# THE INVESTMENT OPPORTUNITIES ON ELECTRICITY SECTOR 2017-2021

Sub-Directorate on Investment of Electricity

Directorate of Electricity Program Supervision Directorate General of Electricity TA. 2016

#### FOREWORD

The development on electricity infrastructures that has been done by government, local government and administration and PT PLN (Persero) highly expected meet the requirement of electricity to nationally need, to supply sufficiently the power system safety, reliable, environmental friendly, with highly quality, be efficiently, and with very fairly price for public, it is aimed perhaps to reinforce national government and go continuously and it should present maximally profitable for people prosperity.

It is certainly that development on electricity require a properly method in management and it must also need enormous fund to gain a maximal performance. Indonesia, is fortunately has abundantly resources of natural wealth, that having a highly potential to explore, perhaps be attractive to those prospective investors.

Referring with it, the investors need sufficiently electricity, generating electric plant is one of sectors to lead for investment in Indonesia. Therefore, Manual book of Investment Opportunities on Electricity of 2017-2021 is highly important considered as initial guidance to those prospective investors to take business on electricity sector certainly in Indonesia, including data of requirements in demand and mechanism of investment as exposed in a type of figure and table, is all to simplify everyone to understand and catch the course by those prospective investors.

At last, this Manual book of Opportunities Investment on Electricity for 2017 – 2021 may contribute valuable clearly and completely information to those prospective investors and take initial step and decide immediately to take part in development of electricity sector in Indonesia.

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Sub-Directorate on Investment of Electricity

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# CHAPTER I INTRODUCTION

#### 1.1. Background

The requirement on electrical power has been one of highly vital to fulfill, that the development on electricity and its infrastructures urged to provide it based on profitable principle, fairly in efficiency, sustainable, optimal to economy while exploiting energy resources, should rely on self confidence, hold always a properly business, safety and secured, got environmental function preserved, and guard local autonomy.

Bases to Regulations No. 30 of 2009 regarding the Electricity there it has been fixed that state owned company in order to supply the electrical power, has a highly priority to provide the electrical for public need. On the areas have not got supply of electrical power, certainly the government or local administration in authority is given challenge to local administration's owned company, privates, or cooperative in generating the electrical power integrated to supply. In a case the local administration has no owned company, absent private business, or cooperative able to generate the electrical power for public locally, it is urged the government appoint the state owned company to provide the electrical power for public of course.

In essentially, the development on electricity sector in Indonesia has depend highly on government efforts in funding. There are many important policies have been taken by government covering policy directly to respond deceleration of national economy. Regarding the fund, it is seen a follow-up step of decision on investment for development. On other side, the government ability to allocate the development fund on electricity sector also is in limited, so the funding by national budget difficulty to realize. In reality, the funding is being processed also got variously barriers in field. So that, the government is urged make efforts in having a development fund as required, either domestically source or overseas loan, all should be mobilized and push improvement capacity of providing superstructure to supply electric power in order to reach more accessible public in a quite lower price of cost.

The funding policy on the investment made by government should however share an accurately information to all sides, motivate those prospecting private investors to take part in priority, and let them to compete fairly. The earlier provide data of investment completely and socialize it all in the symmetric info to those prospecting investors to many sides, the better feasibility of project or investment offer as feedback become more attractive.

#### 1.2. Legal Standing

#### 1.2.1 The Laws

In responding to a highly request of electric power rising time to time, the government has offer to all side, either local government and to private business be actively participating in development of electricity sector. The policy itself has been based on the regulations No. 30 of 2009 regarding the Electricity, as well as supported by the Regulations No.23 of 2014 regarding Local Government and the Regulations No. 33 of 2004 regarding a Financial Balancing between Central Government and local. Due to a spirit in development of electricity has been an integrated part of national development required there proportional, harmonious and simultaneously steps based on the national development plans.

In a highly need supply of electricity power either upon public requirement or for individual, it has been ruled under the Regulations No. 30 of 2009 point out the operator of supply electricity power for public (PIUPL) consisting of :

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- Government and local authority through BUMN and BUMD state owned companies shall hold operation to supply electricity for public.
- Private business corporations, cooperative, and public participant are well invited taking part for supply the electricity for public.

State owned companies - BUMNs are welcomed as priority, but for local owned, private, cooperative and public participation is allowable as organizing of supplying the electrical power integrated on the regions having no electricity. The operation of supplying the electrical power for public should be done bases to the permits officially for supply the electricity power issued by Central government or local administration.

#### 1.2.2 Government Regulations

- a. The Government regulations No. 14 of 2012 jo. No. 23 of 2014. The Government regulations No. 14 of 2012 jo. No. 23 of 2014 regarding the business operation of supply electricity power constituted an amendment of Government regulations No. 10 of 1989, PP 14/2012, properly differentiate between the operation supply of electricity for public and the operation to supply for individual need, which by :
  - The operation to supply electricity power for public comprising:
    - 1. Electricity Power plant,
    - 2. Electricity Power transmission,
    - 3. Electricity Power Distribution, and/ or
    - 4. To sell electricity.

The business operation to supply electricity for public is ruled bases to the permits of business supply the electricity (IUPL) issuance by the Ministry or Governor refers to his authority.

- The operation to supply electricity power for individual need comprising :
  - 1. The Electricity Power plant,
  - 2. Electricity Power plant and to distribute, or
  - 3. Electricity Generating Power, transmission the power and distribute the power accordingly.

The operation to supply electricity power for individual should be done bases to the official permits issued by the Ministry or Governor accordingly.

b. The Government regulations No. 42 of 2012 regarding to sell the power cross nations.

PP – Government Regulations No. 42 of 2012 regarding the sellbuying of power in cross-nations, should refers to a condition of buying any power cross-nations in a main point if unfulfilling the requirement of electricity power locally, the power then is to support in supply the electricity in local, not inflicted loss upon state interest relating with sovereignty, security, and national economic, still to improve quality and reliable of supply electricity in regional, not neglect the development of ability to supply the electricity domestically, also avoid dependency of supply the electricity from out country.

The selling-buying of electricity cross-nations by holder of permits with business operation to supply the power can be done after having permit for sale or buying the power cross-nation issued by the Ministry of Mines and Mineral Resources. c. The Government regulation No. 62 of 2012 regarding the operation of supporting service on electrical power.

In order to support the development on electricity sector, the government has issued a governmental regulation No. 62 of 2012 refers to points of business to serve such as :

- 1. Consultation on installation of supply the electrical power;
- 2. Development and installation of supply the electrical power;
- 3. Testing and examination of installation electrical power;
- 4. Operating installation of electrical power;
- 5. Maintenance of electrical installation;
- 6. Research and innovation;
- 7. Trainings
- 8. Testing laboratory to equipments and uses of electrical power
- 9. Certification of equipments and uses of electrical power;
- 10. Certification of technical skill competition on electricity; or
- 11. Others business operation that directly related with supply the electrical power;

#### 1.3 Policy Supporting

#### 1.3.1 A Policy in Supply the Electrical power

In supply the electrical power should be controlled under state there it is organized by Government and local government. In order to provide and supply the electrical power, the Government and local Government based on its authority may definite policy, regulation, supervision, and hold the business operation in supply the electrical power.

In implementing the business operation supply the electricity by Government and Local Government shall be done by a state owned company and also in local authority owned corporation. As private business operation, cooperative and society however, is allowable to take part mainly in supply the electrical power. In supply that electrical power, the Government and Local Government is subject to provide fund to society group seen not capable, also development superstructure on supply the electricity on a region not development yet, and the development electrical power on remote areas and borders, and supply electrical power for rural. In addition, the Government and Local Government shall pay attention more to fulfill the need of electricity on most-outer islands through a reality implementation so that all social level may access on electricity.

Make endeavor supply electricity for public comprising business operation of power generator, transmission of electrical power, distribution the power and/or selling the electrical power. In addition, the operation to supply the electrical power for public can be done in integrated way. It defines to supply the electric for public should be held by one company in one business region. The limitation of operation region shall be also applicable on business of supply electrical power for public interest that only covering distribution of electrical power and/or selling the electric.

Bearer of the permits of operation having excess power by generating plant owned self is allowable to sell the excess power to the bearer permits of business in supply the electrical power or to public, if the region surrounding has not yet been reached by the bearer permits of business in supply the power (PIUPL) bases the permits may be issued by the Ministry or Governor, according to the authority. To buy the electrical power from excess power is also allowable done by PIUPL as an endeavor to fulfill the need of electrical power, to reduce Basic Cost of Supply in electrical power locally or renew the mixed primary energy for electrical power generator.

In order to make efficiency in supply the electrical power, the plans for location of development and have generating of power should consider the location of potency in primary energy resources in local. In a location of generator is close to the load, it is expectable to overcome the barrier of shortage capacity and any late in completing the development of transmission

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net. In field, in development of generating electrical power should take priority to generate the primary energy power and electricity in local.

In reality, in field existed shortage of land to develop generating plant near to load area and not existing primary energy resource in local. Therefore, need to optimally buying electrical power from bearer permits of operation through excess power scheme and in the plan to develop generator should apply there a least cost principle. On the remote regions and border areas and on the most outer island can be developed a small scale electricity power system.

#### **1.3.2** The Policy in Investment of Electricity

Mostly investment has been more interested in field or region with relative no *risks* and with a highly *return* rate to gain. An investment with a highly risk is in generally refers to have got a highly rate of return too. Upon to have a *return*, thence can be calculated profit. Therefore, the investment policy shall be carried out by improving perfect regulation product to attract investment, provide incentive either fiscal or non-fiscal, and also maximize as possible the fund resourced from domestic and fund from oversea.

The government efforts to minimize the *risk* in investment of electricity sector is done by provide guarantee in legal there with issuance sets of rule securing the activity of business operation in electricity sector, it must obey contracts that had been agreed, and also need do *law enforcement*. Correction to the regulation function and bureaucracy also shall be done by simplifying procedures in permits, accelerate process time in supply, giving subsidiary to PLN as an effort to keep *cash flow* of PLN, so it may meet the obligations to other side and also to accelerate negotiation process with *Independent Power Producer*, also provide guidance to make price of buying the electrical power by PT PLN (Persero).

Regarding possession of business on electricity field as ruled in Presidential Decree No. 44 of 2016 regarding the List of Business operation closure and on Business operation Openly with condition on the Investment there are many points ruling as the follows :

- 1. The electricity generating with capacity less than 1 MW must be with domestic investment 100%.
- 2. Small-scale electricity generating with capacity 1 MW up to 10 MW, can be a foreign investment owned maximally 49%.
- Electricity geo-thermal generating with capacity ≤ 10 MW, can be foreign investment owned maximally 67%;
- Electricity generating with capacity more than 10 MW can be a foreign investment owned maximally 95% (be maximally 100% if done in a cooperation of government-private during with concession period);
- Electrical Power Transmission can be in share ownership for foreign maximally 95% (be maximal 100% if done in a cooperation Private Government for a concession period).
- The Electrical power distribution Business operation can be a foreign investment ownership maximally 95% (be maximal 100% if done in a cooperation of government-private for concession period);
- Consultation service on Installation of Electrical power can be a foreign investment ownership maximally 95%;
- 8. Development and Working Installation of Supply Electrical power can be in foreign capital maximally 95%.
- Development and Working installation of electrical power upon a High Voltage/ Extra-high Usage electricity power Installation can be foreign investment ownership maximally 49%.
- Development and Constructing the Electricity power installation upon a lower voltage/ middle power installation can be domestic investment ownership 100%.

- 11. The operating and maintenance on the electricity power installation can be foreign investment ownership maximally 95%.
- 12. For audit and Testing of the electrical installation upon the installation of supply the electricity or usage in high voltage/ Extra high power can be a foreign investment ownership maximally 49%;
- 13. For audit and testing of the electrical installation upon the usage installation of lower/ middle voltage electrical power ca be a domestic investment ownership of 100%;

The rules in possession of business on electricity field is expected fully increasing investment climate on electricity there persistently to consider national operators' participation.

In funding the projects for supply the electricity, there is funded by central government and Local Government, means it lead to the projects be done directly by Government or through BUMN or BUMD. Source of fund through loan in Government be forward to BUMN as it is usually known in *subsidiary Loan Agreement (SLA)* in order to have investment loan in a lower bank interest, with mechanism of SLA itself is ruled in Government Regulation No. 10 of 2011 about the methods of procurement in oversea loan and grantee, the implementation shall be done under control of Government upon the amount to receive. In a flexible funding, BUMN itself may directly receive the fund for investment through issuance of obligation, directly loan, or *revenue*. The last fund source is by pure private carrying out the projects in *Independent Power Producer (IPP)* or *Public Private Partnership (PPP)*. The PPP projects itself got transmission time to time in implementation, marked by issuance a Presidential Decree No. 38 of 2015 regarding Cooperation of Government with Private Business in Supply an Infrastructure.

#### 1.3.3 Permits Policies

The business permits in supply electrical power is issued by the Ministry of Mines and Mineral Resource/ Governor refers to authority. The permits covering the electrical generating, electrical transmission, electrical distribution, and/ or selling the electrical power.

The permits of business in supply electrical power is an early step in development of electricity infrastructure. The permits policy in business of supply electrical power is indeed applicable principles of serving public by hold up transparency, efficiency and accountability. Easiness in permits shall be one of factors to improve investment.

For efficiency process of having permits in business of supply electrical power, the permits in given on that business of supply electrical power can be done integrated such as make delegation over Chief of Investment Coordinating Board. The permits on electricity has been delegated over Chief of National Investment Coordinating Board under the Decree of Ministry of Mines and Mineral Resource No. 35 of 2014 regarding Delegating the authority given Permits of business in electricity for Implementation of integrated with one service to the Chief of Investment Coordinating Board, however on supervision and controlling upon the permits and realization in field on electricity is persistently held by the Ministry of Mines and Mineral Resource.

