PRAKARSA
Welfare Initiative for Better Societies

ResponsiBank Indonesia

Policy Paper

FINANCING A JUST ENERGY TRANSITION IN INDONESIA

Analysis and Policy Recommendations

2025

Financing A 'Just' Energy Transition in Indonesia: Analysis and Policy Recommendations

Citation:
PRAKARSA. (2025). Membiayai Transisi Energi 'Berkeadilan' Di Indonesia: Analisis dan Rekomendasi Kebijakan. Perkumpulan PRAKARSA: Jakarta.

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Publisher:
Perkumpulan PRAKARSA
Komplek Rawa Bambu 1
Jl. A No.8E Kel. Pasar Minggu, Kec. Pasar Minggu
Jakarta Selatan, Daerah Khusus Ibu Kota Jakarta 12520, Indonesia

Key Words:
A Just Energy Transition, financing energy. Renewable energy, inclusive financing, policy recommendations

Disclaimer:
This paper is written as a policy recommendation for the implementation of financing a just energy transition in Indonesia. The contents of this policy paper are the sole responsibility of the authors.

List of Contents

List of Figures

List of Tables

Foreword

Indonesia is facing a crucial moment in determining the direction of its energy transition.

Amidst the heavy reliance on fossil fuels, the transition towards renewable energy is not merely a technical option but rather an imperative to address the climate crisis. However, the energy transition must not stop at emission reduction alone. It must ensure fairness for disproportionately impacted groups including workers, vulnerable communities and indigenous communities to ensure that no one is left behind on joutney to clean energy.

As a civil society coalition, ResponsiBank Indonesia is committed to driving real change in financing practices in the financial sector. We ensure that financial institutions prioritize not only profitability but also the principles of sustainability and social justice as their core ground. Through research, policy dialogue, and public advocacy, we emphasize that energy transition financing must be aligned with the interests of the broader community, not deepening social inequality or exacerbating environmental damage.

This paper is presented as a policy paper offering suggestions from civil society to strengthen the direction of energy financing in Indonesia. We believe that sustainable finance can only be realized if transparency, accountability, and inclusiveness are the primary standards in every policy. This way, the financing system becomes not merely a means of capital mobilization but also an instrument of social change toward a low-carbon, equitable, and climate-resilient economy.

We hope that the recommendations in this report can be used as a basis for consideration by policymakers, financial institutions, and all stakeholders to accelerate the realization of an energy transition that is not only greener and cleaner, but also fairer and more pro-human and environmental.

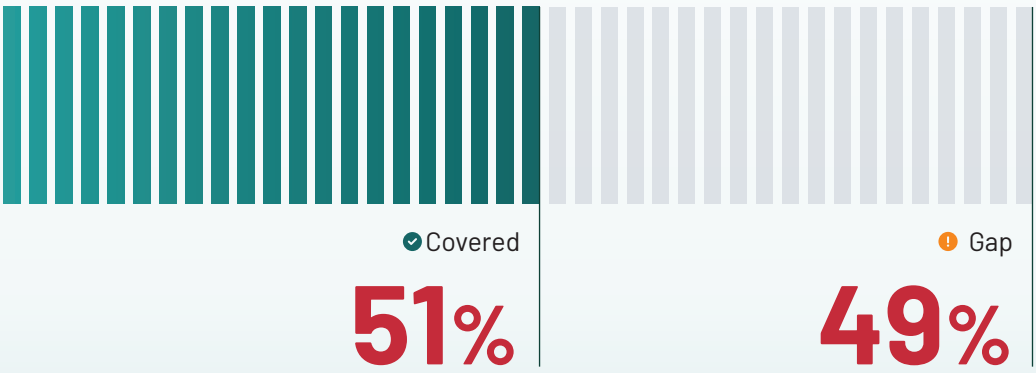
Jakarta, Agustus 2025

Ah Maftuchan
Executive Director of PRAKARSA
ResponsiBank Indonesia Coalition Coordinator

Executive Summary

Funding Needs

USD**247,3** billion



Affected Groups

INDONESIA stands at a crossroads. As one of the world's largest carbon emitters, its reliance on fossil fuels, such as coal, exacerbates the impacts of the climate crisis for those affected, particularly for disproportionately affected groups such as vulnerable groups, coal workers, and even indigenous communities.

At a glance, the energy transition is key. Through its Enhanced Nationally Determined Contribution (NDC), Indonesia has committed to reducing greenhouse gas (GHG) emissions from identified sectors by 31.89 percent under its own capacity (CM1) or 43.20 percent under international commitments (CM2), against the Business as Usual (BAU) scenario by 2030 (Ministry of Environment and Forestry/MEF, 2024). In line with this, Indonesia has set a Net Zero Emission (NZE) target by 2060, and has introduced various regulatory frameworks, policies, and a long-term roadmap called the Long-Term Strategy for Low Carbon and Climate Resilience (LTS - LCCR) 2050 which aims to provide guidance for low-carbon development.

However, the energy transition is not as easy as it looks on paper. Cost and financing are the main issues. To achieve the 2030 NDC target alone, the Fiscal Policy Agency (FPA) estimates the funding requirement at USD247.3 billion (Rp4,002.44 trillion) or Rp307.88 trillion annually based on the Business-as-usual (BAU) scenario across the five sectors subject to the NDC: energy, waste, industry (Industrial Process and Production Use/IPPU), agriculture, and forestry (BKF, 2020). By 2024, the combination of public and private sector (financial) funding will only cover 51 percent of the total funding required (Climate Policy Initiative, 2024). The government, through Ministry of Finance Regulation No. 103 Year 2023 (PMK 103/2023), has provided a regulatory framework for the use of public funding sourced from the National State Budget (APBN) to support energy transition projects. Furthermore, over the past three years, the government has also signed international climate financing schemes, such as the Just Energy Transition Partnership (JETP) and the Energy Transition Mechanism (ETM). However, this funding remains insufficient to raise the funds needed to achieve energy transition targets, particularly for the early retirement plan of the Coal-fired Power Plants (CFPPs) and the development of Renewable Energy (RE) infrastructure.

While research and policy advocacy have extensively highlighted and proposed effective financing mechanisms for the energy transition, the aspect of 'just', which we use interchangeably in this research, is often missing from the discourse. Specifically, in this research, we focus on analyzing the 'justice' aspect of existing sustainable financing schemes by identifying the state-of-play of these financing schemes for groups we identify as experiencing disproportionate impacts from the climate crisis and energy transition, namely affected workers, vulnerable groups, and indigenous communities. We conduct a gap analysis of the aspects and mechanisms within these sustainable financing schemes and provide recommendations to encourage the integration of the 'just' principle, based on a typology of justice that will be discussed further.

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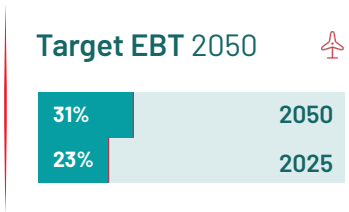
CHAPTER I

Overview of Energy Transition in Indonesia

The energy transition, both conceptually and practically, is complex. Historically, the energy transition process began with the understanding that the genealogy of international development, based solely on 'growth' and driven by the excessive use of fossil fuels for industrialization, has created a continuing climate crisis. Therefore, a systematic transformation is needed in how we seek and use more sustainable energy sources. From this historical stage, the energy transition emerged with two primary objectives, namely transforming the energy sector from one that was previously dependent on fossil fuels to renewable energy sources, and reducing Carbon dioxide (CO_2) emissions to curb climate change.



Despite its complexity, the energy transition is generally divided into two major levels which are upstream, or planning, and downstream, or financing. Specifically, in Indonesia, the energy transition planning process began long ago and involves a multisectoral approach. The government itself has committed to achieving the Net Zero Emission (NZE) target by 2060, and integrating this plan into several long-term roadmaps such as the Long-Term Strategy for Low Carbon and Climate Resilience 2050 (LTS – LCCR 2050), Enhanced Nationally Determined Contribution (ENDC) 2030, Ratification of the Paris Agreement, and also the National Medium-Term Development Plan (NMTDP) 2025 – 2045. At the regulatory level, the government has also established Government Regulation Number 79 Year 2014 concerning the National Energy Policy (NEP), one of which targets the contribution of New and Renewable Energy (NRE) in the national primary energy mix of 23 percent in 2025 and 31 percent in 2050, although this threshold was later lowered to 17 – 19 percent in 2025 due to the slow realization of the national energy mix (IEEFA, 2024). The targets in the NEP then became the basis for the formation of the General National Energy Plan (GNEP) and the Regional Energy General Plan (GREP), and specifically regulations in the electricity sub-sector such as the National Electricity General Plan (NEGP) and the General Plan for Electricity Power Supply (GPEPS).

The energy transition, in this context, holds a highly strategic position as an instrument for realizing the NZE's long-term commitments. In terms of phasing, the end-to-end energy transition process is divided into four major stages. However, this careful planning does not always align with the desired outcomes. Our research identified two initial issues amidst numerous structural and administrative barriers to the energy transition.

First, dependence on fossil fuels such as coal. As the world's second-largest coal producer, the dilemma of climate change and energy transition is one of the biggest challenges.

Indeed, historically, coal has contributed significantly, especially to economic growth. Approximately 10.5 percent (Rp2.198 trillion) of Indonesia's total Gross Domestic Product (GDP) in 2023 came from the Mineral and Coal (Minercoal) sector, with 85 percent of Non-Tax State Revenue (NTSR) coming from the coal sector alone, for example in the form of APBN dividends (Indonesia Mining Association, 2024). It is 67 percent of total electricity production comes from coal, especially that operated by Steam Power Plants (StPPs) (Dewi, 2024). Most recently, in the 2025-2034 GPEPS, despite a reduction in the fossil fuel mix target to 24 percent and an increase in the renewable energy mix target to 61 percent, compared to the 2021-2030 GPEPS of 48.4 percent fossil fuel and 51.6 percent coal (Ministry of Energy and Mineral Resources, 2021), dependence on coal remains significant. One example is the government's plan to increase coal and gas generating capacity by 6.3 GW and 10.3 GW, respectively, or 16.6 GW (CERAH, 2025). In its implementation, 76 percent (12.7 GW) of the total additional capacity will be built in the 2025-2029 time period, while the remaining 24 percent (3.9 GW) will be built in 2030-2034 (SUSTAIN, 2025).

Coal also directly employs around 250.000 workers, or 0.2 percent of Indonesia's total workforce (Nangoy & Christina, 2022). In some provinces, such as East Kalimantan, around 11 percent of the total workforce works in coal mines (Climate Transparency & Institute for Essential Services Reform (IESR), 2022). This figure could be even higher if multiplier effects, such as indirect jobs generated by other coal-related sectors and activities, are taken into account. In some regions of Indonesia, local governments (PEMDA) are highly dependent on coal for regional revenue (Regional Original Income/ROI), with the figure reaching 40 percent of the total Regional State Budget (APBD). It is not surprising that, to date, the government still maintains the Domestic Market Obligation (DMO) policy, which requires coal producers to 'deposit' 25 percent of their total production to the domestic market, even though numerous studies have shown the negative impacts of this policy especially in the energy transition process (Bridle & Suharsono, 2019).

Besides its economic impact, coal holds a significant role in maintaining political stability. Research has shown a 'lock in' effect between the government, particularly politicians at both the local and national levels, and coal producers (Prihandono & Widiati, 2023). Generally, the political interests that arise are related to the government's desire to keep electricity prices low, particularly because the production cost of electricity and fuel (Levelized Cost of Electricity/LCOE) is much cheaper when produced using coal due to subsidies scheme. Conversely, coal producers rely on the government and politicians for their business operational needs, particularly in obtaining permits and resolving certain political conflicts or disputes (Toumbourou, 2020). In its implementation, the government also applies a Domestic Price Obligation (DPO) policy, where the coal price is set at a ceiling tariff of USD70 per metric ton to maintain the stability of electricity production. Conversely, producers who comply with

these regulations will receive permits easier, such as Mining Business Permits (Izin Usaha Pertambangan/IUP) and Special Mining Business Permits (Izin Usaha Pertambangan Khusus/IUPK) (Stockholm Environment Institute, IESR, 2024). Other studies have also highlighted how coal producers commonly serve as campaign fund 'suppliers' for local and national politicians. This 'clientelistic' relationship between the government/politicians and producers is one of the biggest obstacles to progress in the energy transition in Indonesia.

Besides the political-economic context, our research also identified barriers to the energy transition at the micro level, specifically within the energy transition projects themselves. One of the issues is in the financing section. We found that project 'bankability' aspect, or the financial viability of securing funding from investment, is one of the key obstacles to the realization of the energy transition. Generally, in conducting a project feasibility study, investors will assess several aspects, such as costs, including Capital Expenses (CapEx) and Operational Expenses (OpEx), return on investment, typically measured by return-on-investment (ROI) and return-on-equity (ROE), and project risks, including economic, policy, financial, and procedural risks. Therefore, ensuring that projects achieve viable returns economically and minimizing investment risks is a prerequisite for project developers and the government to address these issues holistically.

In reality, these three feasibility aspects have not been effectively met. In regards to cost aspect, several studies indicate that for solar energy, for example, the average cost of electricity generation/production (LCOE) is USD 165/mWH, making it one of the most expensive in ASEAN countries, far above Myanmar, which only requires USD79/MWH (Global Environment Institute, IESR, 2021). This figure represents a significant increase from 2019, when the LCOE range was still between USD58 – USD128/mWH. Furthermore, for solar panel installation projects, the average capital cost needed ranges from USD700 – 1,200/kW, significantly higher than the average capital cost in Europe, China, India, and Scandinavian countries. Which can be below USD500/kWh (International Renewable Energy Agency, 2020). When analyzed further, it reveals that material procurement costs are the largest contributor to high capital costs, with cost composition accounting more than 50 percent of the total cost in a renewable energy project. Furthermore, due to the capital-intensive nature of renewable energy projects, the composition of capital costs significantly determines the LCOE. In Indonesia, due to inadequate domestic manufacturing capabilities, coupled with the 40 percent Domestic Component Level (DCL) regulation (discussed in the next section), capital costs contribute approximately 15.3 – 20 percent of the total project cost. Compared to fossil fuels such as gas and coal, which only have a capital cost to LCOE ratio of 5.5 – 9 percent, the cost ratio of renewable energy in Indonesia is still quite high (IESR & Agora, 2019).

On the other hand, the cost factor that should be beneficial to renewable energy projects is derived the operational cost (OpEx) component, which is generally divided into fixed costs and variable costs for operations and management (O&M). In general, renewable energy has a smaller variable cost component than fossil fuels, due to its independence from fluctuations in oil and diesel prices. The IESR study (2024) found that at global level, the variable costs can be reduced to as low as USD5,000/MW/year, with a ratio to the LCOE below five percent. This figure is far below that of fossil fuels, which on average have a variable cost to LCOE ratio of

10 – 20 percent. However, in reality, the variable costs of renewable energy are still quite high compared to the global average, at USD14.4/kW/year for fixed O&M costs, and USD80/kW/year for fixed costs (Muthahhari, 2024).

