

# RENEWABLE ENERGY

## Indonesia



# Renewable Energy

Consulting editors

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Quick reference guide enabling side-by-side comparison of local insights into market and legal frameworks; treatment of environmental attributes; government incentives and authorisations; dispute resolution; utility-scale renewable energy projects; hydropower; distributed generation; energy storage; foreign investment considerations; offtake arrangements; decommissioning; transaction structures; and recent trends.

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## MARKET FRAMEWORK

### Government electricity participants

Who are the principal government participants in the electricity sector? What roles do they perform in relation to renewable energy?

The principal government participants in the electricity sector are:

- the Ministry of Energy and Mineral Resources (MEMR) through the Directorate General of Electricity and the Directorate General of New and Renewable Energy as the regulator and issuer of permits, licences and other authorisations; and
- PT Perusahaan Listrik Negara (Persero) (PLN), a state-owned company that acts as the main offtaker for the power or electricity produced by an independent power producer (IPP).

There is limited involvement of local government with respect to the issuance of certain licences required for the development of power plants although most of the licences are now applied and issued through the Online Single Submission (OSS) System.

*Law stated - 21 May 2022*

### Private electricity participants

Who are the principal private participants in the electricity sector? What roles do they serve in relation to renewable energy?

The private participants in the electricity sector are IPPs, whose electricity is sold to PLN. In the geothermal sector, the IPP is also the holder of a geothermal working area and a geothermal permit issued by the MEMR. In addition to the IPPs, other private participants in the electricity sector are the sponsors, investors and creditors or lenders.

*Law stated - 21 May 2022*

### Definition of 'renewable energy'

Is there any legal definition of what constitutes 'renewable energy' or 'clean power' (or their equivalents) in your jurisdiction?

Renewable energy is defined in the MEMR Regulation No. 50 of 2017 on the Utilization of Renewable Energy Sources for Power Supply as amended several times, lastly by MEMR Regulation No. 4 of 2020 (MEMR Regulation No. 50/2017), as any source of energy generated from energy resources that are sustainable if managed properly, including geothermal energy, wind, bioenergy, solar energy, hydro-energy (streams or waterfalls) and movement and temperature difference of ocean layers.

*Law stated - 21 May 2022*

## Framework

## What is the legal and regulatory framework applicable to developing, financing, operating and selling power and 'environmental attributes' from renewable energy projects?

For geothermal power plants, the development is based on the tender of a geothermal working area by the MEMR. The tender winner will be granted a geothermal permit to develop the geothermal power plant within the geothermal working area and the government, at the same time, will assign PLN to purchase the electricity produced by the geothermal permit holder. Another renewable-based power plant is under a permit regime in which the developer must obtain the necessary licences to develop, operate and sell the power or electricity produced to PLN or another buyer.

With respect to the environmental attributes, PLN recently issued a Renewable Energy Certificate for business participants in the commercial and industrial sectors that use electricity from renewable energy-based power plants.

*Law stated - 21 May 2022*

### Stripping attributes

#### Can environmental attributes be stripped and sold separately?

Yes, environmental attributes can be stripped and sold separately. The government recently issued Presidential Regulation No. 98 of 2021 on the Implementation of Carbon Economic Value to Achieve Nationally Determined Contribution Targets and Control over Greenhouse Gas Emissions in Relation to National Development (PR 98/2021), which regulates the implementation of carbon pricing which serves as the basis for the development of the Indonesian carbon market. In combination with Law No. 7 on the Harmonisation of Taxation Regulations, PR 98/2021 provides for a roadmap for Indonesia's carbon reduction. However, further implementing regulations at the ministerial level need to be issued to further implement carbon pricing and carbon trading under the new PR 98/2021.

In addition, PLN also issues the market-based Renewable Energy Certificate for companies that use renewable energy-based power plants and contribute to the use of clean energy in Indonesia. However, we do not know whether this certificate can be traded in the secondary market. Currently, the purpose of this certificate is to act as evidence for companies in Indonesia that carry out export trading, to show they use renewable energy in their production activities.

*Law stated - 21 May 2022*

### Government incentives

#### Does the government offer incentives to promote the development of renewable energy projects? In addition, has the government established policies that also promote renewable energy?

The government generally offers fiscal facilities for renewable energy as follows:

- income tax facilities in the form of a 30 per cent reduction of net income for six years, escalated depreciation and amortisation and compensation for any loss incurred for more than five years but not more than 10 years' tax holiday;
- a tax holiday in the form of exemption from tax from five to 10 years as of the commercial operation of the power plant and a 50 per cent reduction of tax from outstanding income tax for two years; and
- a VAT exemption and exemption of import duty for capital goods.

