

Development of the Renewable Energy Sector in Indonesia

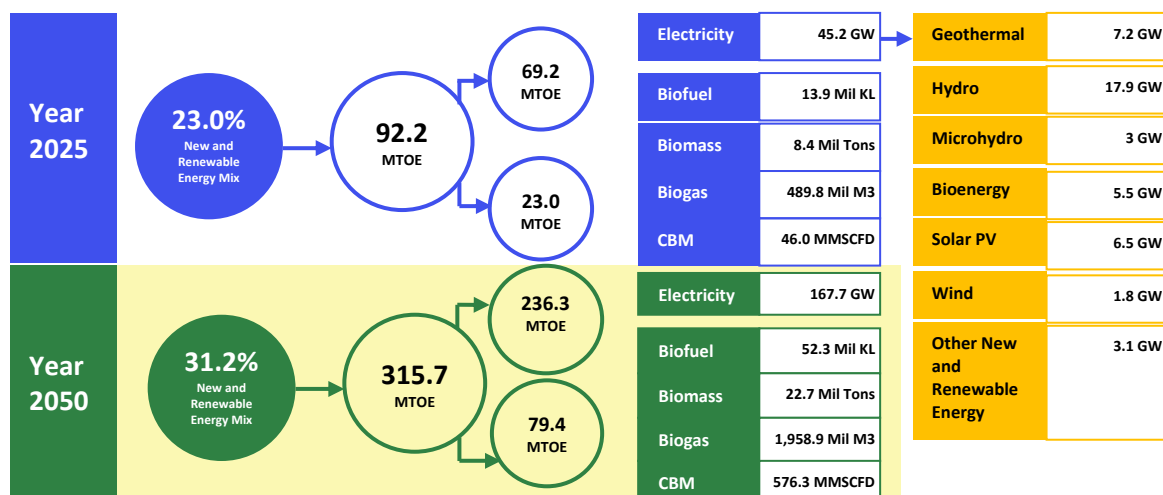
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I. The Development of the Renewable Energy Sector in Indonesia

Law No. 30 of 2007 concerning Energy requires the central and regional governments to improve the utilization of renewable energy and the utilization can be performed by business entities and individuals who can obtain facilities and/or incentives from the Government of the Republic of Indonesia (“GoI”) for a certain period until the utilization achieves its economic value. The Ministry of Energy and Mineral Resources (“MEMR”) Progress Report for 2016 shows that the MEMR aims to increase investment in the new and renewable energy sector, which includes investment in geothermal energy, biofuel, hydropower plants/micro-hydro power plants, wind power plants, solar power plant, and bioenergy power plants, with the following targets:

Performance Indicator on Investment	Target					Unit
	2015	2016	2017	2018	2019	
Electricity	11.2	16.4	20.4	19.6	15.9	Billions (USD)
New and Renewable Energy and Energy Conservation	4.5	3.3	3.9	5.8	3.7	

Presidential Regulation No. 22 of 2017 concerning the National Energy Master Plan (“RUEN”) states that the RUEN focuses on the utilization of renewable energy as the primary energy for electricity generation and direct utilization by users (non-electricity), with the following projection for the years 2025 and 2050:



The diagram above shows that the modeled new and renewable energy supply in the primary energy mix for 2025 is 23%, but the Book of New and Renewable Energy and Energy Conservation Statistics for year 2016 states that the primary energy mix in year 2015 had crude oil still dominating with 43%, followed by coal with 28.7%, natural gas with 22% and new and renewable energy with 6.2%. The current primary energy mix for power plants consists of coal with 56.86%, gas with 26.52%, water with 6.60%, fuel oil with 4.66%, geothermal energy with 4.84% and other new and renewable energy with 0.52%.¹

Pursuant to the foregoing, the utilization of new and renewable energy for electricity generation is expected play a bigger role in the development of the overall utilization of new and renewable energy, especially when we take into account the program for realization of 35,000MW initiated by the President of the Republic of Indonesia, Joko Widodo. MEMR Regulation No. 39 of 2017 concerning the Implementation of Physical Activities of Utilization of New Energy and Renewable Energy and Energy Conservation states that the scope of physical activities for the utilization of new and renewable energy will include electricity supply installations.

