

Just Energy Transition Fund

Discussion Paper

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CLIMATE
POLICY
INITIATIVE

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AUTHORS

Hari Solagratia, Belinda Mursidi, Muhammad Aulia, Albertus Siagian, Antonius Priyo, and Rahma Reyhan

CONTACT

Hari Solagratia
Hari.solagratia@cpiglobal.org

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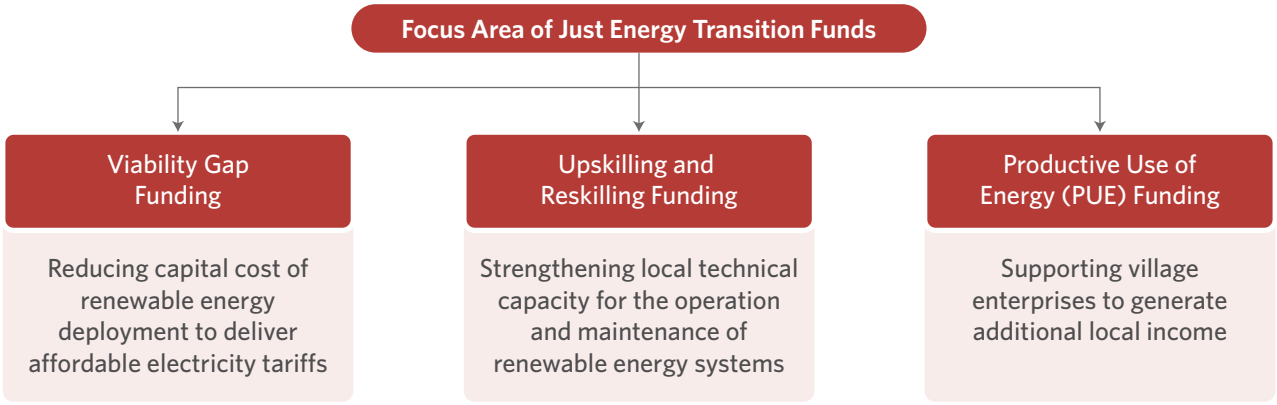
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MEDIA CONTACT

Rindo Saio
rindo.saio@cpiglobal.org

EXECUTIVE SUMMARY

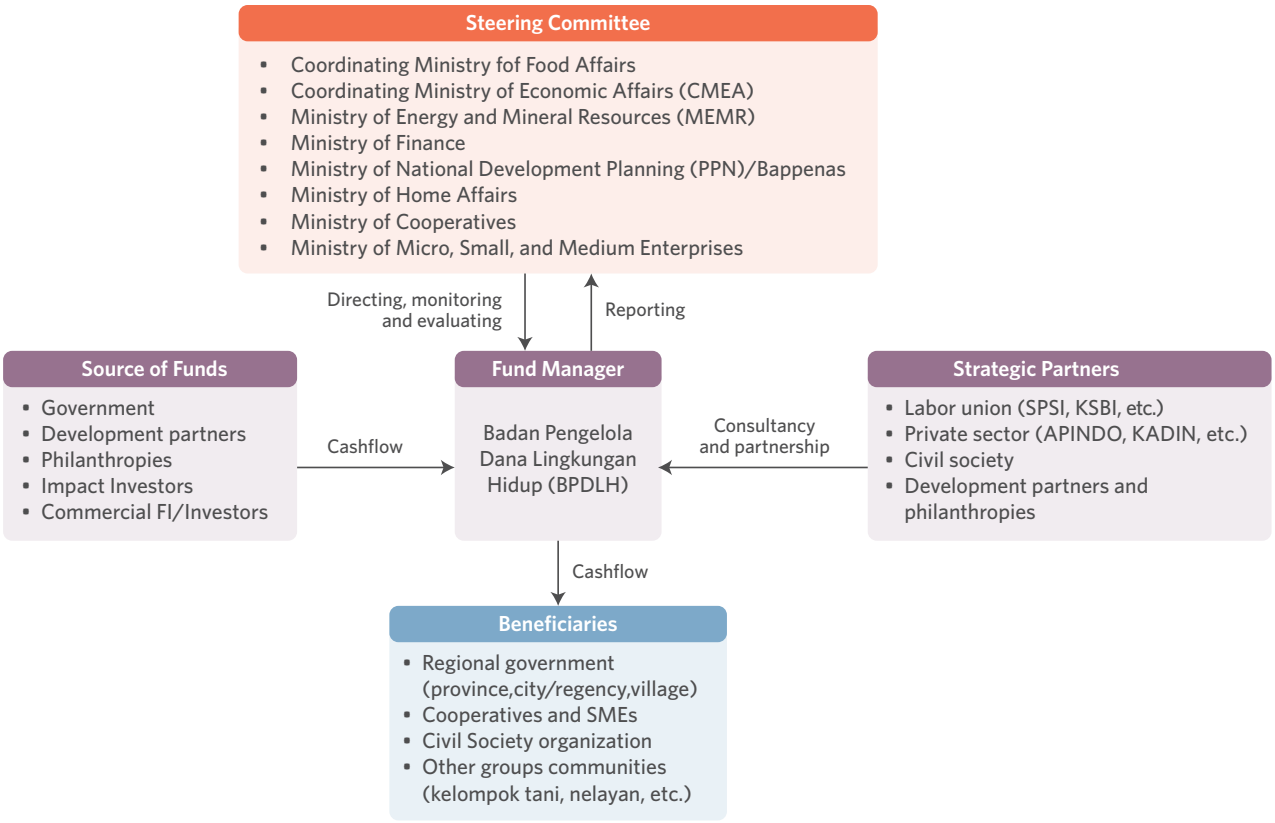
Indonesia's energy transition ambition requires substantial investment of USD 103.1 billion, or around USD 30.3 billion annually. However, financing recorded between 2019 and 2023 averaged only USD 1.2 billion per year, far below what is required. Moreover, small-scale renewable energy has relied heavily on public finance and grant-funded sources. This overreliance is not sustainable to cover all the capital needed for a community-based energy transition at the subnational level. To reduce state budget distress, the national priority 100-GW Solar PV Acceleration Program was launched in 2026. Off-grid solar is estimated to create new demand of **4.36 Gigawatt-peak (GWp)**, providing ample opportunities for rural communities to diversify and create revenue generation for the local economy. Given the significant capital required, the **Just Energy Transition Fund (JETF) plays a pivotal role as a lever that adds value to renewable-energy-powered economic transformation**. The fund targets three focus areas: **viability gap funding, upskilling and reskilling funding, and productive use of energy.**



To date, **funding for community-based renewable energy** has come **mainly from state budget transfers and philanthropic grants**. This model is not sustainable. A gradual **shift toward more diversified funding sources could ensure continuity of funds and reduce risk exposure**. This funding transition consists of **three phases**, each with a distinct objective**:**

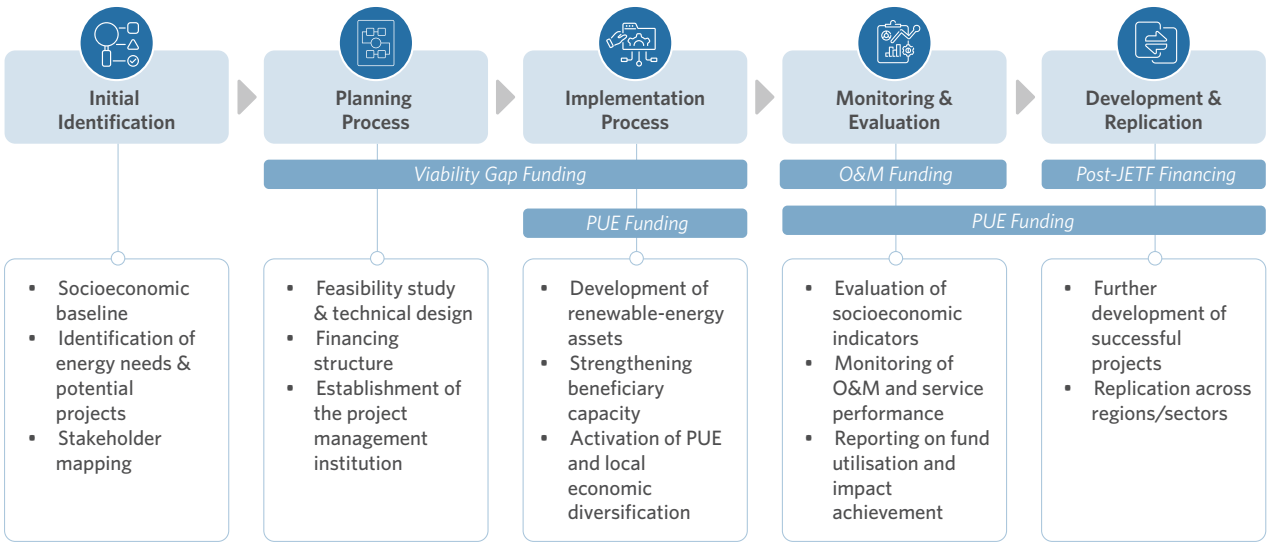
1. **Initiation Phase,** with focus on building the ecosystem and reducing initial investment risk by pooling funds from public, private, and philanthropic partners.
2. **Transition Phase,** with focus on the intervention through a combination of financing mechanisms, such as portfolio-based financing and blended finance, to support multipurpose projects as they mature.
3. **Diversification / Maturity Phase**, with focus on broadening the funding mix so that public funding is less dominant but still essential for maintaining public services and empowering communities.

Managing the JETF fund requires a governance model built around an entity that has the capacity to attract and aggregate multiple funding sources, form and manage the fund pool, and disburse funds to various beneficiaries through multiple instruments. This requirement aligns with the governance of Indonesia Environment Fund (BPDLH), where accountability and transparency are top priorities. Accordingly, the following JETF governance structure is proposed:



The JETF aims to lower barriers to private investment and help sustain established energy transition activities that transform and diversify local economies in rural communities. These activities are expected to strengthen existing local economic activities by enabling communities to develop new skills and improve productivity.

At the beneficiary level, the funding phases outlined above correspond to a project lifecycle that progresses from identification and planning, implementation and monitoring, to expansion and replication. Long-term plans and strategies should ensure that JETF support extends beyond project construction and contributes to electrification, increased village incomes, and green jobs in beneficiary areas. While this approach applies to all three JETF funding streams (VGF/PUE Funding/Upskilling and Reskilling), each should be carried out under corresponding terms and conditions, reporting requirements and monitoring and evaluation.



KEY FINDINGS

1. **Mandate and Scopes**

As a first step in establishing the JETF, formal policy mandate and scope are essential. They should set out the fund's objective, government sponsor, priority beneficiaries, eligible uses of funds, sectors, and geographic coverage. These parameters should translate the guiding principles into clear eligibility boundaries for the fund. The mandate should also define the intended outcomes of JETF support, as shown below:



Support marginalized communities in achieving **energy justice** across distributive, procedural, and recognition dimensions.



Reduce the **disproportionate adverse impacts of climate change** and the burdens borne by marginalized regions.



Create **sustainable jobs** in the energy sector, particularly within target communities.

The subsequent step is to translate the JETF's mandate and intended outcomes into (i) project-specific terms and conditions and (ii) measurable success metrics.

2. **Capitalization and Pipeline preparation**

Securing capital commitments that underscore JETF principles and mandate is one of the priorities alongside building the project pipeline. The first seed capital is especially important because it signals national commitment to implement energy transition at the regional and community level as part of its priority program. T This initial capitalization also helps secure private investor buy-in, since de-risking instruments are introduced upfront. It is therefore appropriate for public and philanthropic funds to be the first capital invested in the Just Energy Transition Fund.

Pipeline development should be coordinated with subnational governments and local project developers based on identified energy needs, existing or planned renewable-energy assets, and opportunities to strengthen local economic activities. Potential projects should be screened against the most appropriate funding window and the required level of support.

