In collaboration with Accenture and Kamar Dagang dan Industri Indonesia (KADIN)

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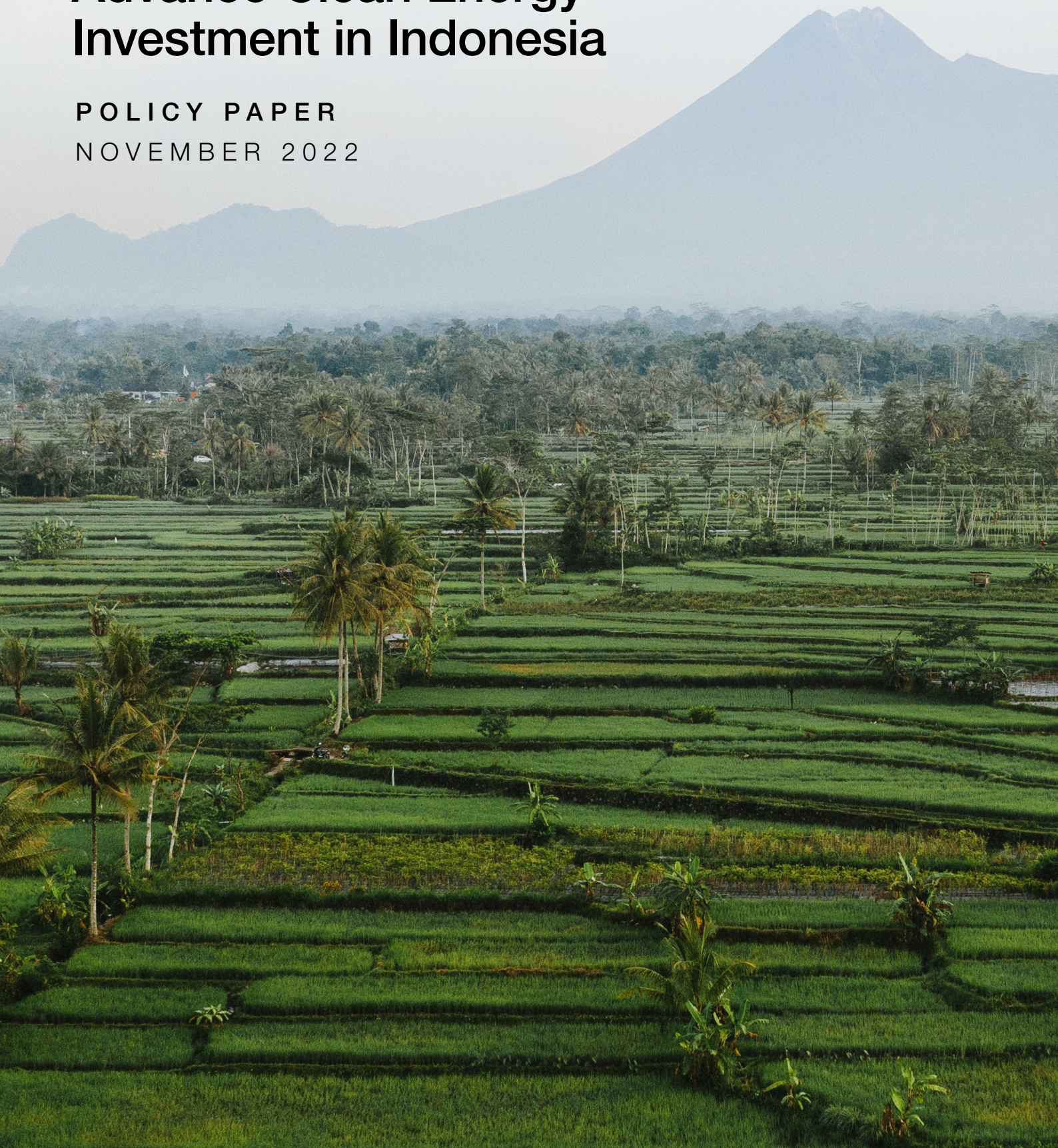
WORLD ECONOMIC FORUM

Policy Opportunities to Advance Clean Energy Investment in Indonesia

POLICY PAPER

NOVEMBER 2022



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Executive summary

Indonesia is the world's largest archipelagic state and the largest economy in South-East Asia. While fossil fuels currently dominate its electricity generation mix (70%), the country is endowed with a phenomenal potential for renewables (at least 400 GW). Accelerating the deployment of renewable energy capacity can be a significant measure for Indonesia to bolster its energy security, reduce reliance on fossil fuel imports and meet its net-zero targets. In doing so, Indonesia has the opportunity to become a renewable energy superpower.

In 2022, the World Economic Forum (supported by Accenture), Kamar Dagang dan Industri Indonesia (KADIN), and RE100 (led by Climate Group in partnership with CDP) established a working group of Indonesian and international stakeholders from industry, finance and academia to explore solutions to unlock capital for clean energy investments in Indonesia. This report outlines a series of policy and regulatory aspects that, if addressed, would help unlock Indonesia's clean energy future. For each of these aspects, possible regulatory and policy framework enhancements are suggested to create the kind of environment that would be conducive for Indonesia to attract the $150-200 billion in annual investments it needs to meet its net-zero targets:

Policy message #1:
Renewable energy tariff regime
Create a level playing field for renewable electricity to compete fairly with fossil fuel-based electricity

Policy message #2:
Regulatory environment
Remove regulatory barriers and implement stable frameworks to facilitate the uptake of corporate renewable electricity sourcing