On the offtake side, the government also provides feed-in tariff and, for geothermal energy, there is a mandatory offtake

from PLN. However, we understand that the feed-in tariff provided by the government is still considerably low given the large investment cost that the developers must put into in order to develop renewable-based energy power plant in Indonesia; in particular, for geothermal power plants.

*Law stated - 21 May 2022*

Are renewable energy policies and incentives generally established at the national level, or are they established by states or other political subdivisions?

Renewable energy policies and incentives in Indonesia are established at the national level.

*Law stated - 21 May 2022*

### **Purchasing mechanisms**

What mechanisms are available to facilitate the purchase of renewable power by private companies?

In the private sector, rooftop solar PV is used by existing PLN customers. In the commercial and industrial sector, companies used solar PV based on an operating lease arrangement with a solar PV provider (and, in certain cases, together with operation and maintenance services). Solar PV used can be off-grid or on-grid. The operating lease agreement scheme is used instead of direct power purchase agreements because of certain regulatory constraints. Although it is not prohibited under the electricity regulation for an IPP to directly sell electricity to or for the private companies to purchase from an IPP, to do so the IPP must initially obtain various approvals and licences from the government such as:

- stipulation of business area, which serves as a 'concession' right where IPP can sell electricity to end consumer within the area stipulated under the approval or 'concession' issued by the MEMR;
- electricity supply business licenses (that covers integrated activities from power generation, distribution and sales); and
- approval of electricity tariff or price from IPP to consumers.

Private companies can also construct, own and operate a renewable energy-based power plant for its own use. The excess power can be sold to PLN or the holder of an electricity supply business licence or, in the event the surrounding area experiences an electricity crisis, sold to households or other companies in the surrounding area.

*Law stated - 21 May 2022*

### **Legislative proposals**

Describe any notable pending or anticipated legislative proposals regarding renewable energy in your jurisdiction.

There are two pending or anticipated regulations regarding renewable energy to be issued by the government. The first one is in the form of the Law on Renewable Energy, which we understand the draft of the law or bill have been discussed between the government and the House of Representative. The second one is a presidential regulation on electricity purchase from a renewable energy-based power plant by PLN, which is intended to replace the current ministerial regulation of the same.



**Drivers of change**

What are the biggest drivers of change in the renewable energy markets in your jurisdiction?

The biggest drivers of change in the renewable energy market in Indonesia are issues with market sustainability and technological change. The private sector has started to use renewable energy power plants for the supply of electricity in production plants or facilities as part of its commitment to greener energy. Households have also started to use and install solar PV panels to reduce electricity bills in the long run. The government encourages ministries, government institutions, local government and state-owned enterprises to expand the usage of renewable energy in the form of installation of solar PV in their offices and public places. This, along with the technology of solar PV that becomes cheaper and generally more accessible to the public, to some extent, are the biggest drivers of change in the renewable energy market in Indonesia.

Law stated - 21 May 2022

**Disputes framework**

Describe the legal framework applicable to disputes between renewable power market participants, related to pricing or otherwise.

Dispute resolution with respect to renewable market participants depends on the power purchase agreement signed by the parties. In the power purchase agreement (PPA) between PLN as the offtaker and IPP as the seller, the dispute resolution normally refers to arbitration including international arbitration for power projects involving foreign sponsors and lenders. The same goes with PPA between private parties in which dispute resolution refers to arbitration.

Law stated - 21 May 2022

**UTILITY-SCALE RENEWABLE PROJECTS****Project types and sizes**

Describe the primary types and sizes of existing and planned utility-scale renewable energy projects in your jurisdiction.

Utility-scale renewable projects in Indonesia primarily consist of the following:

- geothermal power plants: the capacity of each project varies but most of them are above 100MW;
- hydro power plants: with capacity starting from 15MW up to 1000MW;
- wind power plants: with capacity of more than 70MW; and
- solar power plants: with capacity starting from 15MW.

Law stated - 21 May 2022

**Development issues**

What types of issues restrain the development of utility-scale renewable energy projects?

The development of utility-scale renewable energy projects depends on the procurement conducted by PT Perusahaan

Listrik Negara (Persero) (PLN). There is no exact or specific timeline for the procurement under the regulation that must be followed by PLN. It has been around three years since the last procurement for renewable energy projects was conducted by PLN. Transmission infrastructure and grid instability undoubtedly are the reasons why utility-scale renewable energy projects are not a priority given that transmission lines owned by PLN are not entirely interconnected and could not receive electricity supplied by an intermittent power plant on a utility-scale to its fullest capability.