Coordination with related institutes shall be done still as an effort to accelerate the process of permits. Using information technology is highly possibility to apply for future as superstructure to simplify the process of permits.

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#### 1.3.4. Policies of Deciding a Regional of Business

In order to supply the electrical power for public needs comprises of type of business in generating the electricity, transmission of the electricity, distribution of electricity power and/ or sell out electricity. In addition, the efforts supplying the electricity power for public should be done integrated. Essentially, endeavor to supply the electricity for public done be integrated precisely under control of corporation within a regional of service. However, it is limited also on the works of supply the electricity for public of coverage the electricity distribution and/ or sell out the electricity as done in distribution of the electricity on a certain region, shopping centre selling the electricity and on apartment too.

In deciding the regions of business service is under control of government hold in electricity. In order to supply the electricity is as done integrated, distribution service, or selling it out, the Ministry of Energy and Mineral Resources or Governor refers to its authority may issue the permits of business operation to supply the electricity following existed decision of region of services by the Ministry of Energy and Mineral Resources. Still, in order to gain the region of services, business operation, the corporation must got recommendation by Governor refers to the authority, except on the permits issued by the Ministry.

In order to avoid an over-lapping in deciding the regions of business to supply the electricity among those corporations, there for deciding the regions on business by the government perhaps hold a precautionary principles, transparency and accountable. It is noted that regions of business to supply the electricity not administration region of government, so in deciding the regions of services required a close coordination related authorities including local government as issuer of recommendation. Therefore it must refers to the decree of Ministry in Energy and Natural Resources No. 28 of 2012 jo No. 07

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of 2016. It is until mid of November 2016, Government has already issued 25 regions of business outside service under PT PLN (Persero).

The distribution location of business service is as listed on Figure 1.1.



Figure 1.1 : Regional Business Operation Map of Supply the Electricity of 2016 ( Status November 2016 )

The bearer hold regional operation is subject to fulfill the electricity requirement within the regional business operation. The policy to decide the regions of business operation also aimed at accelerating to supply the electricity nationally. In connecting with it, it is allowable to bind a cooperation inter regions of operation in supply the electricity by selling out any surplus power and also for any work of jointly usage on the electricity network belonging to bearer of other business operation. Fortunately, the Government has issued a decree of Ministry Energy and Natural Resources No. 1 of 2015 regarding a cooperation in supply the electricity and jointly exploitation of the Electricity networks.

#### 1.3.5 Sale-Price Policy and Leasing Line-net of Electricity Power

The sale-price policy and have leasing line-net of electricity is an instrument to rule of keeping *fairness* to those parties in transaction. The government has authority to give agreement upon the sale-price of electricity and leasing of line-nets from bearer of permits in business of supply electricity power as decided by Government. The agreement on the sale-price can be a standard price. In order to encourage investor be more attractive and also to keep business climate well run in principally the sale-price of electricity and leasing line-net of electricity is decided bases to a healthy business principle.

In order to encourage uses of newly energy and renewable in an electricity generating, the government should make efforts completing the rule of sale-price and the generating plant using a newly energy and renewable such as geo-thermal, Micro hydro, PLT Rubbish – power plant, Wind and other EBT through a mechanism of *Feed in Tariff* price with more attractive and under standard price. In addition, Government also make rules with mechanism of sale-price in quite large generating plant by issuing a Ministry Decree ruling the standard price of buying electrical power by appointing directly.

A policy to define price in leasing is need to rule on a natural monopoly. Refers to Government Regulation No. 14 of 2012 regarding Business operation in supply Electrical as it has been amended with a Government Regulation no. 23 of 2014 that a transmission business on electricity is subject to open opportunity using jointly the transmission nets for public interest. On business work distribution of electricity may open opportunity the uses jointly a distribution net. The jointly uses transmission and distribution net is done under a net-leasing inter bearer of permits in business to supply the electricity that having a transmission business and/ or distribution with the party is going to use the transmission nets and/ or distribution business having already agreed on cost of leasing by the Ministry or Governor refers to the authority. For the jointly uses transmission nets and/or distribution must consider capability on capacity of transmission nets and/or its distribution. As a guidance, the Government has issued already a Decree of Ministry in Energy and Natural Resources No. 1 of 2015 regarding a Cooperation of Supply Electricity and Jointly uses of Electricity Nets.

#### 1.3.6. Tariff Policy

The government policy on the electricity tariff is applicable the tariff got gradually and in planning is led to achieve its economical rate so that tariff of the electricity can cover all basic cost expended to supply. This policy is expected capturing positive responses from investor and encourage them to invest on the electricity.

In deciding its policy of tariff in electricity has been done refers to its economical values. However, a tariff for consumer in public should be done under consideration:

- 1. Having balanced national, regional, consumer, and the operator of business in supply the electricity;
- 2. Hold public interest and capability;
- 3. Rules of industry and commercial healthy;
- 4. Basic cost in supply the electricity;
- 5. Efficiency of business operation;
- 6. Scale of operation and system inter-connected; and
- 7. Available sources of funds for investment.

The policy of tariff on regional electricity shall be persistently reviewed and possibility to apply them for future. It mainly correlates with difference condition of electricity development in one region to other. Having applicable tariff in regional can push local autonomy to provide fund for development of facilities to supply the electricity. The primary points to consider apply the regional tariff of electricity are as the followings :

- 1. Local community capability as customer to the electricity.
- 2. Geographic condition of electricity system;
- 3. Willingness of PLN and owner of share in PLN to divide and separate the business region become an agent or a subsidiary;
- 4. Willingness or special support by local administration in providing the funds on electricity subsidy;
- 5. Fairness rate of electricity tariff bases to social economy condition of all public.

For future, policy of electricity power tariff on consumer group with the tariff has achieved economy valuable may be led in *"Auto Tariff Adjustment"* applicable.

#### **CHAPTER II**

#### A REVIEW CONDITION OF NATIONAL ELECTRICAL POWER

#### 2.1 The Condition Demand on Electrical Power

The Indonesia economic growth currently required a reliable supply in energy including on electricity. The electricity need shall go increasing refers to the economy growth and population. More increasing economy in a region shall result in increased consumption up in electrical power as well as. This condition should be anticipated as early as possible for the supply in electrical power can be provided in sufficient as required in a better quality and good price.



Fig. 2.1. Growth by consumption in national electricity (TWh) (Source: DG of Electricity)

National rate consumption in electricity in Fig. 2.1 got increased about 8.99% in 2012, 7.33% in 2013, 5.74% in 2014, 6.11% in 2015 and about 5.46% in 2016. Per capita consumption 2010-2019 in figure 2.2.



Fig. 2.2. Per capita electricity consumption 2010-2019 (Source: DG of Electricity)

Still, consumption rate existed on operation scope PT PLN (Persero) got a trend same decreasing growth, the consumption grew around 9.4% in 2010, decreased into 7.3% in 20111, got increasing about 10.2% in 2012, then got decreased into 7.8% in 2013 and decreased again into 5.9% in 2014. It is noted that consumption per sector uses, got having decreased growth highest of consumption on industry. It is however not mean consumption go decreased, its growth rate only tended decreasing. It is seemly on the rate of National economy growth got tendency decreased currently years. In addition, shortage in supply on some region manly outside of Java Bali got impact to decreasing rate of consumption.

#### 2.2 The Condition In Supply Electrical Power

The installed capacity of National electricity generating grew about 6.8% in 2010, increased about 16.4% in 2011, got decreased about 13.0% in 2012, then decreasing into 6.7% in 2013 and still decreasing into 4% in 2014. The additional capacity of generating plant in total seemly highly relative but it got

not proportional in distribution, where on Java Bali region got sufficient supply whereas almost region outside Java Bali got shortage.



Fig. 2.2. The Growth Capacity in an Installed Generating (MW) (Source : DG of Electricity)

#### 2.3 The Transmission Condition of Electrical Power

Mostly transmission net is belonged to and operated by PT. PLN (Persero), except on several regions such as on Pulau Batam owned and operated by PT PLN Batam as a subsidiary of PT PLN (Persero), some on Pulau Sulawesi owned and by private but operated by PT PLN (Persero) and on Pulau Papua owned and operated by private for individual.

Today, the electricity system in a properly integrated found only on Java-Bali, where the system in electricity of Java-Bali used 3 types of voltage for inter-connection namely on Saluran Udara Tegangan Ekstra Tinggi (SUTET) – an Extra high voltage air net in 500 kV as a back bone and with a Saluran Udara Tegangan Tinggi (SUTT)-Highly Voltage Air Net in 150 kV and 70 kV as transmission to loan central.

Total length of transmission net in electrical power got increasing about 19.28% for the last 5 years period (2012-2016). The growth net length of transmission is as the following :



(Source : DG of Electricity)

#### 2.4 Electrification Ratio

Due to not all regions in Indonesia got electricity net yet seemly a potency on electricity. The ratio of electricity up to 2016 was about 91.16%. If compared to Singapore, it got 100% already, Brunei Darussalam 99.7%, Malaysia 99.0%, Thailand in 99.3% and Vietnam got 98.0%.



Fig. 2.4. The Growth in Realization and Ratio Electricity Plans (Source : DG of Electricity)

#### 2.5 The Condition in Supply of Electrical Power

Beside condition in ratio of electrification not achieved 100%, the supply condition of electrical power on National electricity system also reflect existing still unbalanced between *Supply* and *demand*, with the condition hopeful offer opportunities to investor in taking part on business of supply electricity.



Fig. 2.5. A Condition of System in National Electricity (Source : DG of Electricity)

#### 2.6 Existing Sources of Primary Energy

In order to support the supply of electric generating primary energy as properly as existing or *on going*, the potency of each primary energy source of Province possible to use are as following :

		ENERGI							
NO.	WILAYAH	BATUBARA 1)	GA S BUMI <sup>2)</sup>	MINYAK BUMI <sup>2)</sup>	PA BU	NAS MI <sup>39</sup>	AIR <sup>1)</sup>	CBM <sup>2)</sup>	
		(JUTA TON)	(TSCF)	(MM STB)	(LOKA SI)	(MWe)	(MW)	(TCF)	
Suma	atera								
1.	Aceh	450,64	6,93	150,68	19	1.307	1.655,1	-	
2.	Sumatera Utara	27,22	1,29	110,67	16	2.762	1.241,5	-	
3.	Sumatera Barat	953,95	-	-	18	1.788	625,1	0,5	
4.	Riau dan Kep. Riau	2.490,74	8,06	3.386,67	1	25	-	52,50	
5.	Kep. Natuna	-	50,48	373,23	-	-	-	-	
6.	Batam	-	-	-	-	•	•	-	
7.	Bangka Belitung	-	-	-	7	105	•	-	
8.	Jambi	2.547.31	-	-	8	1.032	373,9	-	
9.	Bengkulu	211,02		-	5	1.362	50,0	3,6	
10.	Sumatera Selatan	69.030,82	18,30	1005,34	6	1.885	22,0	183	
11.	Lampung	107,89	-	-	13	2.571	64,8	-	
Jawa	-Ball								
1.	Banten	18,80	-		5	613		-	
2.	DKI Jakarta	-	-	-	1	•	•	-	
3.	Jawa Barat	-	3,18	494,89	40	5.839	2.137,5	0,8	
4.	Jawa Tengah	0,82	-	•	14	1.981	360,0	-	
5.	D.I. Yogyakarta	-	-	•	1	10	-	-	
6.	Jawa Timur	0,08	5,89	1.312,03	11	1.314	2.162,0	-	
7.	Ball	-	-		6	354	-	-	
Nusa	Tenggara								
1.	NTB	-			3	175	•	-	
2.	NTT	-		-	24	1.343	11,1	-	
Kalin	nantan								
1.	Kalimantan Timur	63.287,03	14,35	573,50	- 4	30	168,0	106,3	
2.	Kalimantan Barat	491,30	-	-	5	65	198,0		
3.	Kalimantan Selatan	20.122,27	-		3	50	-	104,6	
4.	Kalimantan Tengah	4.101,39	-	-	-	-	-	-	
Sulay	leev								
1.	Sulawesi Utara	-	-	-	9	875	16,0	-	
2.	Gorontalo		-	-	5	250	-	-	
3.	Sulawesi Tengah	1,98	2,58	-	18	718	670,2	-	
4.	Sulawesi Tenggara	•		-	12	311	82,8	-	
5.	Sulawesi Selatan	231,24		51,87	14	468	1.567,8	2	
6.	Sulawesi Barat	-	•	-	12	531	800,0	-	
Malu	ku								
1.	Maluku	-	15,21	24,96	17	644	156,4	-	
2.	Maluku Utara	8,22	-	-	13	427	-	-	
Papu	a								
1.	Papua	9,33	-	-	3	75	49,0	-	
2.	Papua Barat	125,48	23,90	65,97	-	-	-	-	
тоти	AL.	157.181,48	150,18	7.549,81	312	28.910	12.411,2	453,3	

#### Table 2.1 : Data Potency Source of Primary Energy

Remarks :

<sup>1)</sup> Source : National Geology Agent 2014

<sup>2)</sup> Source : Central Data and Information KESDM 2014
<sup>3)</sup> Source : Annual Book on Geothermal Energy Potency Status 2014, Ditjen EBTKE

: Coal Bed Methane CBM

TSCF : Trillion Standard Cubic Feet

MMSTB : Million Metric Stock Tank Barrels

MWe : Mega Watt electric MW : Mega Watt

TCF : Trillion Cubic Feet

# CHAPTER III

## **OPPORTUNITY TO INVEST IN ELECTRICITY**

#### 3.1. The Development of Superstructure in Supply Electrical Leaded

- a. The Generating Plant Leading
  - PLTU Steam Power Plant: it is high prospective to develop, there however take adopting a friendly environmental technology in priority and has highly efficiency (*Clean Coal Technology*) to the system has been established (Java-Bali and Sumatra nets).
  - PLTG and PLTA *Pump Storage;* shall be developed for fulfilling the need on peak load, also to minimize and restrict the fuel generating plants in operation while peak load.
  - **PLT-EBT**; is considerable to develop as alternative if the target portion on newly energy and renewable energy be at least of 25% not performance achieved in 2025 there be persistently taken attention into safety factor firmly.
- b. The Transmission of power to develop Leaded up
  - 2-5 years coming is priority to distribute the electrical power from newly generating plant of program 35,000 MW.
  - The transmission of voltage 500 kV outside Java-Bali net system and Sumatera system, the electric power transmission – voltage Direct Current – DC, and smart grid is highly prospective to develop be persistently taken attention into local electricity system need, economy consideration and technology existed.
  - The electric power transmission using under ground cable is very potential to develop on a certain areas as long as fulfilling technical and economical aspects.
  - Provided transformer added or development of some newly substations shall be priority if putting transformer load on the installed

sub-stations achieved already 70% of capacity on electricity system outside Java-Bali and achieving 80% of capacity on electricity system of Java-Bali.