Policy message #3:
Power purchase agreement (PPA) practices
Create an electricity market structure that allows for direct trade between corporate buyers of all sizes and renewable electricity suppliers

Policy message #4:
Legislative implementation mechanisms
Work with utilities or electricity suppliers to accelerate the growth of renewable energy infrastructure

Policy message #5:
Incentive mechanisms
Substantiate renewable energy incentives to improve the investment environment

Policy message #6:
Renewable energy certificates (RECs) and tracking system
Enhance the transparency, sustainability and additionality of renewable energy certificates (RECs)

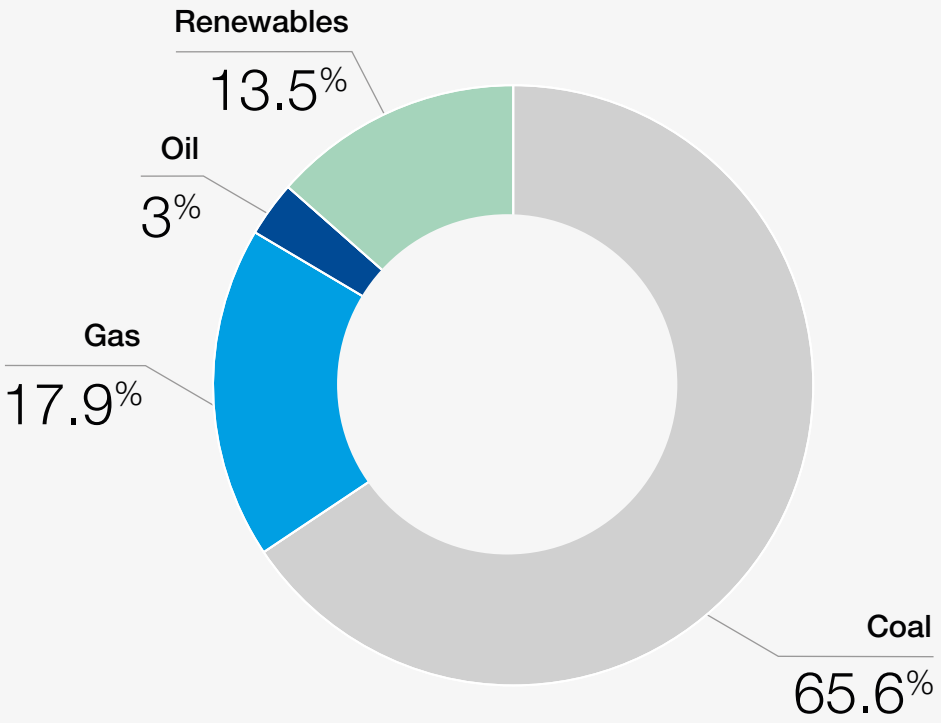
The working group calls on Indonesian stakeholders and government entities to reflect on the arguments made in this paper and take steps to create an enabling environment for renewable energy investments.

1 Overview of Indonesia's energy sector

Indonesia is the world's largest archipelagic state and the largest economy in South-East Asia, with a population of 272.6 million (as of 2021) and a GDP of $1.15 trillion[1] (as of 2021). The country's total primary energy consumption grew by about 16% between 2010 and 2020.[2]

Fossil fuels dominate the country's electricity generation mix, making up more than 70% of generating capacity, with coal contributing to upwards of 65% of total generation.

