of solar power plants and battery capacity
- development of 4.7 GW of **solar power plants** and 0.6 GW of **wind power plants** by 2025
- implementation of biomass co-firing at PT PLN (Persero) CFPPs, with an average share of 20% for CFPPs around Java and Bali and 20% for CFPPs outside Java and Bali
- replacing the baseload plants, which were previously designed to use CFPPs, after 2025 with a 1 GW **baseload of renewable energy power plants**
- **retirement of 1.1 GW of sub-critical power plants** located in Muara Karang, Priok, Tambak Lorok, and Gresik in 2030

Other decarbonization efforts outlined by the RUPTL include:

- **the implementation of EVs**, where PT PLN (Persero) facilitates the charging system infrastructure, as stated in Presidential Regulation No. 55/2019 on Accelerating Programs of Battery Electric Vehicles for Road Transportation. However, the RUPTL points out that it is necessary for PT PLN (Persero) to establish a roadmap to develop EV infrastructure. PT PLN (Persero) is also tasked with defining the business model, tariff scheme, and payment method, all while ensuring the necessary smart grid infrastructure to support demand-side management.
- **the implementation of a smart grid**. Smart grid utilization enables efficient electricity management, reliable energy supply, the acceleration of renewable energy generation, and customers' participation in electricity supply. PT PLN (Persero) has set out a roadmap for smart grid implementation, aiming to reform the national power supply to accelerate the achievement of power sector targets.

■ *Acceleration of Renewable Energy Development for the Provision of Electricity (Presidential Regulation No. 112/2022)*

This regulation sets the electricity tariff for renewable-energy-based power plants and mandates the MEMR to develop an energy transition roadmap that includes the phase-out of CFPPs in the context of the power sector's energy transition. The regulation also mandates the MoF to develop a Ministerial Regulation in that regard.

However, this regulation still opens up the possibility of developing new CFPPs that meet the following criteria:

- integrated with industries that are (1) established to increase the added value of natural resources, or (2) included in National Strategic Projects with a major contribution to job creation and/or national economic growth
- committed to reducing greenhouse gas emissions by at least 35% within a period of ten years since the CFPP starts operating, compared to average CFPP emissions in Indonesia in 2021, through technology development, carbon offset, and/or renewable energy mix
- will be operational until 2050 at the latest.

A.4. Finance-related policies

■ *ASEAN Taxonomy version 2*

In 2021, the ASEAN economy was ranked fifth-largest in the world and third-largest in all of Asia (ASEAN Taxonomy Board, 2023). However, this growth has also resulted in a range of social and environmental issues such as poor air quality and over-extraction of natural resources. This is why the role of sustainable finance was acknowledged among the ASEAN Member States at the ASEAN Finance Ministers' and Central Bank Governors' Meeting (AFMGM) in 2019, enabling ASEAN to advance its sustainability agenda.

In November 2021, ASEAN issued the ASEAN Taxonomy for Sustainable Finance version 1, which was motivated by the ASEAN region's vulnerability to climate change. After it was published, the ASEAN Taxonomy Board (ATB) called for comments from stakeholders through consultations. The consultation processes then fed into the development of the ASEAN Taxonomy version 2. However, it was also acknowledged that ASEAN's Taxonomy needs to be aligned with the Member States' national taxonomies; at that time, taxonomies had been developed by Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam. The Taxonomy is expected to be a guide to enable a just transition towards the adoption of sustainable finance by ASEAN Member States.

ASEAN is set to achieve net-zero greenhouse gas emissions as early as the latter half of the 21st century, which is reflected in ASEAN Member States' NDCs and also the national-level regulations on greenhouse gas emissions reduction, such as in the energy sectors. Several initiatives and programmes have been developed, such as the ETM, the JETP, and the Managed Phase out programme that was developed by GFANZ.

To support the above initiatives and programmes, as well as to respond to several international reports regarding the early retirement of CFPPs, the ASEAN Taxonomy then introduced coal phase-out as an activity that can be classified as green or amber under the Plus Standard (PS) Framework²⁴ in the ASEAN Taxonomy version 2.

²⁴ The PS Framework is one of two frameworks used to determine whether an activity meets the principles of at least one of the environmental objectives and all essential criteria. There are six sectors in the PS Framework, of which the energy sector (including electricity, gas, steam, and air conditioning supply) is one.