3. **Pilot Deployment and Learning**

The following stage is to launch the first JETF funding window and use the initial portfolio to assess success factors by testing it through existing monitoring, evaluation, and beneficiary-support mechanisms. Monitoring should cover both financial and substantive performance, including fund use, implementation progress, upskilling and reskilling local human capital, performance of productive-use activities, and achievement of agreed output and outcome indicators. Beneficiaries should also receive appropriate technical or institutional support where monitoring identifies implementation constraints or capacity gaps.

The pilot evaluation should then assess the effectiveness and sustainability of different JETF interventions, including whether VGF support improves project viability, whether upskilling

and reskilling support contributes to continued asset operation, and whether PuE support generates sufficient economic benefits to strengthen local livelihoods and the sustainability of the underlying energy asset.

The results and lessons from the pilot should be used to refine the JETF's eligibility criteria, funding conditions, MRV framework, beneficiary-support mechanisms, and scaling strategy before broader deployment.

4. **Scale-up and institutionalization**

   The final stage is to expand the JETF funding base, sectors, beneficiaries, and geographic coverage based on lessons learned from the pilot. Projects demonstrating strong implementation performance and socioeconomic impact can provide the basis for further development and replication, including replication across locations or sectors with similar characteristics.

   Over time, the JETF should be integrated into national and subnational planning and financing cycles. This would allow successful project models to be aggregated and replicated while progressively reducing reliance on one-off project support.

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1. INTRODUCTION

This discussion paper serves as a starting point for further stakeholder discussions and offers recommendations to the Government of Indonesia on establishing a Just Energy Transition Fund (JETF). It examines the following topics:

1. **Rational behind JETF concept**
   Chapter 1 will elaborate applicable reasons and sets of problems that want to be solved by recommending the establishment of JETF in Indonesian context
2. **Use of Fund and Source of Fund of JETF**
   Chapter 2 will focus more on the scope of potential usage for JETF as a policy tool in order to answer relevant challenges in Indonesian context of energy transition. Chapter 3 will focus more on landscape of funding source that can be utilized in Indonesia to initialize JETF formulation.
3. **Governance, enabling conditions, and development stages of JETF**
   Chapter 4 will elaborate the governance aspect in addition on consideration of identified enabling factors that can be used to govern JETF in Indonesia. Chapter 5 will elaborate on how JETF can be developed in stages as well as relevant models that can be considered so that JETF can be disbursed and reach the intended target beneficiaries.

Given the extensive nature of the topic in this discussion paper, several topics are outside of scope of this discussion paper, such as:

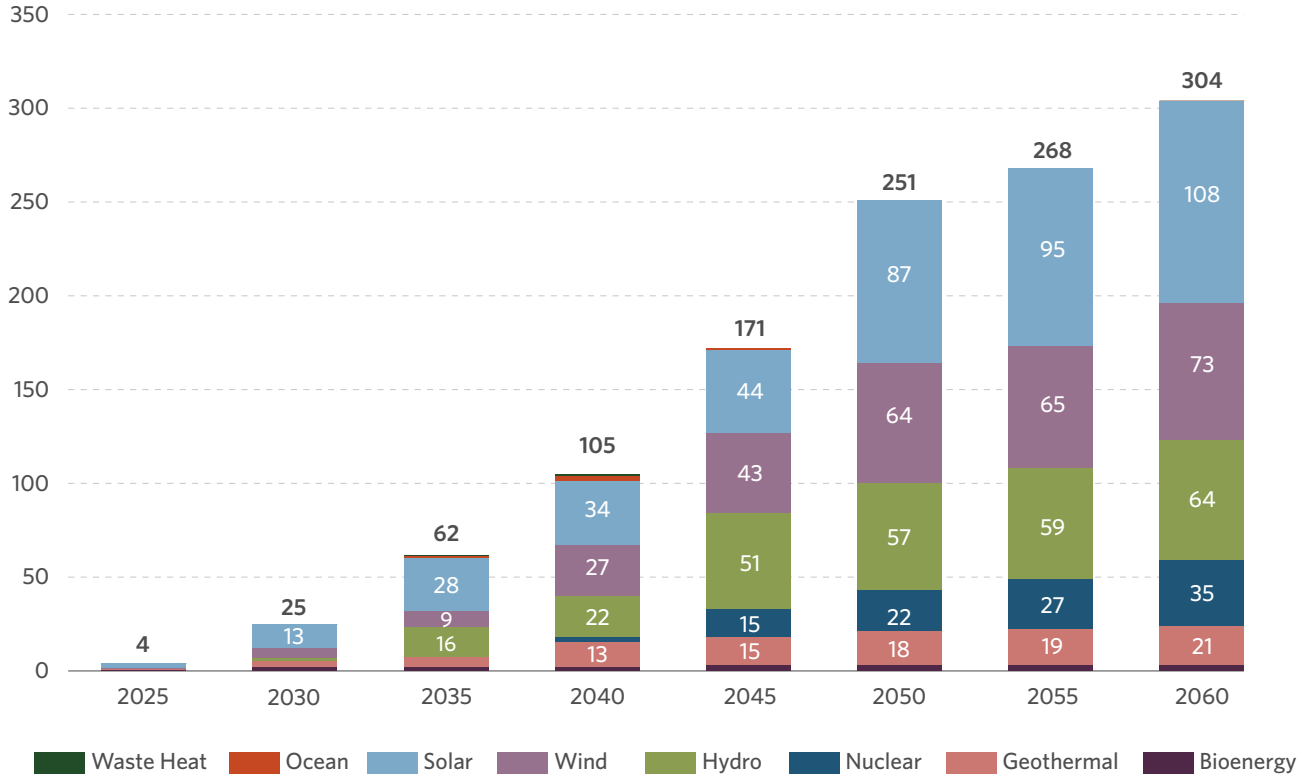
- Details around JETF project appraisals or eligibility checklist
- Legal and institutional matrices for coordination purposes

These topics are excluded as they require another round of discussions with many stakeholders, which might be doable in the future.

1.1 ENERGY TRANSITION TARGETS WILL REQUIRE BOTH PUBLIC AND PRIVATE INVESTMENT

Meeting Indonesia's commitment to net zero emissions by 2060 or sooner will require renewable energy to supply 74% of electricity, supported by an estimated 304 GW of additional renewable generation capacity. Solar technology is projected to have the largest share of capacity addition at 108 GW, followed by wind (73 GW) and hydropower (64 GW), as shown in Figure 1.

Figure 1. Indonesia Renewable Energy Power Generation Development Strategy



***Source**: CPI analysis based on National General Electricity Plan (RUKN) (Ministry of Energy, 2025)*

Indonesia requires around USD 30.3 billion per year in investment through 2060 to build these renewable power plants (MEMR, 2025). However, average realized investment in clean power plants in Indonesia has been only around IDR 21 trillion (USD 1.2 billion) per year from 2019 to 2023, far below the investment needed (CPI, 2025). In other words, there are around USD 29.1 billion per year of investment needs that is not covered yet. This may include financing for small-scale rural electrification from clean sources. The financing under this theme is not sufficiently covered by the existing instruments, because small-scale rural electrification lacks commercial viability to attract private money, plus that public money is fiscally constrained. The establishment of the Just Energy Transition Fund (JETF), as will be explained more later, aims to contribute to closing the investment needs under this theme. Both public and private investment is needed to close this gap.

1.2 LACK OF RENEWABLE ELECTRICITY FINANCING IN RURAL AREAS

Mobilizing private investment for renewable energy projects is challenging, particularly in rural low-income areas. Renewable energy development requires sufficient and predictable revenues to generate returns for investors, but low-income household purchasing power may constrain energy demand and the ability to pay cost-reflective tariffs. These challenges hinder direct private investment at the community level.

Figure 2. Indonesia's Poverty Map



Percentage of Poor People/Total Population

3.42 29.45

Category	Total
High (>20%)	2 province
Medium (10-20%)	14 province
Low(<10%)	22 provinces

Source: *BPS-Statistics Indonesia, 2025*

% of people under the poverty line	Total
High (>20%)	2 provinces
Medium (10-20%)	14 provinces
Low (<10%)	22 provinces

Lack of access to renewable electricity (RE) can be seen as unjust as it reduces rural communities' quality of life. Reciprocally, communities that are transition-affected to lower carbon emission can generate tangible net-benefit. Lack of access to clean electricity leaves households reliant on high-emission energy sources, such as diesel fuel for electricity and burning wood for cooking and lighting. This leads to high costs and spills over into noise and air pollution. Providing RE to these communities can therefore support Indonesia's NZE target, while also improving quality of life.

Most community areas fall under state-owned utility provider's or PLN's electricity business license, which authorizes it to sell electricity directly to end users. However, PLN's capacity to design sustainable, community-based renewable energy depends heavily on fiscal budget allocations.

In Indonesia, small-scale RE projects are mostly supported by public finance and grants. These two major funding sources for community based RE are channeled through Official Development Assistance (ODA) and government fiscal transfers. However, public financing and grants are inherently limited. With strong demand for distributed RE in small and remote islands and limited

fiscal budgets, public finance alone cannot meet the investment scale needed to expand and sustain community-based RE deployment.

1.3 PROPOSING A FUND TO SUPPORT THE JUST ENERGY TRANSITION PARTNERSHIP

An international Just Energy Transition Partnership (JETP) was announced in 2022 to fund USD 21.4 billion to accelerate early coal retirement and renewable energy development (JETP,2022) . The initiative aims to mobilize private financing through a blended finance mechanism to five Investment Focus Areas (IFAs): i) Transmission lines, ii) Early coal retirement, iii) Dispatchable renewable energy acceleration, iv) Variable renewable energy, and v) Renewable energy supply chain enhancement. The initiative also includes a component that designs an operational framework of just transition principles, in which standard nine: economic diversification and transformation is the key driver of transition at the community level (JETP Indonesia, 2023).

Beyond the JETP, the Indonesian government's efforts to expand electricity nergyaccess in rural areas are also limited. Government support for rural renewable electricity projects is likely grant-based, making this funding model's replicability questionable because it depends on fiscal strength and annual review. Hence, a Just Energy Transition Fund (JETF) emerges as a financing mechanism to support community-level transitions through economic diversification and transformation.

Particularly, JETF will differ from JETP, in the sense that JETF will also deal with ensuring the affordability of the electricity for the rural people (through viability gap funding), the sustainability of the assets (through skill funding so that rural people can operate and maintain the assets), and the economic impact of the assets (through the so-called 'productive use of energy' funding, so that the power generated is channeled for elevating rural people's income).

Such a fund can facilitate renewable electricity expansion in rural and low-income areas, aligning with both Indonesia's energy transition and broader socioeconomic goals. The fund is expected to be managed sustainably through different financing instruments, while also maximizing economic and social impacts for rural communities in Indonesia.

1.4 JUST TRANSITION ENABLING FACTORS

The following enabling factors may support the establishment of the JETF in Indonesia:

1. **Indonesia's diverse initial funding sources** can be used to establish a pool for the initial phase of the JTEF. As mentioned in Section 3.2, these include funding from government, international donors, development banks, and domestic and international philanthropies.
2. **Indonesia's strong fiscal cooperation and development planning framework** between national and local governments can be leveraged for future collaborations on energy transition projects. A profit-sharing mechanism exists from resource-rich regions to underdeveloped regions through Dana Transfer Daerah (Regional Transfer Fund), where the national government allocates a portion of the national budget each year for essential operational costs at the subnational level. In recent years, there has also been budget allocated for villages called the Village Fund (Dana Desa), which can be used to establish

village business entities (Bumdes) alongside other village infrastructure and other government programs, to improve the economic capability of communities at the village level, as well as other mechanisms of fund transfer to subnational-level government. Both national and subnational governments have developed coordinated annual development planning frameworks such as the National Medium-Term Development Plan (RPJMN), the Regional Mid-Term Development Plan (RPJMD), the National Energy General Plan (RUEN), and the Regional Energy General Plan (RUED). Some subnational governments have also developed a Low Carbon Development Plan (RPRKD), which can serve as a basis for JETF strategy plan.