FIGURE 1 **Indonesia's energy mix (as of 2021)[3]**

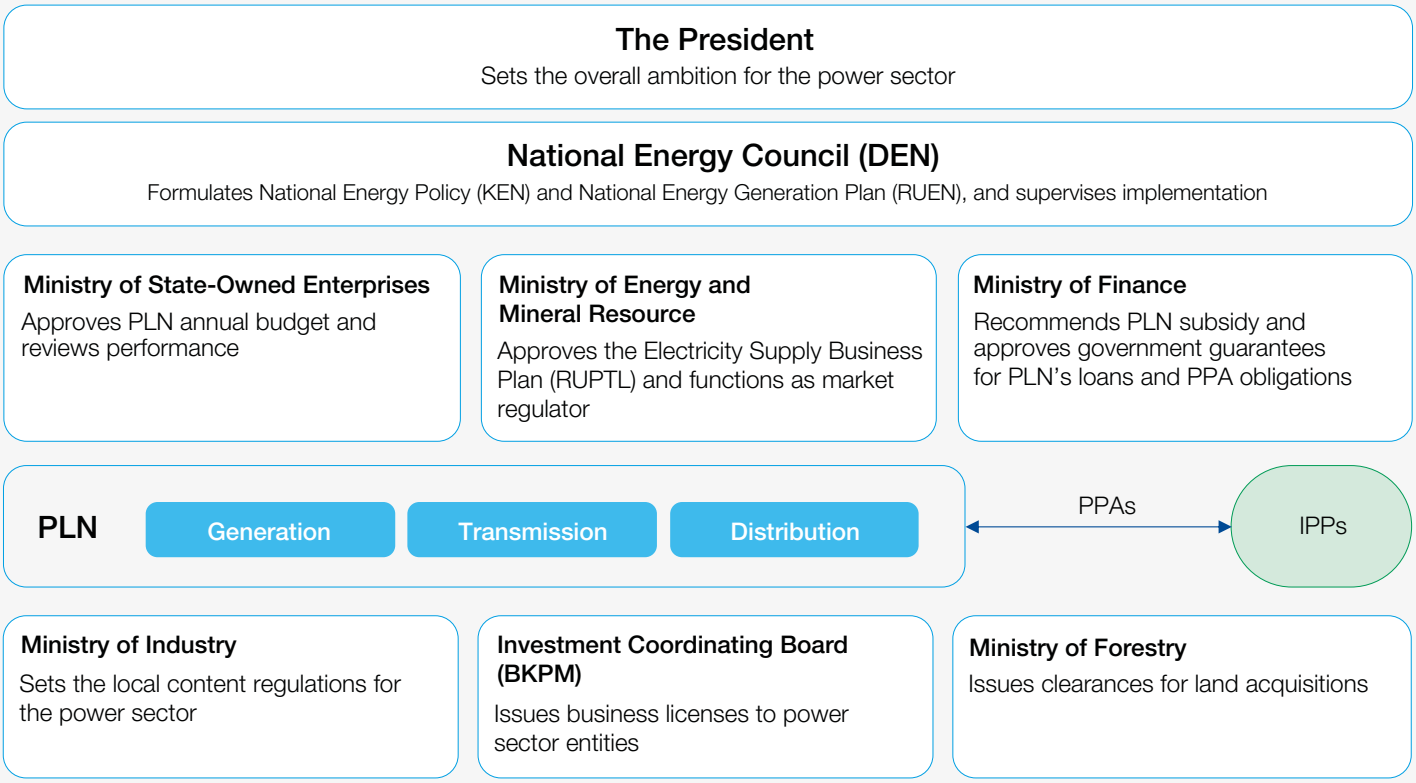


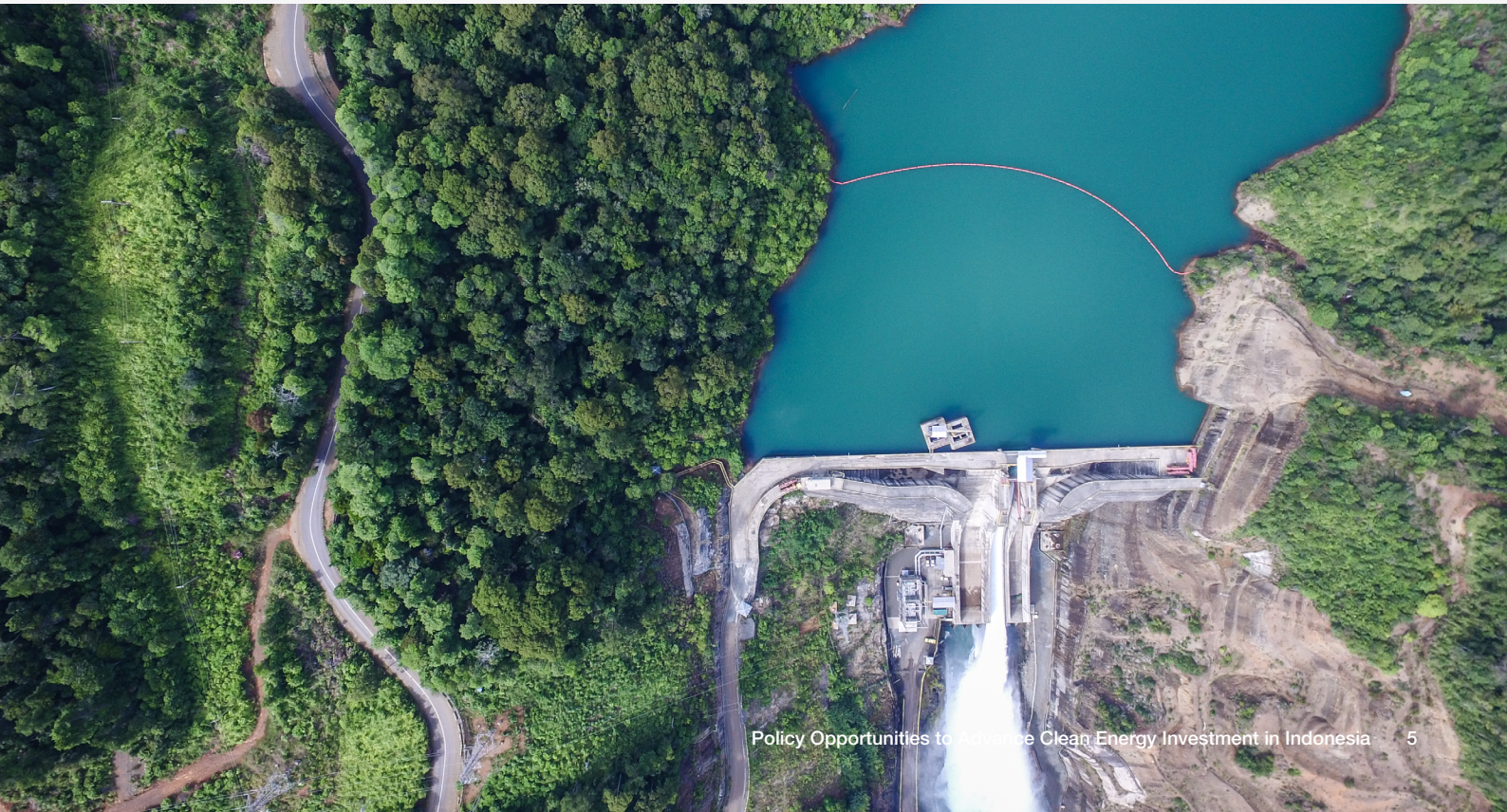
Indonesia is currently the world's second-largest coal exporter after Australia,[4] with coal exports totalling $26.5 billion in 2021. That same year, Indonesia spent $24 billion on net oil imports, a number that is expected to rise to around $35 billion in 2022. By 2050, net oil and gas imports are expected to reach $100 billion.[5]

1.1 Indonesia's electricity market structure

The Indonesian electricity market is vertically integrated. Its leading player, state-owned enterprise Perusahaan Listrik Negara (PLN), has an electricity transmission and distribution monopoly. Although there is a provision for independent power producers (IPPs) to generate electricity, they need to contract with PLN via power purchase agreements (PPAs). PLN then fulfils the transmission and distribution functions.