■ Green Taxonomy (2022)

Indonesia's Green Taxonomy 1.0 was formulated and issued by Indonesia's Financial Services Authority, or *Otoritas Jasa Keuangan* (OJK), in 2022. This guideline classifies industries based on the Standard Classification of Indonesian Business Fields, or *Klasifikasi Baku Lapangan Usaha Indonesia* (KBLI), into red, yellow, and green status based on their level of compliance and performance on regulations and environmental aspects. Green classification means the projects do no significant harm, apply minimum safeguards, have a positive impact on the environment, and align with the environmental objectives of the Taxonomy. Yellow classification means they do no significant harm, while red classification indicates harmful activities.

Indonesia recently launched the first version of Indonesia's Sustainable Taxonomy (*Taksonomi Berkelanjutan Indonesia* (TBI)), which focuses on the power sector. The OJK has indicated that the TBI is an updated version of Indonesia's Green Taxonomy 1.0; however, at this stage the TBI still focuses on the power sector.²⁵ The TBI introduces two classification categories: green and transition. In both categories, the early retirement of CFPPs is included, with terms and conditions, in the expectation that this will attract more funding for early retirement projects.

■ Sustainable Finance Roadmap Phase II (2021–2025) by the Financial Services Authority (Otoritas Jasa Keuangan (OJK)) of Indonesia

The Financial Services Authority issued the Sustainable Finance Roadmap Phase 1 for 2015–2019, which was intended to increase the understanding and capacity of financial services sector actors in the low-carbon economy. The roadmap set forth a detailed work plan for the financial services industries, including a timeline for the development of sustainable finance regulation, sustainable financial products, incentives for financial institutions, and coordination among government agencies.

In 2021, the OJK issued the Sustainable Finance Roadmap Phase II for 2021–2025, which consists of seven components to accelerate the financial sector's transition towards sustainability: policies, products, market infrastructure, coordination of ministries/agencies, non-government support, human resources, and awareness.

Through the Sustainable Finance Roadmap, the OJK requires players in the financial services industry to prepare reports containing the application of environmental, social, and governance (ESG) principles in business plans, as well as submitting reports to the public regarding the implementation of ESG principles.

■ Implementation of Sustainable Finance (Regulation No. 51/POJK.03/2017)

To improve sustainability policy for financial institutions and also encourage green funding schemes, the OJK has issued Regulation No. 51/POJK.03/2017 on the Implementation of Sustainable Finance for Financial Services Institutions, Issuers and Public Companies. The regulation states that in order to implement sustainable finance, financial services institutions (*Lembaga Jasa Keuangan* (LJK)), issuers, and public companies must annually submit their sustainable finance action plans to the OJK. This action plan must be prepared based on, at least, each LJK's financial products and/or services that are aligned with sustainable finance; the internal capacity development of each LJK; and adjustment of the organization, risk management, governance, and/or standard operating procedures of the LJK that are aligned with sustainable finance principles. This regulation also requires all LJKs to pursue social and environmental responsibility (*Tanggung Jawab Sosial dan Lingkungan* (TJSL)) by allocating funding for the implementation of sustainable finance.

²⁵ The PS Framework is one of two frameworks used to determine whether an activity meets the principles of at least one of the environmental objectives and all essential criteria. There are six sectors in the PS Framework, of which the energy sector (including electricity, gas, steam, and air conditioning supply) is one.

■ Sustainability Bonds and Sukuk (OJK Regulation No. 18/ 2023)

OJK Regulation (POJK) No. 18/2023 on the Issuance and Requirements for Debt Securities and Sukuk Based on Sustainability was launched in this context to develop sustainability-based financial instruments, including green bonds and green sukuk. The financial instruments developed in accordance with this regulation are intended to support the implementation of the Sustainable Finance Roadmap as reflected in POJK No. 51/POJK.03/2017. POJK 18/2023 regulates the issuance of securities based on sustainability issues, including green bonds, green sukuk, social bonds/sukuk, sustainability bonds/sukuk,²⁶ sukuk-linked waqf,²⁷ and sustainability-linked bonds. The issuance of these sustainable securities can be carried out through public offering, or without public offering on securities with a due date of more than a year.

Article 8 of the regulation states that the funds obtained from the securities issuance can be used to fund environmentally based business activities (*kegiatan usaha berwawasan lingkungan* (KUBL)), including renewable-energy-related activities, energy efficiency, climate change adaptation, environmentally friendly transportation, land and water biodiversity conservation, sustainable water and wastewater management, and other related activities.