3. **Indonesian special agencies have** experience in managing sustainable and environmentally linked funds. For example, several grants have been managed and disbursed through special agencies, including the Indonesia Environment Fund (the Badan Pengelola Dana Lingkungan Hidup, or BPDLH, in Bahasa Indonesia). The BPDLH has experience and capability to manage grants collected from public and donor funds for sustainability-themed projects. The BPDLH also developed Social Return on Investment (SROI) metrics which are fitting for small, medium, and community-based renewable energy projects.

2. USE OF JUST ENERGY TRANSITION FUND

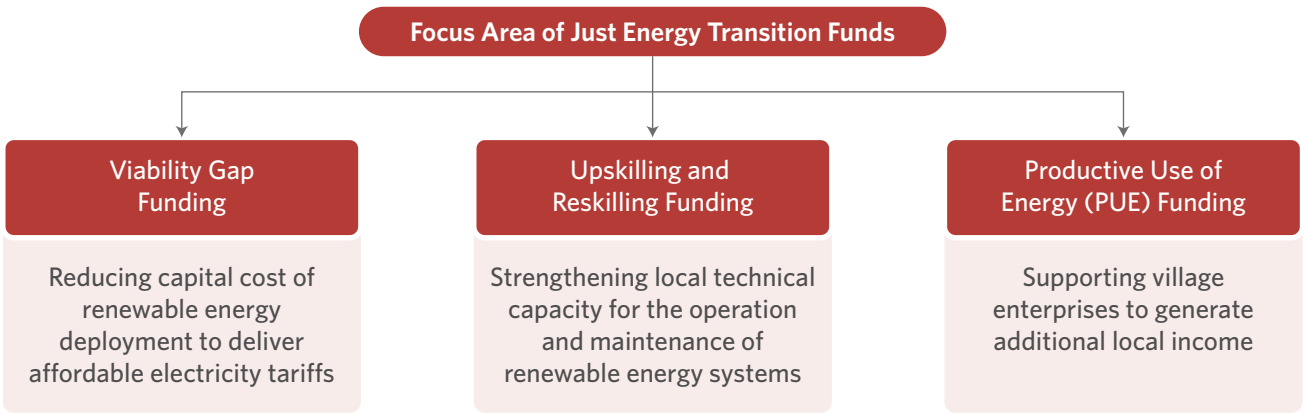
As an emerging economy, Indonesia is pursuing a low-carbon transition while sustaining economic growth. This transition will therefore require greater access to energy for productive activities and to the finance that supports them. Ensuring underserved communities can access both is essential to a just transition.

Purpose of the JETF is to address subnational decarbonization challenges by enabling locally driven energy solutions that contribute to economic diversification, sustainable livelihoods, and inclusive growth. The fund aims to support the use of community energy projects, which can bring multiple benefits, such as improving livelihoods, strengthening local economies, improve resilience, create workforce opportunities, and enable inclusive development. In addition, the JETF will also targets capacity building and skill development so that local populations can maintain and operate installations, thereby creating local technical capacity, upskilling and reskilling, vocational training and community management of renewable-energy assets.

2.1 ENERGY TRANSITION AS A LOCAL ECONOMY DIVERSIFIER

The JETF should act as a strategic lever to generate lasting benefits for local communities, addressing the full pathway from making clean energy affordable to sustaining the infrastructure, and ultimately enabling communities to use that energy productively. This builds on Standard 9 on economic diversification and transformation as mentioned in the *Comprehensive Investment Policy Plan* (CIPP) (JETP, 2023). Figure 3 shows the three focus areas envisioned for the JETF, which are further described below.

Figure 3. JETF proposed focus areas



1. **Viability gap funding (VGF)** can take the form of interest subsidies for debt financing, technical assistance in the inception phase, and project preparation funding. This can lower capital expenditure for RE projects, thereby improving their financial viability and contributing to more affordable electricity tariffs for end users.
2. **Upskilling and Reskilling Funding** can enable them to operate and maintain renewable assets. This funding's impact can be strengthened through cooperation with similar initiatives from the Human Resources Development Agency for Energy and Mineral Resources (BPSDM MEMR) and the Vocational Training and Productivity Center (BBVP), Ministry of Manpower Indonesia.
3. **Productive-Use-of-Energy (PuE) funding** can support community-based businesses that leverage RE for value creation ventures. This may include funding for product-market fit assessments, business model development to identify productive activities, or other strategic levers to create business ventures that create local jobs and strengthen the supply chain.

2.2 SUPPORTING PRODUCTIVE USE OF ENERGY

The JETF should drive PuE by funding activities that generate tangible socioeconomic benefits for transition-affected and underserved communities. The fund should address predefined community outcomes, such as reducing production losses, increasing local value addition, diversifying incomes and creating local jobs.

To underpin Indonesia's energy transition target and social development goals, JETF-supported activities should connect clean energy with productive economic activities. For example, a community solar development can power cold storage for fish products, which can be containerized for export. Such initiatives can promote local economic development and create new demand for clean energy in a local, socioeconomic-led energy transition. Table 1 shows an indicative, non-exhaustive list of eligible applicants for the JETF, target beneficiaries, illustrative activities, productive application and the intended outcomes.

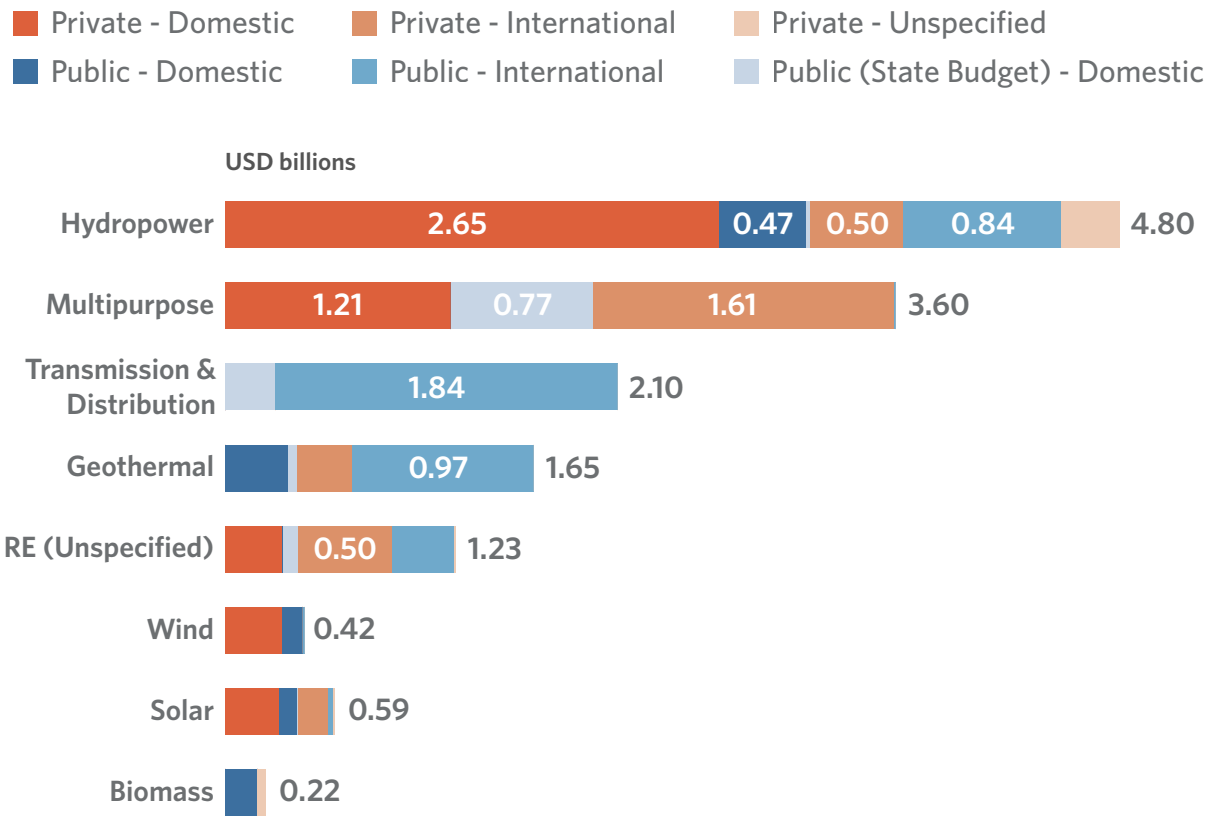
Table 1. Eligible applicant, Target Beneficiaries and Productive Application of The JETF

Eligible Applicant	Target Beneficiaries	Productive Application	Illustrative PuE Application
▪ Cooperative ▪ Local enterprise ▪ Village Enterprise ▪ State-owned Enterprise ▪ Private developers ▪ University ▪ Civil Society Organization ▪ Non-profit Organization	▪ Village Business Entities (BUMDES) ▪ Farmer/Fisheries Associations ▪ Regional communities ▪ Marginalized areas ▪ Transition-affected areas	▪ Community solar + battery storage ▪ Biomass or biogas system ▪ Mini-grid ▪ RE-productive use equipment ▪ Upskilling and reskilling local work ▪ Planning document supporting PuE Application	▪ Reduced losses, higher fisher income ▪ Local economic value addition and jobs ▪ Lower energy cost and new businesses ▪ Skills, jobs and income diversification ▪ Alternative livelihoods

3. SOURCE OF JUST ENERGY TRANSITION FUND

Indonesia's RE sector is supported by multiple public and private funding instruments from domestic and international sources, with flows largely going to centralized, large RE projects. Private capital sources stood at 20.19 billion USD or 72% of overall power sector investment of Indonesia's RE financing (CPI, 2025). This financing focuses on projects that offer scale, predictable risk and return profiles, and greater business certainty.

Figure 4. RE financing landscape in Indonesia



Source: *CPI, 2025*

As economic diversification and transformation are an important part of the just energy transition, sourcing and developing suitable financing should consider the challenges faced by small– and medium-sized energy transition projects. Many rural communities seeking economic development have limited access to electricity and other resources and therefore have limited economic activity and institutional capacity to diversify their economies. Differences in economic scale may decrease the viability of renewable energy projects, adding challenges to obtaining financing from conventional financiers.

Figure 5. Source of Climate financing landscape in Indonesia



Source *: Indonesia Research Institute for Decarbonization (IRID), 2023, adapted by CPI*

The JETF aims to bridge financing by connecting community-based energy transition projects with suitable sources of finance. It pools existing public and private funding from domestic and international sources, with the long-term aim of lowering the risk of private-sector investment in such energy transition projects. (Indonesia Research Institute for Decarbonization (IRID), 2023)

4. GOVERNANCE AND ENABLING CONDITIONS

4.1 JETF GOVERNANCE MECHANISM

4.1.1 POTENTIAL JETF FUND MANAGERS

The JETF governing entity should have the capacity to attract and aggregate multiple funding sources, form and manage the fund pool, and disburse funds to various beneficiaries through multiple instruments. The VGF, upskilling and reskilling, and PuE funds outlined above should be disbursed not only through one-off grants but also through blended-concessional finance options.

Indonesia has developed and reformed designated institutions to finance its infrastructure development. For example, PT Sarana Multi Infrastructure (PT SMI), a state-owned special-mission vehicle (SMV) under the Ministry of Finance, had finance and invest in roads, public transportation, water, and energy infrastructure. Public Service Agencies (*Badan Layanan Umum*, or BLU) have been established for other specific matters. While BLUs were initially established to provide public goods and services (e.g., hospitals and universities), some fund-managing BLUs have been formed for specific purposes. These include Lembaga Pengelola Dana Bergulir Koperasi for cooperative financing; Badan Pengelola Dana Perkebunan to manage state revenue from the plantation sector (palm oil, coconut, and cocoa); and Badan Pengelola Dana Lingkungan Hidup (BPDLH, or the Indonesia Environment Fund), designated for climate mitigation and adaptation financing.