FIGURE 2 **Key entities in the Indonesian electricity market**





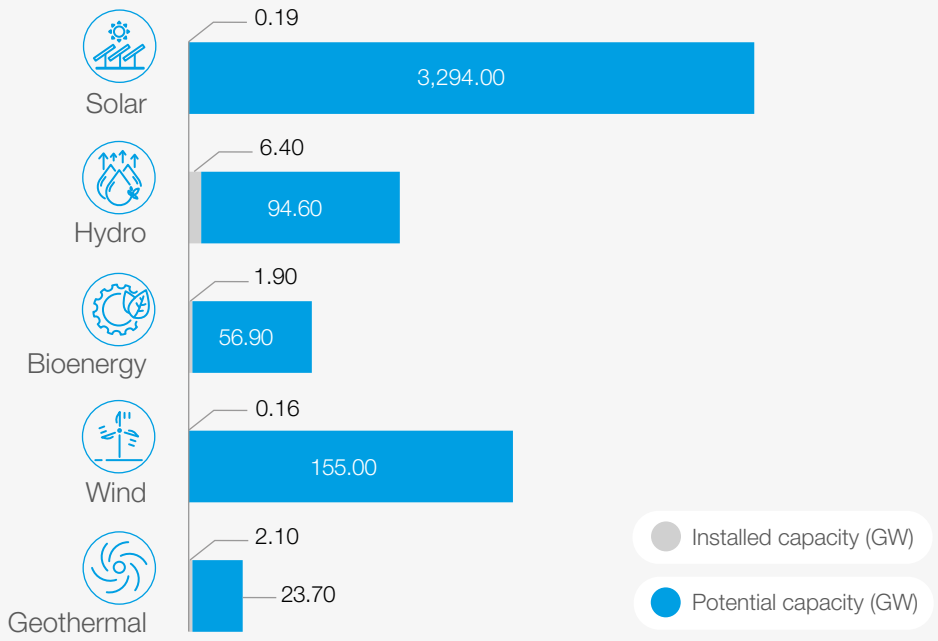
1.2 Renewable energy in Indonesia

Indonesia has a total renewable potential of more than 400 GW, which is still largely untapped, with a renewable installed capacity of about 10.8 GW (as of 2021).

The country plans to install additional generation capacity of 40.6 GW by 2030, more than half of which (20.9 GW) is to come from renewable sources. By 2025, the national energy mix shall comprise 23% renewable energy (or 24 GW of installed capacity). The majority of the planned renewable capacity addition until 2030 will come from hydropower (9.3 GW), solar (4.7 GW) and geothermal (3.4 GW). To meet its net-zero by 2060 target, it is estimated that Indonesia would need an average of $150-200 billion annually until 2030.[7]

Presidential decree no. 112/2022 issued in September 2022 highlights the main measures to encourage renewable energy in Indonesia, including setting up a competent pricing regime for renewable energy sources, tax incentives for renewable energy projects and streamlining the negotiation process to reach the pricing agreement.

FIGURE 3 **Indonesia's renewable resource potential and installed capacity[6]**



1.3 Current electricity supply-demand dynamics

Indonesia's National General Electricity Plan (RUKN – Rencana Umum Ketenagalistrikan Nasional), published by the Ministry of Energy and Mineral Resources (MEMR), sets out a 20-year projection for electricity supply and demand. The Government of Indonesia and PLN also publish the country's Electricity Supply Business Plan (RUPTL – Rencana Umum Penyediaan Tenaga Listrik) every year. It outlines Indonesia's power capacity projections and network development plans for the next 10 years.

Optimistic consumption growth projections have led to the building of significant coal-fired power plant capacity, leading to a capacity over-supply in the electricity market. Additionally, long-term "take-or-pay" PPA agreements – which ensure that plant operators receive guaranteed payments irrespective of plant use rates – have led to high reserve margins and general underuse of coal power plants.

Accelerating the deployment of renewable energy capacity can be a significant measure for Indonesia to bolster its energy security and reduce reliance on fossil fuel imports. On top of the growth of its domestic clean energy capacity, Indonesia has the opportunity to become a renewable energy superpower, exporting to neighbouring countries increasingly seeking green electricity sources, as exemplified by Singapore, which aims to import 4 GW of its electricity needs by 2035.[8]

2 Policy opportunities to advance clean energy investment in Indonesia

In line with the RE100 Global Policy Message,[9] the working group has identified six critical areas for consideration and the associated recommendations that could improve Indonesia's current regulatory and policy environment. These recommendations would create an enabling environment for investments to flow at the scale needed for Indonesia to fulfil its clean energy ambition.

Throughout this section, case studies are provided as illustrative examples of measures having helped increase clean energy investments in other country contexts. These case studies should be treated as examples of solutions as opposed to pure recommendations as their applicability to Indonesia would require further analysis.