- Back-up system can be considerable for improving reliable of electricity system.
- c. The Development of Power distribution Leaded
  - The isolated distribution nets is prospective to develop if the electricity power integrated to the other electricity system unfulfilled or not efficiency to hold.
  - The electric power distribution net by using under ground cable is highly prospective to conduct on a certain areas as long as fulfilling its technical and economical aspects.
  - The electric power distribution net with smart grid technology and submarine cable inter-islands can be done as long as meet the system and technology available requirement.
  - *Micro Grid* shall be highly prospective in order to meet the reliable and to optimize the mixed generating energy on remote location far from central system.

#### 3.2. The Strategic Generating Projects

- a. The Electricity in Java-Bali System
  - CFPP Jawa Tengah (2x950 MW). This project is highly strategic, has been the first electrical project adopting a cooperation scheme of Government and Private business (KPS) under Presidential Decree No. 67 of 2005 Jo Presidential Decree No. 13 of 2010, is on going of releasing land.
  - CFPP Indramayu (1x1,000 MW). This project is highly strategic, relative near to the load central on Jabodetabek, is currently to going to release the land.

- CFPP Jawa-1 (1,000 MW) is developed as an expansion of IPP that has been operated with connection point to GITET Mandirancan.
- CFPP Jawa-3 (2x660 MW) can be allocated to PLTU IPP Tanjung Jati A, to be developed by PT, TJPC, or development of new CFPP-plant by IPP, with connection point to *switching station* 500 kV between Pemalang and Indramayu.
- CFPP Jawa-4 (2x1,000 MW) : can be developed as an expansion of IPP that has been operated, or development of new PLTU by IPP with connection point to GITET Tanjung Jati or other area refers to need in system.
- CFPP Jawa-5 (2x1,000 MW) shall be done by IPP existing with alternative location on Jawa Barat/ Banten province with connection system point GITET Balaraja or *Incomer* SUTET 500 kV Tasik – Depok.
- CFPP Jawa-6 (2x1,000 MW) with alternative of location in Jawa Barat/ Bantan province.
- CFPP Jawa-7 (2x1,000 MW) located in Bojonegara on land of PLN width 170 ha(s), is currently in process of financial closing to develop as IPP Project with connection point *Incomer* double pi SUTET Surabaya Baru – Bojanegara – Balaraja Baru.
- CFPP Jawa-8 (1,000 MW) to be done by the existing developer located in Jawa Tengah Province.
- CFPP Jawa-9 (600 MW) is expandable of the IPP project that has been operated, or the development newly PLTU-plant by IPP on Banten Province.
- CFPP Jawa-10 (660 MW) to be done by PLN or IPP located in Jawa Tengah or Jawa Barat province.
- CCPP Jawa-1 (2x800 MW), to be developed by IPP with location of Jawa Barat Province near to central load of Jakarta.

- CCPP Jawa-2 (1x800 MW) to be developed by PLN on location of Priok near to central load of Jakarta.
- CCPP -3 (1x800 MW), an additional the load follower generating located in Jawa Timur, highly expected supply of gas from Blok Cepu or other sources in Jaw Timur.
- CCPP-Plant Jawa-4 (2x800 MW), CCPP Jawa-5 (2x800 MW), CCPP Jawa-6 (2x800 MW) and CCPP Jawa-7 (2x800 MW) are all newly generating plants in order to meet a mixed energy target of gas some 24% for 2025 as well as contingency if the mixed target of energy from EBT unfulfilled. Indication of location in Banten, Jawa Timur, Jawa Tengah and Jawa Barat provinces that having infrastructures on gas and with highly sufficiently potency to supply gas.
- GEPP-plant Senayan 100 MW is high strategic too due to located to central load of Jakarta and functioning to improve reliable supply system of MRT (as back up supply from GI CSW and Pondokindah sub-stations) as well as to meet the requirement of blackstart generating in Muara Karang and Priok generating units.
- CFPP/CCPP Plant Madura (400 MW) functioning to improve reliable quality of electric supply on Pulau Madura as well as to reduce dependence on Grid Surabaya system that currently hardly to have additional supply from newly generating plant or from newly GITET.
- b. The Electricity System outside Java-Bali (Sumatra)
  - CFPP Accelerating Phase I Project Plant (CFPP Tarahan, PLTU Tenayan), PLTA Peusangan 1-2 as well as HEPP Asahan III, are acknowledged highly strategic generating plants, due to beside prospective to supply basic load need, also at once it recover BPP LWBP on Sumatra systems.

- The generating *Peaker* plants such as Sumbagut-2 (250 MW), Riau (200 MW), Jambi (100 MW) and Lampung (200 MW) are all strategic generating projects must be immediately finished for fulfilling the electrical power of Sumatra system on peak times currently is operated under fuel yet.
- The generating MPP is a strategic project due to this power plant is acknowledged moveable that can be removed into areas to overcome shortage supply of power due to late of project.
- The generating in large scale (CFPP-MM plant of Sumsel-8 of 2x600 MW, Sumsel-9 of 2x600 MW, and Sumsel-10 of 1x600 MW) which the electricity distributed also to Java-connection system through a special transmission 500 kV HVDC, it must be settled referring with completing the inter-connection project of Jawa-Sumatera 500 kV HVDC.
- CFPP Plant Jambi (2x600 MW), CFPP-MM Riau-1 (600 MW), HEPP Merangin 350 MW on Jambi Province and HEPP Batang Toru 510 on Sumatera Utara Province, are recognized IPP strategic project in order to meet the need of Sumatra system and to reduce BPP.
- c Outside Java-Bali Electricity System (Eastern Indonesia)
  - The development of transmission 275 kV inter-connection Kalbar-Serawak stretching from Bengkayang up to border Serawak as planned to finish in 2015, and a transmission project 150 kV related with this inter-connection.
  - The generating project FTP1 namely Parit Baru and Pantai Kura-Kura as well as the generating project Parit Baru FTP2 and the generating Kalbar *Peaker*.
  - The generating project FTP1 namely PLTU Kalteng 2x60MW on Pulau Pisang and CFPP Kaltim 2x110 MW on Teluk Balikpapan.

- The generating project FTP2 namely CFPP IPP Kalsel 2x100 MW, CFPP IPP Kaltim 2x100 MW, GTPP/GEPP Bangkanai total capacity of 295 MW.
- The generating project regular CFPP plant namely Kalselteng 1 (20x100 MW), Kalselteng 2 (2x100 MW), Kalselteng 3 (2x100 MW, Kaltim 3 (1x200 MW), Kaltim 4 (2x100 MW), and Kaltim 5 (1x200 MW) and Kaltim 6 (1x200 MW).
- The generating project *Peaker* namely: Kalsel *Peaker* 1 (200 MW), Kalsel *Peaker* 2 (100 MW), Kaltim *Peaker* 2 (100 MW) with LNG fuel.
- The generating load follower project they are: Kalsel-1 (Load Follower) 200 MW, Kaltim-1 (Load Follower) 200 MW with LNG fuels.
- Mobile power Plant (MPP) 30 MW on Kaltim with *duel fuel* to meet the need a load fulfillment and in short-term running.
- Development of GEPP plant with *duel fuel* in several isolated system on Kalimantan Utara namely in Malinau and in Tanjung Selor to meet the need in load of those regions growing rapidly following an established Kalimantan Utara Province.
- Preparing sufficiently supply of LNG to meet the need of fuel to the generating *peaker* included the existing generating and MPP.
- The generating project FTP 1 namely PLTU Gorontalo (2x25 MW) and PLTU Sulut 1 (2x50 MW).
- The generating project FTP2 namely PLTP IPP Lahendong 5 and 6 (2x20 MW), a Regular generating project PLTU namely Sulut-3 (2x50MW), Sulbagut 1 (2x50 MW), Sulbagut-3 (2x50 MW) and Sulbagut-2 (2x100MW).
- The generating project *Peaker* namely Minahasa *Peaker* 150 MW, Gorontalo *Peaker* 100 MW,.

- The generating project FTP2 namely CFPP Punagaya 2x100 MW, HEPP Malea 90 MW, HEPP Bonto Batu 2x100 MW, PLTP Bora Pulu 40 MW and GeoPP Marana 20 MW.
- The generating project regular CFPP namely Sulsel Baru 2 (1x100 MW), Jeneponto 2 (2x125 MW), Sulsel 2 (2x200 MW), Palu 3 (2x50 MW), Kendari (2x50 MW).
- The generating project *Peaker* namely Makassar *Peaker* 450 MW, Sulsel *Peaker* 450 MW with indication location in Maros.
- The generating project hydro as developed by private as project IPP and project as developed by PLN as EPC PLN.
- The Generating project FTP1 namely CFPP 2 on NTB Lombok/ Jeranjang 2x25 MW. The generating project FPT2 CFPP Lombok 2x50 MW to meet the need of load requirement is going on increased.
- The generating projects of IPP CFPP Plant Lombok TImur 2x25 MW is on constructing phase, is expected in 2017 to operate.
- The generating project of Lombok *Peaker* 150 MW with gas fuel stored in CNG product to meet the need of peak load.

It can be offered yet to investor perhaps those electric power generating projects either as IPP Project or EPC is to develop as enclosed (appendix II).

#### 3.3. In Realization and The Investment Need Plan

The investment need of PT PLN (Persero) in developing superstructure supply of power from year to year indicated an increasing trend refers to growth consumption rate of electricity, which by for development to supply the power within a period coming 5 years (2016-2020) required a funding around Rp.1,019 Trillion or average Rp. 204 Trillion yearly. In requiring the fund is to finance projects of PT PLN (Persero) either on the generating, distribution, and the project of private handled or *Independent Power Producer (IPP)*. In referring to a historical data of funding as allocated through a National Budget (APBN) and PLN budget (APLN) indicated existing gap between the demand and supply. So the gap shall be a certain challenge to the local government and PT PLN (Persero) in future for development of superstructure in supply the power.



Fig. 3.1 : The Realization Progress (2010-2016) and the Investment Plan (2017-2020) Sub-Sector Electricity (Sumber: DG of Electricity)

#### CHAPTER IV

#### **MECHANISM/ PROCEDURE IN INVESTMENT**

#### 4.1. Investment Policy

It is found some points related the investment policy on electricity subsector, they are:

- To encourage and improve investment climate be better and organize private participation in business of electricity
- To increase ability of PT PLN (Persero) to invest on superstructure of supply power.
- To push private investment and to many other business operation specifically on the generating power under mechanism *Independent Power Producer (IPP)* also by a Government partnership with Business operating (KPBU) or *Public Private Partnership* (PPP).
- **D** To improve efficiency and transparency investment in electricity
- To offer fiscal and non-fiscal incentive in investment of electricity sector for public interest and development of new energy and renewable.

#### 4.2. Scheme by Private Partnership In Supply Infrastructure of Power

a. Scheme of business and Private participation in development of the generating power consisting of 3 type, they are :

# Engineering Procurement and Construction (EPC) Contract

The employer is PLN, The *Engineering Procurement and Construction (EPC)* project is offered to private through tender. In this model, PLN is responsible for the activities and cost of plans, provide the land, funding and generating operation. For instance: Development of the generating program FTP I and program 35 GW.

## Independence Power Producer (IPP) – Regular Program/ Accelerating

The employer of project at once executor EPC is private, where 100% of funding is original from private and transform it by price sale of power. The funding is comprising the fund for development, land clearance, asset operation, where the asset after completing the contract period shall be transferred to PT PLN (Persero). For instance: IPP projects in a 35 GW program.

# Independence Power Producer – in cooperation Government with Corporations (KPBU) or Public Private Partnership (PPP) Project

The government project is offered to private under a tender mechanism. The government may provide support or a government guarantee. If the private as initiator of project in case, the government shall provide compensation. For instance: PLTU Jawa Tengah Project 2 x 1,000 MW.

b. Scheme of business and private participation in development of transmission and sub-station

#### □ Supply and Erect

PLN shall buy equipments from supplier of transmission and sub-station through process of procurement refers to the rules in PLN, and PLN shall procure a contractor that responsible for conducting the works of construction and installing transmission and sub-station.

# Engineering Procurement and Construction (EPC) Contract

PLN shall appoint contractor EPC responsible for procurement of transmission equipments and sub-station and carry out construction and installation and PLN shall pay contractor EPC
refers to the terms of payment and works progress by agreement.

# Deferred Payment

PLN shall appoint contractor responsible for funding, procurement of transmission equipment and sub-station as well as carrying out construction and installation, and PLN shall pay contractor in staged after transmission and sub-station finished all refers to the agreement.