Presidential Regulation No. 4 of 2016 concerning Acceleration of Power Infrastructure Development (as amended by Presidential Regulation No. 14 of 2017) (“**PR No. 4/2016**”) provides that the acceleration of electricity infrastructure including the development of 35,000MW power plants must prioritize the use of new and renewable energy to support endeavors to decrease greenhouse gas emissions.

Gol has passed various regulations and policies to support the acceleration of the development of power plants utilizing renewable energy, the smooth implementation thereof and to provide certainty in the procurement of such power plants and the electricity purchase price, which is expected to attract investors to engage in such development, as follows:

a. Electricity Supply Business Plan (*Rencana Usaha Penyediaan Tenaga Listrik* (“**RUPTL**”))

PT PLN (Persero) (“**PLN**”) has issued their RUPTL for year 2017 – 2026 as ratified by MEMR under MEMR Decree No. 1415K/20/MEM/2017 dated 29 March 2017. Law No. 30 of 2009 concerning Electricity and Government Regulation (“**GR**”) No. 14 of 2012 concerning Electricity Supply Business (as amended by GR No. 23 of 2014) provides that the implementation of electricity supply business for public use shall be performed in accordance with the Electricity General Plan (*Rencana Umum Ketenagalistrikan* (RUK)) (comprising of National Electricity Master Plan (*Rencana Umum Ketenagalistrikan Nasional*) and Regional Electricity Master Plan (*Rencana Umum Ketenagalistrikan Daerah*)) and RUPTL.

b. Policies relating to Foreign Investment

Presidential Regulation No. 44 of 2016 concerning List of Business Fields that are Closed to and Business Fields that are Conditionally Opened for Investment provides the following:

Line of Business	Requirements
Power plant <1MW	100% local participation
Small scale power plant 1 - 10MW	Max. 49% foreign investment
Power plant >10MW	Max. 95% foreign investment (Max. 100% foreign investment in Public Private

¹ According to slides of presentation concerning “Endeavours to Create Fair Energy in the Electricity Sector” presented by MEMR in CEO Summit and Exhibition of 2017 dated 28 September 2017

	Partnership scheme)
Geothermal Power Plant having capacity ≤10MW	Max. 67% foreign investment

c. Procurement Process

Government Regulation No. 14 of 2012 concerning the Electricity Supply Business as amended by GR No. 23 of 2014 provides that purchases of electricity from power plants using renewable energy can be procured through direct appointment. However, MEMR Regulation No. 50 of 2017 concerning the Utilization of Renewable Energy for Electricity Supply provides more details on the procurement requirements as follows:

Type of Renewable Energy	Procurement Process	Project Scheme
Solar PV	Direct selection with capacity quota	Build, Own, Operate and Transfer (“ BOOT ”)
Wind	Direct selection with capacity quota	BOOT
Hydro	Direct selection	BOOT
Biomass	Direct selection	BOOT
Biogas	Direct selection	BOOT
Geothermal	Applicable laws and regulations	BOOT
Ocean water movement and temperature	Direct selection	BOOT

d. Government Support

PR No. 4/2016 provides that an independent power producer (“**IPP**”) can receive a business viability guarantee from the Minister of Finance for PLN’s obligation under the power purchase agreement (“**PPA**”) entered into by the IPP and PLN. PR No. 4/2016 also provides that for the utilization of new and renewable energy, GoI may give support in the form of:

- (i) fiscal incentives (i.e., income tax facilities under Government Regulation No. 18 of 2015 concerning Income Tax Facilities for Investment in Certain Lines of Business and/or Certain Areas (as amended by Government Regulation No. 9/2016));
- (ii) licensing and non-licensing relief (i.e., several licenses for which the granting authority has been delegated to the Indonesian Investment Coordinating Board (BKPM) for the implementation of a one stop service (including Electricity Supply Business Licenses));
- (iii) feed-in tariffs for each type of new and renewable energy;
- (iv) the establishment of a separate business entity to provide electricity generated from new and renewable sources of power to be sold to PLN; and
- (v) specific subsidies;

on consideration of the feasibility and economics of electricity infrastructure development.