Beyond state-owned enterprises (SOEs) and BLUs, Indonesia has also formed other types of entities to deliver specific agendas and programs. These include the Project Management Office (Kartu Prakerja), a special unit under the Coordinating Ministry of Economic Affairs that delivers upskilling and reskilling programs. On climate-related issues, the Ministry of National Development Planning (Badan Perencanaan Pembangunan Nasional/Bappenas) established the Indonesia Climate Change Trust Fund (ICCTF)—a specialized national trust fund that manages grants from multiple donors for Indonesia's greenhouse gas mitigation efforts. The ICCTF's board of trustees includes representatives from the central government, civil society organizations, and the Indonesian Chamber of Commerce (Kamar Dagang dan Industri Indonesia, or KADIN Indonesia).

BPDLH AS THE STRONGEST CANDIDATE

Hosting a pool of funds for the JETF within an existing relevant entity could be more effective than forming a new dedicated entity. Among several entities which CPI has identified as a potential fund manager, BPDLH emerges as the best candidate to manage the JETF, given its agility as a BLU and its extensive existing financing portfolio in climate mitigation and adaptation. Since 2025, the BPDLH has been mandated as the government's investment operator (Operator Investasi Pemerintah, or OIP), a status that allows it to develop short-, medium-, and long-term investment strategies. Even before acquiring OIP status, the BPDLH had the most extensive

green microfinancing portfolio among several potential fund managers in Table 2. It also had several innovative financing schemes, such as the tree-based guarantee for agriculture and forestry MSMEs (MoF, 2024). The BPDLH also has experience forming a special pool of funds, including a disaster relief endowment fund (Dana Abadi), that has been conceptualized since 2018 and started to accumulate funds from 2022 (MoF, 2026). This experience aligned with the JETF's needs for fund management and disbursement.

Table 2. Comparison of Potential Fund Managers

	BPDLH (Indonesia Environment Fund)	ICCTF (Indonesia Climate Change Trust Fund)	JDU (JETP Delivery Unit)	PT SMI (PT Sarana Multi Infrastructure)
Entity type	BLU with Operator Investasi Pemerintah (OIP)[1] status	Trust fund agency, operates as a taskforce under Bappenas (differed from the usual trust fund in the Financial Sector Law (UU No. 4 / 2026)	Special unit under the GIZ[2]	SOE under the MoF
Current sectoral focus	AFOLU, waste, clean energy, climate adaptation (including disaster relief fund)	Forestry, maritime	Energy (power, transmission, transport, building)	Infrastructure (energy, roads, dams, etc.)
Source of funds	State budget; international donors; philanthropies	State budget; international donors; philanthropies	International Partners Group (IPG) and Glasgow Financial Alliance for Net Zero (GFANZ)	State budget, loans, returns on investment
Types of financing provided	Grants; revolving micro-concessional fund	Grants	Grants; concessional loans; guarantee	Grants, concessional loans
Beneficiaries	Cooperatives and SMEs; farmer/ fishermen groups; regional governments	Cooperatives and SMEs	SOEs; private corporates; government agency	Other SOEs, private corporates
Advantages	Extensive blended finance modality from state budget	Technical integration/ proximity with national development planning and agenda	Secured commitments from IPG & GFANZ; Had developed the JT framework	Extensive blended financing portfolio; Appointed as the Energy Transition Mechanism – Country Platform[3]
Limitations	Need ministerial-level approval for equity financing	Cannot disburse loans	Energy transition-related infrastructure, mainly on a utility scale	Corporate financing, no portfolio in microfinance (excluding Corporate Social Responsibility/ CSR)

1 **Operator Investasi Pemerintah (OIP)/Government Investment Operators** are entities which are mandated by Ministry of Finance to operationalize state investments, including from the state budget and endowment fund (*dana abadi*).
2 **Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)** is the Federal Government of Germany's state-owned enterprise, focuses on delivering international aid programs across the globe, including energy sector in Indonesia.
3 **Energy Transition Mechanism (ETM)** is a blended financing platform initiated by development partners to facilitate commercial and non-commercial financing to Indonesia's energy transition projects. [Link]

Each institution has its own mandate, sectoral focus, funding sources, and types of finance disbursed. The other entities are assessed below:

- **PT SMI** has the most extensive portfolio in infrastructure finance, including several RE projects. In 2025, the SMV had outstanding financing of IDR 22.36 trillion and IDR 44.08 trillion IDR within the new and RE and electricity sectors (PT SMI, 2025). However, it mainly focuses on corporate and SOE financing, especially for national priority projects. Therefore, financing for community-scale RE or PUE is outside its mandate.
- **The JDU** is the *ad hoc* secretariat for Indonesia's JETP implementation. It facilitates planning, construction/operation, monitoring, and evaluation process for the partnership. While it has shown agility in multi-stakeholder facilitation (mainly among IPG countries, the GoI, and financiers) and decision-making, the JDU primarily focuses on utility-scale infrastructure projects. In addition, JETP implementation is reliant on political and financial commitments from IPGs and the GoI. They were neither mandated nor accredited to raise and manage funds outside JETP programs. Therefore, the JDU might not be the fittest to manage the JETF.
- **The ICCTF,** as a national climate trust fund, is one of the stronger candidates for managing the JETF. Under Bappenas, the ICCTF had advantages in aligning the JETF with Indonesia's sustainable development plan. Its Board of Trustees has demonstrated inclusive participation of private sector and civil society organizations. However, the ICCTF can only disburse grants. In addition, while it claims to cover all NDC-focused sectors, it currently only manages one scalable grant called Ocean for Prosperity (*Laut untuk Kesejahteraan*/LAUTRA). This might raise questions regarding its ability to attract finance from multiple donors for the energy sector.

CONSIDERATIONS FOR ENGAGING THE BPLDH

The BPDLH, as a public service agency, has managed tendering, qualification, and fund disbursement since its inception in 2019. However, its portfolio centers on forestry and agroforestry. To integrate the JETF, BPDLH operations would need some adjustment. For example, the technical team would need to adopt new standards for identifying prospective JETF beneficiaries; the BPDLH would also need to appoint an intermediary institution with knowledge and experience in disbursing funds in the energy sector.

In addition, the BPDLH steering committee chair, previously from the Coordinating Ministry for Economic Affairs, now comes from the Coordinating Ministry for Food Affairs. Because the steering committee oversees BPDLH's general policy, technical policy (including asset allocation), and overall evaluation, it needs to be confirmed whether the JETF falls within BPDLH's current priorities.

4.1.2 JETF PROPOSED GOVERNANCE STRUCTURE

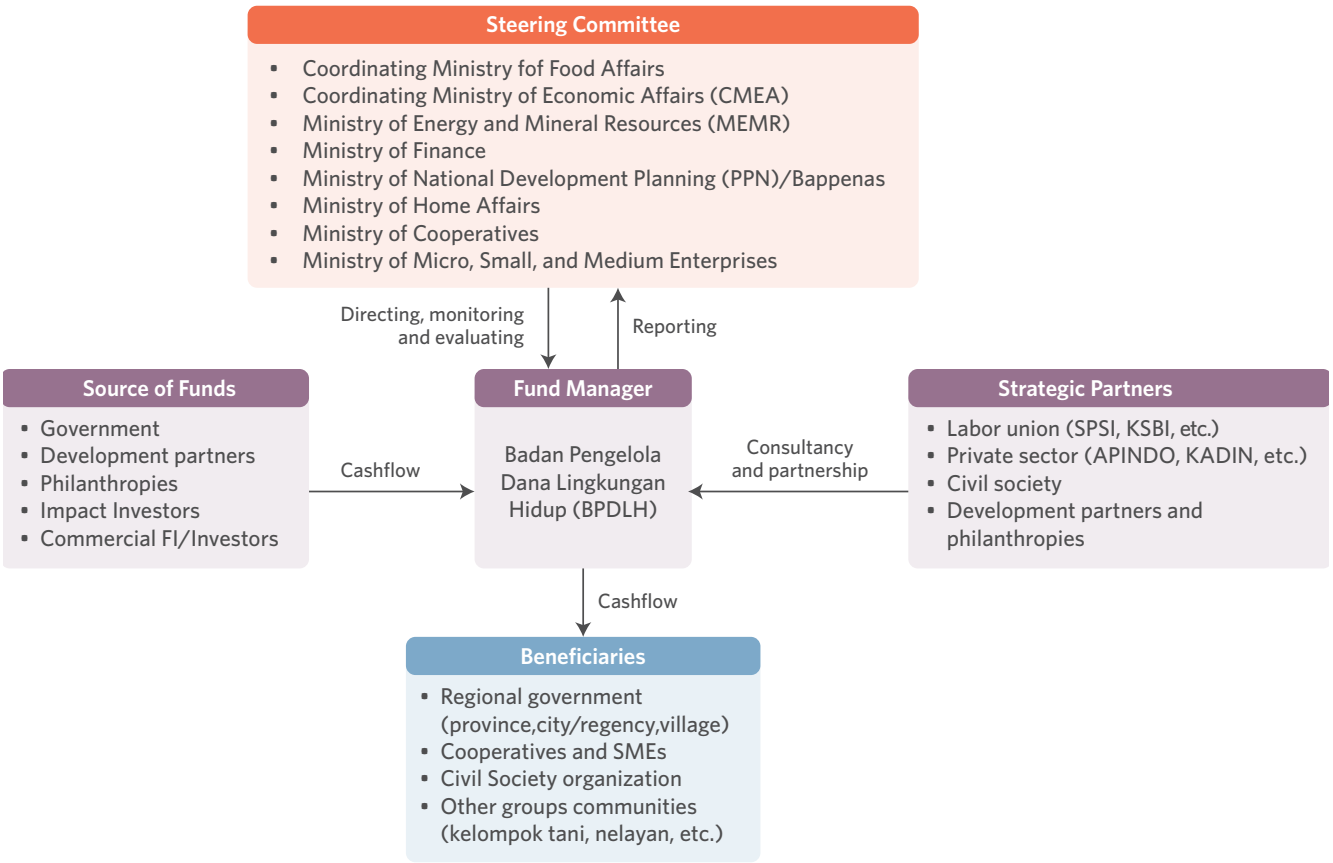
Figure 4 depicts the JETF's proposed governance structure. A JETF Steering Committee would direct, monitor, and evaluate implementation through the proposed fund manager, the BPDLH. The Steering Committee would have representation from relevant government bodies, including the Coordinating Ministry of Economic Affairs (CMEA), Ministry of Energy and Mineral Resources (MEMR), Ministry of Finance, Bappenas, Ministry of Home Affairs, Ministry of Cooperatives, and Ministry of Micro, Small, and Medium Enterprises. Because the JETF is

designated to invest in small-to-medium energy projects with cross-sectoral linkages beyond the energy sector, these government agencies would need to coordinate to ensure JETF investment aligns with each focus area; viability gap, upskilling and reskilling, and PuE funding.

Strategic partners will also play a significant role in advising and consulting on the social and technical aspects of fund implementation. Strategic partners might include representatives from labor unions, the private sector, civil society organizations, and development partners. The steering committee and fund manager could define the detailed scope of strategic partners' roles in the JETF implementation. For instance, initiatives such as the ICCTF and the Energy Transition Mechanism – Country Platform by PT SMI will hold board of trustees/partners' meetings periodically. Meanwhile, other initiatives grant veto rights and develop grievance mechanisms for impacted communities (Cintron-Rodriguez, Schalatek, & Vandamme, 2024).

Finally, the fund manager will coordinate with funders and beneficiaries on projects, based on the project/grant agreement, financing mechanism, and the BPDLH's internal operational procedures — including its existing internal and external audit processes.

Figure 7. Proposed governance structure of the JETF



Further to the above, as the JETF's potential fund manager, the BPDLH's experience reflects its capability to manage environmental funds through functions covering fund mobilization, fund optimization, and disbursement. The BPDLH can also apply risk management throughout the process, with an existing framework that provides both expenditure-based support and financing. Under applicable laws and regulations, the BPDLH has the authority to carry out the functions shown in Table 2.