# 4.3. Mechanism in Participation of Private in Procurement of Infrastructure of Power

Engineering Procurement and Construction (EPC) Contract
 Procedures in procurement of goods/ services and many others
 on scope PT PLN (Persero) is subject to fulfill and/ or related
 refers to the rules as intended in *terms & conditions* on web Procurement PT PLN (Persero) as follow :

http://eproc.pln.co.id/assets/portal/doc/Term%20of%20Condition s.pdf

 Independence Power Producer (IPP)
 IPP in participation on investment of supply the power must refer to the rules and procedures of procurement, permits process as following:



Fig. 4.1. Process Permits IPP (Source : BKPM)

Bases Article 25 point (2) of Government Regulation No. 14 of 2012 regarding Business Operation of Supply the Power as it has been amended by a Government Regulation No.23 of 2014, purchasing the power by PIUPL from other party in principally shall be done by a public tender. In a certain circumstance, however the purchasing power from the third party can be done in an elected to or appointing to, under a procedure as following :

1. Procedure in procurement IPP in an electing to refers to the Ministry Decree No. 3 of 2015.



Fig. 4.2 Procedure Procurement IPP under an Electing to (Source : PT PLN (Persero))

2. Procedure Procurement IPP under an Electing to refers to the Ministry Decree ESDM No. 03 of 2015:



Fig. 4.3. Procedure Procurement IPP under an Electing to ( Source : PT PLN (Persero

 Procedure Procurement IPP under an Open tender refers to the Ministry Decree of ESDM No. 01 of 2006 and the Decree of Ministry of Mines and Mineral Resources No. 04 of 2007.



Fig. 4.4 The Procedure Procurement IPP under an Electing to (Source : PT PLN (Persero))\

C Public Private Partnership (PPP) Project or Cooperation Government with Corporations (KPBU)

Applied KPBU is aimed at fulfilling the need of funding continuously in supply infrastructure is to mobilize fund of private. Still, to implement the supply of infrastructure qualified, effective, efficient, on target and on time; Provide properly climate in investment and encourage participation of corporations in supply Infrastructure bases business principle fairly; to encourage the user kindly hold principle paying any service as received, or in a certain matter may consider capability to pay the user; and/ or provide accuracy of returning of investment in corporation in supply of Infrastructure by mechanism of payment regularly by government to corporation. Legal base of implementing projects by KPBU namely Presidential Decree No. 38 of 2015 regarding cooperation Government with the corporation in the supply of Infrastructure, the decree of Ministry in the Planning of National Development/ Chief Bappenaas No. 4 of 2015 on the Methods of Cooperation Implementation of Government with Corporations in the supply of Infrastructure with the stages as following :



Fig. 4.5. The Stages of Project Implementation by KPBU (Source : Bappenas)

### 4.4 Permits in Business to Supply the Power

The Permits in Business of Supply Temporary Power (local-IUPLS) and IUPL is issued by the Ministry of ESDM based on the Ministry Decree ESDM No. 35 of 2015 regarding the methods of having permits in business of electricity. But, since issuance of One Point Service (PTSP) as coordinated under BKPM – the Investment Coordinating Board in early 2015, there are 10 permits of business has been delegated over BKPM, some 6 (six) permits of business are categorized a permits on electricity. In order to maximize the process of permits issuance of PTSP BKPM requiring a technical recommendation, the Ministry of ESDM shall appoint official assignment to give a technical recommendation and/or permits of operation, with the conditions of permits as follow :







## For the process of Permits on PTSP BKPM are as follow :

(Source : BKPM)

# 4.5 The Authority and Given Permits on Business of Supply Power

As it has been ruled in the Regulation No. 30 of 2009 on Electricity, to the private is offered opportunities as wide as possible to take part in business of supply power for public uses and for individual, it bases the permits on business of supply the power. In connecting with it, it is refers to policy upon region authority has been ruled on division of authority issuing permits on business in electricity between Central Government and Local Government in this case the Ministry and Governor. Separation of authority in issuing the permits of supply the power for public uses as ruled in UJ No. 23 of 2014, as following:

- a. Governor holds for corporation where the business are cross cities.
- b. Ministry, for corporations that its region business cross-province; is done by State owned company, and sales the power and/or rent the power nets

to the holder of permits in business of supply power which its permit issued by Ministry.

- 4.6 Having Permits in Operation Supply the Power (Refers to Permen ESDM No. 35 of 2013 and Permen ESDM Ministry No. 35 of 2014
  - a. IUPLS
    - For the operation in the generating power, operation on transmission of power, operation Distribution of power, or operation supply of power already being integrated in priority given temporary permits of operation supply the power after meet the administrative and technical requirement as formed on Figure 4.6
    - Requesting a temporary Permits on operation to supply the power should be submitted in written by a corporation to Director Direktur Jenderal Ketenagalistrikan, used a form as requesting and the form intended as on Fig. 4.8
    - The issuance of Temporary Permits on operation supply of power or refusal shall be made at least 20 (twenty) working days since completed proposal accepted.
    - In a case the proposal request for temporary Permits on Operation of Supply the power is refused, Director Jenderal Ketenagalistrikan shall notify it in written to the applicant, also reasonable of refusal.

A. SURAT PERMOHONAN IZIN USAHA PENYEDIAAN TENAGA LISTRIK SEMENTARA								
KOP SURAT BADAN USAHA								
Nomor :, 20 Lampiran : Hal : Permohonan Izin Usaha Penyediaan Tenaga Listrik Sementara								
Yang terhormat, Direktur Jenderal Ketenagalistrikan Jl. H.R. Rasuna Said Blok X-2 Kav.7-8 Kuningan, Jakarta								
Dalam rangka usaha penyediaan tenaga listrik untuk kepentingan umum, dengan ini kami mengajukan permohonan Izin Usaha Penyediaan Tenaga Listrik Sementara untuk usaha pembangkitan/transmisi/distribusi/ terintegrasi tenaga listrik di, dengan kelengkapan dokumen sebagai berikut:								
1. Data Administrasi :								
a. identitas pemohon;								
b. profil pemohon; dan								
c. nomor pokok wajib pajak;								
2. Data Teknis :								
a. studi kelayakan awal; dan								
b. surat penetapan sebagai calon pengembang usaha penyediaan tenaga listrik dari pemegang Izin Usaha Penyediaan Tenaga Listrik selaku calon pembeli tenaga listrik atau penyewa jaringan tenaga listrik untuk usaha pembangkitan tenaga listrik, usaha transmisi tenaga listrik, atau usaha distribusi tenaga listrik.								
Demikian permohonan kami, atas perhatian Bapak/Ibu*) Direktur Jenderal, kami ucapkan terima kasih.								
*) Sesuaikan dengan keperluan								
Hormat kami, Jabatan								
tanda tangan, meterai, dan stempel								
(Nama Lengkap)								

Fig. 4.8 : .Form for Requesting and Form of Proposal to fill in

IUPLS

(Source : DG of Electricity)

- b IUPL
  - Proposing on Permits of Operation in supply the power is submitted by a corporation and should be completed in administrative, technical, environmental requirements as seen on Fig. 4.6.
  - Proposal for Permits on operation of supply the power is submitted in written by corporation to the Ministry via Director Direktur Jenderal Ketenagalistrikan by using form of Request and Form to fill in as listed on Fig. 4.9.
  - Director Direktur Jenderal shall do examining and evaluation on the proposal.
  - Bases to the result of examination and evaluation, the Ministry then make decision conferring or refusal upon the proposal for Permits of operation the supply power at least 30 (thirty) working days since the proposal in complete received.
  - In a case the proposal for the permit is in refusal, the Ministry shall notify in written to the applicant, also a reasonable in refusal.

#### A. SURAT PERMOHONAN IZIN USAHA PENYEDIAAN TENAGA LISTRIK

#### KOP SURAT BADAN USAHA

#### Nomor Lampiran

...,... 20....

#### Hal : Permohonan Izin Usaha Penyediaan Tenaga Listrik

Yang terhormat,

Menteri Energi dan Sumber Daya Mineral

c.q. Direktur Jenderal Ketenagalistrikan Jl. H.R. Rasuna Said Blok X-2 Kav.7-8 Kuningan, Jakarta

Dalam rangka usaha penyediaan tenaga listrik untuk kepentingan umum, dengan ini kami mengajukan permohonan Izin Usaha Penyediaan Tenaga Listrik untuk pembangkit/transmisi/distribusi/penjualan/terintegrasi tenaga listrik di ...

- dengan kelengkapan dokumen sebagai berikut:
- Data Administrasi : a. identitas pemohon
  - b. pengesahan sebagai badan hukum Indonesia;
  - c. pengesahan sebagai badan hukum Indonesia bagi swadaya masyarakat yang berbentuk badan hukum;
  - d. profil pemohon;
  - e. nomor pokok wajib pajak;
  - f. kemampuan pendanaan;
- 2. Data Teknis :
  - a. studi kelayakan usaha penyediaan tenaga listrik;
  - b. lokasi instalasi kecuali untuk usaha penjualan tenaga listrik;
  - c. izin lokasi dari instansi yang berwenang kecuali untuk usaha penjualan tenaga listrik;
  - d. diagram satu garis;
  - e. jenis dan kapasitas usaha yang akan dilakukan;
  - f. jadwal pembangunan;
  - g. jadwal pengoperasian;
  - h. persetujuan harga jual tenaga listrik atau sewa jaringan tenaga listrik, dalam hal permohonan Izin Usaha Penyediaan Tenaga Listrik diajukan untuk usaha pembangkitan tenaga listri, usaha transmisi tenaga listrik, atau usaha distribusi tenaga listrik;
  - i. kesepakatan jual beli tenaga listrik dalam hal permohonan Izin Usaha Penyediaan Tenaga Listrik diajukan untuk usaha pembangkitan tenaga listrik;
  - j. kesepakatan sewa jaringan tenaga listrik, dalam hal permohonan Izin Usaha Penyediaan Tenaga Listrik diajukan untuk usaha transmisi tenaga listrik atau usaha distribusi tenaga listrik; dan
  - k. penetapan wilayah usaha oleh Menteri dan rencana usaha penyediaan tenaga listrik, dalam hal permohonan Izin Usaha Penyediaan Tenaga Listrik diajukan untuk usaha distribusi tenaga listrik, usaha penjualan tenaga listrik, atau usaha penyediaan tenaga listrik secara terintegrasi.
- Dokumen Lingkungan

Demikian permohonan kami, atas perhatian Bapak/lbu\*i Menteri, kami ucapkan terima kasih. \*i Sesuaikan dengan keperluan Hormat kami, Jabatan

tanda tangan, meterai, dan stempel (Nama Lengkap)

Fig. 4.9: .Form of Requesting Letter and Form to fill in as Proposal IUPL (Source : Ditjen Ketenagalistrikan)

- C Permits of Operation
  - The operation of supply the power on individual own uses with capacity of the generating of power more than 200 kVA with its installation facility covering cross province shall be done after having Permits of Operation from the Ministry.
  - The operation of Supply the Power for individual own uses with capacity of the generating of power more than 25 kVA up to 200 kVA with the installation facility covering cross province, shall be done after having Official Registered Certificate from Director Direktur Jenderal Ketenagalistrikan.
  - The Operation of supply the power for individual own uses with capacity of the generating of power up to 25 kVA with installation facility covering cross-province, shall be done after doing official report to Director Direktur Jenderal Ketenagalistrikan.

A. SURAT PERMOHONAN IZIN OPP	ERASI
KOP SURAT	T BADAN USAHA
Nomor :	, 20
Hal : Permohonan Izin Opera	si
Yang terhormat,	En anal
c.q. Direktur Jenderal Ketenagalistr	ikan
Jl. H.R. Rasuna Said Blok X-2 Kav.7	7-8 Kuningan, Jakarta
Dalam rangka usaha penya sendiri dengan kapasitas pemban fasilitas instalasinya mencakup lin permohonan Izin Operasi dengan ke	ediaan tenaga listrik untuk kepentingan gkit tenaga listrik di atas 20 kVA yang tas provinsi, dengan ini kami mengajukan elengkapan dokumen:
1. Data Administrasi :	
<ul> <li>a. identitas pemohon;</li> </ul>	
<li>b. profil pemohon; dan</li>	
<li>c. nomor pokok wajib pajak;</li>	
2. Data Teknis :	
<ul> <li>a. lokasi instalasi termasuk tata</li> </ul>	letak (gambar situasi);
b. diagram satu garis;	
c. jenis dan kapasitas instalasi p	enyediaan tenaga listrik;
d. jadwal pembangunan; dan	
e. jadwal pengoperasian.	
3. Data Lingkungan.	
Demikian permohonan kami, ucapkan terima kasih.	atas perhatian Bapak/Ibu*  Menteri, kam
*) Sesuaikan dengan keperluan	Hormat kami, Jabatan
	tanda tangan, meterai, dan stempel
	(Nama Lengkap)

Fig. 4.60 : .Form of Requesting Letter and Form to fill in Proposal by IO (Source : DG of Electricity)

Refers to Permen ESDM Regulation Decree No. 35 of 2014 regarding the Delegating an Authority on Conferral Permits of Operation on the Electricity in connecting with implementing the spirit to serve an integrated One Service Point over chief of BKPM, the authority of permits given such as IUPLS, IUPL and IO, in this case the chief of BKPM is given authority to issue the Permits on behalf the Ministry.



Gambar 4.7. Conditions of Operation Permits

(Sumber: DG of Electricity)

# 4.7. Private Power Utility (PPU)

Refers to the Decree of Ministry in Energy - ESDM No.35/2013, that PPU is noted bearer permits in operating business of supply the power license integrated, it has covering the operations :

- The Generating of power, the transmission of power, the distribution of power, and selling the electricity power done it all integrated in one business operation.
- □ The generating of power, the transmission of power, and selling the electricity power done it all integrated in one business operation; or
- The generating of power, distributing the power, and selling it all integrated in one busness operation.