e. Feed-in Tariffs

Renewable Energy Type	Electricity Price	
	Local Grid BPP > National BPP	Local Grid BPP ≤ National BPP
Solar PV	Maximum 85% x local grid BPP	Mutual agreement between PLN and IPP
Wind	Maximum 85% x local grid BPP	Mutual agreement between PLN and IPP
Hydro	Maximum 100% x local grid BPP	Including Sumatera, Jawa and Bali grid, mutual agreement between PLN and IPP
Biomass	Maximum 85% x local grid BPP	Mutual agreement between PLN and IPP
Biogas	Maximum 85% x local grid BPP	Mutual agreement between PLN and IPP
Municipal waste	Maximum 100% x local grid BPP	Including Sumatera, Jawa and Bali grid, mutual agreement between PLN and IPP
Geothermal	Maximum 100% x local grid BPP	Including Sumatera, Jawa and Bali grid, mutual agreement between PLN and IPP
Ocean water movement and temperature	Maximum 85% x local grid BPP	Mutual agreement between PLN and IPP

*BPP = Basic Generation Cost (*Biaya Pokok Pembangkitan*) of PLN

f. Power Purchase Agreements (“PPA”)

MEMR has passed MEMR Regulation No. 10 of 2017 concerning Principles in Power Purchase Agreements (as amended by MEMR Regulation No. 49 of 2017) and MEMR Regulation No. 48 of 2017 concerning Supervision of Businesses in the Energy and Mineral Resources Sectors (“**MEMR Regulation No. 48/2017**”) which set mandatory provisions to be included in a PPA and limitations on transfers of ownership of power plants. The following items are key points of several provisions in the regulations which may concern potential investors as their enactment could cause the issuance of a new PPA model replacing the PPA model which has been applied for years:

No.	Matter	Remarks
1.	Period of PPA	Maximum 30 years from commercial operation date (“ COD ”) taking into account the type of power plant
2.	Capacity Payment	Capacity cost calculated in component A of the electricity selling price is calculated based on investment value depreciated over at least 20 years
3.	Rights of IPP	(i) to receive payment of electricity selling price in accordance with PPA; (ii) to receive incentive for acceleration of COD if the acceleration is requested by PLN; and (iii) to receive deemed dispatch due to interruptions on PLN’s grid not attributable to a force majeure event.
4.	Obligations of IPP	(i) to design, fund, construct, own, operate and transfer power plant and the electricity transmission (if so

		<p>required);</p> <p>(ii) to provide guarantees in the form of performance security and performance guarantee in the form of penalties;</p> <p>(iii) to pay penalty due to failure in achieving the performance guarantee and penalty for delay of COD;</p> <p>(iv) to provide monthly electricity supply plan (projected availability factor (“AF”));</p> <p>(v) to deliver and sell electricity to PLN in accordance with the projected AF;</p> <p>(vi) to obtain all required licenses;</p> <p>(vii) to fulfill the local content requirement;</p> <p>(viii) to maintain the sustainability of the electricity supply during the period of the PPA; and</p> <p>(ix) to pay penalties in accordance with the prevailing regulations.</p>
5.	PLN’s Rights	<p>(i) to receive the distribution of a reliable and sustained electricity supply from the power plant; and</p> <p>(ii) to obtain all approvals required in relation to the PPA.</p>
6.	PLN’s Obligations	<p>(i) to provide incentives for the acceleration of COD requested by PLN;</p> <p>(ii) to absorb and purchase electricity generated by the IPP in accordance with the PPA as determined for a certain period as agreed by the parties taking into account the period for loan repayments to lenders;</p> <p>(iii) to pay deemed dispatch due to interruptions on PLN’s grid not attributable to a force majeure event; and</p> <p>(iv) to maintain and ensure the reliability of the grid facilities to receive the electricity supplied by the IPP.</p>
7.	Risks borne by PLN	<p>(i) electricity/load requirements;</p> <p>(ii) limited transmission capability; and</p> <p>(iii) force majeure.</p>
8.	Risks borne by the IPP	<p>(i) government force majeure (change of policy or regulation);</p> <p>(ii) land acquisition issues;</p> <p>(iii) licenses including environmental licenses;</p> <p>(iv) fuel availability;</p> <p>(v) accuracy of development schedule;</p> <p>(vi) performance of the plant; and</p> <p>(vii) force majeure.</p>
9.	Performance Security	<p>The IPP must provide PLN with the following performance securities:</p> <p>(i) Phase 1 to guarantee the achievement of the financing date, to be valid from the execution date of</p>