*Law stated - 21 May 2022*

## HYDROPOWER

### Primary types of project

Describe the primary types of hydropower projects that are prevalent.

The primary types of hydropower projects in Indonesia are conventional hydropower projects with dam or weirs, run-of-river and a small number of pumped storage hydropower plants. Most hydropower plant projects involving PT Perusahaan Listrik Negara (Persero) (PLN) as offtakers are under a build-operate-own-transfer (BOOT) scheme with a limited number of projects under a build-own-operate (BOO) scheme. The BOOT scheme was initially mandated under the Ministry of Energy and Mineral Resources (MEMR) Regulation 50 of 2017 on the Utilisation of Renewable Energy Sources for the Provision of Electricity (MEMR Regulation No. 50/2017) in which the regulation stipulated that the power purchase agreement (PPA) for renewable energy-based power plants entered into between independent power producers and PLN must be under a BOOT scheme. However, the relevant provision has been amended with the latest amendment to MEMR Regulation No. 50/2017 (ie, by virtue of MEMR Regulation No. 4 of 2020) in which the PPA can be entered into with a BOO scheme.

*Law stated - 21 May 2022*

### What legal considerations are relevant for hydroelectric generation in your jurisdiction?

Generally, the regulations related to the development of hydropower projects already cover all aspects of the project. However, note that permits for the development of hydropower projects are under the authority of multiple ministries and involve local government. Consequently, the process to obtain these permits is not straightforward and takes time. For example, to build the dam, the process to obtain the mandatory permits before the construction of the dam can commence involves the local government where the dam is located, the Ministry of Public Work and Housing and the Ministry of Environment and Forestry (for the environmental licences required as a prerequisite to obtain the permit related to the construction and operation of the dam).

*Law stated - 21 May 2022*

## DISTRIBUTED GENERATION

### Prevalence

Describe the prevalence of on-site, distributed generation projects.

To the best of our knowledge, there are no renewable power projects that are owned, operated or maintained by a private entity and where the electricity or power produced is distributed directly to end users. If any, it is a solar PV plant with an operating lease scheme and not a direct power purchase scheme with end users. These solar PV plants on-site are mostly connected to the PT Perusahaan Listrik Negara (Persero) (PLN) distribution system (on-grid) although the regulation allows for an off-grid connection. The reason for the use of this operating lease scheme instead of a power purchase scheme is because these end users are normally PLN customers meaning that PLN holds the right to

distribute and sell power or electricity in the area. As mentioned above, for an independent power producer to be able to sell power or electricity to the consumer, it must initially obtain stipulation of business area from the MEMR and pursuant to the regulation, there can only be one electricity supplier in a particular area. Therefore, if PLN is already supplying electricity to customers or users, the IPP cannot be granted the stipulation of business area unless PLN releases its right to supply electricity or power in that particular area.

*Law stated - 21 May 2022*

## Types

Describe the primary types of distributed generation projects that are common in your jurisdiction.

Distribution of power or electricity in Indonesia is generally still under the control or monopoly of PLN including electricity from renewable energy-based power plants even though the regulation allows the private sector to be involved in the distribution of electricity or power activities including owning and operating the assets (transmission lines). Only limited areas such as industrial zones where there is an integrated independent power producer or public private utility company that generates, distributes and sells electricity directly to the tenants in the industrial area. Residential areas or households that use solar PV are still connected to PLN's distribution system (on-grid) and not fully off-grid. Commercial & Industrial solar PV in Indonesia is also mostly, if not all, on-grid or connected to PLN's distribution system before being re-distributed to the users.

*Law stated - 21 May 2022*

## Regulation

Have any legislative or regulatory efforts been undertaken to promote the development of microgrids? What are the most significant legal obstacles to the development of microgrids?

There is no specific regulation issued by the government for the development of microgrids. Therefore, this lack of specific regulation on microgrids generally is the legal obstacle to the development of microgrids. Private entities that want to develop microgrids and supply electricity from renewable energy power plants to communities are subject to the same requirement as the development of transmission lines or integrated power projects in which the permits, approvals or licences that need to be obtained may be burdensome. Further, there used to be restrictions for foreign investment for a capacity of 1 to 10MW. With the new investment list recently introduced by the government, only power generation activity with a capacity below 1MW is closed for foreign investment. Currently, microgrids in Indonesia are limited to the captive microgrid in which the private entity owns and operates the renewable energy power plant and the microgrid by itself for its own use (usually the private entity is a mining company or manufacturer company).