The high cost of energy transition activities, both direct costs such as capital investment in renewable energy infrastructure and indirect costs such as the political costs of 'break free' from coal dependence, has led to massive scale of financial mobilization. In recent years, the 'financial' aspect of the energy transition has emerged in mainstream debates, which has been defined as 'sustainable financing' (Climate Policy Initiative, 2024). Funding comes from both the government through national public funding sourced from the National State Budget (APBN), international partnerships such as the Just Energy Transition Partnership (JETP) and the Energy Transition Mechanism (ETM), and from the private and non-public sectors. The call-to-action for transition funding is growing, along with the issuance of Minister of Finance Regulation No. 103 Year 2023 (PMK 103/2023), and the signing of the JETP and ETM financial initiatives which have a funding commitment of USD21.6 billion for the early retirement plan of coal-fired power plants (CFPPs) and the development of RE infrastructure.

However, historically, energy sector reform and its intersection with 'sustainable financing' are still limited to conventional debates about the most efficient and economical method for channeling financing to 'contractual parties'. The JETP funding scheme for the a Coal-fired Power Plant (CFPP) early retirement pilot project, for example, focuses on mobilizing funding through a 'cooperative' and 'tripartite' agreement between Independent Power Producers (IPPs), the government (represented by technical regulators such as the Ministry of Energy and Mineral Resources (MoEMR) and the State Electricity Company (SEC), project sponsors such as the Indonesia Investment Authority (INA), as well as creditors such as the Asian Development Bank (ADB) (JETP, 2023)

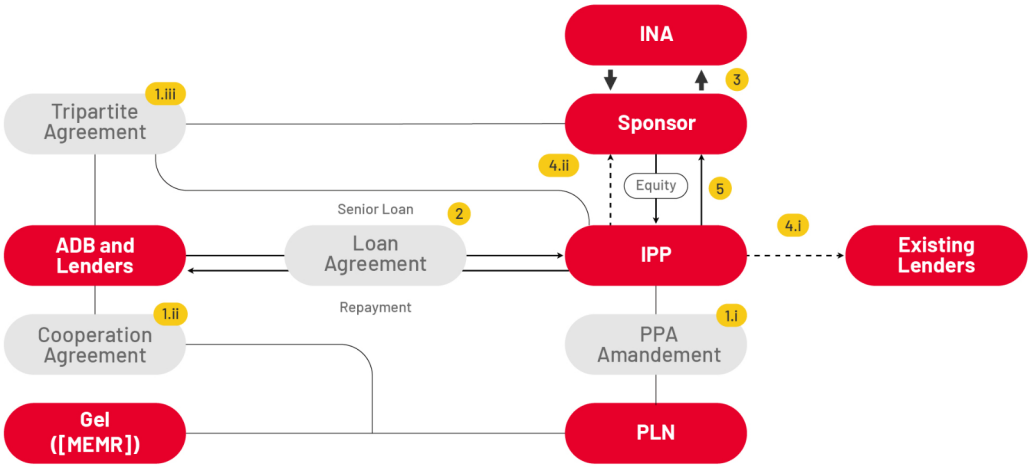


Figure 1. Pilot Project Transaction of Early Retirement of CFPP by Independent Power Producer (IPP)

Sumber: JETP's Comprehensive Investment and Policy Plan (CIPP), 2023.

In reality, in several early retirement projects for coal-fired power plants (CFPPs) that are part of the 'focus investment area', such as the CFPP Cirebon 1, the negative externalities on workers, local residents, and affected communities in general are much greater. Likewise, the post-decommissioning impacts of the CFPP on formal and informal workers, as well as the communities in the area, who will bear the burden, such as losing their jobs and livelihoods. This phenomenon is then theorized as 'energy justice', referring to the 'new contract' (Heffron & Fontenelle, 2023) in energy reform plans, along with financial mobilization that pays more attention to the aspect of 'just' for vulnerable parties who are generally overlooked in debates about energy systems and energy transitions.

This is precisely the point at which this research was conducted. We started from the problem that, so far, the discussions and schemes for the energy transition, both at the planning and financing levels, tend to not integrate the pillars of sustainable development, such as social, economic, and environmental. Progress on the energy transition remains largely limited to discourses about financial financing schemes as an enabler of planning, without optimally looking at and measuring the resulting direct and indirect impacts. Whereas, our research findings reveal that the energy transition, despite being a necessity, often has a disproportionate impact on certain social groups, creating negative externalities for the environment, and economic uncertainty for those affected.

CHAPTER II

Methods

This research was conducted using a descriptive-exploratory method. We collected data qualitatively, primarily through in-depth interviews with experts, academics, practitioners, and regulators, and secondary data through literature review and field observations. Broadly speaking, our research takes a landscape analysis angle, with the hope that our findings will be developed into more detailed and comprehensive studies in the future.

We divided our research into several stages. **First**, we conducted a scoping analysis of the state-of-play of sustainable financing schemes in Indonesia, identifying issues related to energy transition financing at the planning level. In this section, the angle we use is a gap analysis at levels be it the regulatory, policy, program, and sustainable financing scheme. We focused our analysis on three major groups, namely affected workers, vulnerable groups (women, persons with disabilities/PWD, children and the elderly). Our goal was to analyze the progress of sustainable financing and its aspects, particularly regarding the mainstreaming of these three groups.

Second, we provide policy recommendations and steps that various stakeholders should take to realize a just energy transition. It's important to note that our recommendations are not only aimed at government stakeholders, but also at all parties involved in the energy transition. Our initial policy recommendations focus not only on impact mitigation but also provide a long-term roadmap to ensure the energy transition meets the 'just' aspect for the subjects or groups we focus on..

CHAPTER III

Realizing a Just Energy Transition

What is a just energy transition? And how can we ensure that it is carried out 'fairly'? This research examines this from a critical perspective. A just transition stems from the understanding that while the impacts of climate change are felt by all parties, historically, some subjects have experienced far more significant impacts. The impacts of climate change can differ not only based on geographic factors but also socio-economic conditions, with communities generally living in slums and lacking access to basic public services such as adequate sanitation and housing experiencing potentially far more significant losses. Therefore, efforts to address the climate crisis, including the energy transition, need to understand and accommodate these structural differences.

We understand that a 'just' energy transition emphasizes not only the 'financial' aspect, but also the resulting socio-political-economic impacts, both direct and indirect. Our research finds that the energy transition disproportionately impacts certain social groups, creating negative externalities for the environment, and also economic uncertainty for those affected. Therefore, the discourse on the energy transition cannot be limited to finding effective and efficient financing schemes for planning implementation, but also to identifying preventive and curative methods that can prevent and compensate for the impacts of the energy transition. These methods include, for example, providing worker training, creating new jobs, and expanding adaptive social protection schemes.

3.1 Indonesia Sustainable Financing Landscape

Globally, to achieve the scenario target of 1.5 degrees Celsius, an amount of USD266 trillion in climate finance is required by 2050, comprised of public, private, and blended funding (CPI, 2024). These funds will generally be used to finance the early retirement or decommissioning of coal-fired power plants, the development of Renewable Energy (RE), and also to mitigate the risks associated with this process, particularly in developing countries. However, the reality regarding the progress of climate finance and the energy transition is in stark contrast to the projected scenario. The International Energy Agency (IEA) estimates that to achieve the 1.5 degrees Celsius scenario by 2050, approximately USD1.05 trillion in funds must be mobilized to finance energy transition projects in developing countries. However, as of 2020, the annual average mobilized funds were only around USD89.6 billion per year, or only about 8 percent of the total funds required (IEA, 2023).

Specifically, for Indonesia, the Comprehensive Investment and Policy Plan (CIPP) report issued by the Just Energy Transition Partnership (JETP) Secretariat shows that for the electricity sub-sector alone, funding of USD1.3 trillion is needed to achieve the ideal scenario of 1.5 degrees Celsius by 2050 (JETP, 2023). Meanwhile, to achieve the target of Nationally Determined Contribution (NDC) 2030, the Fiscal Policy Agency (FPA) estimates the funding requirement of USD247.3 billion (IDR4.002,44 trillion) or IDR307,88 trillion annually based on the Business-as-usual (BAU) scenario in the five sectors subject to the

NDC: energy, waste, industry (Industrial Process and Production Use/ IPPU), agriculture, and forestry. This figure is equivalent to 10 - 11 percent of the total value of the National State Budget (APBN) (CPI, 2024). Meanwhile, another report indicates that Indonesia requires USD285 billion in funding across these five sectors (CPI, 2023). As of 2024, climate finance had accumulated to USD138.6 billion, or 49 percent of the total funding requirement (CPI, 2023). Of this total accumulated funding, 15 percent (USD41.6 billion) was financed by the financial sector (both private and public), and 34 percent (USD96.9 billion) was financed by the government through the National State Budget (MoF, 2021). To achieve the NDC target, an additional USD146.4 billion (51 percent) of investment is required from various sources, including investment from the financial sector, the government, and blended sources (IRID, 2023).

NDC Requirement **2030**

USD **247,3 billion**

NDC Realization **2024**

USD **138,6 billion**

	Nasional	Internasional
Publik	• APBN (Belanja Mitigasi Adaptasi PI) • Dana Alokasi Khusus (DAK) • Green Sukuk • Badan Pengelola Dana Lingkungan Hidup (BPDLH) • Badan Pengelola Dana Perkebunan Kelapa Sawit • SGD Indonesia One • Indonesia Climate Change Trust Fund	• Green Climate Fund • Global Environment Facility • Multilateral Development Bank • Lembaga pembangunan negara sahabat (seperti JCM)
Non-Publik	• Investasi langsung swasta • Sustainable Finance oleh Perbankan dan jasa keuangan lainnya • Filantropi • KPBU	• Bond Investor • Equity Fund • Dana Pensiun • Filantropi

Figure 2. Climate Financing Landscape

Source: Indonesia Research Institute for Decarbonization (IRID), 2023.

3.2 Sector Climate Financing

In 2023, the Ministry of Finance issued Ministerial Regulation (PMK) No. 103 Year 2023, which became the legal basis for the use of the National State Budget (APBN) to fund the energy transition in Indonesia. This policy became the basis for the formation of the Energy Transition Platform (PTE) and authorized PT. Sarana Multi Infrastruktur (PT. SMI), a government-owned Special Mission Vehicle (SMV) under the Ministry of Finance as the Country Manager tasked with managing and distributing all funds for the energy transition, including climate funding commitments such as JETP and ETM. The APBN funds were allocated for two purposes in the energy transition phase, namely the Early Retirement of Coal-Fired Steam Power Plants (CFSPPs), and the development of Renewable Energy (RE) infrastructure, which will be distributed through several mechanisms such as Regional Financial Transfers (RFT) and State Capital Inclusion (SCI).

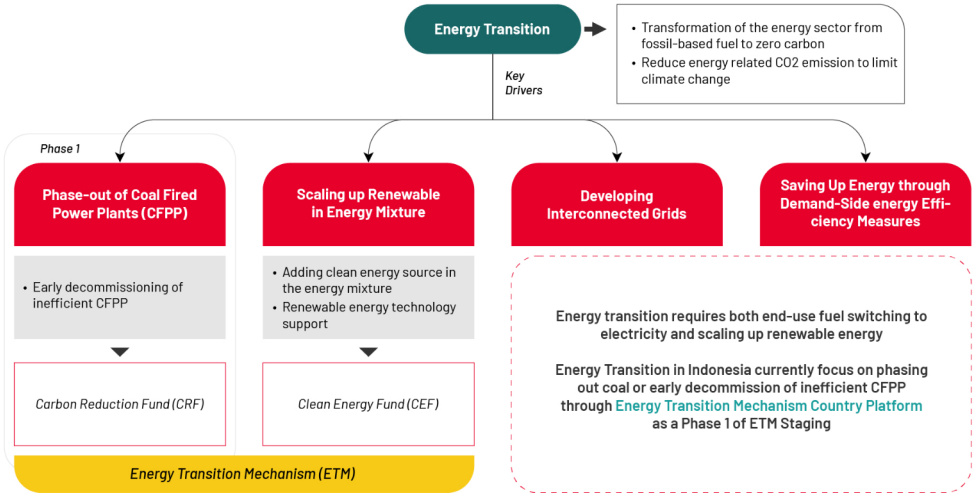


Figure 3. Energy Transition Phases

Source: International Energy Agency (IEA), Coordinating Ministry for Maritime Affairs and Investment, RE Invest Indonesia, 2023.

Before the policy was enacted, the government already had a climate budget tagging (CBT), or a special fund allocation for the realization of climate change action spending in the APBN (National State Budget). Since its initial initiation in 2016 through 2022, a cumulative total of IDR569 trillion (IDR81.3 trillion per year or 3.5 percent of the National State Budget) has been spent by the government. This fund is certainly insufficient to cover the total cost of energy financing. This is particularly true because the total cost of climate action as a whole exceeds the estimated cost of the NDC scenario. Moreover, the calculated costs also do not account for additional end-to-end energy transition costs, such as the

decarbonization phase with a composition of 75 percent renewable energy, which requires USD100 billion (IDR1.500,87 trillion) by 2030 (PT. Perusahaan Listrik Negara/PLN, 2024). In addition, the government, through the Ministry of Finance, also estimates a funding requirement amounting to USD1 trillion (IDR16,000 trillion or four times the existing State Budget) to achieve the Net Zero Emission (NZE) target by 2060, of which the government can only finance around 30 percent of the total cost requirements based on the existing National State Budget (Tempo, 2022).

However, the allocation of CBT funds experienced a significant downward trend in 2020, during which budget priorities were reallocated to stimulus measures for the impact of the Covid-19 pandemic, particularly the National Economic Recovery (NER) program. The problem is, under the guise of economic recovery, the government not only provided funding disincentives for renewable energy programs but also incentives, both in the form of liquidity and policies, for fossil fuels. For example, in 2020, the government passed the Omnibus Law, which facilitated the extension of coal mining business permits and also eliminated royalty obligations down to 0 percent for coal mining IUP or IUPK holders possessing down-streaming plans (IESR, 2022; SSEK, 2020). Furthermore, in the same year, the government continued to develop a 35 GW electricity generation program, 47 percent of which was coal-fired (IESR & CPI, 2022). The government also reduced the budget allocation for Low Carbon Development (LCD) to 0.9 percent of GDP in 2020 and 0.6 percent in 2021, from an average of 1.5 percent annually (CORE, 2023). These measures have negatively impacted national climate action, with organizations such as the Climate Policy Initiative (CPI) scored -0.54 on its indexation of climate mitigation plan implementation across the five sectors targeted by the NDC (CPI, 2021).

✦ 3.2.1 Just Energy Transition Partnership (JETP)

Amidst the 2022 Group of Twenty (G20) meeting in Bali, the government, together with the International Partners Group (IPG), launched the Just Energy Transition Partnership (JETP) funding scheme. Under the scheme, JETP will mobilize energy transition funding of USD21.6 billion, with USD10 billion to be mobilized by IPG member countries, and the remaining amount will be mobilized by private funding through the Glasgow Financial Alliance for Net Zero Emissions (GFANZ). The long-term goal of JETP is to encourage the achievement of Indonesia's 2030 NDC target through sustainable financing. Meanwhile, the main focus of JETP is funding for the development of Renewable Energy (RE), especially in the electricity sub-sector.

In 2023, JETP issued a comprehensive document containing investment and policy frameworks to achieve energy transition goals, called the Comprehensive Investment and Policy Plan (CIPP). In formulating the CIPP, participating parties, such as the Just Transition Working Group, part of the JETP Secretariat, Civil Society Organizations (CSOs), and labor unions, developed a Just Transition framework or reference frame that is not only presented

to energy transition investors, but also generally to the government in the context of creating policy designs and investment landscapes that encourage energy transition.