Table 3. BPDLH Statutory Functions

BPDLH AUTHORITY	APPLICATION TO THE JETF
Fund mobilization and development	Mobilize public, donor, private and other permitted sources while establishing the applicable requirements for each source of funds.
Fund placement/investment	Manage JETF resources in accordance with the approved mandate, investment objectives, risk parameters, and applicable financing instruments.
Proposal appraisal	Assess projects against eligibility, financial viability, regulatory readiness, institutional capacity, safeguards, and expected impact.
Fund disbursement	Establish funding agreements covering eligible costs, milestones, disbursement conditions, reporting, and changes to approved activities.
Monitoring, evaluation and beneficiary support	Monitor financial utilization, outputs and outcomes, upskilling and reskilling local human capital, socioeconomic impacts, and sustainability, while providing capacity support where required.

Source: *GR No.23/2005, as amended by GR No.74/2012, GR No.46/2017, Presidential Regulation (PR) No.77/2018, GR No.63/2019, Minister of Finance Regulation (PMK) No.53/2020, PMK No.137/2019, as amended by PMK No.24/2021, Minister of Finance Decree (KMK) No 779/2019, KMK No.212/2024.*

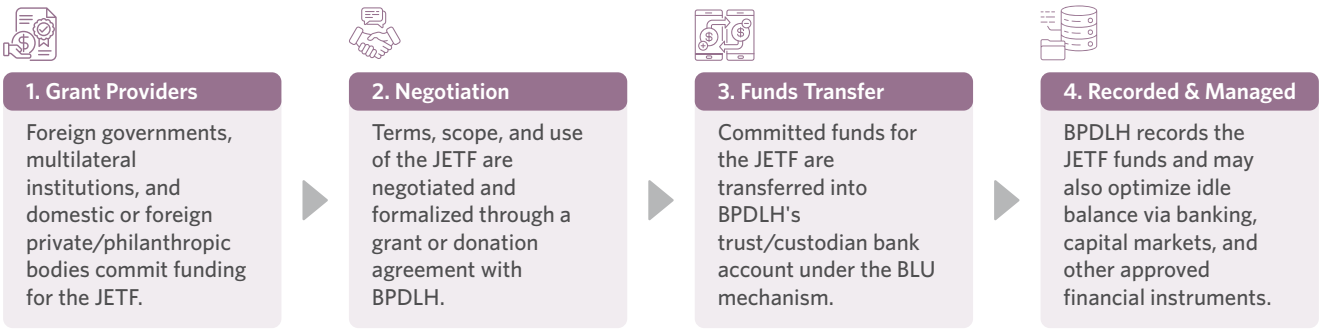
4.2 JETF FLOW OF FUND MECHANISMS

While BPDLH's existing infrastructure provides a potential foundation for JETF, it was developed primarily for the forestry and agroforestry sectors. To incorporate the proposed JETF, BPDLH needs to establish energy-sector-specific systems and capabilities.

4.2.1 COLLECTION OF FUNDS

The BPDLH can currently collect funds in the form of (i) funds for the prevention of environmental pollution and/or damage, and environmental restoration; and (ii) trust funds/ conservation grants. Funds for the prevention of environmental pollution and/or damage may come from the state budget (APBN) or subnational budget (APBD) allocation. Meanwhile, trust funds and/or conservation grants may come from domestic institutions/public, foreign governments and foreign financial/non-financial institutions, and multilateral bodies. This is the category the JETF would most naturally fall into if routed through the BPDLH. The current mechanism for the BPDLH to receive a grant can carry over to how a JETF tranche would be structured:

Figure 8. Proposed funds collection for the JETF



4.2.2 FUND OPTIMIZATION

The BPDLH may optimize idle cash in its account , such as funds from its existing, non-energy-related activities, to prevent the money from sitting non-productively between collection and disbursement. Regulation allows short- and long-term investments of idle cash in banking instruments, capital market instruments, and other financial instruments. For grant purposes (such as the proposed JETF), Ministry of Finance Regulation No. 124/2020 requires the BPDLH to invest in accordance with the underlying grant agreement.

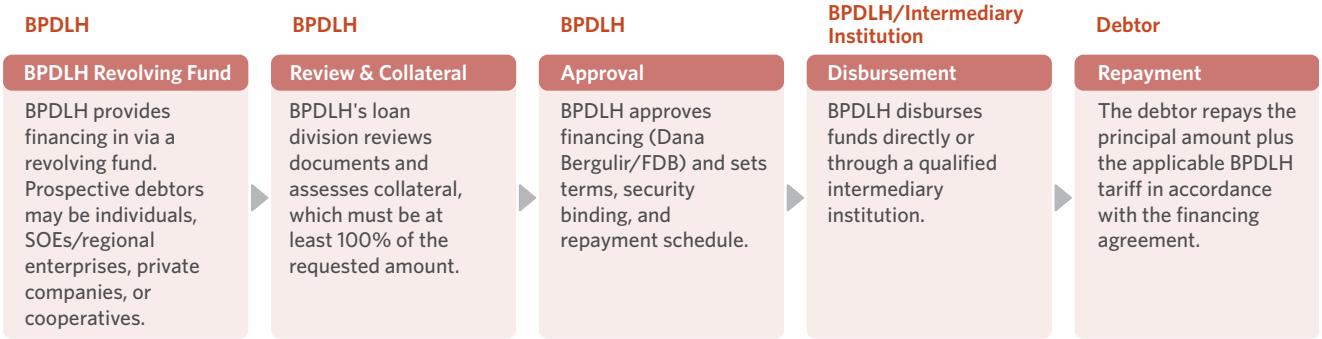
4.2.3 DISBURSEMENT OF FUNDS

The BPDLH uses two distinct financial mechanisms for fund disbursement, which could be adopted into the JETF model: (i) Grant; and (ii) Revolving Loan as described in detail below:

GRANT TRACK

The grant track refers to funds provided to beneficiaries without a repayment obligation. Eligible recipients include individuals, communities, government or non-government bodies, businesses, and research institutions. Disbursement can be directly to beneficiaries or through an intermediary institution, such as a regional government, bank, non-banking financial institution, cooperative, NGO, or other legal entity appointed by the BPDLH.

Figure 9. Proposed grant disbursement mechanism for the JETF

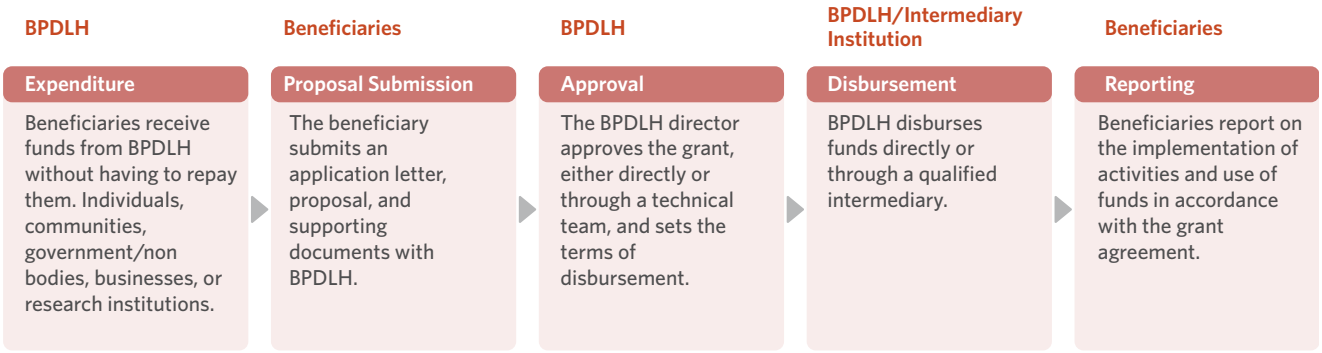


The grant track is the most suitable mechanism for the proposed Upskilling & Reskilling Funding under the JETF. This is because reskilling and upskilling local workers to operate and maintain renewable assets is a cost-absorbing, rather than revenue-generating activity.

REVOLVING LOAN TRACK

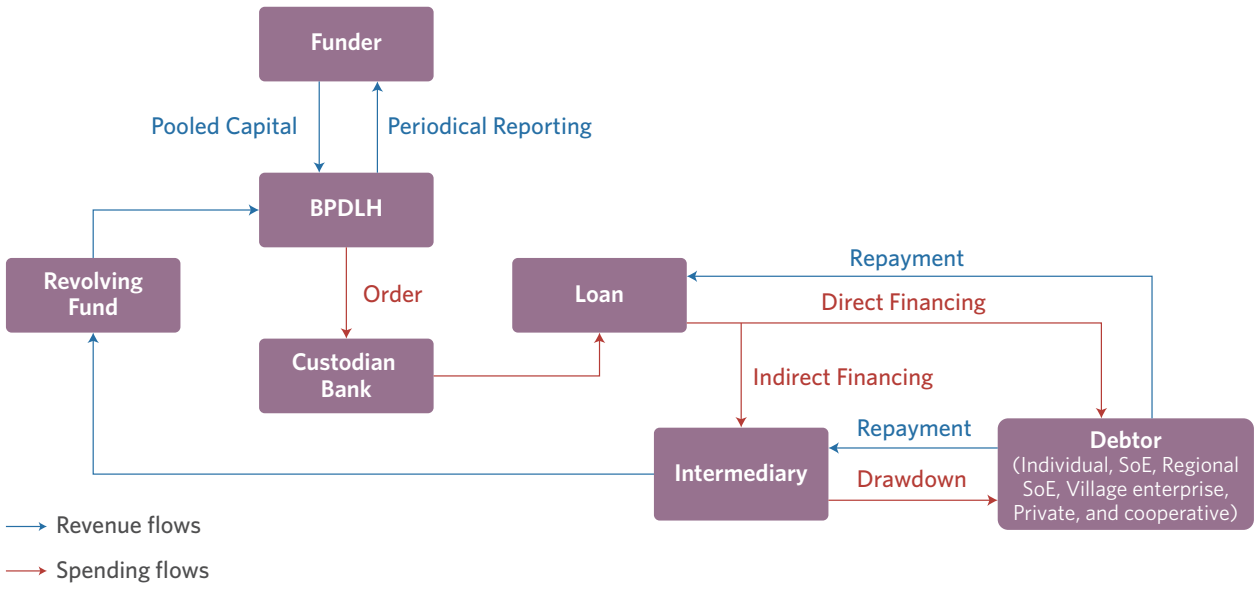
Under the revolving loan track, the BPDLH can provide a the facility to a prospective debtor, either through a conventional or sharia scheme. The debtor must also provide collateral for the loan. Similar to the grant track, if a prospective debtor cannot access the loan directly, an intermediary institution can be used.

Figure 10. Proposed revolving loan disbursment mechanism for the JETF



The revolving fund could target individuals, SoEs/regional enterprises, private enterprises and cooperatives using loan instruments in the form of conventional, profit-sharing or sharia loans. Repayments flow back through the intermediary institution that originally disbursed the loan. The BPDLH can collect principal and profit as non-tax revenue to finance more just energy transition projects and cover the BPDLH's operational costs.

Figure 11. Revolving Forestry Fund under BPDLH



The revolving loan track fits well for the VGF and PuE funding mechanisms, as both support activities that are ultimately revenue-generating. VGF may lower the capital expenditure of RE projects and create more affordable electricity tariffs for end users. Similarly, PuE funding supports community-based business ventures that leverage RE to create value, meaning the funded projects are intended to generate commercial returns. Therefore, beneficiaries must repay to preserve the JETF's revolving nature.

OTHER FINANCING INSTRUMENTS

Besides the two financial instruments above, the BPDLH also has flexibility to issue other forms of financial instruments, so long as it applies sound business practices. This flexibility allows BPDLH to design customized programs with innovative financing models, as demonstrated by the recent launch of a social-forestry program funded through a blended finance model.[4] This is relevant for the deployment of JETF as it allows the creation of specific instruments tailored for energy transition projects, such as blended finance.

The flexibility also allows modification of the existing BPDLH infrastructure to fit JETF's goals, for example, by adopting a new standard for identifying prospective beneficiaries that is more energy-sector-specific, or by appointing an intermediary institution with knowledge and experience in handling fund disbursement in the energy sector.