A.5. Industrial-related policies

■ Indonesia's National Industrial Plan (Rencana Induk Pembangunan Industri Nasional (RIPIN))

Indonesia's National Industrial Plan or RIPIN is governed through Government Regulation No. 14/2015, which outlines Indonesia's industrial plan for the period 2015–2035. The implementation of RIPIN is derived from an implementation plan called the National Industrial Policy or *Kebijakan Industri Nasional* (KIN). In the KIN 2022–2024, the priority areas for the power sector will be electricity generation, batteries, solar cells, and nuclear power plants. The annual implementation plan of KIN 2022–2024 can be seen in Table 10, below.

Policy	2022	2023	2024
Main initiatives	<p>Implementing energy efficiency management through the use of energy efficiency technology</p> <p>Increasing the demand for electricity components through the implementation of energy management policy and the utilization of electricity-saving technology</p>	Applying Indonesia's National Standard (Standar Nasional Indonesia (SNI)) for the power sector	Utilizing solar PV to produce electricity in the industrial sector
Main activities	Promoting the implementation of energy management as well as the use of electricity-saving technology	<p>Promoting the application of Indonesia's National Standard in the power sector</p> <p>Developing National Standard Plan products for the electricity industry</p> <p>Facilitating laboratories for power generators' testing</p>	<p>Facilitating the use of solar PV technology as a power source in the industrial sector</p> <p>Providing incentives for the utilization of solar PV as a power source in the industrial sector</p>

Table 10: Annual implementation plan of KIN 2022–2024

²⁶ A sukuk is a certificate of ownership – of equal value and representing undivided shares in ownership of tangible assets, usufruct, and services, or the assets of particular projects. The returns on the certificates are directly linked to the returns generated by the underlying assets. Sukuk is an instrument of Islamic finance that is operationalized in accordance with Islamic principles.

²⁷ A sukuk-linked waqf is a sukuk where the funds obtained can be used to finance (or re-finance) activities/projects to optimize the benefit of the asset. The asset itself is an asset waqf, which is an asset donated by the owner of the asset to the asset manager.

■ *Local Industrial Empowerment (Government Regulation No. 29/2018)*

Government Regulation No. 29/2018 on Local Industrial Empowerment is designed to regulate issues around:

- **strengthening institutional capacity and providing facilities for small and medium enterprises in Indonesia**
- **green industry**
- **strategic Industry**
- **increasing the utilization of domestic products**
- **international collaboration in industries**

To increase the utilization of domestic products, the regulation highlights their use as mandatory. The product users are identified in Article 57(a) of the regulation, which states that all government activities that are funded by national or regional budget, including loans and grants from domestic or international sources, are obliged to use domestic products. The following are also obliged to utilize domestic products: state-owned enterprises and other legal entities that are state-owned; regionally owned enterprises; and private sector bodies that use funds sourced from national or regional budget, collaborate with national and/or regional government, and/or are involved in procurement that involves nationally owned resources.

This regulation also regulates local content requirements in procurement of goods or services. Article 61 of the Regulation states that the minimum proportion of local content required in the procurement is 25%. Paragraph 4 of the Article states that it is the Minister of Industries who has the authority to define the minimum local content.

■ *Guidelines for the Utilisation of Domestic Products for the Development of Electric Power Infrastructure (MoI Regulation No. 54/2012)*

The regulation states that all constructions in the power sector for public use have to use domestic goods and/or services (Article 1.1 of the regulation). It also states that the required goods need to be fabricated by domestic producers. However, importing goods (Article 3.2 of the regulation) can be an option if they cannot yet be produced domestically; the specification of goods produced at the domestic level has not met the requirement; and/or the volume of production at the domestic level is not enough to meet the need. Compliance with these three conditions must be disclosed by the relevant association.

The proportion of local content that is expected is quite high, ranging from 39% to 90% for materials, and up to 100% for services procurement, which need to be applied for all technologies, including solar home systems and solar power plants. The local content requirement applies to the whole infrastructure and is not calculated per component of the power plant.

In the amendment MoI Regulation No. 5/2017, local content is specified down to each component. For the same solar power plant as above, for each unit installed capacity, the local content requirement for materials is 37.47%, for services 100%, and for both materials and services a minimum of 43.72%. However, in the power plant, the local content of a solar PV module needs to be at least 40%, a battery 40%, and a distribution panel 40%.

In 2023, another amendment was made to the regulation. Aside from increasing the local content requirement for a solar power plant to a minimum of 60%, which will be applied from 1st January 2025, the regulation also exempts the development of solar power plants in Indonesia's new capital city, Nusantara, from the application of the LCR (Article 2.2 of MoI Regulation No. 23/2023).



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