The funds disbursed by JETP will be allocated to five Investment Focus Areas (IFA), including the development of transmission and distribution networks (interconnection networks), early retirement of coal-fired power plants, acceleration utilization of dispatchable renewable energy type, acceleration of renewable energy variable type, and building a renewable energy supply chain. For the early retirement phase, JETP has an MoU with the ETM ADB for financing. As of December 2024, IPG has disbursed grants and technical assistance totaling USD230 million for 44 programs, while another USD97 million is still pending approval for 11 other programs (IESR, 2025). JETP has also disbursed loans in the form of equity for eight other projects totaling USD1 billion, and an additional USD2 billion in the form of project guarantees as a de-risking instrument. The same report also indicates that MoUs for 19 other projects, with a total investment of USD5.2 – 6.1 billion, are under discussion (IESR, 2025).

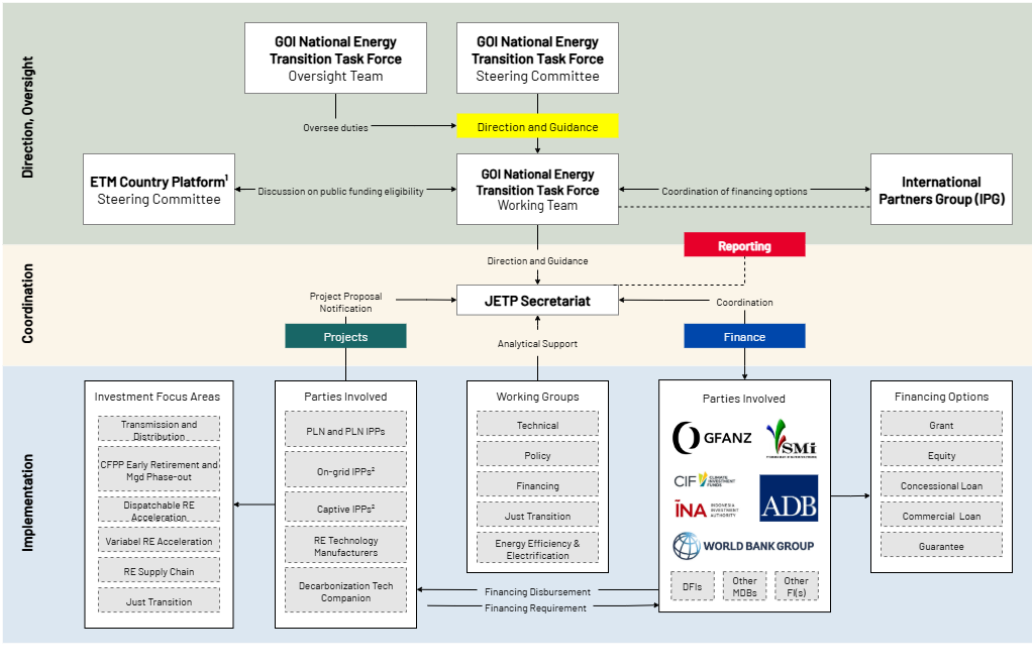


Figure 4. JETP Implementation Structure

Source: CIPP, 2023

JETP Public Finance breakdown by country/entity and funding mechanism (in US$million)*
Source: (JETP analysis based on IPG submissions and consultations, 2023)

Countries /Entities	Grant/TA	Concessional Loan	Non-Concessional Loan	Equity	MDB Guarantee	Other/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			50.0	25.0	1,000.0	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	384.5			2,559.0
Total	295.4	6,945.5	1,590.0	384.5	2,000.0	345.3	11,561.7

**The US$ amount is indicative due to the use of exchange rate from original home currency commitment. The currency exchange is done to offer a rough indication for comparability.*

Figure 5. JETP Public Funding Allocation by Country/Entity and Financing Mechanism
Source: CIPP, 2023

However, conceptually, the JETP framework within Indonesia's energy transition landscape is not positioned as a primary reference, but rather as a complement to existing frameworks, including regulations, policies, and other reference frameworks. For example, the CIPP document states that the foundation of the JETP framework is a complement to other regulatory components, such as Law No. 39 Year 1999 concerning Human Rights, Law No. 8 Year 2016 concerning Persons With Disabilities, Law No. 7 Year 1984 concerning the Ratification of the Convention on the Elimination of All Forms of Discrimination against Women, Law No. 14 Year 2008 concerning the Submission of Public Information, and Law No. 25 Year 2009 concerning the Public Sector. Furthermore, the CIPP document also positions the just transition framework as a derivative of the regulatory framework related to the protection and mainstreaming of environmental and socio-economic aspects (safeguards) applicable in Indonesia, as well as the protection framework for borrowers, such as Multinational Development Banks/MDBs and the private sector in the investment realm. Several legal components such as the Environmental Impact Analysis (EIA) and the Land Acquisition and Resettlement Plan (LARAP) are also referred to (JETP, 2023).

In its implementation, JETP not only considers the economic potential of projects to be invested in (bankability aspect), but also identifies the impacts and ensures that these projects accommodate the interests of vulnerable groups. Furthermore, CIPP also explicitly highlights the involvement of vulnerable groups not only within the framework of descriptive representation, but also ensures their 'inclusive and meaningful participation'. Specifically,

CIPP requires policymakers to ensure that vulnerable groups have access to accurate project information, fair reporting systems and grievance mechanisms, and participation in decision-making, for example through Free, Prior, and Informed Consent (FPIC).

> *"The energy transition has a disproportionate impact on vulnerable groups, including marginalized groups. Therefore, by first assessing their interests and needs, policymakers can design policies and intervention mechanisms that are accommodative, prevent inequality, and ensure accessibility to the creation of new opportunities for them"*
>
> **(JETP, 2023: 118).**

✦ 3.2.2 Energy Transition Mechanism (ETM)

In addition to JETP, Indonesia also adopted the Energy Transition Mechanism (ETM) Country Platform, an energy transition and infrastructure development funding program initiated by the Asian Development Bank (ADB) together with other international partners on the sidelines of the 2022 G20 Summit. Through the Minister of Finance Regulation (PMK) No. 103/PMK.010/2023 concerning the Provision of Fiscal Support through a Funding and Financing Framework in the Context of Accelerating the Energy Transition in the Electricity Sector, the government appointed PT. Sarana Multi Infrastruktur (PT. SMI) as the manager of investment funds through a blended finance approach. Within this framework, PT. SMI acts as an investment manager that manages and facilitates energy transition funding, particularly from Public-Private Partnership (PPP) funding sources initiated by the government together with development banks, commercial banks, equity investors, climate finance organizations, insurance companies, and also local and international philanthropies (PT. Sarana Multi Infrastruktur/SMI, 2023).

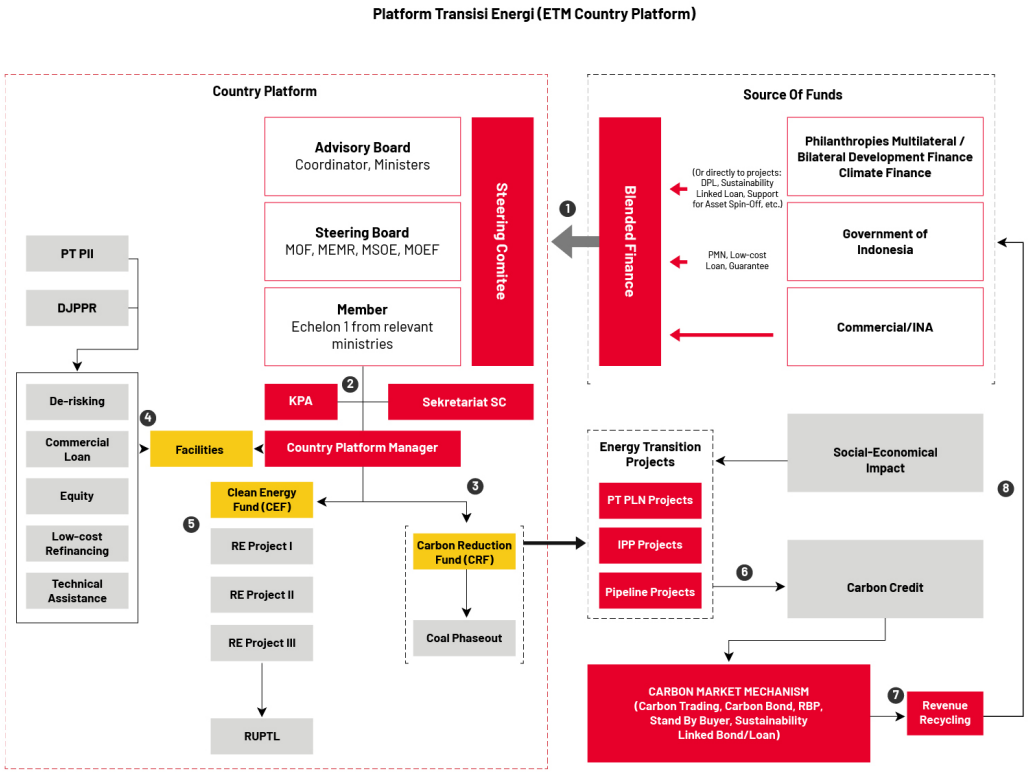


Figure 6. ETM Financing Scheme

Source: IRID, 2023

ETM has a strategic position in the two initial stages of the energy transition, namely the early retirement of coal-fired power plants (CFPPs). ETM funding is accumulated through the Carbon Reduction Fund (CRF), including funding for the development of renewable energy infrastructure as stipulated in the GPEPS (Electricity Power Supply General Plan), and technological assistance through the Clean Energy Fund (CEF). In total, ETM has invested an amount of USD500 million and will allocate an additional USD4 billion through PT. SMI. The plan is to allocate these funds to early retirement projects of coal-fired power plants totaling 2 GW of coal in Indonesia. The CFPP Cirebon I, for example, is one of the projects funded by ETM, where the 660 MW power plant capacity will be retired in 2035, seven years from the initial plan. This early retirement project is estimated to cost USD1.3 billion, of which approximately 20 percent (USD250 - 300 million) will be funded by PPP with a blended finance scheme through ETM (PT. SMI, 2023).

3.3 Non-Public Sector Climate Funding

In the financial sector, both private Financial Institutions (FIs), such as commercial FIs, and private and public investors, such as Multinational Development Banks (MDBs) and climate finance institutions (Climate Funds/CFs), invested in nearly equal proportions, namely USD20.7 and USD20.9 billion between 2015 and 2021, or 15 percent of Indonesia's total climate financing needs (CPI, 2024). Generally, private FIs invest in debt instruments with market interest rates, equity, and concessional loans. Meanwhile, in the grant instruments, the investment composition is very small at USD971 million. However, funding in the form of grants is greatly needed, especially to finance energy transition projects at the regional level (Yustika, 2024).

The majority of this funding is directed to building renewable energy systems (58 percent), a sector assumed to be relatively safe to invest in due to its guaranteed returns (CPI GLF, 2023). Meanwhile, public sector FIs, such as SDG Indonesia One and the Environmental Fund Management Agency (EFMA), generally invest in "adaptation" plans, such as economic, social, and environmental resilience plans. However, public sector FIs do not fully invest in "mitigation" plans that directly impact on GHG emission reductions in NDC-subject sectors (CPI GLF, 2023). Further analysis also shows that only three percent of private FIs' investments are climate-aligned, and only 34 percent of their total funding is designated as sustainable financing (CPI GLF, 2023). While the sustainable financing figures are quite proportional on paper, it is important to remember that the definition of 'sustainable financing' under the Financial Services Authority Regulation (POJK) also includes funding for Micro, Small, and Medium Enterprises (MSMEs), and is not necessarily aimed at 'green funding'.

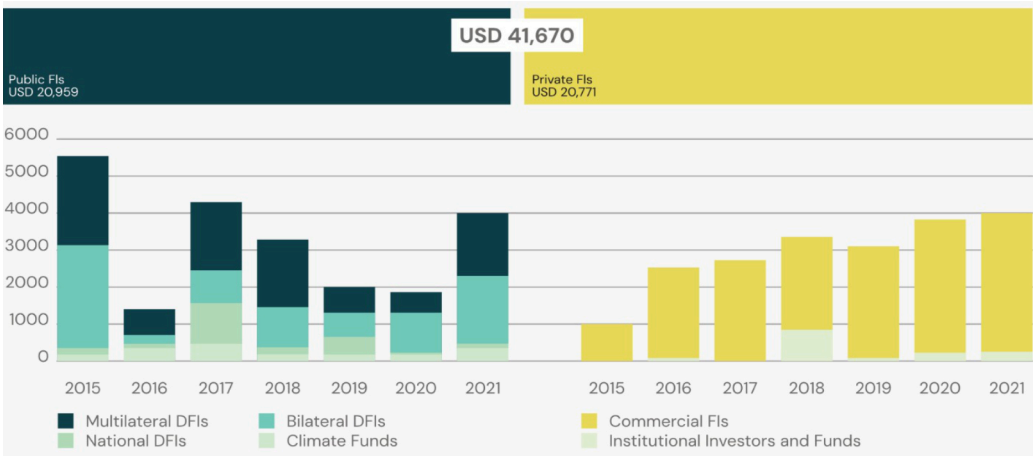


Figure 7. Climate Financing Based on Type of Financing Institution Year 205 – 2021 (in million USD)
Source: CPI, 2023.

The financial sector's climate financing plans are specifically regulated by the Financial Services Authority (FSA). Since 2015, the FSA has developed several strategic planning documents and regulations (through OJK Regulations/POJK) regarding sustainable financing. In 2015, the FSA issued the Sustainable Finance Roadmap Phase 1 2015-2019, which served as the basis for POJK No. 51 Year 2017 concerning Sustainable Finance and POJK No. 60 Year 2017 concerning Green Bonds. Subsequent financial initiatives occurred after, included the launch of Green Bonds/Sukuk, which were issued in the form of State Sharia Bonds (SSB) as its instrument, as well as fiscal incentives for the development of domestically produced Battery-Based Electric Vehicles (BBEV). Specifically, for BBEV, the fiscal incentives implemented became a milestone due to the changing domestic policy landscape, such as the Domestic Component Level (DCL), from a penalty-first approach to an incentive-based approach (Center for Strategic and International Studies, 2023). Meanwhile, POJK 51/2017 was later amended to POJK 18/2023, which introduced Sustainable Bonds and its derivative instruments such as Sustainability Linked Loans (SLLs). The issuance of SLLs brought progress to the sustainable financing landscape because, unlike Green Bonds/Sukuk, which must be 'parked' in specific projects, SLLs can be provided to borrowers with non-project initiatives that meet sustainable standards and requirements (Loan Market Association/LMA, 2019).

Ultimately, in 2022, the FSA introduced the Green Taxonomy 1.0 (THI) as a reference framework for climate financing from the financial sector, which was later renamed the Indonesian Sustainable Finance Taxonomy (ISFT). This taxonomy regulates end-to-end sustainable financing, starting from the identification of priority investment sectors in the Nationally Determined Contribution (NDC) document and 11 other Environmentally Based Business Activity Categories (EBBAC) in accordance with the Indonesian Standard Classification of Business Fields (ISCBFs) in POJK 51/2017, to the Financial Services Sector (FSS) compliance standards with International Financial Reporting Standards (IFRS), such as IFRS 1 and IFRS 2, along with the Financial Accounting Standards (FAS) applicable in Indonesia. The THI classifies EBBAC into three categories: Green - Yellow - Red based on several specific metrics, such as sector or industry player's contribution to environmental restoration and compliance with sustainable standards (OJK, 2022). The greener the classification, the more aligned the EBBAC is with climate initiatives, while red indicates that the EBBAC is 'polluting' the environment and destroying nature. In total, there are 919 EBBAC in the ISCBFs which have been assessed by the THI classification, along with 198 other non-ISCBFs sectors out of 2,733 mapped sectors and sub-sectors (OJK, 2022)..