4.3 ENABLING CONDITIONS

This section focuses on the necessary enabling conditions to ensure (i) the long-term operation of the JETF and (ii) the successful delivery of JETF-supported projects.

4.3.1 ALIGNMENT OF NATIONAL AND SUBNATIONAL PRIORITIES

The JETF can align financing with Indonesia's existing climate, development, and energy policies, supporting projects that advance national and subnational priorities. At the national level, key policy frameworks increasingly link the energy transition to investment, economic transformation, and job creation, while subnational development strategies reflect different regional characteristics and economic opportunities. Table 4 summarizes the policy frameworks most relevant to the JETF and identifies potential areas of alignment.

4 Keputusan Direktur Utama BPDLH (KEP-52/BPDLH/2026).

Table 4. Policy Frameworks Enabling The JETF Implementation

National Transition Commitments and Strategies	
Long-Term Strategy for Low Carbon and Climate Resilience 2050 (Indonesia LTS-LCCR 2050)	Recognizes the need for additional investment in productive activities and technology adoption, including productivity enhancement in AFOLU and technology adoption in the energy sector.
Republic of Indonesia Second NDC (2025)	Identifies a substantial financing need (USD 472.6 billion), calls for sustainable economic activities and quality jobs in transitioning regions, and recognizes community-based initiatives as vehicles for strengthening village economies and welfare through village-based enterprises.
National Development and Energy Planning	
National Long-Term Development Plan 2025-2045 (*Rencana Pembangunan Jangka Panjang Nasional* – UU No.59 Tahun 2024/ RPJPN)	Positions economic transformation and the energy transition alongside long-term development processes, including the gradual retirement of coal-fired power plants and the development of new sources of economic growth. It also establishes differentiated economic transformation pathways across regions, providing a basis for tailoring the JETF-supported productive economic activities to regional development priorities.
National Medium-Term Development Plan 2025-2029 (*Rencana Pembangunan Jangka Menengah Nasional* – Perpres No.12 Tahun 2025/RPJMN)	Provides multiple entry points for the JETF-supported productive economic activities by linking the green and low-carbon transition (National Priority 2) with productive enterprise and employment creation (National Priority 3) and bottom-up rural economic development (National Priority 6).
National Energy Policy (*Kebijakan Energi Nasional* – PP No.40 Tahun 2025/KEN)	Links energy-sector decarbonization with inclusive economic growth, domestic value, and employment creation. It also establishes an updated national–subnational energy planning architecture, under which RUEN is expected to incorporate decarbonization targets, regional energy plans, investment estimates and financing strategies, providing a potential entry point for aligning the JETF financing with national and regional energy-transition priorities. Its operationalization through the RUEN 2026–2035 remains under development.
Power-Sector Planning and Transition Roadmap	
National Electricity General Plan 2025-2060 (*Rencana Umum Ketenagalistrikan Nasional*/RUKN)	Explicitly links electricity development with local economic development through RE-Based Economic Development (REBED), which integrates local energy resources with economic clusters, and RE-Based Industrial Development (REBID), which integrates energy-resource development with industrial development. The RUKN further identifies domestic value creation and employment creation as objectives of power-sector development and provides for participation by cooperatives and community organizations in small-scale rural electricity provision.
Electricity Supply Business Plan 2025-2034 (*Rencana Usaha Penyediaan Tenaga Listrik PT PLN (Persero) Tahun 2025-2034*/ RUPTL)	Translates national electricity-sector priorities into a geographically specific investment pipeline, including planned generation, transmission, and distribution infrastructure at the provincial level, which can be used to identify potential synergies between the JETF-supported productive economic activities and planned electricity-system development.
Electricity Sector Energy Transition Road Map (*Peta Jalan* (Road Map) *Transisi Energi Sektor Ketenagalistrikan – Peraturan Menteri ESDM No.10 Tahun 2025*)	Establishes the implementation pathway for accelerated coal-fired power plant retirement, from PLN assessment and government evaluation through Ministerial determination, replacement generation and implementation, subject to financing availability. The prioritization of candidate plants explicitly considers economic value added, financing availability, and just energy transition aspects, alongside technical, emissions, system-reliability, and tariff considerations.

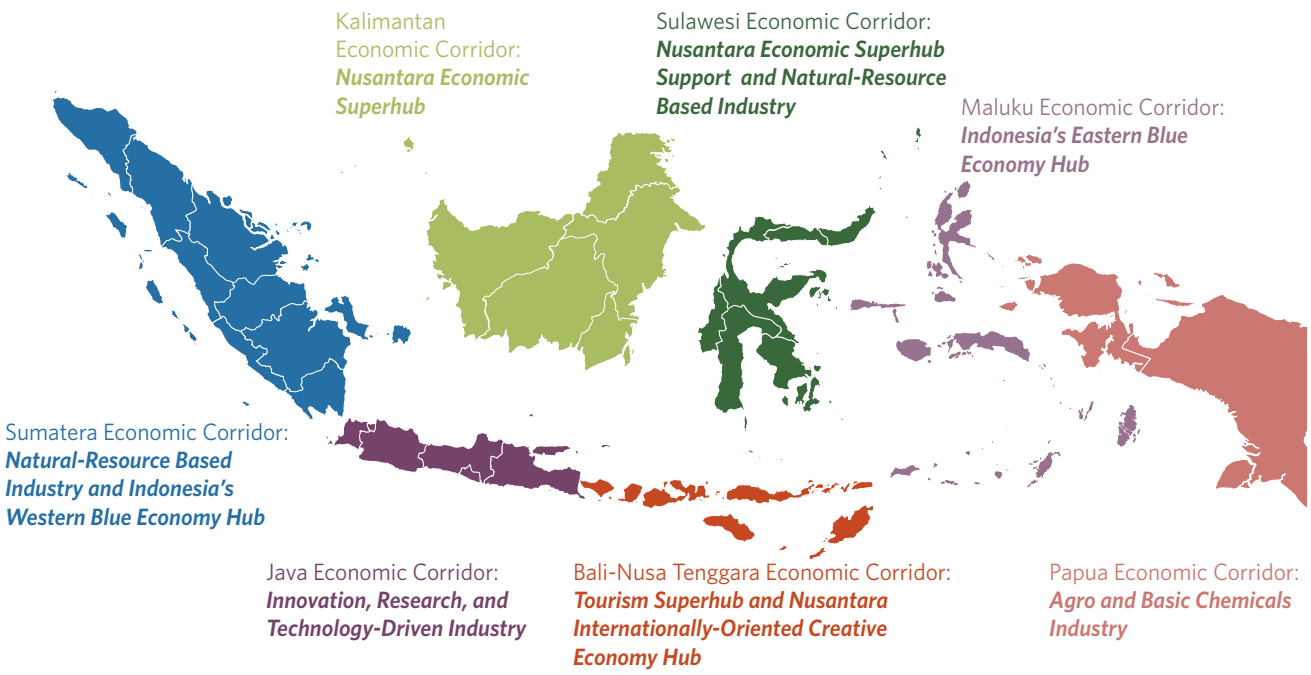
Among these frameworks, the Indonesia's Long Term Development Plan (Rencana Pembangunan Jangka Panjang Nasional/ RPJPN) provides timeline-based development stages for economic transformation to align with the energy transition, as shown in Table X.

Table 5. RPJPN development stages

Timeline	Economic transformation	Energy transition
2025-2029	▪ Green economy ▪ Productivity improvement ▪ New growth centers	▪ Restriction of new coal-fired power plants ▪ RE expansion, ESS, carbon credits, gradual fossil-fuel subsidy shift
2030-2034	▪ Expansion of new growth centers -> green economy, blue economy, and bioeconomy	▪ Commencement of coal-fired power plant retirement ▪ RE expansion ▪ Carbon Capture and Storage/Carbon Capture, Utilization, and Storage ▪ Grid expansion
2035-2039	▪ Higher-value activities ▪ Global Value Chain integration ▪ Medium/high-technology development	▪ Continued coal-fired power plant retirement ▪ RE and low-carbon technology expansion
2040-2045	▪ High-income economy driven by globally competitive human capital and innovation	▪ Expanded coal-fired power plant retirement ▪ Continued RE and low-carbon technology expansion

The RPJPN does not frame the energy transition in isolation from economic development. Rather, the shift from restricting new coal-fired power plants in 2025-2029 to progressively retiring coal-fired power plants through 2045 is accompanied by a transformation toward new sources of economic growth and higher-productivity activities. The RPJPN further differentiates this economic transformation agenda across regions based on their characteristics and development potential, as shown in Figure 12.

Figure 12. Thematic Focus on Regional Economic Transformation



Source: *National Long-Term Development Plan 2025-2045*

This regional differentiation provides a basis for identifying productive economic activities that are relevant to potential JETF-supported areas. However, their relevance depends on whether and how they are translated into subnational development priorities, sectoral programs, and locally identified investment opportunities.

CASE OF SOUTH SULAWESI

South Sulawesi serves as an illustrative subnational case to assess how national directions translate into local priorities and potential project pipelines. Drawing on a field study conducted in February 2026, the analysis traces the national strategy and plans discussed above through the following provincial planning instruments:

- Regional Long-Term Development Plan of South Sulawesi Province 2025-2045 (*Rencana Pembangunan Jangka Panjang Daerah Provinsi Sulawesi Selatan Tahun 2025-2045*/RPJPD);
- Regional Medium-Term Development Plan of South Sulawesi Province 2025-2029 (*Rencana Pembangunan Jangka Menengah Daerah Provinsi Sulawesi Selatan Tahun 2025-2029*/RPJMD);
- South Sulawesi Provincial Energy General Plan 2021–2050 (*Rencana Umum Energi Daerah Provinsi Sulawesi Selatan Tahun 2021-2050*/RUED-P); and
- South Sulawesi Regional Electricity General Plan 2022–2042 (*Rencana Umum Ketenagalistrikan Daerah Sulawesi Selatan Tahun 2022–2042*/RUKD).

The assessment also considers the South Sulawesi provincial annex to the RUPTL (Electricity Supply Business Plan 2025-2034) and evidence gathered during study visits to Sambueja Village in Maros Regency and Lempangang Village in Gowa Regency. Together, these sources assess whether national and regional transformation directions are reflected in provincial priorities and locally identified project opportunities, and whether these opportunities could be developed into a locally relevant and potentially implementable JETF pipeline.

Table 6. *Illustrative assessment of national-subnational alignment and potential JETF project leads in South Sulawesi*

National-level finding	Subnational translation	Local field visit finding
The National Medium-Term Development Plan (RPJPN) positions economic transformation and energy transition as parallel long-term processes and differentiates economic transformation pathways according to regional characteristics and potential.	**The South Sulawesi Long-Term Development Plan** (RPJPD) vision is: "South Sulawesi Independent, Advanced, and Sustainable", positioning the province as a national food hub supporting Nusantara Capital City through green economic development and digital transformation. Its directions include sustainable development of agriculture, fisheries, and other regional commodities; green and blue economy development; renewable-energy utilization; and an integrated food-energy-water approach.	A community biogas and bio slurry initiative in Sambueja and solar-powered irrigation installation in Lempangang are practical applications of clean energy to enhance agricultural productivity. These provide potential starting points for JETF projects that combine RE, rural productivity, and local value creation.