In operating the business of distribution and/ or selling out the electric power, PPU operator must have own area of business. It should be noted that only one business corporation within one area of business and bearer area of business is subject to supply the power or net distribution of electric power with highly qualified and properly reliable within its area of business. The procedures of determining the area of business is as listed on Figure 4.12



Figure 4.12: The Procedures determining the area of business (Source: DG of Electricity)

## 4.8 The Operations of Supply Electric Power in Small-scales (UPTLSK):

The background of UPTLSK operations are existed a lot of community having no any electricity service by the bearer area of business available (PLN) particularly those people live on villages, remote rural, on border areas, and on small islands noted around 12,659 (16%) of villages, whereby around 2,519 villages got dark yet, that government must be care of it, to encourage accelerating the supply of power in sufficiently, the electric available should be in economic price to those villages, in this case also to empower BUMDs (Villagers' owned operations), the private and cooperatives, perhaps involved them to handle the UPTLSK area operations.

The is found around 2,500 villages in spread location having not electric net yet, for this condition should be electrified up to 2019, with the target as following :



Figure 4.13: the location of 2.500 Villages not electrified yet

(Source: DG of Electricity)

The stages to electrify around 2,500 villages is under UPTLSK operations perhaps according to its area business in small-scale and also offer the area of business to BUMD-villagers corporations, Private business and Cooperatives with the area width in offered there minimally 1 (one) Kecamatan (sub-district). In operating the area of business as UPTLSK operation is allowable to employ official subsidiary fund or without use the benefits of subsidy. The mechanisms of determining officially area of business with subsidy are as following:



Figure 4.14: The Mechanism of determining official area of business with Subsidy

(Source: DG of Electricity)

The rules of UPTLSK operations under assignment of government (subsidized) is to maximize the uses of EBT – renewable energy resources, still encourage each partner to use domestic products/ services in priority (minimum standard TKDN), perhaps the point put the electric power tariff charge by PLN to those consumers of household with 450 VA is benefit. To support more get performance in RE 95% for 5 years operation since assignment, also encourage to build infrastructures and got its function at least 1 year after assignment. The mechanisms of UPTLSK operation under assignment by government are as following:



Figure 4.15: The Mechanisms of UPTLSK operation under assignment of government

(Source: DG of Electricity)

# 4.9 The Rented Electric Power Nets

Refers to the Government Regulations No.14 of 2012 regarding the Operations Business of Supply the Electrical Power as it has been amended to the Government Regulations No. 23 of 2014 point out that a transmission operation in electric power is obliged to open opportunities in a jointly uses of transmission net for public interest and for operations business of distribution in electric power can open also opportunities under a jointly uses of distribution net. The uses of a jointly transmission net and its distribution is allowable under a rental of net between the bearer of operations permit in supply the electric power having operation business in transmission and/or distribution with the partner is going to use the nets of transmission and/or distribution after got approval price upon the rental by the Ministry or Governor accordance to the authorization. For the jointly uses of nets in transmission and/or distribution must refers to own ability of capacity in transmission nets and/or distribution. For guidance, the Government has issued a Regulation Ministry of Energy and Mineral Resources No. 1 of 2015 regarding a Cooperation in Supply the Electric power and a Jointly Uses of Electric Power Nets.

The rules binding a Cooperation Inter bearer area business permit:

- Inter bearer area business permits can bind cooperation directly in fulfilling the need of power on the business-area
- It is allowable inter bearer of business area permit having operated already, it should have consumers already and generating or contract of sellingbuying the electric by out-flow
- There need no any newly IUPL.
- The price rate of selling electric should got agreement by provider IUPL as buyer of electric power.
- If the standard price has been decided, the selling-buying can be done bases to the standard price itself.

Example 1: Scheme of Transmission Rent

- 1. Distribution TL by IPP to the business area of PT X (bearer IUPL permit having own business area.
- 2. For buying (cooperation) internal business area
- 3. The buying from bearer IO outside business area of PT X



## Figure 4. 16: Example 1: Scheme of Transmission Rental

(Source: DG of Electricity)

Example 2, bearer IO permit (owner a captive power) do rent transmission other PLN / PPU to distribute electric to own corporation on different location.



Figure 4.17 Example 2, Scheme of Transmission Rental (Source: DG of Electricity)

# 4.10 Serving the Investment as Priority

In order to attract the investors for investment on any priority sectors, the national investment coordinating Board – BKPM do issuance official priority services policy as the followings:

# a. Got the Permits only in 3 hours

It is very simple and effective already to those investors with plans (newly or expansion) of investment minimally of Rp. 100 Billion (USD 8 Million) and/or hiring at least 1,000 Indonesian workers.

The permits in 3 hours clear may got 9 permits package such as: investment permit, the establishment of company deed & its legalization, NPWP – Official Tax Number, TDP-Registered Company, Master Plan Hiring Workers (RPTKA), Permits of Hiring Expatriates (IMTA), Producer Importer Identity (APIP), Identity No. Customs (NIK), Land Booking Letter.

For the procedures are as follow:



Figure 4.11. Procedures of 3 hours Got Permits (Sumber : BKPM)

# b. Having Incentive Directly in Construction (KLIK)

The investor is allowable commence the construction of project immediately before having permits of construction related, no obligatory minimal rate of investment or hiring Indonesian workers and the matter is applicable to several industrial special regions. Regarding the construction permits is allowable to process in parallel while construction is executed.



Figure 4.12 Procedures of Incentive Directly in Construction (Sumber : BKPM)

# 4.11 Fiscal and Non Fiscal Incentive

In order to support and accelerate the development program of Installation to supply the Power for public uses, the Government offer a fiscal and non-fiscal incentive as the following:

# a. Non Fiscal

- Simplify the mechanism of purchasing the power by PLN to the holder of permits operation of the generating power (IUPTL) or Permits of Operation (IO), (it is Permen ESDM No. 3/2015).
- Simplify the procedure of permits on central government and local authority under an Integrated One Service Point (PTSP).
- The Purchase Price of electricity uses the benchmark price for generating from Renewable Energy Source (EBT) and Non EBT with Cost Production of Generation (BPP) as reference. (Appendix III, IV, V & VI).

# b Fiscal

- Exemption duty fee of capital goods for the development of the generating power for public use (exclude transmission, distribution and supporting services) (PMK No. 66/2015).
- Conferring facility with tax allowance for the investment of electricity generating exploited renewable new energy resources (PP. 18/2015, PMK No. 89/2015, and Perka BKPM No. 18/2015.
- Conferred facilities with tax holiday exemption Income Tax of business for period 5 to 15 years commenced COD, given to pioneer industries that are industries that have broad linkages, provide high added value and externality, introduce new technology, and have strategic value for the national economy. (PP No. 94/2010, PMK No. 159/2015, and Perda BKPM No. 19/2015.

# 4.12 Government Guarantee

Beside conferred special incentive/ supporting, the Government also offer the guarantee as the following:

No	Regulation / Decrees	Type of Guarantee	Remarks
1	Perpres	Fully Guarantee – legal guarantee on all	Fast Track Program
	91/2007,	PLN duties to creditor	Phase 1 (FTP 1) 10.000
	Perpres		
	91/2007, and		
	PMK 44/2008		
2	Perpres	Guarantee on financial duties of PJPK	Public and Private
	78/2010,	(K/L, Pemda-Local Administration,	Partnership (PPP)
	Perpres	BUMN/BUMD) to the corporation	
	38/2015,	operation bases to a cooperation	
	РМК	agreement.	
	260/2010,		
	dan PMK		
	170/2015		
3	Perpres	Full guarantee – Guarantee on all duties	Lending of BUMN to the
	82/2015 and	of BUMN to the creditors.	International Financial
	РМК		Agent with (Direct
	189/2015		Lending)
4	Perpres	Loan Guarantee to support PT PLN	Accelerating to develop
	4/2016, PMK	(Persero) in accelerating PIK program	electricity infrastructure
	130/2016	through private party.	(PIK)
		• Feasibility business Guarantee in order	
		to support PT PLN in conducting and	
		accelerate PIK through a cooperation	
		scheme.	

APPENDIX

# Annex I

# List Projects of Power Plant developed by IPP/unallocated (Planned)

					KAPASITAS	TARGET		
NO	PROVINSI	PENGEMBANG	JENIS	ΝΑΜΑ ΡΡΟΥΕΚ	(MW)	COD	PROGRAM	FLAG
1	Aceh	Swasta	PLTA	Redelong	18	2019	Reguler	35 GW
2	Aceh	Swasta	PLTA	Meureubo-2	59	2021	Reguler	
3	Aceh	Swasta	PLTA	Tampur-1	214	2025	Reguler	
4	Aceh	Swasta	PLTA	Tampur-1	214	2025	Reguler	
5	Aceh	Swasta	PLTA	Kluet (PLTA tersebar ACEH)	87	2025	Reguler	
6	Aceh	Swasta	PLTA	Kluet (PLTA tersebar ACEH)	87	2025	Reguler	
7	Aceh	Swasta	PLTA	Kluet (PLTA tersebar ACEH)	87	2025	Reguler	
8	Aceh	Swasta	PLTA	Woyla-5 (PLTA tersebar ACEH)	56	2025	Reguler	
9	Aceh	Swasta	PLTA	Meurebo-3 (PLTA tersebar ACEH)	50	2025	Reguler	
10	Aceh	Swasta	PLTA	Meurebo-3 (PLTA tersebar ACEH)	50	2025	Reguler	
11	Aceh	Swasta	PLTA	Tripa I (PLTA tersebar ACEH)	50	2025	Reguler	
12	Aceh	Swasta	PLTA	Tripa I (PLTA tersebar ACEH)	50	2025	Reguler	
13	Aceh	Swasta	PLTB	Biogas PT Bahari (PLTB tersebar ACEH)	3	2016	Reguler	Non 35 GW (2016-2019)
14	Aceh	Swasta	PLTB	Biomassa Primanusa energi lestari (PLTB tersebar ACEH)	10	2016	Reguler	Non 35 GW (2016-2019)
15	Aceh	Swasta	PLTB	Biomassa Primanusa energi lestari (PLTB tersebar ACEH)	9.8	2017	Reguler	Non 35 GW (2016-2019)
16	Aceh	Swasta	PLTB	Biogas PT Primanusa Energi (PLTB tersebar ACEH)	1.5	2018	Reguler	Non 35 GW (2016-2019)
17	Aceh	Swasta	PLTG	Sinabang-2 #1	3	2021	Reguler	
18	Aceh	Swasta	PLTG	Sinabang-2 #2	3	2021	Reguler	
19	Aceh	Swasta	PLTM	Ketol A (PLTM tersebar ACEH)	10	2022	Reguler	
20	Aceh	Swasta	PLTM	Mangku Sosial (PLTM tersebar ACEH)	6.6	2022	Reguler	
21	Aceh	Swasta	PLTM	Teunom (PLTM tersebar ACEH)	10	2022	Reguler	
22	Aceh	Swasta	PLTM	Tembolon (Bidin 2) (PLTM tersebar ACEH)	3.1	2022	Reguler	
23	Aceh	Swasta	PITM	Subulussalam (PLTM tersebar ACEH)	7.4	2022	Reguler	
24	Aceh	Swasta	PITM	Lawe Mamas (PLTM) (PLTM tersebar ACEH)	9.6	2024	Reguler	
25	Aceh	Swasta	PLTM	Lawe Gurah (PLTM tersebar ACEH)	4.5	2024	Reguler	
26	Aceh	Swasta	PLTM	Lhok Pineung (PLTM tersebar ACEH)	5.1	2024	Reguler	
27	Aceh	Swasta	PLTP	Seulawah Agam (FTP2)	110	2023	Reguler	
28	Aceh	Swasta	PLTP	G. Geureudong (PLTP tersebar ACEH)	55	2023	Reguler	
29	Aceh	Swasta	PLTSa	Sampah Kota Swasta 2 (PLTSa tersebar Sumatera )	10	2024	Reguler	
30	Aceh	Swasta	PLTU	Meulaboh (Nagan Raya) #4	200	2020	Reguler	
31	Aceh	Unallocated	PLTA	Jambu Ave	160	2025	Reguler	
32	Aceh	Unallocated	PLTA	Lawe Alas	150	2025	Reguler	
33	Babel	Swasta	PITB	Biogas Austindo Aufwind New Energy (PLTB tersebar BABEL)	0.6	2016	Reguler	Non 35 GW (2016-2019)
34	Babel	Swasta	PLTB	Biogas PT United Kingdom Indonesia	0.8	2016	Reguler	Non 35 GW (2016-2019)
35	Babel	Swasta	PLTB	COD Biogas PT, Putra Bangka Mandiri (PLTB tersebar BABEL)	2	2016	Reguler	Non 35 GW (2016-2019)
36	Babel	Swasta	PLTB	Biomas Sampoerna dan PJB (PLTB tersebar BABEL)	40	2018	Reguler	Non 35 GW (2016-2019)
37	Babel	Swasta	PLTU	Bangka-1	100	2019	Reguler	35 GW
38	Babel	Swasta	PLTU	Bangka-1	100	2020	Reguler	
39	Bali	Swasta	PLTB	Tersebar	5	2019	Reguler	Non 35 GW (2016-2019)
40	Bali	Swasta	PLTB	Tersebar	5	2020	Reguler	· •