	Category	Explanation
	Green *(do no significant harm, apply minimum safeguard, provide positive Impact to the environment and align with the environmental objective of the taxonomy).*	*Business activities that protect, restore, and improve the quality of environmental protection and management, as well as climate change mitigation and adaptation, and comply with the governance standards by government, and apply best practices at both the national and international level*
	Yellow *(do no significant harm).*	*Determination of business benefits for environmental protection and management must still be conducted through measurement and support of other best practices.*
	Red *(Harmful activities).*	*The business activities do not meet the yellow and/or green criteria threshold.*

Figure 8. Green Taxonomy of Financial Services Authority (FSA)

Source: OJK, 2023

The introduction of Law No. 4 Year 2023 concerning the Development and Strengthening of the Financial Sector (P2SK), accompanied by the development of the ASEAN Transition Finance Guidance (ATFG), prompted the OJK to revise the THI and replace it with the Indonesian Sustainable Finance Taxonomy (ISFT). Sseveral new provisions or clauses were introduced through both frameworks, namely the concept of 'transition finance' and changes to the classification of EBBAC. The 'transition finance' (TF) is financing for sectors (sectoral level) or entities (entity level) of carbon emitters that have a decarbonization commitment (OJK, 2024). This means that instead of breaking the financing chain for EBBAC classified as 'red', ISFT will continue to recognize and provide financing support as long as they meet the Environmental Objectives (EO) and Essential Criteria (EC) that have been prepared, for example, having a long-term decarbonization commitment, even if they currently still rely on coal (ASEAN Capital Market Forums, 2024). This consideration is important due to the greater costs and domino effect of transition financing for decarbonization activities, such as the early retirement of coal-fired power plants (CFPPs), on the socio-environmental implications than simply financing the development of renewable energy infrastructure projects, even if the resulting returns are smaller (OJK, 2024). The ISFT also integrates the principle of 'just' in its taxonomy design, and even some EC3 or Social Aspect (SA) components in the ISFT tend to be more progressive than the ATFG, including the consideration of General Principles (GPs) and criteria for job creation, poverty eradication, and economic growth that were not previously identified by the ATFG. This taxonomy also places emphasis on Micro, Small, and Medium Enterprises (MSMEs) as the backbone of the economy and as economic agents requiring financing for business development (OJK, 2024).

In terms of the EBBAC classification, the ISFT changed the red-yellow-green classification to simply 'Green' and 'Transition'. Economic activities at the project or entity levels can be

classified as 'transition' if they demonstrate a commitment to the environment and have a clear timeline for decarbonization or moving to the 'green' classification. This classification is slightly different from the ATFG classification. Although the essential criteria are the same, Do No Significant Harm (DNSH) or EC1; Remedial Measures to Transition (RMT) or EC2; and Social Aspects (SA) or EC3, the ATFG uses the 'Green', 'Amber' and 'Red' classifications. Furthermore, they define several essential aspects under SA that tend to be more progressive than those in the ISFT.

Social Aspects	Definition
Promotion and Protection of Human Rights	Promotion of human rights and fundamental freedoms, in line with the ASEAN Human Rights Declaration (AHRD) and the Phnom Penh Statement on the Adoption of the AHRD (ASEAN, 2012).
Prevention of Forced Labour and Protection of Children's Rights	Promotion of labour rights and prohibition of forced labour, including but not limited to exploitation, trafficking in persons, violence and abuse, in line with the ASEAN Declaration on the Protection of the Rights of Migrant Workers and the ASEAN Consensus on the Protection and Promotion of Rights of Migrant Workers (ASEAN, 2012).
Impact on People living Close to Investments	Management of investment-related impacts to people (including children) living in at-risk areas by encouraging inclusive and targeted measures to reduce the impact of investments on vulnerable populations and strengthen institutional capacity to address the needs of people affected, in line with the ASEAN Declaration on Strengthening Social Protection (ASEAN, 2013).

Figure 9. ASEAN Transition Finance Guidance

Source: ASEAN (2023)

The change in the ISFT classification has been criticized for its nature of giving a 'green light' to funding for activities or entities that damage the environment, including in the extractive sector, such as coal mining companies and coal-fired power plants. TuK Indonesia found that blurring the 'red' and 'yellow' classifications to merely 'transitional' lead to provision of justification for creditors, particularly banks, to provide financing for the extractive sector and coal-fired power plants (CFPPs). First, regarding funding for companies affiliated with high-carbon emitting sectors. Between 2017 – 2022, there were 40 companies remained operational despite the government revoking 192 forestry concession permits covering 3,1 million hectares. This was because their funding continued and even increased to USD26.62 billion (TuK, 2024). The removal of the 'red; classification from the ISFT thus provides justification for creditors to provide financing to these companies to continue operating even after their permits have been revoked (TuK, 2024). Moreover, the FSA reported that bank credit disbursement to the mining and coal industry increased significantly year-on-year, from IDR187,43 billion in May 2022 to IDR256,41 billion in May 2023 (OJK, 2023; TuK Indonesia, 2023). Whereas, the same report

indicated that the prevalence of Non-Performing Loan (NPL), which depicts debtors experiencing greater default in entities previously classified as 'red' and 'yellow' compared to 'green' (TuK, 2024; INFID, 2024).

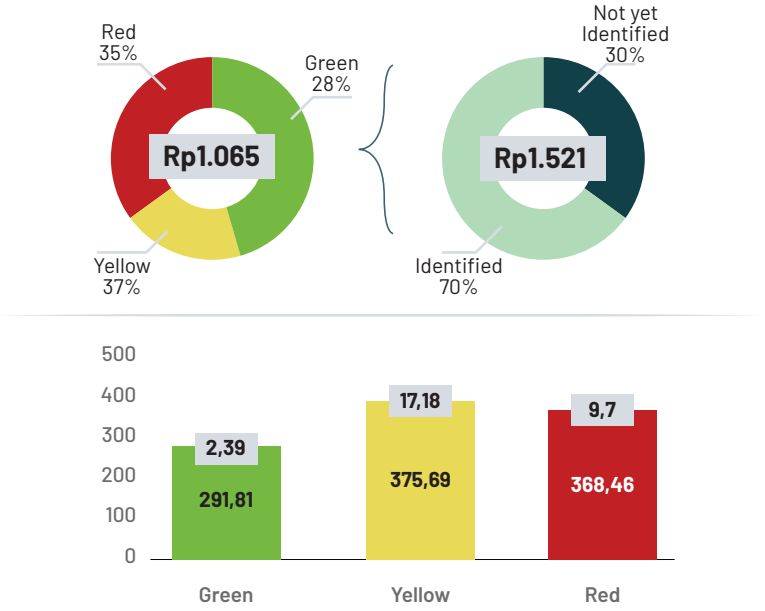


Figure 10. Credit Distribution by Amount (top) and Quality (bottom)
Source: TuK Indonesia (2023) Report; Financial Services Authority Report (2022)

The IEEFA findings also identified other issues related to overly flexible funding provisions and technical criteria. Under the ISFT, a coal-fired power plant (CFPP) is classified as 'transitional' if it emits carbon dioxide as much as 510 grams per kilowatt-hour (gm/KWh) or less (IEEFA, 2024). Whereas, various taxonomies, including the ATFG, would classify such emission intensity as 'Level 3' or 'Red', prohibiting any type of financing. The ISFT also mandates coal-fired power plants (CFPPs) to reduce their GHG emissions by 35 percent compared to the average baseline of coal-fired power plants (CFPPs) emissions in 2021 within the first 10 years of operational. Under this provision, the International Energy Agency (IEA) estimates that the permissible emission intensity is 750gm/KWh, well above the upper limit of emission intensity in other countries, including those in the ATFG taxonomy (IEA, 2023). ATFG also specified a timeline for early retirement of coal-fired power plants (CFPPs) in 2030, while ISFT did not.

Finally, our research also identified the potential for greenwashing and social washing activities and entities carbon-emitting for public image purposes through ISFT. This is because, unlike other taxonomies, the ISFT does not require internal assessments of sustainability activities to be conducted by professional third parties such as auditors,

assessors, or energy and environmental accountants. In the ISFT, it stipulates that entities are permitted to conduct self-assessments toward their sustainability operational performance within the disclosure requirement, as long as they meet the sustainable performance indicators and integrate predetermined assessment criteria, such as PROPER (OJK TKBI FAQ, 2024). This disclosure requirement will eventually become one of the documents required to apply for funding from banks or alternative financing sources. The problem is, without a professional third-party auditor, entities have the flexibility to prepare sustainability reports without having to consider their validity.

3.4 Sustainable Financing Instruments

In terms of instruments, the Indonesian government already has several sustainable financing instruments, including Sustainable Development Goals (SDG) Bonds, Green Sukuk, Blue Bonds, and Social Corporate Bonds. Since their introduction several years ago, these three instruments have recorded quite progressive financial performance, particularly through government bond securitization. A report from the INFF shows that by 2023, Green Sukuk bond offerings will reach USD2 billion (IDR38.58 trillion) domestically performance and USD5 billion internationally. In total, the estimated GHG emission reduction from renewable energy power plants reaches 130 thousand tons, and use for waste management installations contributes the largest proportion of Green Sukuk contributions for 3,7 million people (INFF, 2023). Meanwhile, domestic SDG Bond offerings reached IDR16,85 trillion in the past three years (World Bank & DJPPR Kemenkeu, 2024), the majority of which was used to fund the Social Protection Program (SPP) for three million low-income individuals, including one million for basic education scholarships (INFF, 2023). There were also Blue Bonds used to protect maritime ecosystems and the livelihoods of coastal communities, and Social Corporate Bonds to provide affordable housing (INFF, 2023).

In addition to bonds, there are several other financing instruments, such as grants, debt, concessional loans, and labeled bonds. Grants, for example, can be used to finance projects or activities with a relatively low required rate of return (RRR), such as technical assistance, subsidies, and government Environmental Funds (EFs). These activities can relate to retraining for affected workers, remediation and compensation for layoffs, restoration of affected communities, access to healthcare for workers affected by the transition, and also early-stage evaluations such as the formulation of feasibility studies (World Bank, 2024). Generally, grant funds have the smallest proportion because their RRR is small or even non-existent.

Unlike grants, debt, including loans and bonds, is generally used to finance energy transition programs and activities with varying RRR, generally dependent on the interest rate and yield of the instrument. For example, the public transportation financing program in Peru uses a Green Loan as its instrument, with public transportation infrastructure as

the underlying project and asset (IDB Invest, 2024). However, due to the nature of energy transition projects in developing countries like Indonesia, which are vulnerable to default or non-performing loan (NPL), investors generally consider de-risking instruments such as credit enhancement and guarantees to ensure the certainty of the project's RRR (Ministry of Finance, 2020). In Indonesia, specifically, PT. SMI, as an SMV, uses a blended finance approach as a de-risking instrument by pooling various types of financing, such as public financing from the National State Budget (APBN) and international commitments such as JETP, along with non-public financing such as philanthropic institutions, as a guarantee if the project experiences NPL. In addition, the Environmental Fund Management Agency (EFMA) also established a Credit Enhancement Fund (CEF), a de-risking and credit enhancement mechanism for project financing, and introduced instruments such as Interest During Construction (IDC) loans, mezzanine loans, project implementation guarantees, insurance premium subsidies, liquidity risk facilities, and partial credit guarantees (Ministry of Finance, 2020). Recently, Indonesia also introduced the Sustainability-Linked Loan (SLL), which is known for its flexibility and does not have to be 'parked' at a specific project level (Loan Market Association/LMA, 2019).

3.5 Integrating The 'Just' Principle into Sustainable Financing

The conceptualization of 'sustainable finance' stems from the understanding that climate finance commitments are not limited to the short term, namely to find financial mechanisms that generate the greatest returns, but also have long-term implications toward the socio-economic conditions of those affected. It is at this point that the principle of 'justice' or 'just' in sustainable financing is introduced—with the view that the integration of these three pillars is a key consideration in financing distribution. The classification of 'just' aspects in energy systems is generally divided into three typologies, referred to in the literature as the 'triumvirate' of just energy (McCauley, 2013; Setyowati, 2021), forming the basis for energy financialization, which was later expanded in discussions of energy transitions was added making it four typologies of justice. First, procedural justice focuses on the aspect of 'equal' and 'meaningful' participation by all stakeholders without exception, especially vulnerable parties disproportionately impacted by the energy transition. Among the steps required by this typology are openness and access to transparent decision-making mechanisms (McCauley, 2013). Second, distributive justice focuses on the equitable distribution of benefits from energy and the energy transition in a spatial context, particularly for vulnerable groups (Jenkins, 2016). Third, recognitive justice focuses on eliminating all forms of socio-cultural discrimination in access to and participation in systems and energy transitions (Jenkins, 2016). Fourth, restorative justice focuses on finding effective and just methods of restoration for those affected by energy transition (Agostini, Silva, and Navisor, 2016).

Tabel 1. Conceptual Typology of Sustainable Financing

Conceptual Typology	Definition	Methods	Financial Aspect
Procedural Justice	Taking into account the aspirations and perspectives of those affected by the transition	Social Dialogue with Stakeholder involvement (affected parties)	Clear and equitable energy procurement mechanisms. Financial interventions (e.g. technical assistance) for IPPs to obtain FPIC. Financial interventions for IPPs to conduct Environmental Impact Analysis (EIA) or other forms of Environmental Impact Assessments (EIAs).
Distributive Justice	Allocate the benefits of transition decisions and share the burdens fairly among affected parties	Community support services	Subsidies for vulnerable groups experiencing 'energy poverty'
		Economic distribution mechanisms (fair tax allocation, place-based investment, direct transfers to affected parties)	Spatial electrification interventions for rural areasl
Recognitive Justice	Recognize the historical differences of the identities of groups affected by energy systems and transitions and eliminate forms of socio-cultural discrimination.		Financial interventions for small-scale energy transition projects, off-grid, and grid-based solutions.
Restorative Justice	Promote consultative process elements in transition decision-making and restore the 'damage' caused by such decisions for affected parties	Continuous stakeholder engagement for operating permits	Financial interventions in the form of upskilling, reskilling, and grants for affected workers and communities.
		Restoration clause	Develop a fair complaint mechanism
		Grievance mechanism	Inclusion of bond financing and energy transition funds.
		Capacity building (including upskilling and reskilling of affected workers and communities) Policy social dialogue	

Source: Asian Development Bank (2022).

Setting off from the understanding that climate change and the energy transition not only impact everyone without exception, both workers and non-workers. However, the impacts felt are often disproportionate, meaning that historically, vulnerable groups feel more significant impacts and challenges than non-vulnerable groups. In this study, we define the phrase 'vulnerable groups' in a critical approach, namely community groups that experience 'systematic exclusion' due to a social stratification system that perpetuates power relations based on race, sex, gender, and other social categories (Collins & Bilge, 2016). We divide them into five large groups, namely: 1) Affected workers; 2) Vulnerable women; 3) Persons With Disabilities (PWD); 4) Children and the Elderly; and 5) Indigenous Law Communities (ILC). This section will discuss the state-of-play of the intersection of energy transition financing and its distribution to these groups, and put forward several policy recommendations that refer to the principle of 'just' in energy transition financing.