2.1 Renewable energy tariff regime

Situation

Indonesia has implemented tariff caps linking renewable energy tariffs to the average local and national electricity generation cost (BPP – Biaya Pokok Penyediaan). Currently, the final tariffs (capped at 85% of the local BPP if higher than the national average[10]) are subject to extensive negotiations between PLN and the IPPs and require significant time and effort from the latter. This BPP benchmark is based on fossil fuel-based generation costs, which are highly subsidised. In the absence of direct subsidies for renewables, the present tariff mechanism does not allow renewable energy projects to compete fairly with fossil fuel-based infrastructure, which limits their financial viability.

Policy message #1

Create a level playing field for renewable electricity to compete fairly with fossil fuel-based electricity

Simplify negotiation processes

Conduct open auctions

Simplify tariff mechanism process

While Presidential decree no. 112/2022 proposes improvements to the renewable energy tariff regime, the strategies below could be considered to ensure competitive costs for renewable energy when it comes to its enactment:

- Simplify the negotiation process by establishing standardized processes for negotiation between PLN and the IPPs
- Conduct open auctions favouring the lowest quoted generation cost to ensure more competitive renewable energy prices
- Simplify the tariff mechanism process by exploring the viability of introducing renewable energy subsidies.

FEATURED CASE STUDY

Malaysia's large-scale solar (LSS) programme

The large-scale solar programme is a competitive bidding programme to drive down the levelized cost of energy (LCOE) for the development of large-scale solar photovoltaic projects. It has allowed Malaysia to grow its solar capacity through solar auctions substantially. Four rounds of auctions have been held since its creation, awarding a total of 2.45 GW of solar capacity.

The connection of these solar plants to the grid is governed by the *Guidelines on large scale solar photovoltaic plant for connection to electricity networks* published by the Energy Commission (Malaysian regulator for the electricity sector). A take-and-pay mechanism has been adopted for PPAs under a build, own and operate (BOO) model. The PPA duration is 21 years, with fixed energy prices throughout its tenure.

The successive auctions have driven the awarded prices per kWh downwards (see figure 4), making the Malaysian solar PV market more competitive and leading to an increase in total installed solar capacity in the country.

FIGURE 4 **Large-scale solar awarded capacity and auction price**

Source: Malaysia's Sustainable Energy Development Authority (SEDA), Large Scale Solar, https://www.seda.gov.my/reportal/large-scale-solar/#:~:text=Large%20Scale%20Solar%20or%20known,implementing%20agency%20for%20this%20scheme. Malaysia's Energy Commission (ST – Suruhanjaya Tanaga), LSS Progress by Region, 2022, https://www.st.gov.my/en/web/industry/details/2/17. ST, Guidelines on Large Scale Solar Photovoltaic Plant for connection to Electricity Networks, 2018, https://www.st.gov.my/contents/2019/LSS/Guideline%20on%20LSSPV%20for%20Connection%20to%20Electricity%20Networks_%20February%202019.PDF.

2.2 Regulatory environment

Situation

In Indonesia, discrepancies in planning and policy considerations were observed in the different power sector planning documents published by national agencies (i.e. RUPTL (Electricity Supply Business Plan), RUEN (National Energy Generation Plan), RUKN (National Electricity General Plan)). Those differences add complexity for investors and project developers who must consider multiple scenarios to build investment plans and project pipelines.

Stringent local content requirements discourage investments in renewable infrastructure projects in Indonesia. While local content requirements apply to all renewable energy technologies, they are the most stringent for solar photovoltaics (PV), for which they have been increased from 40% in 2012 to 60% in 2019, posing a threefold challenge for project developers:

- The procurement of locally manufactured panels has been limited by total national manufacturing capacity, which was estimated by the Indonesian Solar Module Manufacturer Association (APAMSI) at 11 national manufacturers, with a total production capacity of 500 MWp/year[11]
- Locally manufactured panels have difficulties competing with the cost of panels manufactured abroad
- The quality and efficiency of domestic panels have also been highlighted as areas of concern vis-à-vis panels that can be procured from the international market.

Policy message #2

Remove regulatory barriers and implement stable frameworks to facilitate the uptake of corporate renewable electricity sourcing

Increase coordination in energy policy-making and regulation

Adopt a phased and gradual approach to defining local content requirements

The following measures could help Indonesia remove existing regulatory barriers to corporate renewable electricity sourcing and reinforce the stability of its regulatory framework:

- Increase coordination in energy policy-making and regulation wherein multiple planning bodies issue coordinated plans. Proactive rulemaking, backed by effective and firm implementation, can enable the smooth and efficient uptake of renewable energy investments in Indonesia.
- A phased and gradual approach to defining local content requirements could be adopted, taking into consideration Indonesia's manufacturing capacity, supplier base, local regulations and workforce skillset. Initially, local content requirements could be minimal and applicable to specific areas of the value chain where appropriate capability and know-how exist, to provide impetus to the development of renewable projects.

FEATURED CASE STUDY

India's Jawaharlal Nehru National Solar Mission (JNNSM)

India launched the National Solar Mission in 2010 to establish the country as a global leader in solar energy through effective policy implementation throughout the country. The mission proposed to adopt a three-phase approach, with critical targets for each phase:

- Phase 1 (2010–2013) – Target of 1000 MW grid-connected PV (including rooftop) and 200 MW off-grid PV
- Phase 2 (2014–2017) – Cumulative target of 4000-10,000 MW grid-connected PV and 1000 MW off-grid PV
- Phase 3 (2017–2022) – Cumulative target of 100,000 MW grid-connected PV and 2000 MW off-grid PV

A key objective of the mission was to enable India to be a leading solar manufacturer and reach 4-5 GW annual manufacturing capacity by 2020. To achieve these objectives, the government adopted a phased local content requirement (LCR) approach wherein the local content rules only applied to crystalline silicon technologies in phase 1, while in phase 2, developers had to source locally manufactured PV components to be eligible for the domestic content requirement (DCR) auction categories.