NO	PROVINSI	PENGEMBANG	JENIS	NAMA PROYEK	KAPASITAS (MW)	TARGET COD	PROGRAM	FLAG
41	Bali	Swasta	PLTBm	Tersebar	0,4	2016	Reguler	Non 35 GW (2016-2019)
42	Bali	Swasta	PLTM	Ayung	2,3	2024	Reguler	
43	Bali	Swasta	PLTM	Tukad Daya	8,2	2024	Reguler	
44	Bali	Swasta	PLTM	Sunduwati	2,2	2024	Reguler	
45	Bali	Swasta	PLTM	Telagawaja Ayu	1	2024	Reguler	
46	Bali	Swasta	PLTM	Tukad Balian	2,5	2024	Reguler	
47	Bali	Swasta	PLTS	Tersebar	50	2020	Reguler	
48	Bali	Swasta	PLTS	Tersebar	50	2020	Reguler	
49	Bali	Swasta	PLTSa	Tersebar	1,7	2016	Reguler	Non 35 GW (2016-2019)
50	Bali	Swasta	PLTSa	Tersebar	3	2017	Reguler	Non 35 GW (2016-2019)
51	Bali	Swasta	PLTSa	Tersebar	0,5	2021	Reguler	
52	Bali	Unallocated	PLTP	Bedugul	10	2025	Reguler	
53	Banten	Swasta	PLTB	Tersebar	35	2019	Reguler	Non 35 GW (2016-2019)
54	Banten	Swasta	PLTB	Tersebar	35	2020	Reguler	
55	Banten	Swasta	PLTB	Tersebar	80	2025	Reguler	
56	Banten	Swasta	PLTM	Nagajaya	6	2021	Reguler	
57	Banten	Swasta	PLTM	Cisiih Mandiri	8	2024	Reguler	
58	Banten	Swasta	PLTM	Cibareno	3	2024	Reguler	
59	Banten	Swasta	PLTM	Cisiih Leutik	4	2024	Reguler	
60	Banten	Swasta	PLTP	Rawa Dano (FTP2)	110	2022	FTP-2	
61	Banten	Swasta	PLTP	Gunung Endut (FTP2)	40	2025	FTP-2	
62	Banten	Unallocated	PLTGU	Jawa-4	800	2024	Reguler	
63	Banten	Unallocated	PLTGU	Jawa-4	800	2025	Reguler	
64	Bengkulu	Swasta	PLTA	Air Putih	21	2018	Reguler	35 GW
65	Bengkulu	Swasta	PLTA	Kepahiyang (PLTA tersebar BENGKULU)	27	2025	Reguler	
66	Bengkulu	Swasta	PLTB	Biomassa Global Green Energy Lestari (PLTB tersebar	6	2016	Reguler	Non 35 GW (2016-2019)
67	Bengkulu	Swasta	PLTM	Muara Sahung	9,9	2025	Reguler	
68	Bengkulu	Swasta	PLTM	Batu Ampar	3	2025	Reguler	
69	Bengkulu	Swasta	PLTM	Aur Gading (IPP) (PLTM tersebar Bengkulu)	2,7	2025	Reguler	
70	Bengkulu	Swasta	PLTM	Padang Guci (PLTM tersebar Bengkulu)	6	2025	Reguler	
71	Bengkulu	Swasta	PLTM	Air Tenam (PLTM tersebar Bengkulu)	7	2025	Reguler	
72	Bengkulu	Swasta	PLTM	Tunggang (PLTM tersebar Bengkulu)	10	2025	Reguler	
73	Bengkulu	Swasta	PLTM	Nakai 1 (PLTM tersebar Bengkulu)	3	2025	Reguler	
74	Bengkulu	Swasta	PLTM	Nakai 2 (PLTM tersebar Bengkulu)	4	2025	Reguler	
75	Bengkulu	Swasta	PLTM	Ketaun 1 (IPP) (PLTM tersebar Bengkulu)	4,2	2025	Reguler	
76	Bengkulu	Swasta	PLTM	Ketaun 2 (IPP) (PLTM tersebar Bengkulu)	2	2025	Reguler	
77	Bengkulu	Swasta	PLTM	Puguk (PLTM tersebar Bengkulu)	5,3	2025	Reguler	
78	Bengkulu	Swasta	PLTP	Kepahiyang (PLTP tersebar BENGKULU)	110	2025	Reguler	
79	Bengkulu	Swasta	PLTP	Gn.Dingin (PLTP tersebar BENGKULU)	55	2025	Reguler	
80	Bengkulu	Swasta	PLTSa	Sampah Kota Swasta 2 (PLTSa tersebar Sumatera )	10	2020	Reguler	

NO	PROVINSI	PENGEMBANG	JENIS	NAMA PROYEK	KAPASITAS	TARGET	PROGRAM	FLAG
01					(10100)	COD		
02	Bengkulu	Unallocated		Musi Kota Agung (PLTA tersebar BENGKULU)	27,50	2022	Reguler	
82	Yogyakar	Swasta	PLIB	lersebal	10	2025	Reguler	
83	Yogyakar	Swasta	PLIM		0,6	2020	Reguler	
84 0F	Gorontal	Swasta	PLTBM	Biomass Gorontalo Tersebar	6	2016	Reguler	Non 35 GW (2016-2019)
80	Gorontal	Swasta	PLTBM	Biomass Gorontalo Tersebar	6	2018	Reguler	Non 35 GW (2016-2019)
80	Gorontal	Swasta	PLTM		2	2019	Reguler	35 GW
8/	Gorontal	Swasta	PLTM	Bone	7,4	2024	Reguler	
00	Gorontal	Swasta	PLTP	Suwawa	20	2024	Reguler	
89	Gorontal	Swasta	PLTP	Pentadio	5	2025	Reguler	
90	Gorontal	Swasta	PLTS	Gorontalo Tersebar	5	2017	Reguler	Non 35 GW (2016-2019)
91	Gorontal	Swasta	PLTS	Gorontalo Tersebar	10	2019	Reguler	Non 35 GW (2016-2019)
92	Gorontal	Swasta	PLTS	Gorontalo Tersebar	10	2021	Reguler	
93	Gorontal	Swasta	PLTU	Sulbagut 3	50	2019	Reguler	35 GW
94	Gorontal	Swasta	PLTU	Sulbagut 3	50	2020	Reguler	
95	Jambi	Swasta	PLTA	Merangin #1	175	2022	Reguler	
96	Jambi	Swasta	PLTA	Merangin #2	175	2023	Reguler	
97	Jambi	Swasta	PLTB	Biomassa PT Rimba Palma Sejahtera	15	2016	Reguler	Non 35 GW (2016-2019)
98	Jambi	Swasta	PLTP	Graho Nyabu (PLTP tersebar Jambi)	110	2025	Reguler	
99	Jambi	Swasta	PLTSa	Sampah Kota Swasta 2 (PLTSa tersebar Sumatera )	10	2018	Reguler	Non 35 GW (2016-2019)
100	Jambi	Swasta	PLTU	Jambi	600	2019	Reguler	35 GW
101	Jambi	Swasta	PLTU	Jambi	600	2019	Reguler	35 GW
102	Jabar	Swasta	PLTB	Tersebar	80	2018	Reguler	Non 35 GW (2016-2019)
103	Jabar	Swasta	PLTB	Tersebar	80	2019	Reguler	Non 35 GW (2016-2019)
104	Jabar	Swasta	PLTB	Tersebar	90	2020	Reguler	
105	Jabar	Swasta	PLTB	Tersebar	160	2025	Reguler	
106	Jabar	Swasta	PLTBm	Tersebar	11,5	2016	Reguler	Non 35 GW (2016-2019)
107	Jabar	Swasta	PLTGU/MG	Peaker Jawa-Bali 4	450	2018	Reguler	35 GW
108	Jabar	Swasta	PLTM	Kertamukti	6,3	2020	Reguler	
109	Jabar	Swasta	PLTM	Pesantren-1	1,8	2020	Reguler	
110	Jabar	Swasta	PLTM	Sukamaju	7,5	2021	Reguler	
111	Jabar	Swasta	PLTM	Kanzy-5	5	2021	Reguler	
112	Jabar	Swasta	PLTM	Cilayu Kulon	5,2	2021	Reguler	
113	Jabar	Swasta	PLTM	Ciherang	1,5	2021	Reguler	
114	Jabar	Swasta	PLTM	Cibuni Mandiri	2	2021	Reguler	
115	Jabar	Swasta	PLTM	Cibuni	3,2	2021	Reguler	
116	Jabar	Swasta	PLTM	Cibatarua Panyairan	8,2	2023	Reguler	
117	Jabar	Swasta	PLTM	Toblong	6	2023	Reguler	
118	Jabar	Swasta	PLTM	Jatisari	5	2024	Reguler	
119	Jabar	Swasta	PLTM	Cikaengan Najaten	7,2	2024	Reguler	
120	Jabar	Swasta	PLTM	Cirompang Mekarmukti	4	2024	Reguler	

	<b>DDD</b>				KAPASITAS	TARGET		514.0
NO	PROVINSI	PENGEMIBANG	JENIS	NAMA PROYEK	(MW)	COD	PROGRAM	FLAG
121	Jabar	Swasta	PLTM	Cileat	5,2	2024	Reguler	
122	Jabar	Swasta	PLTM	Cimaja	3	2024	Reguler	
123	Jabar	Swasta	PLTM	Cikawung Bawah	2,5	2025	Reguler	
124	Jabar	Swasta	PLTM	Cikawung Atas	5	2025	Reguler	
125	Jabar	Swasta	PLTP	Tangkuban Perahu 1 (FTP2)	55	2020	FTP-2	
126	Jabar	Swasta	PLTP	Karaha Bodas (FTP2)	55	2020	FTP-2	
127	Jabar	Swasta	PLTP	Cisolok-Cisukarame (FTP2)	50	2020	FTP-2	
128	Jabar	Swasta	PLTP	Wayang Windu 3 (FTP2)	110	2020	FTP-2	
129	Jabar	Swasta	PLTP	Karaha Bodas (FTP2)	55	2021	FTP-2	
130	Jabar	Swasta	PLTP	Wayang Windu 4 (FTP2)	110	2021	FTP-2	
131	Jabar	Swasta	PLTP	Tampomas (FTP2)	45	2022	FTP-2	
132	Jabar	Swasta	PLTP	Cibuni (FTP2)	10	2024	FTP-2	
133	Jabar	Swasta	PLTP	Tangkuban Perahu 2 (FTP2)	30	2025	FTP-2	
134	Jabar	Swasta	PLTP	Tangkuban Perahu 2 (FTP2)	30	2025	FTP-2	
135	Jabar	Swasta	PLTP	Gunung Ciremai (FTP2)	55	2025	FTP-2	
136	Jabar	Swasta	PLTP	Gunung Ciremai (FTP2)	55	2025	FTP-2	
137	Jabar	Swasta	PLTSa	Tersebar	14	2016	Reguler	Non 35 GW (2016-2019)
138	Jabar	Swasta	PLTSa	Tersebar	10	2016	Reguler	Non 35 GW (2016-2019)
139	Jabar	Swasta	PLTSa	Tersebar	10	2017	Reguler	Non 35 GW (2016-2019)
140	Jabar	Swasta	PLTSa	Tersebar	10	2018	Reguler	Non 35 GW (2016-2019)
141	Jabar	Swasta	PLTSa	Tersebar	16	2021	Reguler	
142	Jabar	Unallocated	PLTA	Cimandiri-3	119	2025	Reguler	
143	Jabar	Unallocated	PLTA	Cimandiri-3	119	2025	Reguler	
144	Jabar	Unallocated	PLTA	Cikaso-3	53	2025	Reguler	
145	Jabar	Unallocated	PLTA	Cipasang	200	2025	Reguler	
146	Jabar	Unallocated	PLTA	Cipasang	200	2025	Reguler	
147	Jabar	Unallocated	PLTA	Cibuni-3	172	2025	Reguler	
148	Jabar	Unallocated	PLTA	Cibuni-4	105	2025	Reguler	
149	Jabar	Unallocated	PLTGU	Jawa-7	800	2024	Reguler	
150	Jabar	Unallocated	PLTGU	Jawa-7	800	2025	Reguler	
151	Jabar	Unallocated	PLTP	Gunung Galunggung	110	2024	Reguler	
152	Jabar	Unallocated	PLTP	Gede Pangrango	85	2025	Reguler	
153	Jateng	Swasta	PLTM	Karekan	8	2020	Reguler	
154	Jateng	Swasta	PLTM	Danawarih	0,6	2020	Reguler	
155	Jateng	Swasta	PLTM	Kalipelus	0,5	2020	Reguler	
156	Jateng	Swasta	PLTM	Pageruyung-1	4,4	2022	Reguler	
157	Jateng	Swasta	PLTM	Kaliwadas	0,4	2023	Reguler	
158	Jateng	Swasta	PLTM	Preng-1	1,8	2024	Reguler	
159	Jateng	Swasta	PLTM	Preng-2	4,5	2024	Reguler	
160	Jateng	Swasta	PLTM	Tulis	9	2024	Reguler	