At the implementation or intervention activity level, referring to the just social transition (JST) framework from the Institute for Essential Service Reform (IESR) and New Climate Nexus, there are several aspects of intervention, including: a) early retirement assistance for workers approaching retirement age; b) training and capacity building programs for affected workers; c) economic diversification from coal; d) relocation support for affected workers or residents; e) investment for affected communities; f) health assistance; g) access to affordable renewable energy; and h) skills and education enhancement to create a new worker cohort (IESR & New Climate Nexus, 2024).

3.6 Affected Workers

Currently, the coal sector employs approximately 400.000 workers across the entire upstream to downstream supply chain (IESR & New Climate Nexus, 2024). Specifically, in the power generation sub-sector, coal-fired power plants (CFPPs) are one of the largest employment generators in Indonesia and even globally, with a projected workforce of approximately 160.000 (IEA, 2022) . These workers will be significantly impacted by the energy transition, and therefore substantial costs will be required to compensate not only for job losses but also for relocation and retraining to new workforce sectors. Several analyses using data from the National Labor Force Survey (NLFS/Sakernas) indicate that approximately 31.000 jobs in the coal sector will be lost annually (Climate Transparency & IESR, 2022). This figure does not include the regional employment multiplier (such as traders and service providers near the site), which, according to our calculations, could reach 2.000 – 3.000 workers, especially informal workers around the CFPP area who will lose their jobs. In terms of costs, the report estimates that the costs for job compensation, relocation, and retraining will reach USD1.3 billion (IDR21 trillion) by 2030 for just 200,000 (50 percent) workers (Climate Transparency & IESR, 2022). Meanwhile, if we refer to the JETP scenario, costs will be up to USD2.4 billion (IDR39.15 trillion). These costs will be much higher if we integrate 'hidden costs', such as increased electricity costs due to the CFPP's operational shutdown.

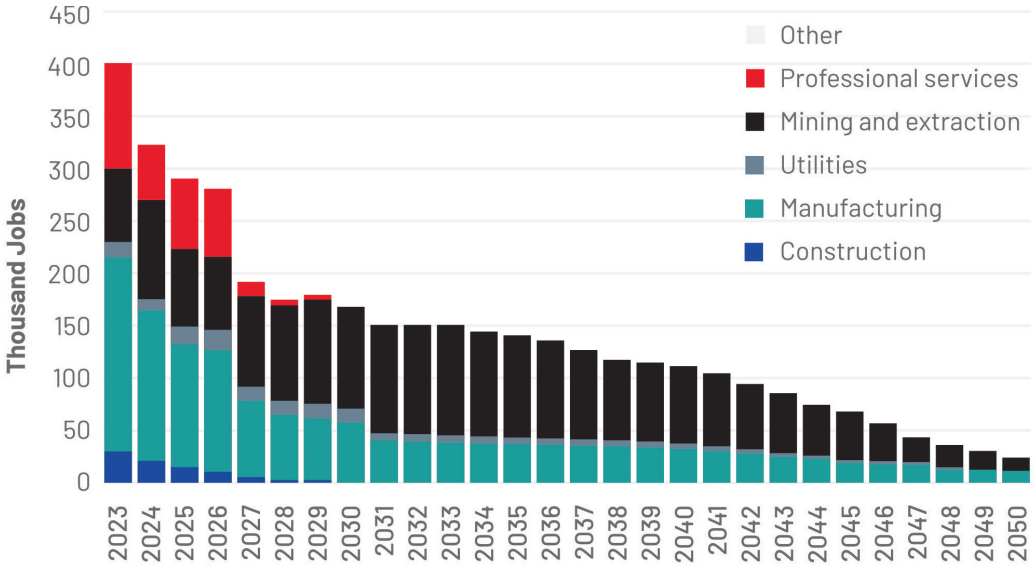


Figure 11. Number of Employments by Sector in the CFPP Supply Chain

Source: NewClimate Institute & IESR (2023).

Due to the nature of financing for affected workers, which is categorized as a Human Capital Investment (HCI) or non-revenue-generating investment that does not generate a return for investors, financing for them generally uses non-investment channels, such as public financing, for example through earmarking or financing through taxes, grants, or philanthropy. The problem is, current funding is insufficient. The JETP financing scenario, for example, provides only 0.8 percent (USD160 million / IDR2.6 trillion) in the form of grants that will also be divided into stages and other components of end-to-end energy transition financing, including financing for affected workers (JETP, 2023). In addition to JETP, financing support of USD500 million (IDR8.1 trillion) from the Climate Investment Fund (CIF) can also be used to finance affected workers (IESR, 2022). However, this figure is relatively small considering the proportion provided for this stage is very limited, especially when compared to the overall financing needs. Furthermore, in terms of public funding, until this research was compiled, there had been no public funds, for example through the National State Budget (APBN), allocated by the government specifically for this matter, even though news and issues regarding intra-governmental discussions had long begun (IESR, 2022).

To date, public financing to compensate affected workers still uses the Social Security Fund (SSF) scheme through the Employment Social Security (Jamsostek). Jamsostek, in this case, has a strategic position as a Passive Labor Market Policies (PLMPs) that provides a Social Safety Net (SSN) for workers directly affected by the energy transition, such as CFPP workers subject to early retirement plans, or indirectly, informal workers working in the coal sector or Non-Wage Workers (NWWs). Macro-structurally, the main objective of PLMPs is to ensure that workers have access to financially affected, both directly and

indirectly, receive adequate financial and non-financial assistance as compensation for job losses, and during the transition process to new jobs. PLMPs generally take the form of Social Protection (Perlinsos) programs, both non-contributory (Social Assistance) and contributory (Social Insurance). Based on the ILO's framework of reference "Social Protection Floors Recommendation No. 202 Year 2012", PLMPs can include: 1) Access to national health insurance; 2) Basic financial assistance to access nutritious food, education, care, and other essential aspects adjusted at least to the minimum size of financial assistance determined nationally; 3) Basic financial assistance for productive age who cannot earn a decent income, especially in cases of illness, unemployment, pregnancy, and disability; and 4) Basic financial assistance for old age (International Labour Organization/ILO, 2012).

The problem is that the Jamsostek structure, which consists of five main programs: Old Age Security (OAS), Job Loss Security (JLS), Pension Security (PS), Work Accident Security (WAS), and Death Compensation (DthC), is still inadequate to provide financial support or compensation for affected workers. First, in regards to beneficiaries' coverage. The JLS program, for example, implemented by the government as mandated by the Law of Employment Creation (UU Ciptaker), requires a minimum membership enrollment period of 12 months and payment of premium contributions (Define Contribution/DC) for six consecutive months before the date of Termination of Employment (ToE). The problem is that the majority of workers at the CFPP are contract workers (NFTCE) with a contract period of less than six months, or casual daily laborers (CDL). Data from CELIOS and CERAH research shows that of the three coal-fired power plants still in operation (Karangkandri coal-fired power plant in Cilacap, Paiton coal-fired power plant in Probolinggo, and Pangkalan Susu coal-fired power plant in Langkat), 50 percent of the workers, or around 1.934 workers, are contract workers or casual daily workers (Yayasan Indonesia Cerah & CELIOS, 2024). In addition, due to their status as Non-Wage Workers (NWWs), based on Government Regulation No. 45/2015, they can only access the WAS, DthC, and OAS (voluntary) programs. Furthermore, CERAH & PSHK research findings indicate that the financial assistance provided is only able to cover 14 - 32 percent of workers' decent living expenses (DLE), depending on their work location (Indonesia CERAH Foundation & Indonesian Center for Law and Policy Studies, 2023). In terms of compensation, after the implementation of the Law of Employment Creation (UU Ciptaker), there was a reduction in severance pay compensation for laid-off workers, where the percentage of the reduction varied between 37.5 percent and 64.2 percent (Indonesia CERAH Foundation & Indonesian Center for Law and Policy Studies, 2023).

The lack of government funding for Jamsostek schemes, for example in the form of State Capital Inclusion (SCI), is one of the issues we want to highlight. With JKP contributions from workers still minimal, as reflected in the 2023 Employment Social Security Management Agency (BPJS Ketenagakerjaan) financial report, government financial

intervention is needed to ensure workers receive adequate compensation funds (BPJS, 2023). In fact, with the government's plan to separate OAS accounts to reduce workers' pre-retirement claims, for example, in the event of job loss, to only 35 percent of flexible funds that can be claimed, and their non-registration in the program, workers affected by the energy transition face a greater risk of financial instability after early retirement (Tsuruga, 2024). Therefore, mobilization of public funding is needed to encourage training and capacity building programs for affected workers to transition to the renewable energy sector, or in this case as an enabler of Active Labor Market Policies (ALMPs). In accordance with the International Labour Organization (ILO) terms of reference, the government can provide public financing support for several intervention activities, such as: 1) Reviewing existing skills development policies, and ensuring that they are sustainable with industry needs through the development of targeted curricula; 2) Incorporating TVET skills development programs into green policies; 3) Creating and developing an accurate employment database, especially for green industries; 4) Adjusting skills in the labor supply through labor assessment programs, labor market information, and development of core workforce capabilities through collaboration with industry and vocational training institutions; and 5) Developing STEM (Science, Technology, Engineering, and Mathematics) knowledge (ILO, 2012).

So far, in terms of ALMP, the government has had several strategies at the planning level, such as the National Occupational Map of Green Jobs within the Indonesian National Qualifications Framework (INQF) prepared by the National Development Planning Agency (Bappenas), and the vocational job training system organized under the National Employment Training System (Sislatkernas) which is based on the SKKNI and INQF. The SKKNI also has modules for job training in the new and renewable power generation sector and also in the green energy sector as a whole, also utilizing collaboration with other TVET institutions. In addition, at the sectoral level, there are other initiatives such as the preparation of the Green Economy Document 1.0 by the FSA in the financial and banking sector, with derivative products such as the Indonesian Green Taxonomy (IGT) and the Indonesian Sustainable Finance Taxonomy (ISFT). The Ministry of Industry (MoI) also has an institution that conducts assessments of Green Industry Standards, followed by the Ministry of Environment (MoE), which initiated the Program for Environmental Performance Rating (PROPER) and other sustainable finance programs such as Green Sukuk. However, these programs focus more on incentives for industry in the energy transition process and do not specifically address the workforce and demand for new employments.

The problem is that these various initiatives are not supported by government financial intervention in the form of public capital participation. Take, for example, the Jobs Training Centers (JTC) and Vocational and Productivity Training Centers (VPTC) in Indonesia. Data from Bappenas (2022) shows that 62 percent (561) Community Job Training Centers (JTC-

C) still experience difficulties in self-financing, 31 percent experience difficulties in partial financing, and only six percent experience no financial difficulties. Dependency on government funding is one of the causes (State Budget Bulletin, Secretariat General of the House of Representatives Republic of Indonesia, 2023). In fact, JTC can be an entry point for preparing the workforce for green jobs, even though currently only four JTCs out of the 305 existing Central Technical Implementation Units (CTIU) have integrated green energy modules into their training programs: Aceh, East Lombok, Ambon, and Ternate (The PRAKARSA, 2024). Therefore, alternative financing schemes, such as Public - Private Partnership (PPP) or Corporate Social Responsibility (CSR) are expected to become new financing schemes for JTCs.

From a private sector perspective, financing for workers affected by the transition is often hampered by low Return-on-Investment (ROI). Investments in workers generally do not generate the rate of return expected by investors, as was the case at Northvolt (Financial Times, 2024). One alternative solution is, instead of creating new RE infrastructure for workers, which typically requires significant capital investment, the government can leverage existing economic assets in certain regions. However, this approach is not always successful, given that the supply-side approach, providing jobs from the built RE infrastructure, without being complemented by demand-side incentives, often fails to encourage workers' voluntary transition through incentives. The government, in this case, can act as a mediator in industrial relations between employers and workers, both in terms of formulating regulations and providing technical assistance in the form of incentives for workers through Public-Private Partnerships (PPPs).

In the case of the energy transition in the Ruhr, one of the coal industry hubs in Germany, demand-side interventions for affected workers were prioritized in encouraging a full transition of workers from coal industry jobs from 480.000 workers in 1955 to full job transfer by 2018 (Dahlbeck & Gartner, 2019).

A tripartite agreement between the government, private sector (IPP), and workers found common ground to support early retirement of coal-fired power plants (e.g. the Prosper-Haniel mine and IBA Emscher Park) with three objectives: gradual early retirement, socially acceptable staff reductions, and a comprehensive package for affected workers (World Resources Institute/WRI, 2021). Some of the policies adopted include: a) voluntary cessation of wage increases and job redistribution to avoid layoffs; b) Early retirement for workers who have worked for a certain period of time and reached a certain age limit, including the provision of a monthly pension for permanent workers, and a pension scheme for mine workers (including casual workers); c) Worker relocation; d) Employer commitment to transfer workers into internal company management with re-training; e) Providing worker opportunities, including financial assistance to obtain on-the-job certification; and f) Assistance for worker transition to the service sector (Pao-Yu, Brauers, Herpich, 2019).

Vulnerable Group [Women]

Nearly 50 percent, or 139.91 million, of Indonesia's population are women. However, only 53 percent of women are employed, compared to 81.9 percent of men, and for every dollar earned by men, women earn only USD0.76 (World Bank, 2024). Women are also more vulnerable to harassment, both in the workplace, public spaces, virtual environments, and even within the domestic context. The National Commission on Violence Against Women (Women National Commission) annual report indicates that there are 10 million cases of sexual violence experienced by women, and at least 1 in 3 women experience physical and/or sexual violence in their lifetime, with 289.111 cases of violence reported in 2023 (Komnas Perempuan, 2016). Economic wise, approximately 9.2 percent, or 25.22 million women, live below the poverty line, compared to 8.86 percent of men (BPS, 2024). The view that women are 'objects' or objectification, and the categorization of women's roles as 'housewives' and 'caretakers', or the marginalization of women's roles, are two primary reasons why this data exists. Furthermore, these two views are then internalized structurally, for example through various gender-insensitive policies.

In the energy sector in general, at the household level, approximately 2,7 million female-headed households still rely on traditional energy sources, such as firewood and kerosene, due to the limited government Social Protection Program (SPP) to subsidize energy used at the household level (Gobel, 2024). Our research found that the marginalizing view of women's role as 'housewives' who must rely on men as heads of households is one of the reasons why many female heads of households do not receive any assistance from the government, especially energy subsidies. To receive subsidies, women must apply for a Certificate of Poverty (CoP) and show their Family Registration Card (FR Card) and Identity Card (ID Card) to be registered in the New Generation Social Welfare Information System (SWIS-NG) created by Ministry of Social Affairs, which serves as the basis for the Integrated Social Welfare Data (ISWD). This process is often gender biased, where women, especially widows who are heads of household, must seek the consent of their male (ex-husband), and if this is not possible, must review their status on the Family Registration Card (FR Card), which is time-consuming and expensive.