*Law stated - 21 May 2022*

## Other considerations

What additional legal considerations are relevant for distributed generation?

A lack of specific legislative and regulatory support for the distribution of power from renewable energy-based power plants, such as solar power owned by third parties or private parties in a residential area, is one of the reasons for the lack of use of renewable energy in Indonesia. The current regulation covers the use of solar PV by PLN consumers (single household or private entities), which normally need to be connected to PLN's system or on-grid.

**ENERGY STORAGE****Framework**

What storage technologies are used and what legal framework is generally applicable to them?

Energy storage in Indonesia is relatively new and the regulation related to energy storage has only recently been enacted (ie, Government Regulation No. 25 of 2021 on the Management of the Energy and Mineral Resources Sector). The current or existing regulation does not regulate in detail the storage technology. The regulation only states that energy storage, in particular, battery energy storage system (BESS), is part of the electricity supporting business. There are not yet significant energy storage projects in Indonesia. However, there has been discussion and potential investment related to BESS projects in Indonesia after the enactment of the regulation covering this activity.

*Law stated - 21 May 2022*

**Development**

Are there any significant hurdles to the development of energy storage projects?

Given that this sector is relatively new in Indonesia and the main regulation has recently been enacted, the implementation of energy storage projects may still be subject to policy from the government or issuance of further regulation at a ministerial level.

*Law stated - 21 May 2022*

**FOREIGN INVESTMENT****Ownership restrictions**

May foreign investors invest in renewable energy projects? Are there restrictions on foreign ownership relevant to renewable energy projects?

Power generation from renewable energy with capacity above 1MW is open for 100 per cent foreign ownership. The supporting business activities including installation, operation and maintenance of the power generation and also energy storage is now also open for 100 per cent foreign shareholding. For renewable energy generation projects, such as solar PV with operating lease or rent scheme, the company providing the lease is also open for 100 per cent foreign shareholding.

*Law stated - 21 May 2022*

**Equipment restrictions**

What restrictions are in place with respect to the import of foreign manufactured equipment?

Generally, the import of equipment is subject to tariffs, value-added tax (VAT) and import duties. However, a foreign investment company can apply for an exemption of import duties and VAT to the government for the import of equipment that is categorised as capital goods. For renewable energy, the exemption of these tariffs and import duties is part of fiscal and non-fiscal incentives granted by the government to encourage the development of renewable energy.

## PROJECTS

### General government authorisation

What government authorisations must investors or owners obtain prior to constructing or directly or indirectly transferring or acquiring a renewable energy project?

For the developer or owner of a renewable energy power plant, the main government authorisations that need to be obtained are as follows:

- a business identification number;
- an electricity business licence;
- a Certificate of Standard; and
- for geothermal power plants, a Geothermal Business Permit (and a Geothermal Working Area).

Prior to the construction of the renewable energy power plant, the developer or owner would be required to obtain at least the following government authorisations:

- a location permit;
- an environmental approval;
- a building construction permit;
- evidence of ownership or control over the land. If the land is owned by the developer or owner of the power plant, it must obtain a Right to Build Certificate. If it is not owned by the developer, a land utilisation agreement with the landowner and land utilisation permit from the local government is required to apply for the building construction permit;
- for hydropower plants with a dam, separate licences related to the construction and operation of the dam is also required; and
- if the location of the renewable energy power plant is within a forestry area, a permit to utilise the forestry area is required.

For energy storage projects, the regulation categorises energy storage as an electricity supporting business activity and thus the main government authorisations that are required by the owner are as follows:

- a business identification number;
- an electricity supporting business licence; and
- a Certificate of Standard.

In order to construct the facilities, the same licences (save for the dam related permit for a hydropower plant) as mentioned above for the construction of renewable energy power plants are generally also applicable for the construction of a facility or plant for energy storage.

## Offtake arrangements

What type of offtake arrangements are available and typically used for utility-scale renewables projects?

The typical offtake arrangement for utility-scale renewable projects is a power purchase agreement with PT Perusahaan Listrik Negara (Persero) (PLN) as the offtaker. Certain government support options are available if the project is developed under a public private partnership scheme or if PLN, when conducting the procurement, asks for government support from the Minister of Finance in the form of a Business Viability Guarantee Letter (BVGL). The BVGL is government support issued in favour of the seller in the power purchase agreement (PPA) in which the Minister of Finance will ensure to support PLN in connection with PLN's payment obligations under the PPA (which normally also include the termination payment). However, note that the support is not a direct support in which the Minister of Finance is going to pay any outstanding payment directly to the seller or the independent power producer. The BVGL only serves as an assurance that the Minister of Finance will make sure that PLN will have the funds to fulfil its payment obligation under the PPA. If the utility-scale renewable project is to be developed with a public private partnership scheme, the payment obligations of PLN under the PPA will be guaranteed by PT Penjaminan Infrastruktur Indonesia (Persero) (or also known as Indonesia Infrastructure Guarantee Fund) and, in certain cases, co-guaranteed by the Minister of Finance in accordance with the risk allocation in the PPA.