		DENGEMBANG	IENIIS		KAPASITAS	TARGET	DPOCPAM	FLAG
NO	PROVINSI	FEINGEIVIDAING	JEINIS	NAIVIA PROTEK	(MW)	COD	PROGRAIM	FLAG
161	Jateng	Swasta	PLTM	Harjosari	9,9	2024	Reguler	
162	Jateng	Swasta	PLTM	Lambur	8	2024	Reguler	
163	Jateng	Swasta	PLTM	Prukut Sambirata	1,5	2024	Reguler	
164	Jateng	Swasta	PLTM	Dadapayam	3	2024	Reguler	
165	Jateng	Swasta	PLTM	Binangun	3,8	2024	Reguler	
166	Jateng	Swasta	PLTM	Jimat	0,5	2024	Reguler	
167	Jateng	Swasta	PLTM	Pageruyung (Damar)	2,1	2024	Reguler	
168	Jateng	Swasta	PLTP	Ungaran (FTP2)	55	2023	FTP-2	
169	Jateng	Swasta	PLTP	Dieng (FTP2)	60	2023	FTP-2	
170	Jateng	Swasta	PLTP	Baturaden (FTP2)	110	2023	FTP-2	
171	Jateng	Swasta	PLTP	Guci (FTP2)	55	2023	FTP-2	
172	Jateng	Swasta	PLTP	Umbul Telumoyo (FTP2)	55	2023	FTP-2	
173	Jateng	Swasta	PLTP	Baturaden (FTP2)	110	2024	FTP-2	
174	Jateng	Swasta	PLTSa	Tersebar	7	2016	Reguler	Non 35 GW (2016-2019)
175	Jateng	Swasta	PLTSa	Tersebar	16	2023	Reguler	
176	Jateng	Unallocated	PLTA	Maung	350	2024	Reguler	
177	Jateng	Unallocated	PLTA	Rawalo-2	10,3	2025	Reguler	
178	Jateng	Unallocated	PLTGU	Jawa-6	800	2024	Reguler	
179	Jateng	Unallocated	PLTGU	Jawa-6	800	2025	Reguler	
180	Jateng	Unallocated	PLTP	Gunung Lawu	55	2024	Reguler	
181	Jateng	Unallocated	PLTP	Gunung Lawu	55	2024	Reguler	
182	Jateng	Unallocated	PLTP	Gunung Lawu	55	2024	Reguler	
183	Jateng	Unallocated	PLTU	Jawa-10	660	2021	Reguler	
184	Jateng	Unallocated	PS	Matenggeng PS	225	2023	Reguler	
185	Jateng	Unallocated	PS	Matenggeng PS	225	2023	Reguler	
186	Jateng	Unallocated	PS	Matenggeng PS	225	2024	Reguler	
187	Jateng	Unallocated	PS	Matenggeng PS	225	2024	Reguler	
188	Jatim	Swasta	PLTGU	Jawa-3	500	2018	Reguler	35 GW
189	Jatim	Swasta	PLTGU	Jawa-3	300	2019	Reguler	35 GW
190	Jatim	Swasta	PLTM	Lodagung	1,3	2020	Reguler	
191	Jatim	Swasta	PLTM	Kanzy-1	2,4	2023	Reguler	
192	Jatim	Swasta	PLTM	Jompo 1 (Jompo Atas)	2,1	2024	Reguler	
193	Jatim	Swasta	PLTM	Jompo 2 (Jompo Bawah)	3,2	2024	Reguler	
194	Jatim	Swasta	PLTM	Kali Tengah (Sungai Tengah)	1,4	2024	Reguler	
195	Jatim	Swasta	PLTM	Ketajek	3,3	2024	Reguler	
196	Jatim	Swasta	PLTM	Zeelandia	2,2	2024	Reguler	
197	Jatim	Swasta	PLTM	Lodoyo	9,5	2025	Reguler	
198	Jatim	Swasta	PLTP	ljen (FTP2)	55	2020	FTP-2	
199	Jatim	Swasta	PLTP	ljen (FTP2)	55	2021	FTP-2	
200	Jatim	Swasta	PLTP	Wilis/Ngebel (FTP2)	55	2021	FTP-2	

NO	PROVINSI	PENGEMBANG	JENIS	NAMA PROYEK	KAPASITAS	TARGET	PROGRAM	FLAG
201			DI TO		(10100)		<b>FTD 3</b>	
201	Jatim	Swasta		IVang Argopuro (FTP2)	55	2023	FIP-2	
202	Jatim	Swasta		Wills/Ngebel (FTP2)	55	2024	FIP-2	
203	Jatim	Swasta		Wills/Ngeber (FTP2)	55	2024	FIP-2	No. 25 CM/ (2016, 2010)
204	Jatim	Swasta	PLISa	Tersebar	9	2016	Reguler	Non 35 GW (2016-2019)
205	Jatim	Swasta	PLISa	Tersebar	10	2019	Reguler	Non 35 GW (2016-2019)
200	Jatim	Swasta		Karangkatos #4 E	36	2022	Reguler	
207	Jatim	Unallocatea		Karangkales #4-5	100	2022	Reguler	
200	Jatim	Unallocatea			37	2022	Reguler	
209	Jatim	Unallocated	PLIGU	JdWd-D	800	2024	Reguler	
210	Jatim	Unallocated	PLIGU	JdWd-D	800	2025	Reguler	
211	Jatim	Unallocated	PLIMG	Rangean	1	2020	Reguler	
212	Jatim	Unallocated	PLIMG	Bawean	3	2021	Reguler	
213	Jatim	Unallocated	PLIMG	Sapudi	1	2023	Reguler	
214	Jatim	Unallocated	PLIP	Arjuno wenrang	185	2024	Reguler	
215	Jatim	Unallocated	PLTP	Songgoriti	35	2025	Reguler	
216	Jatim	Unallocated	PLTP		10	2025	Reguler	
21/	Jatim	Unallocated	PLTP		10	2025	Reguler	
218	Jatim	Unallocated	PLTP	Gunung Pandan	60	2025	Reguler	
219	Jatim	Unallocated	PLTU/GU	Madura	400	2022	Reguler	
220	Jatim	Unallocated	PS	Grindulu	250	2025	Reguler	
221	Jatim	Unallocated	PS	Grindulu	250	2025	Reguler	
222	Jatim	Unallocated	PS	Grindulu	250	2025	Reguler	
223	Jatim	Unallocated	PS	Grindulu	250	2025	Reguler	
224	Kalbar	Swasta	PLTBM	Biomass Tersebar Kalbar	20	2017	Reguler	Non 35 GW (2016-2019)
225	Kalbar	Swasta	PLTBM	Biomass Tersebar Kalbar	5	2025	Reguler	
226	Kalbar	Swasta	PLTSa	Waste PP Pontianak	5	2017	Reguler	Non 35 GW (2016-2019)
227	Kalbar	Swasta	PLTSa	Waste PP Ketapang	2	2018	Reguler	Non 35 GW (2016-2019)
228	Kalbar	Swasta	PLTSa	Waste PP Pontianak	2	2023	Reguler	
229	Kalbar	Swasta	PLTSa	Waste PP Ketapang	2	2024	Reguler	
230	Kalbar	Swasta	PLTU	Kalbar 2	200	2021	Reguler	
231	Kalbar	Swasta	PLTU	Kalbar 3	200	2022	Reguler	
232	Kalbar	Unallocated	PLTGU	Kalbar Peaker 2	160	2023	Reguler	
233	Kalbar	Unallocated	PLTGU	Kalbar Peaker 2	90	2024	Reguler	
234	Kalbar	Unallocated	PLTU	Kalbar 4	200	2025	Reguler	
235	Kalsel	Swasta	PLTBM	Biomass Kalsel Tersebar	1	2016	Reguler	Non 35 GW (2016-2019)
236	Kalsel	Swasta	PLTBM	Biomass Kalsel Tersebar	4.4	2016	Reguler	Non 35 GW (2016-2019)
237	Kalsel	Swasta	PLTSa	Waste PP Palangkaraya	2	2018	Reguler	Non 35 GW (2016-2019)
238	Kalsel	Swasta	PLTSa	Waste PP Banjarmasin	2	2023	Reguler	
239	Kalsel	Swasta	PLTSa	Waste PP Palangkaraya	2	2024	Reguler	
240	Kalsel	Unallocated	PLTGU	Kalsel 1 (Load Follower)	200	2024	Reguler	

NO	PROVINSI	PENGEMBANG	JENIS	NAMA PROYEK	KAPASITAS	TARGET	PROGRAM	FLAG
					(MW)	COD		
241	Kaltara	Swasta	PLTA	Kayan 1	110	2024	Reguler	
242	Kaltara	Swasta	PLTA	Kayan 1	110	2025	Reguler	
243	Kalteng	Swasta	PLTBM	Biomass Kalteng Tersebar	10	2018	Reguler	Non 35 GW (2016-2019)
244	Kalteng	Swasta	PLTSa	Waste PP Banjarmasin	2	2017	Reguler	Non 35 GW (2016-2019)
245	Kaltim	Swasta	PLTA	Tabang	175	2024	Reguler	
246	Kaltim	Swasta	PLTA	Tabang	175	2025	Reguler	
247	Kaltim	Swasta	PLTBM	Biomass Tersebar Kaltim	12,1	2017	Reguler	Non 35 GW (2016-2019)
248	Kaltim	Swasta	PLTBM	Biomass Tersebar Kaltim	9,5	2018	Reguler	Non 35 GW (2016-2019)
249	Kaltim	Swasta	PLTSa	Waste PP Balikpapan	4	2018	Reguler	Non 35 GW (2016-2019)
250	Kaltim	Swasta	PLTSa	Waste PP Samarinda	2	2018	Reguler	Non 35 GW (2016-2019)
251	Kaltim	Swasta	PLTSa	Waste PP Balikpapan	4	2023	Reguler	
252	Kaltim	Swasta	PLTSa	Waste PP Samarinda	2	2023	Reguler	
253	Kaltim	Swasta	PLTSa	Waste PP Balikpapan	4	2025	Reguler	
254	Kaltim	Swasta	PLTSa	Waste PP Samarinda	2	2025	Reguler	
255	Kaltim	Swasta	PLTU	Kaltim 3	200	2020	Reguler	
256	Kaltim	Swasta	PLTU	Kaltim 6	200	2020	Reguler	
257	Kaltim	Unallocated	PLTGU	Kaltim 1 (Load Follower)	200	2022	Reguler	
258	Kaltim	Unallocated	PLTU	Kaltim 5	200	2023	Reguler	
259	Kepri	Swasta	PLTB	Biomasssa Prima Gasifikasi Indonesia (PLTB tersebar KEPRI)	1	2016	Reguler	Non 35 GW (2016-2019)
260	Kepri	Unallocated	PLTG	Dabo Singkep	20	2021	Reguler	
261	Kepri	Unallocated	PLTG	Natuna-3	25	2021	Reguler	
262	Kepri	Unallocated	PLTG	Tanjung Batu-3 #1	15	2022	Reguler	
263	Kepri	Unallocated	PLTG	Tanjung Batu-3 #2	15	2023	Reguler	
264	Kepri	Unallocated	PLTU	Tanjung Balai Karimun-1	40	2020	Reguler	
265	Lampung	Swasta	PLTM	Way Simpang Kanan (PLTM tersebar Lampung)	4,6	2022	Reguler	
266	Lampung	Swasta	PLTM	Besay (PLTM tersebar Lampung)	9.2	2022	Reguler	
267	Lampung	Swasta	PLTM	Sukarame (PLTM tersebar Lampung)	8	2022	Reguler	
268	Lampung	Swasta	PLTM	Way Pintau (PLTM tersebar Lampung)	3,2	2025	Reguler	
269	Lampung	Swasta	PLTSa	Sampah Zero Waste (PLTSa tersebar Sumatera)	5	2016	Reguler	Non 35 GW (2016-2019)
270	Lampung	Swasta	PLTSa	Sampah Kota Swasta 2 (PLTSa tersebar Sumatera )	10	2021	Reguler	
271	Lampung	Unallocated	PLTA	Besai-2 (PLTA tersebar Lampung)	27	2022	Reguler	
272	Lampung	Unallocated	PLTGU	Sumatera-2	400	2025	Reguler	
273	Maluku	Swasta	PLTB	Ambon	5	2019	Reguler	Non 35 GW (2016-2019)
274	Maluku	Swasta	PLTB	Ambon	5	2020	Reguler	
275	Maluku	Swasta	PLTB	Ambon	5	2023	Reguler	
276	Maluku	Swasta	PLTB	Ambon	5	2025	Reguler	
277	Maluku	Swasta	PLTBM	Biomass Seram Tersebar	6	2017	Reguler	Non 35 GW (2016-2019)
278	Maluku	Swasta	PLTS	Ambon Tersebar	5	2017	Reguler	Non 35 GW (2016-2019)
279	Maluku	Swasta	PLTS	Seram Tersebar	5	2018	Reguler	Non 35 GW (2016-2019)
280	Malut	Swasta	PLTP	Telaga Ranu	10	2024	Reguler	· · ·