Whereas, in the context of employment in the energy sector, only 32 percent of total workers are women (Pant, 2024). In the electricity, oil, and gas sub-sector, of the 280.000 registered workers, only 40.000 (14 percent) are women, while the rest are men (National Labor Force Survey (Sakernas), 2019; Kirnandita, 2021). Meanwhile, in the mining sub-sector, only 10.727 workers are women, compared to 168.711 men (Ministry of Manpower, 2024). At the public sector decision-making level, only five percent of the total decision-makers in ministries/agencies working in the energy sector are women (UNDP, 2022). As in the private sector, the figure is even smaller. Of the total decision-making authority holders in companies operating

in the energy sector, only 3.4 percent are women. The lack of female representation in the energy and renewable energy sectors means that decisions taken, both at the internal company management and policy levels, are often gender biased.

Within the energy transition specifically, various studies have demonstrated how energy transition processes can disproportionately impact women compared to men. First, as previously stated, it is important to recognize that women face a triple burden: as workers, caretakers, and as women themselves within society and a patriarchal ecosystem, both inside and outside the workplace. First, as workers, the majority of women generally receive low wages and have low access to employment and are generally not bound by formal employment contracts, for example, as casual daily workers (CDL). Our research findings on the labor landscape at the Cirebon 1 Coal-Fired Power Plant (CFPP) confirm this. Furthermore, numerous other studies have documented how gender discrimination in the form of unequal access and wages is one of the social implications of the energy transition. For example, due to the generally lower employment levels, studies show that for every man laid off due to early retirement at the coal-fired power plant (CFPP), three women experience the same impact. The energy transition can have both direct and indirect implications for increasing poverty rates among women, shrinking formal employment opportunities, gender-based discrimination in the employment ecosystem, and the loss of informal employment opportunities such as those in MSMEs supporting coal-fired power plants (CFPPs), which are generally owned and operated by women (World Bank, 2022). A study by CELIOS and the Indonesia CERAH Foundation shows that early retirement of coal-fired power plants (CFPP) could have economic implications in the form of increased demand and competition for jobs in industries that predominantly employ

women, such as manufacturing and the garment industry (CELIOS & Indonesia CERAH Foundation, 2024). These conditions ultimately force women to return to reproductive work—for example, as domestic assistant—or other unpaid work.

Second, as caretakers, women often experience additional physical and emotional burdens as caretakers of their families. Studies show a positive correlation between layoffs of men and the prevalence of Gender-Based Violence (GBV) against women at the household level (Blindow, 2024). Working women also have to bear the burden of reproductive work such as childcare, where studies have shown that the larger the household size (based on the number of family members), the less rest time women have, thus impacting their productivity in the workplace. The lack of economically accessible childcare facilities, especially for working women, is also a problem in itself, with research showing that on average, households have to spend IDR5 - 6 million per month on childcare alone (Arbar & Hasibuan, 2020). These costs are certainly far above the average worker's wage, especially for female contract workers and casual daily workers, who are only paid IDR30.000 – 50.000 per day, or IDR600.000 - 1 million per month (Yayasan Indonesia CERAH & PSHK, 2023). Third, as women in a patriarchal society, they experience structural marginalization. This is rooted in the patriarchal assumption that women have less power than men, so women are often marginalized as mere supporters of men's work.

From a top-down perspective, our research findings indicate several root causes that require immediate intervention. First, various regulatory frameworks for the energy transition have not specifically mainstreamed a gender perspective. In fact, the emphasis on mainstreaming a gender perspective in development has historically been emphasized in the legal and formal spheres. Presidential Instruction (Inpres) No. 9 Year 2000 concerning Gender Mainstreaming in National Development, for example, highlights the participation of women and marginalized groups in the planning, implementation, and evaluation stages of development programs. This policy was then translated into various energy transition policy frameworks and programs. The JETP CIPP document, for example, specifically highlights the impact of the energy transition on women and other vulnerable groups, particularly those directly or indirectly impacted by energy transition projects. Furthermore, JETP has also developed a Mitigation Action Plan (MAP) for identified risks, particularly for women in the energy transition landscape. Other frameworks, such as the ADB's SESA used for ETM projects, have also identified vulnerable women as among those who will be impacted by the planned early retirement of coal-fired power plants (CFPPs).

Although the Fair Finance Asia study findings on the Preliminary Just Transition Assessment (PJTA) and the SESA scoping report highlight the absence of several aspects such as Gender Impact Assessment (GIA), Gendered due diligence, gender proportion in stakeholder mapping, and also the representation of women and Women's Rights Organizations (WROs) in the planning of ETM projects (Fair Finance Asia, 2024), however, our findings reveal that the existing regulatory framework on Environmental Impact

Analysis (EIA) has not specifically internalized GIA. In the other hand, the ETM scheme has not integrated GIA into the Environmental and Social Impact Assessment (ESIA), according to the scoping report. In terms of grievance mechanisms, our findings indicate that grievance mechanisms, particularly for those affected by the energy transition, are still insufficient to accommodate complaints from affected women. First, complaint hotlines are generally limited to apps and/or online-based hotlines. This makes it difficult for vulnerable women who often do not have or have mobile device with limited capacity, especially those living in remote areas without internet access. Second, complaint mechanisms addressing GBV are generally met with gender-insensitive responses that tend to blame and/or marginalize the victim.

Another problem is that existing frameworks serve only as references and do not necessarily constitute obligations that specifically mainstream gender perspectives and participation. Our research findings indicate that there are still significant gaps in the existing energy transition regulatory framework. Our research findings indicate that several key regulations in the energy transition, such as the National Energy Policy (NEP) in Government Regulation No. 79 Year 2014, the GNEP in Presidential Regulation No. 22 Year 2017, the GREP, and sectoral regulations such as Presidential Regulation No. 98 Year 2021 concerning the Economic Value of Carbon (EVC), do not explicitly regulate gender mainstreaming in general instead they emphasize only to take into consideration of 'social justice' and 'human rights' aspects —— and emphasize on involvement of women, especially vulnerable women in the end-to-end energy transition process. Most recently, the Draft Law on New and Renewable Energy (Draft Law on NRE) did not even mention 'women' or 'gender' in its policy text. Meanwhile, other findings also highlight how the design of energy transition projects and policies is 'siloed', and the underutilization of government funds to encourage the involvement of vulnerable women in the energy transition, such as the Physical and Non-Physical Special Allocation Funds (SAF) which do not have separate allocations for these groups, also poses a barrier to the participation, let alone the emancipation, of vulnerable women (Humanis Foundation, 2024). At the program level, our research findings also show that various energy transition projects, specifically those supported by the government, still tend to be elitist, such as the Srikandi program which only targets a certain segment of women at the mid-professional level. While, assistance programs for vulnerable women, both financial and non-financial, remain very limited in terms of participant coverage.

At the downstream or project financing level, the main issue is the gender-focused financing (Gender Lens Investment/GLI) has not yet incorporated in energy transition financing schemes. Currently, the financing landscape for women, particularly in relation to the energy transition, remains largely at the 'Gender-Neutral' phase. This assessment is based on three lenses recognized in GLI, namely access to capital, equality at workplace, and the emancipation of products and services that directly impact women (Athena Global, 2024).

Gender Neutral	Gender Aware	Gender Smart	Gender Leading
• Unaware of or "blind" to gender implications of organizational practices and investment decisions, and process • Practices and policies are focused on gender equality rather than equity • Follows legal and industry standards for gender equality	• Aware of gender implications and bias of internal policies, investments process and decisions • Collects data explicitly addressing gender • Adopts some policies towards gender equity and acknowledges areas for improvement	• Actively pursues gender equity & committed to implementing appropriate policies, processes and practices internally and in the investment process • Actively measures implications of gender equity • Ensures influence and decision making is equitable at all levels of the firm	• Gender equity is a primary organizational and investment priority that drives internal policies, processes and decisions • Positive gender equity or seeks to influence gender equity is as equal to financial returns • Seeks positive gender equity is priority and key driver in process investment decisions

Access to Capital	Workplace Equity for Women	Products & Services that Benefit Women and Girlsv
■ Investing in female entrepreneurs, women-led businesses, and female fund managers ■ Educating women about finance to help them grow assets and gain access to loans - Empowering women through microfinance and small business lending	■ Investing in companies which meet specific criteria around women on the board or in senior management ■ Actively engaging with companies to improve corporate policies that enable higher workforce contribution from women ■ Investing in companies with gender equity policies (e.g. wage equity, paid comprehensive family leave)	■ Investing in female oriented products – products that ease household and caregiving responsibilities, and/or improve safety for women ■ Investing in companies focused on improving health and education for women and girls ■ Investing in products that mitigate problems often disproportionately impacting women (i.e. access to energy, clean water, safe housing)

Figure 12. Gender Lens Investing

Source: Athena Global, 2024; SVX, 2022

Research shows that POJK 51/POJK.03/2017 concerning the Implementation of Sustainable Finance for Financial Services Institutions, Issuers, and Public Companies is not specifically built on the pillars of gender mainstreaming. In its policy, POJK 51/2017 only regulates financial institutions to pay attention to the pillars of environmental management, social empowerment, sustainable governance practices (good governance), and inclusive finance, resulting in the absence of a gender perspective in financing. This status quo has resulted in banks, particularly Himbara banks, as providers of capital access, not taking sides and having a gender mainstreaming agenda. Meanwhile, studies show that although women own 64.5 percent of the total recorded MSMEs throughout Indonesia, only 13 percent of women have access to financial services from banks, compared to 56 percent for men (International Financial Center & USAID, 2016). Although instruments such as Green Sukuk and Sustainable Linked Loans (SLLs) have had a measurable impact on infrastructure development in marginalized areas, yet they are lack of a gender-based framework for the energy transition and lack of evaluation reports based on gender aggregation (Filaili, 2023) Conversely, our research finds that the majority of women's financial access is funded either through private sector financial services (FSI) programs, such as the Women's Livelihood Bond Series (WLB) (UN Climate Change, 2023), OCBC Indonesia's Gendered Bonds, and the Orange Bond initiative, which have their own gender-based frameworks (Rachman, 2024), or through alternative financing such as

Peer-to-Peer (P2P) Lending or other microfinance capital. In fact, the government's National Program for Rural and Urban Community Empowerment (PNPM Perdesaan) which aims to provide financial access for vulnerable women in rural and urban areas still relies on funds provided by donors such as Multinational Development Banks (MDBs) and private banks such as OCBC Indonesia.

Persons with Disabilities [Difabel/PWD]

Currently, there are more than 22 million people with physical and intellectual disabilities (Persons with Disabilities/PWD) in Indonesia, with 27 percent of them having chronic disabilities and the remaining 73 percent having moderate levels (Socioeconomic Registration/ Regsosek, processed by SKALA, 2024). From an educational background, 71 percent of persons with disabilities only completed basic education (Elementary School/ES and equivalent), of which 32 percent did not complete, and only 7.09 percent of persons with disabilities were able to pursue higher education. Meanwhile, from the employment category, data on the Labor Force Participation Rate (LFPR) taken from the National Labor Force Survey (Sakernas) shows that only 46.6 percent of persons with disabilities are employed and/or absorbed by the labor market, with less than 0.5 percent working in the energy sector.

At first glance, the disability issue appears to be merely a demographic issue. However, structurally, this problem is actually closely related to structural conditions. Of the 16.5 million PWD recorded, 43 percent (9.5 million) are spread across the bottom 40 percentile (income), of which 14 percent (904,000) live below the poverty line (Socio-Economic Registration, processed by SKALA, 2024). PWD are also 30 - 50 percent more vulnerable to falling into poverty than non-PWD groups. 7 percent of PWD do not have access to clean drinking water, 20 percent do not have a good sanitation system, 36 percent live in sub-standard housing, 66 percent live in dwellings categorized as 'uninhabitable', and around 90 percent (760 thousand) of PWD living below the poverty line still depend on traditional energy sources, such as firewood and kerosene, and do not receive any assistance from the government at all (Socio-Economic Registration, processed by SKALA, 2024).

Further deconstruction of their educational background also reveals underlying structural issues, with 35 percent of PWD never accessing formal education, and children with disabilities in the bottom 40 percentile (income) are 2.82 times more likely to drop out of school than those in the top 10 percentile. The National Labor Force Rate (NLFR) survey by Sakernas also revealed that of the PWD who have been employed, 79 percent work in the informal sector, which is fraught with vulnerabilities, and 13 percent are unpaid (Socio-Economic Registration, processed by SKALA, 2024). Meanwhile, from a gender perspective, 55 percent of PWD are women, and more than 55 percent of Women with Disabilities (WWD) do not have access to the National Health Security (NHS). Women also have relatively more difficulty finding work, with the NLFR PWD for women only around 36.9 percent compared to the NLFR PWD for men at 58.9 percent (Socio-Economic Registration, processed by SKALA, 2024).

These data demonstrate the disheartening reality of the protection of PWD in Indonesia. In fact, the Government has recognized several principles of equality and non-discrimination for PWD, such as the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD), which was later enacted into Law No. 8 Year 2016 and integrated into the National Action Plan for Persons with Disabilities (NAP-PWD). It contains several foundational principles such as a) respect for dignity, independence, and the right to make one's own decisions; b) non-discrimination; c) full and effective participation; d) respect for differences and diversity; e) equality of opportunity; and e) accessibility. Our research findings indicate that only the financial sector has a long-term plan derived from these principles, which is derived through Law No. 4 Year 2023 concerning the Development and Strengthening of the Financial Sector (DSFS), and sub-sectoral regulations such as POJK No. 3 Year 2023, POJK No. 22 Year 2023, Bank Indonesia Regulation No. 3 Year 2023, and Presidential Regulation No. 114 Year 2020 concerning the National Strategy for Financial Inclusion (NSFI), all of which regulate the obligations of Financial Services Institutions (FSIs) to implement meaningful inclusion and participation strategies for PWD. In addition, the Financial Services Access Guidelines for Empowered Disability (SETARA) document issued by the FSA as a financial inclusion guide for FSIs has also adopted a twin-track approach, an approach that emphasizes 'mainstreaming' and 'special support' for PWD to achieve these goals (CBM Global Disability Inclusion, 2013; Albert, et al, 2005). However, the SETARA report also identified several problems, such as the continued use of the charity model by many companies, which only places disability inclusion as part of the company's Corporate Social Responsibility (CSR), and the lack of integration of the Global Reporting Initiative (GRI) 2, General Disclosure 2021, which regulates reporting on disability inclusion in company products, services, and operations (OJK SETARA Report, 2025).

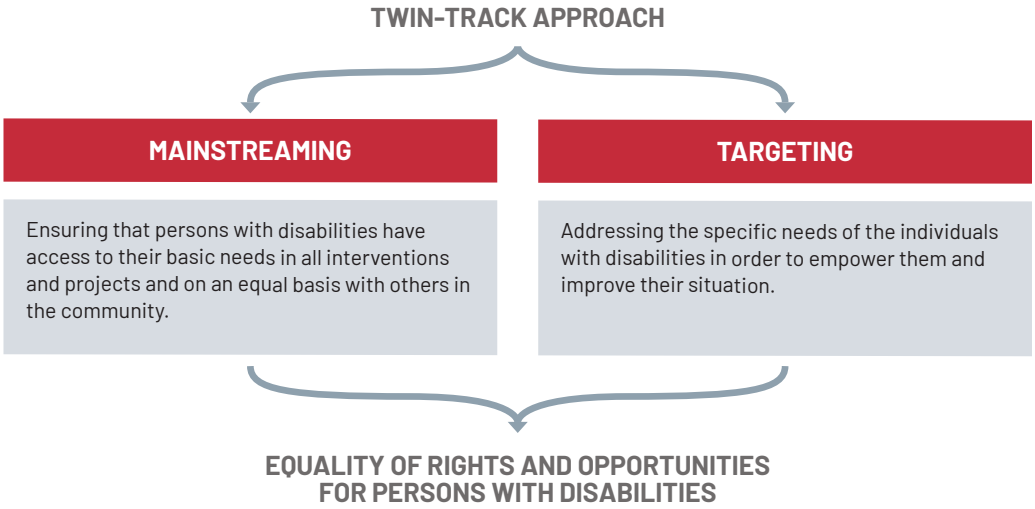


Figure 13. Pendekatan Twin-Track pada Inklusi Penyandang Disabilitas

Source: CBM (2024); Department for International Development (DFID) (2000)).