		<p>the PPA up to the financing date;</p> <p>(ii) Phase 2 to guarantee the achievement of commissioning date, to be valid from the execution date of the PPA up to the commissioning date; and</p> <p>(iii) Phase 3 to guarantee the achievement of the COD, to be valid from the execution date of the PPA up to the COD.</p>
10.	Penalties relating to Performance of the Plant	<p>Penalties which may apply to IPP are as follows:</p> <p>(i) liquidated damages;</p> <p>(ii) penalty for AF or <i>capacity factor</i> (CF);</p> <p>(iii) penalty for outage factor (OF);</p> <p>(iv) penalty for heat rate;</p> <p>(v) penalty for mega volt ampere reactive (MVAR);</p> <p>(vi) penalty for failure in maintaining the frequency; and</p> <p>(vii) penalty for ramp rate.</p>
11.	Transfer of Rights	<p>MEMR Regulation No. 48/2017 provides that:</p> <p>(i) The rights of ownership over the IPP cannot be transferred until the plant reaches the COD;</p> <p>(ii) The limitation on transfers of rights does not apply to transfers to affiliates 90% of whose shares are owned by the sponsor who is willing to transfer. This transfer can only be performed to the business entity one level below;</p> <p>(iii) Upon COD, the transfer may be done upon prior written approval from the buyer and the transfer must be reported to the MEMR through the directorate general of electricity within 5 business days from the latest amendment to the articles of association approved by the Minister of Law and Human Rights.</p>
12.	Force Majeure	<p>(i) The schedule for the COD can be extended if the COD has been delayed due to natural disasters. The extension must be in accordance with the length of the natural disaster and the time for necessary repairs;</p> <p>(ii) The period of the PPA can be extended if the generated power cannot be distributed due to a natural disaster. The extension must be in accordance with the length of the natural disaster and the time for necessary repairs;</p> <p>(iii) If a change of law causes a new investment or additional cost, the IPP may obtain an adjustment of the electricity selling price; and</p> <p>(iv) If a change of law causes a reduction of costs, PLN may obtain an adjustment of the electricity selling price.</p>

With regard to the implementation of the power project using renewable energy, pursuant to the MEMR Accountability Performance Report of 2016, the following is a comparison between the targeted capacity and its realization:

Installed Capacity of Power Plants Using New and Renewable Energy	Target (according to Agreement of Performance of Ministry of Energy and Mineral Resources of 2016)	Realization
Geothermal Power Plant	1,657.5 MW	1,643.5 MW
Bioenergy Power Plant	2,069.4 MW	1,787.9 MW
Hydropower Plant (Micro-hydro Power Plant)	6.12 MW	2.81 MW
Solar Power Plant	15.59 MW	6.62 MW
Wind Power Plant	0.85 MW	0 MW

Furthermore, MEMR states that the current development is as follows²:

a. Realization Up to Year 2017

Power Plants	Potential	Realization
Geothermal Power Plant	11.0 GW (Reserve 17.5 GW)	1.69 GW
Bioenergy Power Plant	32.6 GW	1.81 GW
Hydropower Plant	75 GW + 19.3 GW	5,124 GW
Micro-hydro Power Plant		3,173 GW
Solar Power Plant	207.8 GWp	0.086 GWp
Wind Power Plant	60.6 GW	1.1 MW
Sea	17.9 GW	-

b. Progress in 2017

The 35,000MW program (with an additional planned 7,500MW) is still ongoing taking into account the execution of PPAs respectively for mini hydro power plant and biogas power plant on May 2017 and 46 PPAs for power plants utilizing power plant with an aggregate capacity of 257.17MW and 11 PPAs for the same type of projects with an aggregate capacity of 291.4MW.