*Law stated - 21 May 2022*

## Procurement of offtaker agreements

How are long-term power purchase agreements procured by the offtakers in your jurisdiction? Are they the subject of feed-in tariffs, the subject of multi-project competitive tenders, or are they typically developed through the submission of unsolicited tenders?

Other than geothermal power plants, renewable-based power plants are procured by way of direct selection conducted by PLN to appoint or select the developer or independent power producer (IPP). The selected developer or IPP will enter into a PPA with PLN. Before the direct selection process, PLN will conduct a pre-qualification process in which all developers can participate and developers that passed the pre-qualification stage will be invited to participate in the direct selection. PLN normally conducts separate pre-qualification for each type of renewable energy power plant. Procurement through direct appointment is also possible in certain cases such as the expansion of existing project or if there is an electricity crisis in the area.

For geothermal power plants, the tender is conducted by the Ministry of Energy and Mineral Resources (MEMR) for the geothermal working area for indirect use to produce power or electricity. The tender winner will automatically become the IPP for the geothermal power plant and PLN is assigned or mandated by the government to purchase the power.

In the past, an unsolicited proposal for the development of a renewable energy-based power plant was quite common. However, with the current regulation, PLN must conduct the direct selection and invite other developers (although in a limited number and only those that have already passed the pre-qualification conducted by PLN) to participate in the direct selection. In practice, it is almost certain that the developer submitting the unsolicited proposal will win the direct selection as it has an advantage over other developers in terms of obtaining initial permits from local government and generally the nature of the project itself. Renewable energy power projects are subject to feed-in tariffs by the government. A feed-in tariff is provided in the form of benchmark price and the final price or tariff agreed between PLN and the IPP must be approved by the MEMR.

*Law stated - 21 May 2022*

## Operational authorisation

What government authorisations are required to operate a renewable energy project and sell electricity from renewable energy projects?

The main government authorisations required to operate a renewable energy project and sell electricity are as follows:

- a certificate of worthiness of the power plant or electricity installation; and
- the approval of electricity price or tariff.

The buyer can purchase a Renewable Energy Certificate from PLN.

*Law stated - 21 May 2022*

## Decommissioning

Are there legal requirements for the decommissioning of renewable energy projects? Must these requirements be funded by a sinking fund or through other credit enhancements during the operational phase of a renewable energy project?

There is no regulation in Indonesia that specifically regulates or requires the decommissioning of renewable energy projects or power projects in general.

*Law stated - 21 May 2022*

## TRANSACTION STRUCTURES

### Construction financing

What are the primary structures for financing the construction of renewable energy projects in your jurisdiction?

The financing of renewable energy projects in Indonesia is usually by way of project financing or, if it is not a large project, through equity or a shareholder loan from the shareholders in the project company.

*Law stated - 21 May 2022*

### Operational financing

What are the primary structures for financing operating renewable energy projects in your jurisdiction?

Financing for operating renewable energy projects is commonly part of the project financing. Green bonds can be an alternative; however, the issuance of green bonds in Indonesia is still very limited owing to the requirement that may be burdensome for companies in Indonesia where renewable energy projects are still relatively new.

*Law stated - 21 May 2022*

## UPDATE AND TRENDS

### Recent developments

Describe any market trends with respect to development, financing or operation in the renewables sector or other pertinent matters.

Commercial and industrial solar is starting to thrive and dominate the development of renewable projects in Indonesia, especially since PT Perusahaan Listrik Negara (Persero) (PLN) has not yet conducted direct selection for new renewable independent power producer projects. We also note that PLN's subsidiaries (ie, PT Pembangkitan Jawa Bali and PT Indonesia Power) are also actively participating in the development of the renewable sector and partnering with foreign investors to develop utility-scale renewable projects; in particular, a floating solar PV power plant.

*Law stated - 21 May 2022*

Describe any notable pending or anticipated legislative proposals.

There are no notable pending or anticipated legislative proposals other than those already mentioned. However, the bill or draft law on new and renewable energy and the presidential regulation on the purchase of electricity from renewable energy-based power plants by PLN are not formally dated by the government.

*Law stated - 21 May 2022*



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