National-level finding	Subnational translation	Local field visit finding
The National Medium-Term Development Plan (RPJMN) links the green and low-carbon transition with productive enterprise and employment creation, as well as bottom-up rural economic development.	**The South Mid-Term Development Plan** (RPJMD) prioritizes: (i) agricultural and natural-resource downstreaming based on the green and blue economy, (ii) village self-reliance through community and rural economic development, (iii) adequate energy supply for industry, (iv) energy diversification and increased renewable generation, and (v) access to RE in island and hard-to-reach areas.	The study-visit initiatives show the following: ▪ The biogas and bio slurry initiative supported independent replication through village funds or advocacy to local government. ▪ The solar-irrigation initiative involved collaboration among a university, village government, and farmer groups, including training for assembly, operation, and maintenance.
The national energy framework links energy-sector decarbonization with inclusive economic growth, domestic value creation, and employment. It also addresses the need for regional energy planning that incorporates decarbonization, investment requirements, and financing strategies.	The South Sulawesi RUED includes the following strategies: ▪ Developing PLTMH, PLTS, PLTB, and biomass generation in areas with limited electricity networks ▪ Strengthening distribution and storage infrastructure ▪ Enhancing local technical capacity ▪ Encouraging village governments and village-owned enterprises to participate in local energy services.	▪ PLN already serves both study villages, while micro-scale renewable-energy utilization remains limited and is intended mainly to complement grid supply and meet specific productive needs. ▪ The stronger JETF opportunity is therefore not basic electrification, but productive-use distributed energy, e.g., biogas for household and agricultural use and solar power for irrigation, supported by appropriate operations, maintenance, and community capacity.
The National General Electricity Plan (RUKN) links electricity development with local economic activity through REBED and REBID, while the RUPTL translates electricity-sector priorities into geographically specific generation, transmission, and distribution plans.	**The South Sulawesi annex to the RUPTL** identifies renewable and hybrid solutions for isolated systems, such as: ▪ Smart-grid pilot in Selayar ▪ Planned rural-electrification investments through 2027 ▪ Grid-strengthening measures, including planned 60 MVA extensions at the Maros substation in 2030 and the Sungguminasa substation in 2032	▪ The study visit indicated two potential applications for JETF-supported energy interventions in areas already served by the PLN grid to support productive economic activities rather than basic electrification ▪ The South Sulawesi annex to RUPTL indicates that isolated systems remain in parts of the province, particularly remote islands, where renewable-energy development is planned to improve electricity supply. This may give the JETF an opportunity to coordinate with PLN to identify isolated systems where improved electricity access could be coupled with productive economic activities.

South Sulawesi's long- and medium-term development plans broadly reflect national transition objectives. Provincial priorities already connect green and blue economic development, agricultural down streaming, village-based economic development, and renewable-energy deployment. The initiatives in the study visit further demonstrate that these priorities can be translated into locally relevant productive uses of clean energy. However, initiatives remain relatively small and localized, indicating a potential role for the JETF in supporting project aggregation and coordination with relevant local institutions and PLN.

4.3.2 APPLICABLE REGULATORY FRAMEWORKS AT PROJECT LEVEL

Developing JETF-supported projects requires navigating a range of regulatory requirements, from electricity-sector licensing to land, spatial, environmental, and grid-related approvals. While Indonesia has frameworks governing each area, but uncertainty over how requirements apply to different project types can complicate development, implementation, and operation.

This challenge is particularly relevant for JETF-supported projects, which may vary in ownership arrangements, scale, technology, and RE installation projects. A utility-scale generation project in an established Business Area (Wilayah Usaha), developed through a conventional PLN procurement pathway, will follow a different regulatory route than a small, community-based off-grid system in a remote village. The regulatory assessment therefore focuses not only on the existence of requirements, but also on the extent to which the requirements are proportionate to project characteristics, clearly allocated among institutions, and capable of being satisfied within a predictable project timeline. The analysis therefore focuses on four areas:

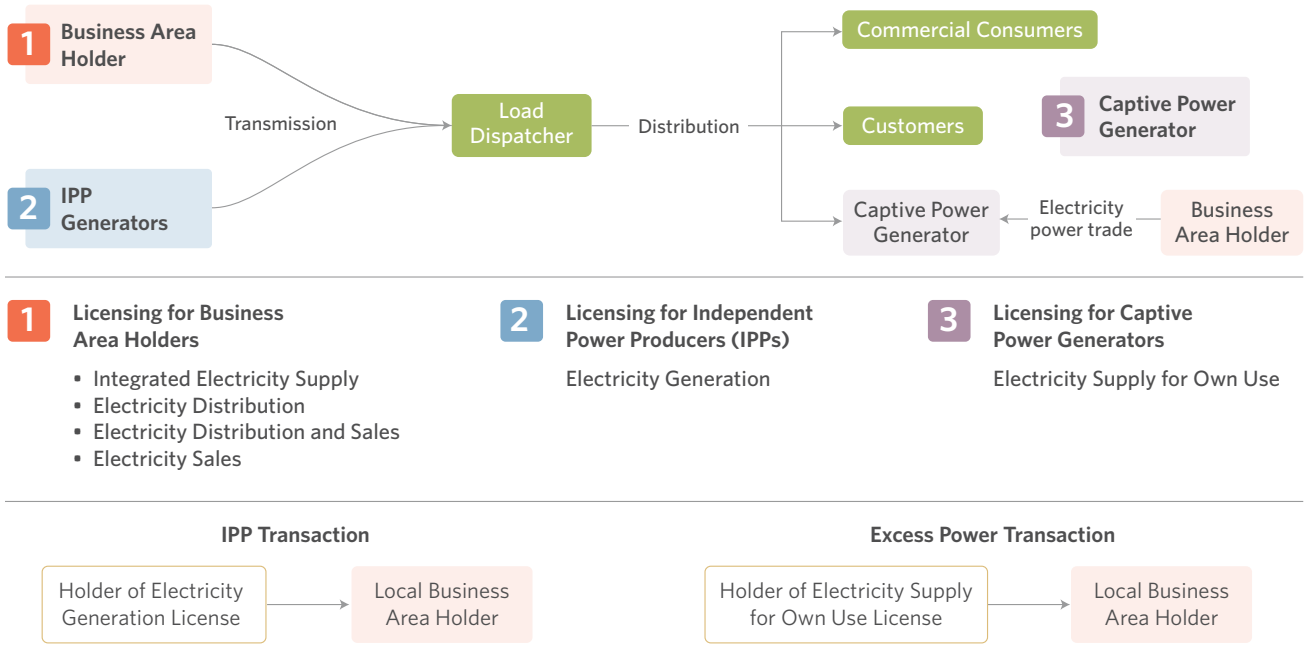
- Electricity licensing and business area requirements
- Land acquisition and land-use approvals
- Sectoral requirements for relevant economic activities
- Environmental and other project approvals

These areas are assessed for their potential implications for project cost, timelines, feasibility, and scalability.

4.3.2.1 ELECTRICITY LICENSING AND BUSINESS AREA REQUIREMENTS

Indonesia's electricity-sector framework establishes different licensing requirements depending on the type and function of electricity provision. In particular, the framework distinguishes between Business Area holders (*Wilayah Usaha*), independent power producers, and self-generating plants, as illustrated in Figure 13.

Figure 13. Electricity supply and licensing framework



Electricity supply within a Business Area involves a Business Area holder, which is responsible for transmitting and/or distributing electricity to customers. At the same time, independent power producers may generate electricity for sale to the holder. Entities generating electricity for their own use follow a separate licensing route. The applicable electricity business license therefore depends on the project's role within the electricity supply system.

For JETF-supported projects, the applicable electricity-supply model should be communicated at an early stage of project development, including the project's capacity, licensing status, intended use of electricity, and relationship with the existing electricity system. This is particularly relevant for projects involving self or distributed generation, where the regulatory treatment may differ depending on whether electricity is used solely for own consumption, whether excess power is generated, and whether the project requires access to an existing electricity network. If excess power or third-party network use is contemplated, it is important to establish the relevant purchaser or network arrangement, required approvals, and applicable commercial terms before incorporating these assumptions into the project's financial and operational model.

4.3.2.2 LAND ACQUISITION AND LAND-USE APPROVALS

Project implementation depends on whether a proposed site can be legally secured and used for the intended activity. The applicable framework covers land rights, acquisition and spatial conformity. Under Law No.2/2012 on Land Acquisition for Development in the Public Interest, as amended, land acquisition must be consistent with applicable spatial and development plans. In contrast, Government Regulation (GR) No.19/2021, as amended, sets out the planning, preparation, implementation, and handover stages for land acquisition. In parallel, GR No.21/2021 on Spatial Planning establishes the Suitability of Space Utilization Activities framework to determine whether a proposed activity conforms to applicable spatial plans.

For JETF-supported projects, this means that site selection should be treated as a project-readiness issue rather than only a land-acquisition matter. The proposed location should be screened early for land status and spatial conformity, as an inability to obtain the required spatial approval may constrain or delay subsequent project development even where the underlying project is technically and economically viable.

4.3.2.3 SECTORAL REQUIREMENTS FOR RELEVANT ECONOMIC ACTIVITIES

Given that JETF-supported projects will use RE to support productive activities including agriculture, fisheries, processing, and other local enterprises, regulatory requirements applicable to these activities may affect whether the intended economic benefits can be obtained. This may include requirements relating to business licensing, product registration, quality and safety standards, processing, and market access. CPI illustrated this consideration through its 2026 case studies in Maluku and South Sulawesi. Site visits in Maluku identified fisheries as a leading economic sector and highlighted the need for cold-chain infrastructure, including ice makers and cold storage, to maintain the quality of fish catches. The visit also observed the use of solar-powered drying to improve the quality and value of locally cultivated seaweed. In South Sulawesi, the site visit identified biogas and bioslurry as supporting agricultural productivity, along with solar-powered irrigation for rice cultivation.

For JETF-supported projects, assess the regulatory pathway for the resulting economic activity alongside the energy intervention itself. For example, commercializing bioslurry as an agricultural

input may require compliance with applicable product registration and circulation requirements. Downstream fisheries activities may also face additional requirements related to processing, food safety, labeling, and *halal* certification.

Accordingly, project appraisal should consider the full pathway from energy provision to marketable output. Where the economic case depends on commercializing products or services enabled by the project, identify the relevant sectoral requirements and route to market early, so regulatory requirements do not emerge only after the energy infrastructure and productive assets have been financed.

4.3.2.4 ENVIRONMENTAL AND OTHER PROJECT APPROVALS

Environmental requirements applicable to JETF-supported projects depend on the type, scale, location, and potential environmental impacts of the proposed activity. GR No.22/2021 on the Implementation of Environmental Protection and Management establishes the environmental approval framework, while Minister of Environment Regulation No.4/2021 specifies the applicable environmental instrument that needs to be satisfied. These instruments include Environmental Impact Assessment, Environmental Management and Monitoring Efforts, or Statement of Commitment to Environmental Management and Monitoring, depending on the characteristics and potential impacts of the proposed activity.

Identify the applicable environmental approval during early project preparation, as requirements and associated management and monitoring obligations may affect project timelines and implementation readiness.

5. JETF DEVELOPMENT STAGES

The JETF should be mobilized from multi source and multi mechanisms to ensure long-term sustainability support. Hence, the first capital invested in JETF shall focus more on how creation of enabling mechanism where multi source of funding from different source can be leveraged to invest in community based renewable energy. This enabling ecosystem shall be designed in a way where derisking mechanism strategy is formulated to enable private investment for small- to medium-scale renewable energy projects. Several planning steps to diversify JETF funding is described in the following figure.