How are PWD related to the energy transition and why are PWD a subject that must be protected in the energy transition? Research shows that PWD have a 4.60 percent higher probability of falling further into poverty in the energy transition scenario, compared to 0.93 percent in the BAU scenario (Halimatussadiah, et al, 2024). The Gini ratio also reaches 0.355 in the NZE 2060 scenario, compared to 0.347 in the BAU scenario, illustrating the economic inequality experienced by PWD (Halimatussadiah, et al, 2024). The problem is, instead of being considered in energy transition schemes, PWD are generally not even considered at all in access to affordable energy. Research shows that there are 290 thousand households with at least one PWD in them that do not receive any electricity subsidy assistance from the government (Gobel, et al, 2024). Furthermore, there are 760.000 households with at least one PWD who lack access to cooking energy, such as Liquefied Petroleum Gas (LPG). This context is widely known as 'poverty' (Halimatussadiah, et al, 2024).

Persons with Disabilities (PWD) are also generally excluded from employment schemes in the Renewable Energy (RE) sector, or in the labor market in general. The government, through Law No. 8 Year 2016 concerning Persons with Disabilities, specifically Article 53, implements Active Labor Market Policies (ALMPs) in the form of job quotas (thresholds) for PWD to become workers. This policy requires governments—both national and regional governments, State-Owned Enterprises (SOEs) and Regional-Owned Enterprises (ROEs), along with private sector companies, to employ PWD in their respective institutional entities with quota thresholds of 2 percent and 1 percent (respectively) of the total workforce. To date, we have not found aggregated data on compliance with or realization of these quotas. However, research findings from The PRAKARSA indicate that as of 2021, only 969 companies (1.73 percent) of the total companies in Indonesia had recruited PWD workers (Prasetya, et al, 2022). Furthermore, of the total 16,5 million working-age PWD, only 0.002 percent (3,363) are employed by companies (BPS & UNFPA, 2024). When aggregated with the number of existing government and private institutions, this quota is clearly not being met. The reasons vary, such as the job allocation for PWD not being a monitoring point or company Key Performance Indicators (KPIs). In addition, research findings from The PRAKARSA also show that more than 90 percent of PWD have never received job training, despite the existence of Government Regulation No. 60 Year 2020 which regulates the obligation of Disability Service Units (ULD) in the regions to provide job counseling services and also act as a liaison between job seekers and employers (Prasetya, et al, 2022).

Children and the Elderly

Children and the elderly are vulnerable groups significantly impacted by dependence on coal and other fossil fuels. Studies show that the prevalence of respiratory diseases is highest among children and the elderly, especially those with chronic diseases and other comorbidities. Data shows that as many as 6.500 children experience premature death

each year as a result of respiratory diseases caused by coal-fired power plants (CFPPs), and the mortality ratio due to air pollution for the elderly is estimated to grow to 53 per 100.000 people by 2080 (WHO, 2018). Moreover, the disproportionate impact is also felt by children who grow up in poor families and do not receive good nutrition in early life who have a greater potential to contract respiratory diseases, as well as elderly from poor families who rely on traditional energy sources such as kerosene and firewood which generally emit more carbon dioxide (Gobel, et al, 2024). Reports indicate that 406,000 families with at least one elderly member lack access to affordable and 'clean' energy sources, thus remaining dependent on traditional energy sources. The low coverage of the Social Protection Program (SPP) in energy sector for the elderly, which is only around 2 percent, is one of the barriers to accessing clean energy (Rahayu et al., 2020).

Health issues are a key issue that must be addressed to ensure the 'just' aspect is met in the energy transition. Therefore, the financing aspect of the energy transition needs to pay attention to the coverage and quality of access to the health system, especially for children and the Elderly who are disproportionately affected by dependence on coal and other traditional fossil fuels. The problem is, the high cost of the health system, marked by relatively high Out-of-Pocket (OOP) health costs at 25 percent rate in 2024 (WHO, ReportLinker, 2024), which is a particular challenge for children and the Elderly. Research also shows that the Elderly specifically have to pay for medical needs (medicines, curative and preventive services) average OOP of IDR615,571, higher than the average medical expenditure of non-elderly households of IDR389,747 (Saputri & Maniarti, 2023). Meanwhile, the existing social security system, particularly the National Health Insurance (NHI), does not provide adequate coverage for these two groups. While the prevalence of public health insurance has gradually increased, albeit not significantly, among other age groups, insurance coverage for children, particularly toddlers, has tended to decline in recent years (Saputri & Maniarti, 2023). Furthermore, in terms of financing, the beneficiary error rate for the Premium Assistance Program (PAP) of National Health Insurance (NHI), a health financing program for Poor Households (PHH) in the bottom 40 percent of the welfare population, remained quite high at 37 percent in 2020 (Saputri & Maniarti, 2023). The percentage was much higher for children and the Elderly. NHI also lacks a dedicated pillar specifically addressing treatment for diseases caused by vapor or smoke contamination from coal combustion. Moreover, our interviews revealed that communities near mines and Coal-fired Power Plants (CFPPs) face difficulties accessing healthcare centers due to the uneven distribution of infrastructure, such as Community Health Centers (CHC). Similar conditions also exist in the financing sector for energy transition schemes, such as ETM and JETP, which have not yet focused on financing healthcare access for children and the Elderly.

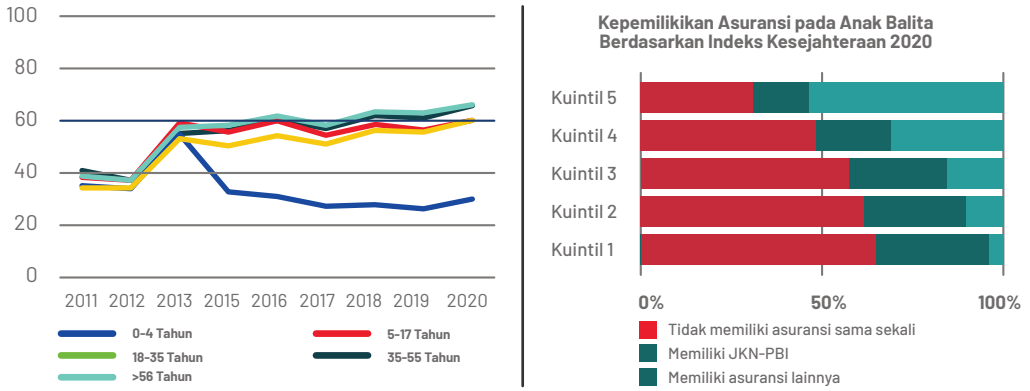


Figure 14. Indigenous Law Community (ILC)

Source: Riset Bappenas & SMERU (Saputri & Murniati, 2023)

Our research found that indigenous peoples, or in legal terminology Indigenous Law Community (ILC), are disproportionately impacted by the energy transition and are often excluded from transition financing schemes. ILC typically possess unique languages and lingua francas, knowledge systems, and beliefs held for generations. ILC also typically have a 'tenurial' relationship with the land they own, commonly referred to as customary land or ulayat land, which is land inherited, owned, and marked by individual or family ownership by a particular indigenous community (ADB, 2023). Data from the Customary Land Registration Agency (CLRA) indicates that there are approximately 1,594 ulayat lands spread across Indonesia, of which 84,63 percent (1.349) have been registered, and the remainder have been verified and certified (ADB, 2023).

Indigenous Law Community (ILC)

ILC, or Remote Indigenous Communities (RIC), are generally marginalized from existing energy systems. In many cases, their rights to ulayat land are compromised. ILC and RIC are cut off from their land rights because energy projects, for example, those sourcing energy through the clearing of oil palm plantations, generally do not begin with consultations based on the principle of Free, Prior, and Informed Consent (FPIC), nor do they comply with other requirements such as Environmental Impact Analysis (EIA), Social Impact Assessment (SIA), Participatory Mapping (PM), Tenure Assessment, and HCV Assessment (HCVA) required at the project development planning stage. Similar conditions also occur in the context of the energy transition. Reports show that in Southeast Asia, 54 percent of the total 5.000 mineral transition projects are adjacent to or overlap with indigenous peoples' lands, and 80 percent of the total 700 mineral transition mining projects are located in indigenous peoples' territories (Kemp, Owen, Muir, 2022). In Indonesia, one of the Biomass Power Plant (BmPP) projects in Merauke initiated by the Medco Group has long

been criticized due to its externalities on the lands of the Zanegi indigenous community in the form of deforestation and land clearing for sourcing biomass materials.

At the financing stage, Indonesia already has several initiatives, such as the ETM and the Indonesia Fund, that have specific clauses for financing indigenous peoples/ILC. The ETM, for example, requires SEC, as the program implementer, to conduct an end-to-end project impact assessment process on indigenous peoples/ILC, starting from the initial assessment at the project development stage, project monitoring, and post-project restoration in every Result-Based Lending (RBL) program executed and funded by the ETM. This assessment must comply with the ADB's safeguard framework, which is then adopted by SEC through its Environmental and Social Management System (ESMS). In allocating RBL program funds, SEC must comprehensively and specifically conduct a Program Feasibility Study (PFS) for indigenous communities, including consultations, screening, an Environmental Impact Analysis (EIA), or similar activities such as a Land Acquisition and Resettlement Plan (LARP) and a Social Impact Assessment (SIA) (ADB, 2023). As well, SEC is required to develop an Indigenous Peoples Plan (IPP), which contains a long-term roadmap of the project's impacts and benefits for indigenous communities and is based on the ADB's IPP Framework (IPPF). The IPPs will then be classified into several tiers depending on the project's impacts and intersections with indigenous communities, which will then influence the project's eligibility Criteria and Conditions (T&Cs).

At first glance, these requirements appear comprehensive and ensure that ETM project financing reflects a just aspect, particularly recognitive and restorative justice for indigenous communities. However, this financing is top-down and fails to address the core issue of indigenous community participation in energy transition financing schemes. Recognizing this gap, a coalition comprising the Indigenous Peoples Alliance of the Archipelago (AMAN), the Agrarian Reform Consortium (KPA), and the Indonesian Forum for the Environment (WALHI) launched the Nusantara Fund, a direct financing scheme aimed at financing indigenous communities to mitigate the impacts of the climate crisis and develop their own micro-scale energy transition projects. The funds are distributed in the form of grants totaling USD350,000 and are also funded by international philanthropists such as the Ford and Packard Foundations (Satriastanti, 2023).

The Nusantara Fund scheme has a bottom-up logic and direct funding in the form of grants, differing from other financing schemes such as the ETM which places SEC as the guarantor and has the authority to leverage the assets (funds). However, neither scheme is sufficient to finance micro-scale energy transition programs across 70 million indigenous peoples and 1.300 ethnic groups.

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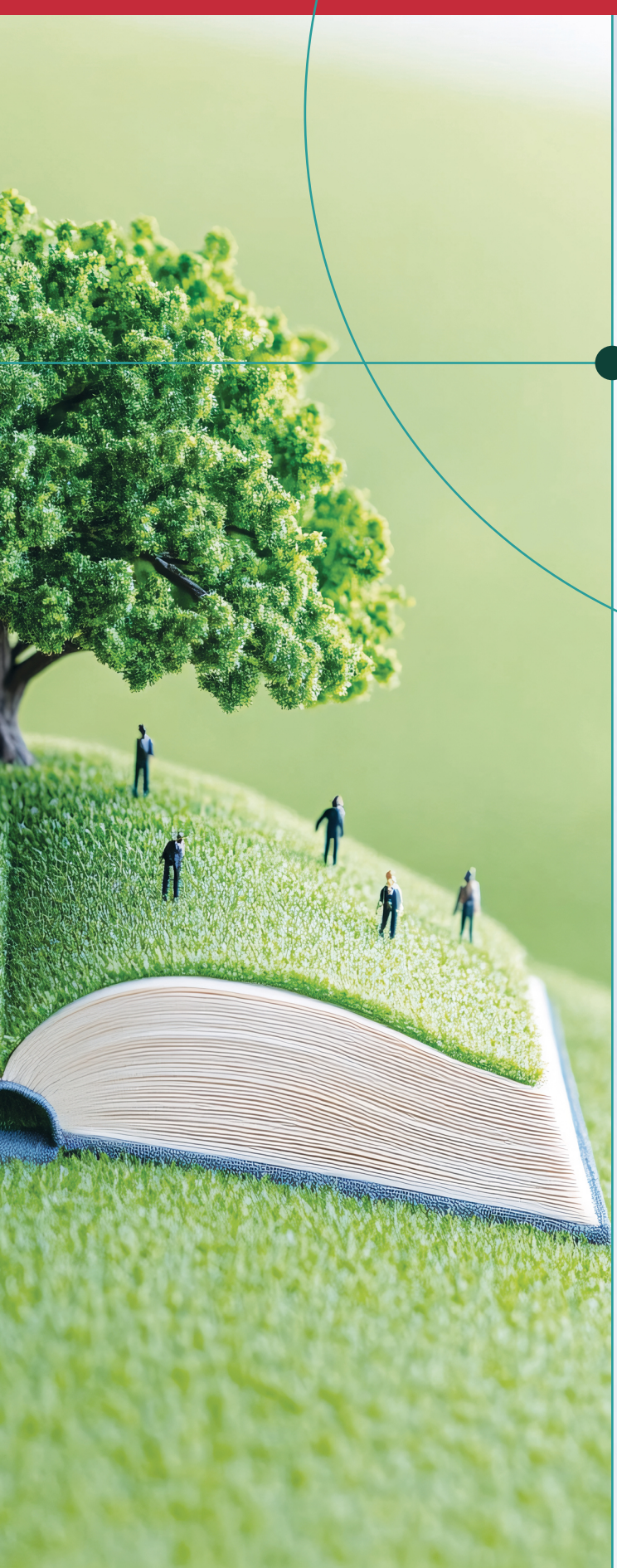

CHAPTER IV

Conclusion and Policy Recommendations

4.7 Conclusion

With existing emission reduction targets at both the global and national levels, the urgency of the energy transition is clear, especially for countries like Indonesia that have historically relied on fossil fuels such as coal. The realization of the energy transition depends not only on accurate and effective planning but also on financing, specifically how to mobilize funds to cover the direct and indirect costs of the energy transition. Despite the existence of climate finance frameworks, both through public and non-public sector financing, the concept remains far from ideal.

One of the problems with the existing climate finance framework is the lack of optimal integration of the principle of 'just' or maximum 'justice'. Our research findings indicate that the existing financing framework is still too focused on the financialization of the energy transition, ensuring that the implementation of the energy transition is efficient and economically sound. Without denying its importance, our research concludes that integrating the just principle into the energy transition is equally important, and therefore, this aspect of the financing must adopt a sustainable financing approach. In this regard, our research concludes that energy transition financing must also consider those disproportionately affected by the transition. We categorize these into three groups, namely affected workers, vulnerable groups (women, persons with disabilities, children and the elderly), and indigenous people. Meanwhile, the sustainable financing approach explicitly states that energy transition financing must ensure that their rights are fulfilled based on the existing the 'just' typology classification, and then integrate it into the policy framework and project implementation.