In 2018, the Ministry of New and Renewable Energy (MNRE), the nodal body for renewable energy in India, issued orders to implement "Make in India" rules for the public procurement of clean power in India. It required a 100% local content requirement for solar modules in grid-connected plants and 70% for off-grid/decentralized solar projects for all projects tendered by the federal government, ministries and public sector undertakings.

LCRs have played a significant role in the 135% growth in the manufacturing capacity of crystalline silicon modules in phase 1. After the "Make in India" announcement, domestic manufacturers expressed significant confidence in ramping up their manufacturing capacities. As of 2022, India had an installed PV cell manufacturing capacity of 3 GW/year and a PV module capacity of 10 GW/year.

Source: International Energy Agency (IEA), Jawaharlal Nehru National Solar Mission (Phase I, II and III), 24 August 2021, https://www.iea.org/policies/4916-jawaharlal-nehru-national-solar-mission-phase-i-ii-and-iii. MNRE, Solar Energy Overview, https://mnre.gov.in/solar/current-status/. Bazilian, M. et al., Local-content rules for renewables projects don't always work, *Energy Strategy Reviews*, 2020, https://www.sciencedirect.com/science/article/pii/S2211467X2030122X.

2.3 Power purchase agreement practices

Situation

Indonesian regulations do not allow IPPs to enter into direct power purchase agreements with customers. This limits the ability of consumers to procure power produced from renewable sources directly. This is especially true for commercial and industrial (C&I) consumers who are increasingly setting ambitious clean energy procurement targets. While PLN's existing renewable energy certificate (REC) programme is a positive step to promote renewable energy in the short term, businesses operating in Indonesia would welcome the ability to procure renewable energy through a direct corporate PPA, which presents the advantage of adding additional clean energy capacity, thus contributing to the national renewable energy target.

Indonesia also does not currently have a standard PPA regime. As such, agreements are assessed and negotiated on a case-by-case basis, increasing complexity, reducing transparency, and lowering investor confidence overall. Negotiation processes also involve a lot of back-and-forth communication between the parties, leading to longer lead times and high costs for project developers. This was found to be especially true for consumers willing to install ground-mounted solar on their premises, which – contrary to rooftop solar – would not fall under Ministry of Energy and Mineral Resources regulation no. 26/2022 but instead would be regarded as an IPP needing to go through a negotiation process with PLN to determine the tariff.

Policy message #3

Create an electricity market structure that allows for direct trade between corporate buyers of all sizes and renewable electricity suppliers

Enable businesses to contract directly with IPPs

Implement power-wheeling mechanism

The following measures could be considered for Indonesia to create an electricity market structure that allows for direct trade between corporate buyers and electricity suppliers:

- Enabling businesses to contract directly with IPPs through standardized and streamlined processes can ensure faster scaling of renewable energy capacity.
- Implementing power-wheeling guidelines allowing IPPs to use PLN's infrastructure to supply power to businesses would increase investor appetite for renewables in Indonesia.

FEATURED CASE STUDY

Corporate renewable energy PPAs in India

In 2019, India was the second-largest growth market in terms of corporate renewable PPAs (1.4 GW capacity addition in 2019). Its corporate PPA market has grown substantially in recent years, allowing it to host the biggest renewable capacity for direct procurement in Asia-Pacific, with a total of 5.2 GW to date.

Under current regulations, large consumers (>1 MW load) can procure electricity from third parties through direct PPAs or by setting up their own captive generation plants. The consumer can use the state's transmission and distribution infrastructure to procure this power on a short-term (up to 1 month), medium-term (3 months – 3 years) or long-term basis (12-25 years).

The following policies and regulations have enabled India to scale up corporate renewable PPAs effectively and seize the enormous potential that corporate demand for clean electricity represents for the country's energy transition:

1. Open access regulations – These determine the procedures and charges for wheeling power from an offsite power plant (using the public grid) to the consumption premises of the corporate buyer. These regulations are managed at a state level with an overarching national framework.
2. Power banking – Under this mechanism, when a generator is wheeling electricity from an offsite renewable power plant, it can "bank" the electricity for consumption later. Accounting methods ensure the virtual banking of the electricity. Banking provides renewable developers with a mechanism to use excess generation later in time and encourages higher uptake of renewable PPAs among businesses.
3. Renewable purchase obligation (RPO) – The RPO mandates all electricity distribution licensees to purchase or produce a minimum specified percentage (defined by individual states) of their requirements from renewable energy. This pushes distribution companies to make concerted efforts, such as implementing smooth processes for granting open access for third parties to fulfil the RPO obligations.

Source: Mercom, India Leads Corporate Renewable Procurement market in Asia-Pacific, 2021, https://mercomindia.com/india-corporate-renewable-asia-pacific-report/. CEEW, Streamlining open access-an alternative to scaling renewables in India?, 2020, https://www.ceew.in/cef/masterclass/analysis/streamlining-open-access-alternative-to-scaling-renewables-in-india. WBCSD, Corporate Renewable PPAs in India: Market and Policy Update, 2021, https://www.wbcsd.org/contentwbc/download/11241/165820/1.