Figure 14. JETF envisioned public-private financing framework

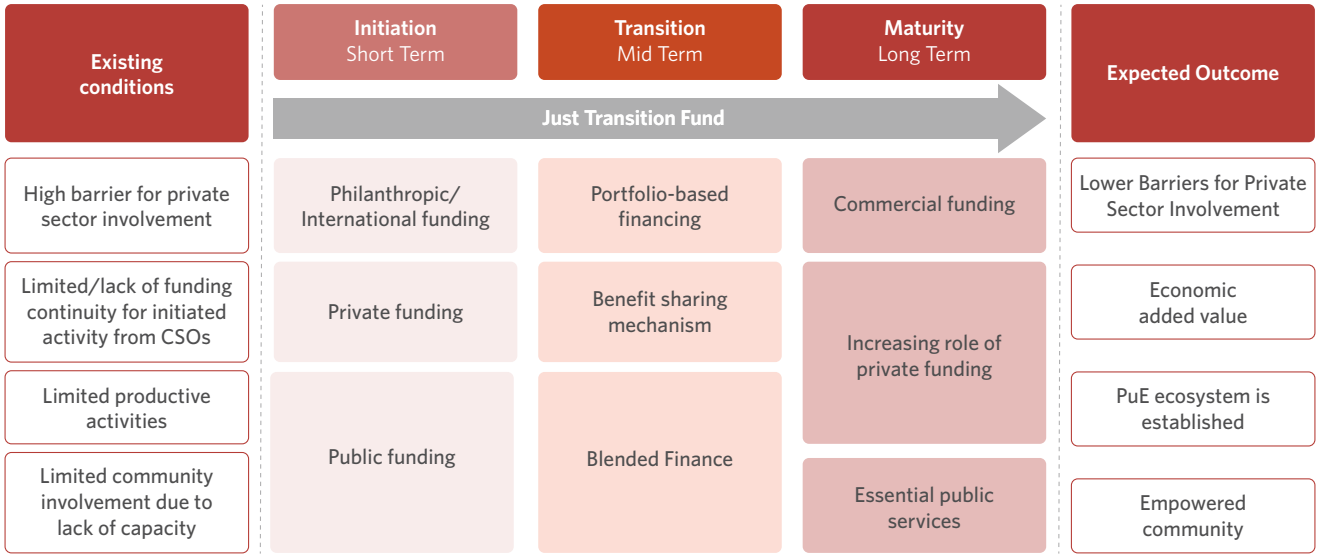


Figure 14 presents three phases to diversify the sources of the JETF funding: Initiation, Transition and Maturity:

1. **Initiation phase,** public funds should be targeted to reduce project development and initial investment risk. One option is to develop a pooling fund from public, private, and philanthropic funders to provide catalytic capital to establish community energy transition projects, reskilling and upskilling local workforce and productive economic activities (PuE). Public funds and institutions could support baseline study for selected regional area, strengthen institutional capacity, conduct mapping, and establish monitoring, reporting, and verification (MRV) mechanisms for eligible energy transition and PuE activities and models that can increase economic productivity in community-based small- and medium-scale PuE activities. Philanthropic funds can provide first-loss capital as part of the de-risking process before private sector finance enters the system.
2. **The transition phase** should sustain the activities and ecosystems initiated earlier and help them mature. During this phase, stakeholders in the energy transition, such as solar project developers and community-based renewable energy (RE) operators, may face risks related to operations, replication, and achieving scale. By this stage, a working business model that

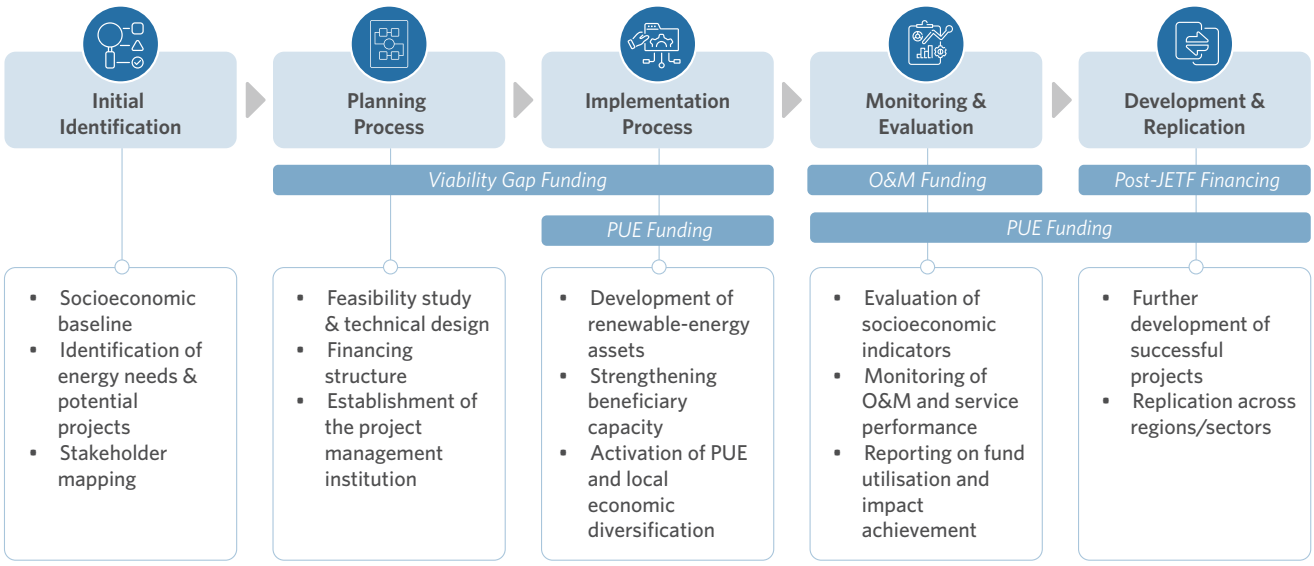
generates meaningful economic and financial value is expected to have been established and maintained for several years. The activity's risk profile is therefore lower than in the initiation phase, making it more viable for private investment. A combination of mechanisms, such as portfolio-based financing and blended finance, can carry projects to maturity, with viability gap funding as a key instrument. In addition, thematic bonds and other de-risking instruments can be developed further.

3. **In the maturity phase,** the JETF is expected to comprise more commercial than public funding. Public investment can support enabling investments, such as monitoring and verification services, operation and maintenance and regulatory and impact metrics. Public funding will become less dominant but remain crucial to maintain essential and extended public services and the established PuE ecosystem for the empowered community.

Over the longer term, the JETF aims to lower barriers to private investment and help to sustain established energy transition activities that transform and diversify local economies in rural communities. These activities are expected to strengthen existing local economic activities by enabling communities to develop new skills and improve productivity.

At the beneficiary level, the different phases as elaborated above can be reflected in a lifecycle from initial identification and planning, through implementation and monitoring, to further development and replication. Long-term plans and strategies should ensure that JETF support extends beyond project construction and contributes to electrification, increased village incomes, and green jobs in beneficiary areas. While this approach applies to all three JETF funding streams (VGF/PUE Funding/Upskilling and Reskilling Funding), each should be carried out under corresponding terms and conditions, reporting requirements and monitoring and evaluation. The JETF development stages are shown below.

Figure 15. *JETF Project Lifecycle*



5.1 MANDATE AND SCOPE

The first stage establishes the JETF's formal mandate and scope, including its policy objective, government sponsor, priority beneficiaries, eligible uses of funds, sectors, and geographic coverage. These parameters should translate the findings in Sections 1–4 into clear eligibility boundaries for the fund. The mandate should also define the intended outcomes of JETF support, as shown in Figure 16.

Figure 16. JETF Fund Principles



This provides the basis for subsequent project selection and monitoring and helps ensure that JETF support remains aligned with relevant national and subnational priorities.

The second stage is to translate the JETF's mandate and intended outcomes into (i) project-specific terms and conditions and (ii) measurable success metrics. The fund manager and recipient should enter into a grant or financing agreement, as applicable. The agreement should define and govern items such as:

(i) Approved activities

(ii) Eligible expenditures

(iii) Implementation period

(iv) Conditions precedent and disbursement milestones

(v) Environmental and social safeguards

(vi) Reporting, audit, verification, and data-access requirements

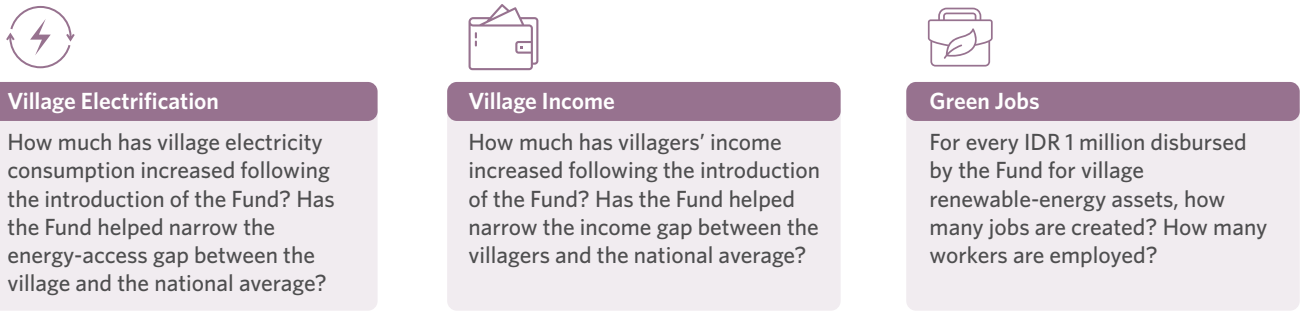
(vii) Procedures for amending approved activities

(viii) Termination in cases of delay or misuse of funds

These requirements should be proportionate to the amount and risk of the funding. Furthermore, the JETF's principle should be translated into a common fund-level results framework, supported by project-specific indicators and targets. The framework should not require every project to report against identical indicators. Instead, each funding agreement should specify the indicators relevant to the supported intervention, together with their baseline values, targets, units of measurement, data sources, reporting frequency, means of verification, and responsible parties. This approach would enable the JETF to aggregate and compare performance across its portfolio while accommodating differences among VGF, Upskilling and Reskilling Funding, and PuE Funding.

Based on the scoping studies conducted, the results framework has been identified into three outcomes: (i) Village Electrification, (ii) Village Income, and (iii) Green Jobs. Therefore, depending on the type of grant the JETF provides, further measurable and impact-oriented metrics, such as the following, will also be determined and tailored to the specific project's needs.

Figure 17. JETF performance through measurable and impact-oriented metrics



5.2 CAPITALIZATION AND PIPELINE PREPARATION

The third stage is to secure initial capital commitments while developing an initial pipeline of projects that the JETF's proposed funding areas can support: VGF, Upskilling and Reskilling funding, and PUE funding.

Pipeline development should be coordinated with subnational governments and local project developers, based on identified energy needs, existing or planned renewable-energy assets, and opportunities to strengthen local economic activities. Potential projects should be screened against the most appropriate funding window and the required level of support.

Where necessary, the JETF may support initial project preparation to establish the technical, institutional, and financial requirements for funding. For PUE interventions, this should include assessing the viability of the underlying economic activity and its potential to generate additional income that can support the long-term operation of the renewable-energy asset.

5.3 PILOT DEPLOYMENT AND LEARNING

The fourth stage is to launch the first JETF funding window and use the initial portfolio to assess success factors by testing it through existing monitoring, evaluation, and beneficiary-support mechanisms, as elaborated in Section 5.2. While the specific scope is to be determined, the pilot should establish whether JETF activities translate into intended energy, economic, and social outcomes across different beneficiary types and interventions.

Monitoring should cover both financial and substantive performance, including fund use, implementation progress, operation and maintenance of supported assets, performance of productive-use activities, and achievement of agreed output and outcome indicators. Beneficiaries should also receive appropriate technical or institutional support where monitoring identifies implementation constraints or capacity gaps.

The pilot evaluation should then assess the effectiveness and sustainability of different JETF interventions, including whether VGF support improves project viability, whether upskilling and reskilling support contributes to continued asset operation, and whether PuE support generates sufficient economic benefits to strengthen local livelihoods and the sustainability of the underlying energy asset.

The results and lessons from the pilot should be used to refine the JETF's eligibility criteria, funding conditions, MRV framework, beneficiary-support mechanisms, and scaling strategy before broader deployment.

5.4 SCALE-UP AND INSTITUTIONALIZATION

The final stage is to expand the JETF funding base, sectors, beneficiaries, and geographic coverage based on lessons learned from the pilot. Projects demonstrating strong implementation performance and socioeconomic impact can provide the basis for further development and replication, including replication across locations or sectors with similar characteristics.

As projects and business models mature, the JETF should seek to mobilize greater participation from private and other financial institutions, while retaining concessional or grant support where projects continue to face viability or capacity constraints. This allows public and donor resources to remain catalytic rather than becoming the sole source of long-term project finance.

Over time, the JETF should be integrated into national and subnational planning and financing cycles. This would allow successful project models to be aggregated and replicated while progressively reducing reliance on one-off project support.

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