II. The Regulatory Landscape in Indonesia for Renewable Energy Sector

Gol has passed various regulations and policies specifically for Renewable Energy Sector as follows:

a. Renewable Energy

- (i) Law No. 30 of 2007 concerning Energy;
- (ii) Presidential Regulation No. 22 of 2017 concerning National Energy Master Plan;
- (iii) Government Regulation No. 79 of 2014 concerning National Energy Policy;

² According to slides of presentation concerning "Regulations and Policies Framework" presented by MEMR in CEO Summit and Exhibition of 2017 dated 29 September 2017

- (iv) MEMR Regulation No. 39 of 2017 concerning Implementation of Physical Activities of Utilization of New Energy and Renewable Energy and Energy Conservation; and
 - (v) MEMR Decree No. 0002 Tahun 2004 concerning Policy of Development of Renewable Energy and Energy Conservation.
- b. Geothermal Energy
- (i) Law No. 21 of 2014 concerning Geothermal;
 - (ii) Government Regulation (“GR”) No. 7 of 2017 concerning Geothermal Energy for Non-Direct Utilization;
 - (iii) MEMR Regulation No. 11 of 2009 concerning Guidelines for the Implementation of Geothermal Energy Business Activities, as amended by MEMR Regulation No. 18 of 2012;
 - (iv) MEMR Regulation No. 23 of 2017 concerning Procedure for Reconciliation, Depositing and Reporting of Geothermal Energy Production Bonuses;
 - (v) MEMR Regulation No. 36 of 2017 concerning Procedure for Assignment of Preliminary Survey and Assignment of Preliminary Survey and Exploration of Geothermal Energy; and
 - (vi) MEMR Regulation No. 37 of 2017 concerning Geothermal Energy Working Area for Non-Direct Utilization.
- c. Electricity
- (i) Law No. 30 of 2009 concerning Electricity;
 - (ii) Presidential Regulation No. 4 of 2016 concerning Acceleration of Power Infrastructure Development as amended by Presidential Regulation No. 14 of 2017;
 - (iii) GR No. 14 of 2012 concerning Electricity Supply Business as amended by GR No. 23 of 2014;
 - (iv) MEMR Regulation No. 17 of 2014 concerning the Purchase of Electricity from Geothermal Power Plants and Geothermal Steam for Geothermal Power Plants by PT PLN (Persero);
 - (v) MEMR Regulation No. 35 of 2014 concerning the Delegation of Authority for Granting Electricity Business Licenses in the Implementation of a One Stop Service to the Chairman of the Investment Coordinating Board as amended by MEMR Regulation No. 14 of 2017;
 - (vi) MEMR Regulation No. 19 of 2015 concerning the Purchase of Electricity from Hydro Power Plants with a Capacity Up to 10MW by PT Perusahaan Listrik Negara (Persero);
 - (vii) MEMR Regulation No. 19 of 2016 concerning the Purchase of Electricity from Solar Photovoltaic Power Plants by PT Perusahaan Listrik Negara (Persero);
 - (viii) MEMR Regulation No. 21 of 2016 concerning the Purchase of Electricity from Biomass Power Plant and Biogas Power Plants by PT Perusahaan Listrik Negara (Persero);
 - (ix) MEMR Regulation No. 10 of 2017 concerning Principles in Power Sales and Purchase Agreements, as amended by MEMR Regulation No. 49 of 2017;
 - (x) MEMR Regulation No. 24 of 2017 concerning Mechanism for Determining the Main Cost of Electricity Supply of PT PLN (Persero);

- (xi) MEMR Regulation No. 48 of 2017 concerning Supervision of Businesses in the Energy and Mineral Resources Sectors; and
- (xii) MEMR Regulation No. 50 of 2017 concerning Utilization of Renewable Energy for Electricity Supply.

III. Legal Assistance for Investors in Renewable Energy Sector

Based on our normal practice and the common requests for legal services we receive from investors in renewable energy, we would render the following legal services:

- a. providing legal advice on the GoI's applicable regulations and policies for investments which include limitations on foreign investment, applicable structures of investment and procedures for investment;
- b. providing legal advice for legal compliance purposes, i.e., providing lists of required licenses and documentation and their timeframe;
- c. providing legal opinion regarding any issues relating to the applicable regulations; and
- d. for the implementation of the power plant project, we can provide legal assistance in relation to the preparation of documentation and licenses for the establishment of a project company acting as a special purpose company and an IPP (including licenses for investment), preparation of documents relating to engineering, procurement, construction, installation, operation and maintenance and financing.

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