2.4 Legislative implementation mechanisms

Situation

In some cases, a gap between policy enactment and their effective implementation has been observed and is thought to discourage renewable energy uptake. Ministry of Energy and Mineral Resources regulation no. 1/2015 and regulation no. 11/2021 – which lay out the primary conditions for power wheeling – have, for instance, not been implemented in practice due to the absence of clear technical guidelines and a lack of clarity on transmission fees.

While existing regulations allow for 100% renewable energy installation at consumer premises, in practice the maximum amount of renewable capacity that is indeed approved typically never surpasses 15%-20%.

Policy message #4

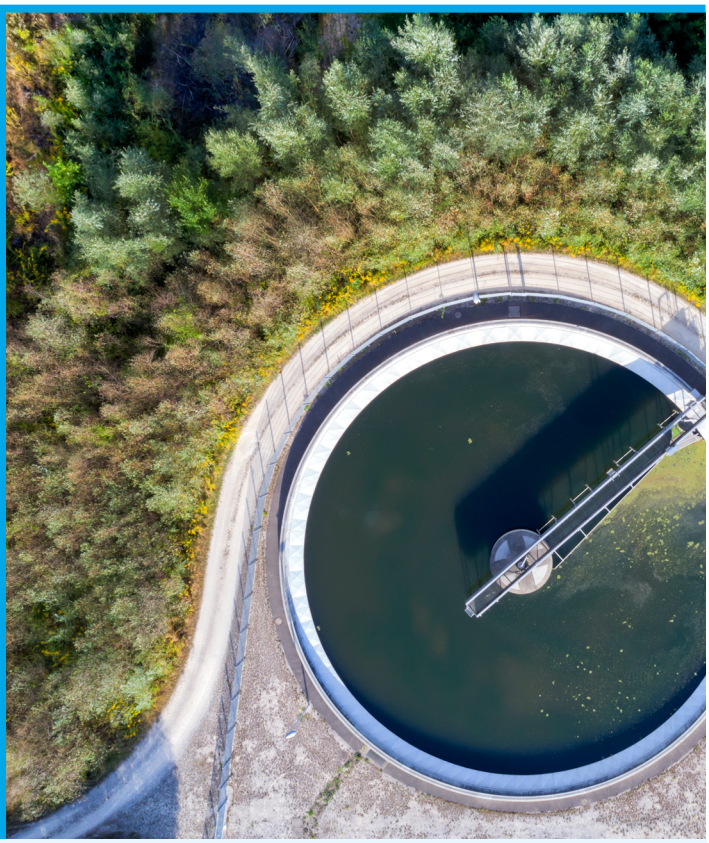
Work with utilities or electricity suppliers to accelerate the growth of renewable energy infrastructure

Implement power-wheeling mechanism

Ensure implementation of the regulation allowing on-site renewable energy installation for 100% of generation needs

The following measures would help Indonesia accelerate the growth of its renewable energy infrastructure:

- Implementing power wheeling guidelines allowing IPPs to use PLN's infrastructure to supply power to businesses is expected to boost renewable energy uptake in Indonesia.
- The effective implementation of the regulation allowing on-site renewable energy installation for 100% of generation needs would enable the scaling-up of clean energy in the country.



FEATURED CASE STUDY

Germany's approach to renewable regulations

Germany has shown a stable and consistent approach to promoting renewable energy. Its Renewable Energy Sources Act (Erneuerbare – Energien Gesetz/EEG) was enacted in 2000 and has since been consistently updated to align with the country's growing renewable energy ambitions. The EEG is a comprehensive and integrated policy that covers all sectors of the economy and encourages extensive engagement with civil society to gather inputs for policy-making.

Through the EEG act, feed-in tariffs (FiTs) were introduced in Germany to encourage renewable energy project developers and improve project bankability. The EEG also provided feed-in priority grid access to renewable projects. As the renewable energy market started to mature, the EEG transitioned from FiTs to feed-in premiums (FiP) that tend to better align renewable energy prices with the actual market conditions.

The EEG Act is considered a significant driver of renewable energy growth in Germany. Key features of the act include:

- Providing priority access to the power grid for renewable energy sources
- Establishing attractive renewable energy tariffs to ensure appropriate returns to project developers
- Linking tariffs to market developments to ensure competitive prices.

Source: Bundesverband WindEnergie (BWE), Renewable Energy Act (EEG), 2020, https://www.wind-energie.de/english/policy/rea/. European Commission, Mission-oriented R&I policies, 2018, https://ec.europa.eu/info/sites/default/files/mission_oriented_r_and_i_policies_case_study_report_energiewende-de.pdf.

2.5 Incentive mechanisms

Situation

Indonesia currently subsidises fossil fuel-based power generation (IDR 83.7 trillion or $5.6 billion in 2021[12]) and provides tariff subsidies to the different consumer categories. Apart from this, there is a domestic market obligation (DMO) that requires local coal producers to supply 25% of their annual production to PLN at a price cap of $70 per tonne for coal that has more than 6000 kilocalories per kilogramme (kcal/kg), which is significantly below international market prices. Fossil fuel and electricity subsidies for Indonesian consumers amounted to $19 billion (1.6% of GDP) in 2021. In contrast, limited subsidies are available for renewable power sources, which places them at a disadvantage vis-à-vis fossil fuels.