Through this research, we identified that the involvement and accessibility of certain subjects, such as affected workers, vulnerable groups, and indigenous people, in energy transition financing schemes remains very minimal. Their voices are often voiceless and underrepresented. In fact, various studies have found that these groups, despite their small contribution to climate change which drives energy transition activities, are often impacted on the most massive and disproportionate scale. Therefore, the conventional 'contractual' paradigm in energy transition financing, which only involves high-level stakeholders, needs to be changed. In this regard, a 'new social contract' (Heffron & Fontenelle, 2023) in the energy transition discourse emphasizes the 'just' aspect and equal and meaningful involvement. Moreover, the objective paradigm of the energy transition can no longer be limited to finding the most efficient and economical mechanism of financial mobilization, but rather ensuring that disproportionately affected parties receive a greater share of such mobilization.

To ensure that sustainable financing for the energy transition achieves justice for those disproportionately affected, we propose several policy recommendations, starting from the identification of existing issues within each thematic group. Our recommendations are

structured around theoretical categories of 'just' and the financial mechanisms that can address these categories.

4.8 Policy Recommendations

4.8.3 Affected Work Force/Workers

1 Expansion of the Jamsostek Program for informal workers

The existing Jamsostek (Employment Social Security) programs, such as Old Age Security (OAS), Job Loss Security (JLS), Pension Security (PS), Work Accident Security (WAS), and Death Compensation (DthC), do not provide adequate protection for informal workers, especially those affected by the coal phase-out and decommissioning plans for coal-fired power plants (CFPPs). The majority of these programs only provide protection for formal workers as an eligibility criterion. Furthermore, the JLS program, which essentially provides financial compensation for workers affected by Termination of Employment (ToE), can only be accessed if the worker has been a member for a minimum of 12 months and has paid premiums for 6 (six) consecutive months. In fact, our findings indicate that the majority of CFPP workers are Casual Daily Laborers (CDL) who do not have clear employment contracts and are not covered by Jamsostek.

We recommend that the government to pay particular attention to the conditions of informal workers, ensuring they receive adequate social security and compensation for losing jobs..

2 Ensuring the Rights to Adequate Compensation for affected workers

Our findings indicate that the majority of affected workers do not receive adequate compensation after termination of employment (ToE). This includes deductions from severance pay, and also the new regulations regarding OAS Program which require disbursement at retirement, and that the disbursements before that time can only be carried out to a predetermined payout quota, leaving informal workers vulnerable to financial compensation.

We recommend that the government to provide adequate compensation to affected workers, including severance pay in accordance with regulatory requirements, expand JLS coverage for informal workers, and fully disburse OAS benefits before retirement. If the third option is deemed too risky in the long term, the government can also consider other options.

3 Expansion of training and re-skilling for affected workers

To date, we have only found the Green Jobs National Occupation Roadmap as the only employment roadmap after the decommissioning or phase-out of coal-fired power plants (CFPPs). Yet, this roadmap only identifies potential jobs classified as 'green', without addressing the impacts on workers, either directly or indirectly. Therefore, we recommend that the government to create a roadmap that covers the end-to-end process for workers after the energy transition, starting with financial and non-financial compensation for losing jobs during the phase-out period, a plan for worker reintegration into the 'green' job sector, as well as other identified impacts, along with the Mitigation Action Plan (MAP).

In terms of policy, we recommend that the government to expand the reach of programs that provide upskilling and reskilling services for workers, three of which are the SIAPKerja program owned by the Ministry of Manpower, the Pre-Employment Card under the Coordinating Ministry for Economic Affairs, as well as institutional and financial strengthening for Jobs Training Centers (JTCs) spread across the regions. Our findings indicate that these two programs do not yet have integrated services that specifically provide the skills needed to navigate green jobs.

4 Regulatory and financial intervention in employee – employer industrial relations

We recommend that the government to play a more active role in conducting regulatory and financial interventions in industrial relations between workers and employers affected by the energy transition plan. In terms of regulatory intervention, the government must ensure employer compliance towards the financial rights of affected workers, such as severance pay or other compensation schemes. Meanwhile, in terms of financial intervention, the government can benchmark the Ruhr transition project to encourage demand-side effects from the worker side to transition to the RE system. Some mechanisms we recommend include: a) Establishing a tripartite relationship, where the government offers a paid early retirement scheme until a certain age at which workers can receive pension compensation, for example, at age 59 when OAS and PS can be disbursed; b) Establishing a tripartite relationship where the government acts as a negotiator for workers to voluntarily stop salary increases, for example, the percentage increase in the Provincial Minimum Wage (PMW) for the following year, if the workers work in high-emission sectors such as coal-fired power plants and coal mines; and c) Providing financial intervention for workers who are committed to re-training or upskilling, for example by forming a PPP with a training service provider company.

4.8.4 Integrasi Aspek Gender dalam Pembiayaan

1 Integration of Gender Impact Assessment (GIA) as a monitoring and evaluation tool for Gender-Based Violence (GBV) into energy transition financing framework

Integrating Gender Impact Assessment (GIA) into a more holistic socio-environmental framework is necessary to ensure that project planning incorporates gender-sensitive integration designs and risk mitigation. Our findings indicate that the existing regulatory framework for Environmental Impact Analysis (EIA) has not yet specifically internalized GIA. In the other hand, the ETM scheme has not yet integrated GIA into its Environmental and Social Impact Assessment (ESIA), according to the scoping report.

We recommend that relevant parties to integrate GIA into their energy transition schemes, particularly in the socio-environmental impact due diligence reports that are generally conducted at the start of a project.

2 Implementing a pilot program to establish grievance mechanisms for Vulnerable Women and Women Experienced Gender Based Violence (GBV)

Our findings indicate that grievance mechanisms, particularly for those impacted by the energy transition, remain inadequate in addressing the concerns of affected women. First, grievance hotlines are generally limited to apps and/or online-based hotlines. This presents challenges for vulnerable women who often lack or have limited capacity of mobile devices, particularly those living in remote areas without internet access. Second, grievance mechanisms addressing GBV are generally met with gender-insensitive responses that tend to blame and/or marginalize victims.

We recommend that the government and relevant parties to: a) Establish a meta-monitoring plan for project monitoring and evaluation; b) Establish a grievance mechanism for affected communities, especially women with limited internet access; and c) Establish a responsive and gender-sensitive reporting system. Specifically, for point (b), we recommend that the government and relevant parties to establish an SMS-based reporting system, or collaborate with non-governmental organizations (NGOs) at local level (e.g. Legal Aid Institutions (LAIs) in the regions) as an entry gate to the community.

3 Provide financial assistance for access to childcare for women

Our research findings indicate a correlation between women's dual burden as workers and domestic caretakers, particularly mothers with children, and their vulnerability to work burnout and low productivity. One reason is the high cost of childcare, with an average out-of-pocket (OOP) expenditure amounting IDR60 million per annum per child.

We recommend that the government to provide financial assistance to vulnerable women, especially mothers with children, in the form of childcare subsidies.

4 Mainstreaming 'Gender Participation' at the Regulatory, Policy, and 'Project' Levels Regarding Energy Transition

Our findings indicate that the lack of women's participation in the energy transition planning process, at the regulatory, policy, and project levels, is a barrier to women's emancipation in the energy transition. For example, we found that there is no gender quota in the Planning and Development Deliberation (Musrenbang) and Village Deliberation (MusDes) planning processes, particularly in discussion topics such as micro-scale energy transition project designs. Furthermore, SMERU's research findings (2023) also indicate that the lack of gender-disaggregated data in the data collection mechanisms for the preparation of GNEP and GREP is also a problem on its own. Meanwhile, at the project level, our findings indicate that energy transition schemes such as JETP and ETM have not yet mainstreamed women into and/or received a share of the project financing structure.

We recommend that the government to incorporate mandatory 'gender participation' quotas and gender-based data collection into the guidelines for developing GNEP and GREP, particularly in the Planning and Development Deliberation (Musrenbang) and Village Deliberation (MusDes) processes. This participation and data collection are also necessary to avoid tokenism at the planning level and to ensure that women have strategic positions in the decision-making process. Meanwhile, to ensure the justice at the project level, we recommend the government to benchmark policies from the Renewable Energy Independent Power Producer Procurement Programme (REIPPPP) in South Africa, which applies a 'percentage tiering' approach to energy transition project planning. This percentage tiering aims to ensure that energy transition projects are owned not only by project developers, off-takers, and sponsors through PJBL, but also inclusively by marginalized communities, particularly women, who are

impacted by the projects. In this case, the percentage tiering in question includes: a) 30 percent of equity ownership must be owned by black South Africans, especially women, as part of the Broad-Based Black Economic Empowerment (BBBEE) policy. In this case, the government provides incentives in the form of funding priority for projects that have met this quota, and if the majority are women, they will be prioritized; b) 50 percent of the job opportunities created by the project, both at the construction and operational levels, must be intended for black women; and c) 1.5 percent of the project's profits (revenue) must be used for programs that encourage the emancipation of affected women.

5 Revision POJK 51/2017 concerning the Implementation of Sustainable Financing, with the addition of the phrase 'gender' in the pillars of sustainable finance.

Our research found that POJK 51 Year 2017, which serves as the foundation for sustainable finance practices for Financial Services Institutions (FSIs) banking and non-banking, does not specifically address 'gender' mainstreaming within the sustainable finance pillars. To date, the sustainable finance pillars have been built solely on the phrase 'Human Rights', without addressing gender aspects.

We recommend that the government, in this case the Financial Services Authority (FSA) as the regulator of Financial Services Institutions (FSIs), to add the gender pillar to the revised POJK 51, and require FSIs to do the following: a) Adding gender mainstreaming obligations into the Sustainable Finance Action Plan (SFAP) and Sustainable Finance Report; b) Requiring financial instruments, such as Green Sukuk, Green Bonds, and Sustainable-Linked Loans (SLL) to have a gender-based framework; c) Accelerating the formation and implementation of Orange Bonds aimed at funding for women; and d) Increasing the proportion of women owners of micro-scale energy transition projects in accessing microfinance services and/or savings in existing programs, such as People's Business Credit (PBC) and the National Civil Empowerment Program (NCEP) – Mekaar.

6 Mainstreaming gender-based funding through utilization of physical and non-physical Special Allocation Fund and Village Fund

We commend the progressive use of non-physical SAF (Special Allocation Fund) allocated to address cases such as GBV against women. However, our findings indicate that existing government funding programs, such as physical and non-physical SAF, as well as Village Funds, are insufficient to provide capital and financial access for women in the energy transition landscape.

In this regard, we recommend allocating these funds to support initiatives taken by women in driving the energy transition, such as access to capital for Micro Hydro Power Plant (MHPP) development projects initiated by vulnerable women in the West Nusa Tenggara (WNT) region.

7 Mainstreaming gender-based investment and/or lending for non-alternative financial institutions (banks)

To date, women's access to capital is still, de facto, covered by alternative (non-bank) financing sources such as peer-to-peer (P2P) lending and microfinance programs. Our research findings indicate that one of the reasons is the absence of funding obligations for women, particularly women in the energy transition landscape, within the scope of conventional bank financing.

We recommend that banks, both commercial and Islamic, to establish a financing pillar for women, particularly vulnerable women, with loan interest rates tailored to their repayment capacity. Furthermore, we also encourage banks to apply Gender Lens Investment (GLI) in financing support, for example by: a) incorporating gender-sensitive metrics, such as GIIN IRIS+, and others; and b) investing in borrowers (e.g. companies) that mainstream gender, such as having a minimum quota for women and implementing gender-sensitive maternity leave mechanisms.

4.8.5 Inclusion for Disability Groups

1 Enforcement of Law No. 8 Year 2016, in particular regarding employment quota for PWD

Currently, only 0.002 percent of PWD are employed by companies, and less than 0,05 percent of workers in the energy transition sector are PWD, despite the mandate of Law No. 8 Year 2016 concerning Persons with Disabilities, which mandates a 2 percent job quota for government and 1 percent for private companies. Therefore, we recommend that the government on the enforcement the job quota policy and to establish an integrated data collection system to monitor its implementation.

❷ Integrating the Twin Track approaches into Key Performance Indicator (KPI) of government and private institutions

To date, many institutions, both government and private, across various sectors, have not yet integrated job quotas for Persons with Disabilities (PWD) into their Key Performance Indicators (KPIs). This serves as a disincentive to providing employment opportunities for PWD. Therefore, we recommend that both the government and private companies integrate the Twin Track approach to PWD inclusion into their institutional KPIs by: a) encouraging quotas for PWD; and b) offering products and services specifically for PWD at internal institution level. As well, we encourage regulators in relevant sectors to develop a disability inclusion assessment framework, develop weighted assessment indicators, and provide compliance incentives.

❸ Provision of access and job training for PWD through Disability Service Unit (DSU) integrated at Job Training Center (JTC)

Approximately 90 percent of PWDs have not received any job training due to existing structural limitations. One of these is the unresponsive and suboptimal performance of Disability Service Units (DSUs) in carrying out their primary duties and functions as liaisons between PWD and job-seeking partners. Therefore, we encourage DSUs at the regional level to integrate their programs with JTCs.

✦ 4.8.6 Inclusion for Children and the Elderly Groups

❶ Expansion of Adaptive Social Protection (ASP) financing for Children and the Elderly affected by the energy transition

The implementation of the ASP is necessary to ensure that children and the Elderly have access to SPP, especially access to healthcare financing. The government needs to consider developing a SPP specifically aimed at children and the Elderly that not only provides cash transfers but also builds household resilience to the energy crisis—one way is by providing affordable RE access. Furthermore, the government also needs to improve the PAP – NHS targeting mechanism to integrate children and the Elderly into receiving healthcare financing assistance that can ease their burden, one of the ways by reducing OOP.

4.8.7 Indigenous People

1 Mobilization of public sector funding for micro-scale transition projects for Indigenous People

Studies show a positive correlation between the uniqueness and knowledge systems of indigenous people and the provision of a greater role for indigenous people to initiate their own micro-scale transition projects, contributing to the optimal and effective energy transition (Dawson et al., 2021). However, indigenous people generally face funding challenges for project development (Satriastanti, 2023). So far, funding to support indigenous people, both directly and indirectly, has been obtained from third parties such as multinational financing schemes and philanthropic support for organizations representing indigenous people. Meanwhile, public sector funding provided by the government through the State Budget is very small. Other countries, such as Brazil and other Latin American countries, have financing schemes such as the Inter-American Foundation, which funded directly by the government to fund indigenous communities. Therefore, we recommend that the government, through relevant stakeholders such as the Ministry of Energy and Mineral Resources or the Ministry of Agrarian Affairs, to mobilize public sector funding, for example through Regional Fund Transfers or Physical and Non-Physical Special Allocation Funds (SAF).

2 Strengthening institutional compliance for funding mobilization

Project developers often fail to comply with regulated safeguards, such as Environmental Impact Assessments (EIA) or other forms of SIA, as was the case with the Biomass Power Plant (BmPP) Merauke. Therefore, intra-institutional strengthening is needed to encourage developer's compliance against existing socio-environmental frameworks.

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