Policy message #5

Substantiate renewable energy incentives to improve the investment environment

Establish fiscal mechanisms to spur renewable energy investments

Develop detailed guidelines to substantiate Presidential decree no. 112/2022

The following measures could be considered to improve Indonesia's renewable energy investment environment:

- Establishing and implementing fiscal mechanisms such as tax credits or incentives would improve the economic viability of renewable energy generation for project developers to spur renewable energy investments.
- While Presidential decree no. 112/2022 issued in September 2022 highlights incentives for renewable energy sources, more detailed guidelines and effective implementation mechanisms will be crucial to ensuring their viability.

FEATURED CASE STUDY

Renewable energy incentives in the United States

The United States has put in place several tax credits and incentive mechanisms contributing to the expansion of renewables, both at the federal and state levels. These include:

1. Renewable portfolio standards (RPS) – Policies that require a certain percentage of electricity sales in the state to come from renewable energy sources. Each state defines its targets and implementation mechanisms. The RPS scheme has significantly impacted the scaling of renewable energies in the United States, with **about 50% of all growth in renewable electricity production being attributed to it since 2000.**
2. Renewable electricity production tax credit (PTC) – A per-kilowatt-hour (kWh) tax credit mechanism for electricity generated from renewable energy sources. A tax credit of 1.5 cents/kWh is provided for electricity from wind and 2.5 cents for geothermal and closed-loop biomass for the first 10 years of operation.
3. Investment tax credit (ITC) – Owners of eligible technologies can claim a tax credit of up to 30% of total project costs. The incentive amount is 26% for solar, fuel cells and small wind projects, 10% for geothermal and 30% for offshore wind projects.

Source: U.S. Energy Information Administration (EIA), What are Renewable Portfolio Standards, 2021, https://www.eia.gov/energyexplained/renewable-sources/portfolio-standards.php. U.S. Environmental Protection Agency (EPA), Renewable Electricity Production Tax Credit Information, 2022, https://www.epa.gov/lmop/renewable-electricity-production-tax-credit-information. Database of State Incentives for Renewables & Efficiency (DSIRE), Business Energy Investment Tax Credit (ITC), 2022, https://programs.dsireusa.org/system/program/detail/658/business-energy-investment-tax-credit-itc.

2.6 Renewable energy certificates and tracking system

Situation

At present, businesses in Indonesia can buy renewable energy certificates (RECs) provided by PLN through a REC scheme launched in 2020. However, there is no clear traceability mechanism ensuring that the money raised from the sale of RECs is indeed used to finance new renewable energy capacity in line with the additionality principle.

Many global businesses operating in Indonesia that have established their international renewable energy targets according to the additionality principle are purchasing existing RECs as an interim solution. In the future, however, a clear traceability mechanism ensuring additional renewable capacity would help unlock further clean energy investments from such businesses.

Policy message #6

Enhance the transparency, sustainability and additionality of renewable energy certificates (RECs)

Establish mechanisms to ensure tracking of funds from RECs

Enact regulations to ensure REC proceeds are invested in new renewable energy capacity

The following measures could enhance the existing renewable energy certificate system:

- Establishing mechanisms to track funds from RECs would ensure the leveraging of technology solutions that can trace the uniqueness of RECs and the use of the funds disbursed by the corporate purchasers.
- Enacting regulations to ensure REC proceeds are invested in new renewable energy capacity would help build corporate confidence in the existing REC regime and unlock renewable energy investments in Indonesia.

FEATURED CASE STUDY

Renewable energy certificates standards in Singapore

In Singapore, businesses are increasingly using RECs to offset their emissions. To facilitate the consistency of REC transactions and management, the Energy Market Authority (EMA), in collaboration with the Singapore Standards Council and Enterprise Singapore, have developed Singapore Standard 673: **Code of Practice for Renewable Energy Certificates.**

The standard provides a clear framework for the transparent measurement, reporting and tracking of RECs. It details guidelines for the roles of crucial ecosystem stakeholders, the different procurement modes for RECs, the verification of renewable energy installations, and public reporting requirements for the issuance and retirement of RECs.

Source: Duane Morris, Rise of Renewable Energy Certificates (RECs) in Singapore, Lexology, 13 May 2022, https://www.lexology.com/library/detail.aspx?g=a801ab34-bea0-4296-ada6-a2685f10fca6. Allen and Gledhill, EMA launches new Singapore Standard for Renewable Energy Certificates, 5 Nov. 2021, https://www.allenandgledhill.com/sg/perspectives/articles/19623/sgkh-ema-launches-new-standard-for-renewable-energy-certificates-explores-geothermal-energy.

3 Call to action

Indonesia has a significant renewable energy potential that has been mostly untapped to date. The working group calls on Indonesian stakeholders and government entities to reflect on the arguments made in this paper and take steps to create an enabling environment for renewable energy in Indonesia.

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Key abbreviations

BKPM – Badan Koordinasi Penanaman Modal (Investment Coordinating Board)

BPP – Biaya Pokok Penyediaan (Electricity Generation Cost)

BOO – Build-Own-Operate

FiT – Feed-in-tariff

IO – Izin Operasi (Operational License for generating electricity for own use)

IPP – Independent Power Producer

KADIN – Kamar Dagang dan Industri (Chamber of Commerce and Industry)

KEN – National Energy Policy

MEMR – Ministry of Energy and Mineral Resources

PLN – Perusahaan Listrik Negara

PPA – Power Purchase Agreement

RUEN – Rencana Umum Energi Nasional (National Energy Generation Plan)

RUKN – Rencana Umum Ketenagalistrikan Nasional (National Electricity General Plan)

RUPTL – Rencana Umum Penyediaan Tenaga Listrik (Electricity Supply Business Plan)

Endnotes

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