					KAPASITAS	TARGET	DDOCDANA	FLAC
NO	PROVINSI	PENGEWIBANG	JEINIS	NAMA PROYEK	(MW)	COD	PROGRAIN	FLAG
281	Malut	Swasta	PLTP	Gunung Hamiding	10	2024	Reguler	
282	Malut	Swasta	PLTS	Maluku Utara Tersebar	5	2017	Reguler	Non 35 GW (2016-2019)
283	Malut	Swasta	PLTS	Maluku Utara Tersebar	10	2024	Reguler	
284	Malut	Unallocated	PLTMG	Halmahera (Load Follower)	40	2021	Reguler	
285	Malut	Unallocated	PLTU	Tidore	25	2022	Reguler	
286	Malut	Unallocated	PLTU	Tidore	25	2023	Reguler	
287	NTB	Swasta	PLTB	Sumbawa	5	2019	Reguler	Non 35 GW (2016-2019)
288	NTB	Swasta	PLTB	Sumbawa	5	2021	Reguler	
289	NTB	Swasta	PLTBM	Biomass Tersebar Sumbawa	1	2017	Reguler	Non 35 GW (2016-2019)
290	NTB	Swasta	PLTBM	Biomass Tersebar Lombok	5	2021	Reguler	
291	NTB	Swasta	PLTM	Sedau	1,3	2018	Reguler	35 GW
292	NTB	Swasta	PLTM	Kokok Babag	2,3	2019	Reguler	35 GW
293	NTB	Swasta	PLTM	Brang Rea 2	3,8	2019	Reguler	35 GW
294	NTB	Swasta	PLTM	Brang Rea 1	2,5	2019	Reguler	35 GW
295	NTB	Swasta	PLTM	Bintang Bano	8,8	2019	Reguler	35 GW
296	NTB	Swasta	PLTP	Hu'u (FTP2)	10	2025	FTP-2	
297	NTB	Swasta	PLTP	Hu'u (FTP2)	10	2025	FTP-2	
298	NTB	Swasta	PLTS	NTB Tersebar	20	2017	Reguler	Non 35 GW (2016-2019)
299	NTB	Swasta	PLTS	NTB Tersebar	5	2018	Reguler	Non 35 GW (2016-2019)
300	NTB	Swasta	PLTS	NTB Tersebar	5	2018	Reguler	Non 35 GW (2016-2019)
301	NTB	Swasta	PLTS	NTB Tersebar	5	2018	Reguler	Non 35 GW (2016-2019)
302	NTB	Swasta	PLTS	NTB Tersebar	50	2018	Reguler	Non 35 GW (2016-2019)
303	NTB	Swasta	PLTS	NTB Tersebar	5	2025	Reguler	
304	NTB	Swasta	PLTS	NTB Tersebar	5	2025	Reguler	
305	NTB	Swasta	PLTSa	Waste PP NTB	1	2017	Reguler	Non 35 GW (2016-2019)
306	NTB	Swasta	PLTSa	Waste PP NTB	1	2020	Reguler	
307	NTB	Unallocated	PLTGU	Lombok 1 (Load Follower)	100	2023	Reguler	
308	NTB	Unallocated	PLTU	Sumbawa 2	50	2021	Reguler	
309	NTB	Unallocated	PLTU	Sumbawa 2	50	2022	Reguler	
310	NTB	Unallocated	PLTU	Lombok 3	50	2024	Reguler	
311	NTB	Unallocated	PLTU	Lombok 3	50	2025	Reguler	
312	NTT	Swasta	PLTB	Kupang	5	2019	Reguler	Non 35 GW (2016-2019)
313	NTT	Swasta	PLTB	Kupang	5	2021	Reguler	
314	NTT	Swasta	PLTB	Kupang	5	2023	Reguler	
315	NTT	Swasta	PLTB	Kupang	5	2023	Reguler	
316	NTT	Swasta	PLTBM	Biomass Tersebar Sumba Timur	4	2017	Reguler	Non 35 GW (2016-2019)
317	NTT	Swasta	PLTBM	Biomass Tersebar Sumba Timur	4	2018	Reguler	Non 35 GW (2016-2019)
318	NTT	Swasta	PLTBM	Biomass Tersebar Sumba Barat	5	2024	Reguler	
319	NTT	Swasta	PLTM	Harunda	1,6	2019	Reguler	35 GW
320	NTT	Swasta	PLTP	Oka Ile Ange (FTP 2)	10	2024	FTP-2	

NO	PROVINSI	PENGEMBANG	JENIS	NAMA PROYEK	KAPASITAS	TARGET	PROGRAM	FLAG
224					(17177)	COD		
321	NTT	Swasta	PLTP	Lesugolo	5	2024	Reguler	
322	NTT	Swasta	PLTS	NTT Tersebar	10	2020	Reguler	
323	NTT	Swasta	PLTS	NTT Tersebar	10	2023	Reguler	NU 25 014 (2016 2010)
324	NTT	Swasta	PLTSa	Waste PP NTT	1	2019	Reguler	Non 35 GW (2016-2019)
325	NTT	Unallocated	PLTMG	Timor 1 (Load Follower)	40	2022	Reguler	
320	NTT	Unallocated	PLTU	Timor 2	50	2023	Reguler	
327	NTT	Unallocated	PLTU	Timor 2	50	2024	Reguler	
328	Papua	Swasta	PLTA	Sentani	20	2025	Reguler	
329	Papua	Swasta	PLTBM	Merauke	10	2018	Reguler	35 GW
330	Papua	Swasta	PLTS	Papua Tersebar	10	2017	Reguler	Non 35 GW (2016-2019)
331	Papua	Swasta	PLTS	Papua Tersebar	5	2019	Reguler	Non 35 GW (2016-2019)
332	Papua	Swasta	PLTS	Papua Tersebar	5	2019	Reguler	Non 35 GW (2016-2019)
333	Papua	Swasta	PLTS	Papua Tersebar	5	2019	Reguler	Non 35 GW (2016-2019)
334	Papua	Swasta	PLTS	Papua Tersebar	5	2019	Reguler	Non 35 GW (2016-2019)
335	Papua	Swasta	PLTSa	Waste PP Jayapura	1	2024	Reguler	
336	Papua	Unallocated	PLTMG	Nabire 3	10	2024	Reguler	
337	Papua	Unallocated	PLTMG	Jayapura 3	50	2025	Reguler	
338	Pabar	Swasta	PLTS	Papua Barat Tersebar	5	2019	Reguler	Non 35 GW (2016-2019)
339	Pabar	Swasta	PLTS	Papua Barat Tersebar	5	2019	Reguler	Non 35 GW (2016-2019)
340	Pabar	Unallocated	PLTMG	Manokwari 3	20	2022	Reguler	
341	Pabar	Unallocated	PLTMG	Sorong (Load Follower)	50	2022	Reguler	
342	Riau	Swasta	PLTB	Biomasssa Prima Gasifikasi Indonesia (PLTB tersebar RIAU)	1	2016	Reguler	Non 35 GW (2016-2019)
343	Riau	Swasta	PLTB	Biogas Karya Mas Energi (PLTB tersebar RIAU)	1	2016	Reguler	Non 35 GW (2016-2019)
344	Riau	Swasta	PLTB	Biogas Karya Mas Energi (PLTB tersebar RIAU)	1	2016	Reguler	Non 35 GW (2016-2019)
345	Riau	Swasta	PLTB	Biogas POME (PLTB tersebar RIAU)	1	2016	Reguler	Non 35 GW (2016-2019)
346	Riau	Swasta	PLTB	Biomassa PT Riau Green Energy Rokan Hulu (PLTB tersebar	10	2017	Reguler	Non 35 GW (2016-2019)
347	Riau	Swasta	PLTB	Biogas POME (PLTB tersebar RIAU)	2	2018	Reguler	Non 35 GW (2016-2019)
348	Riau	Swasta	PLTGU	Dumai	160	2022	Reguler	
349	Riau	Swasta	PLTGU	Dumai	90	2022	Reguler	
350	Riau	Swasta	PLTSa	Sampah PT Pengembangan Investasi Riau (PIR) (PLTSa	10	2016	Reguler	Non 35 GW (2016-2019)
351	Riau	Swasta	PLTU	Riau-1*	300	2019	Reguler	35 GW
352	Riau	Swasta	PLTU	Riau-1*	300	2019	Reguler	35 GW
353	Sulbar	Swasta	PLTA	Tabulahan	10	2022	Reguler	
354	Sulbar	Swasta	PLTA	Masupu	18	2022	Reguler	
355	Sulbar	Swasta	PITA	Tabulahan	10	2023	Reguler	
356	Sulbar	Swasta	PITA	Masupu	18	2023	Reguler	
357	Sulbar	Swasta	PLTA	Tinauka	150	2024	Reguler	
358	Sulbar	Swasta	PLTA	Karama Peaking (Unsolicited)	190	2025	Reguler	
359	Sulbar	Swasta	PLTA	Tinauka	150	2025	Reguler	
360	Sulbar	Swasta	PLTBM	Biomass Sulbar Tersebar	5	2020	Reguler	

NO		DENGEMBANG	IENIIS		KAPASITAS	TARGET	DPOCPAM	FLAG
NO	FICTING	FLINGLINIDANO	JLINIS	NAWA PROTER	(MW)	COD	PROGRAM	FLAG
361	Sulsel	Swasta	PLTA	Salu Uro	47,50	2020	Reguler	
362	Sulsel	Swasta	PLTA	Salu Uro	47,50	2021	Reguler	
363	Sulsel	Swasta	PLTA	Kalaena 1	27	2021	Reguler	
364	Sulsel	Swasta	PLTA	Kalaena 1	27	2022	Reguler	
365	Sulsel	Swasta	PLTA	Tumbuan 1	150	2023	Reguler	
366	Sulsel	Swasta	PLTA	Seko 1	160	2023	Reguler	
367	Sulsel	Swasta	PLTA	Buttu Batu	100	2023	Reguler	
368	Sulsel	Swasta	PLTA	Seko 1	320	2024	Reguler	
369	Sulsel	Swasta	PLTA	Makale	45	2024	Reguler	
370	Sulsel	Swasta	PLTA	Buttu Batu	100	2024	Reguler	
371	Sulsel	Swasta	PLTA	Tumbuan 2	75	2025	Reguler	
372	Sulsel	Swasta	PLTA	Tumbuan 1	150	2025	Reguler	
373	Sulsel	Swasta	PLTA	Seko 2	90	2025	Reguler	
374	Sulsel	Swasta	PLTB	Jeneponto	60	2019	Reguler	35 GW
375	Sulsel	Swasta	PLTB	Sidrap	40	2020	Reguler	
376	Sulsel	Swasta	PLTB	Jeneponto	60	2023	Reguler	
377	Sulsel	Swasta	PLTBM	Biomass Sulsel Tersebar	10	2017	Reguler	Non 35 GW (2016-2019)
378	Sulsel	Swasta	PLTM	Bantaeng 1	4,2	2017	Reguler	35 GW
379	Sulsel	Swasta	PLTM	Bungin III	5	2017	Reguler	35 GW
380	Sulsel	Swasta	PLTM	Datara	7	2018	Reguler	35 GW
381	Sulsel	Swasta	PLTM	Belaien	8,3	2018	Reguler	35 GW
382	Sulsel	Swasta	PLTM	Mallawa	5	2018	Reguler	35 GW
383	Sulsel	Swasta	PLTM	Kondongan	3,5	2019	Reguler	35 GW
384	Sulsel	Swasta	PLTM	Pasui	1,9	2019	Reguler	35 GW
385	Sulsel	Swasta	PLTM	Baliase	9	2019	Reguler	35 GW
386	Sulsel	Swasta	PLTM	Malua	5	2019	Reguler	35 GW
387	Sulsel	Swasta	PLTM	Pasui 2	6	2019	Reguler	35 GW
388	Sulsel	Swasta	PLTM	Pongbatik	3	2019	Reguler	35 GW
389	Sulsel	Swasta	PLTM	Madong	10	2020	Reguler	
390	Sulsel	Swasta	PLTM	Bontotene	1,7	2022	Reguler	
391	Sulsel	Swasta	PLTM	Kahaya	4	2024	Reguler	
392	Sulsel	Swasta	PLTM	Rongkong	8,1	2024	Reguler	
393	Sulsel	Swasta	PLTM	Eremerasa	1,2	2024	Reguler	
394	Sulsel	Swasta	PLTSa	Waste PP Makassar	1	2017	Reguler	Non 35 GW (2016-2019)
395	Sulsel	Unallocated	PLTGU	Sulbagsel 1 (Load Follower)	450	2024	Reguler	
396	Sulteng	Swasta	PLTA	Poso 1	35	2020	Reguler	
397	Sulteng	Swasta	PLTA	Poso 1	35	2020	Reguler	
398	Sulteng	Swasta	PLTA	Laa	80	2024	Reguler	
399	Sulteng	Swasta	PLTA	Laa	80	2025	Reguler	
400	Sulteng	Swasta	PLTM	Koro Kabalo	2,5	2019	Reguler	35 GW

NO	PROVINSI	PENGEMBANG	JENIS	NAMA PROYEK	KAPASITAS (MW)	TARGET COD	PROGRAM	FLAG
401	Sulteng	Swasta	PLTM	Bambalo 2	1.8	2019	Reguler	35 GW
402	Sulteng	Swasta	PITM	Pono	<u> </u>	2015	Reguler	35 GW
403	Sulteng	Swasta	PITM	Bongkasoa	14	2013	Reguler	33 611
404	Sulteng	Swasta	PITM		5	2022	Reguler	
405	Sulteng	Swasta	PITM	Banasu	9	2024	Reguler	
406	Sulteng	Swasta	PITP	Marana (FTP 2)	20	2023	FTP-2	
407	Sulteng	Swasta	PITP	Bora Pulu (FTP 2)	40	2024	FTP-2	
408	Sulteng	Swasta	PLTS	Sulteng Tersebar	10	2017	Reguler	Non 35 GW (2016-2019)
409	Sulteng	Swasta	PLTS	Sulteng Tersebar	20	2019	Reguler	Non 35 GW (2016-2019)
410	Sulteng	Swasta	PLTSa	Waste PP Palu	1	2023	Reguler	
411	Sultra	Swasta	PLTA	Lasolo	73	2023	Reguler	
412	Sultra	Swasta	PLTA	Lasolo	73	2023	Reguler	
413	Sultra	Swasta	PLTS	Bau-Bau Tersebar	5	2017	Reguler	Non 35 GW (2016-2019)
414	Sultra	Swasta	PLTS	Wangi Wangi Tersebar	2	2017	Reguler	Non 35 GW (2016-2019)
415	Sultra	Swasta	PLTS	Bau-Bau Tersebar	5	2020	Reguler	
416	Sultra	Swasta	PLTS	Wangi Wangi Tersebar	2	2020	Reguler	
417	Sultra	Swasta	PLTS	Sultra Tersebar	10	2022	Reguler	
418	Sultra	Swasta	PLTS	Bau-Bau Tersebar	5	2023	Reguler	
419	Sultra	Swasta	PLTS	Wangi Wangi Tersebar	2	2023	Reguler	
420	Sultra	Swasta	PLTU	Bau-Bau	25	2019	Reguler	35 GW
421	Sultra	Swasta	PLTU	Bau-Bau	25	2019	Reguler	35 GW
422	Sultra	Unallocated	PLTP	Lainea	20	2025	Reguler	
423	Sultra	Unallocated	PLTU	Bau-Bau	25	2022	Reguler	
424	Sultra	Unallocated	PLTU	Bau-Bau	25	2023	Reguler	
425	Sulut	Swasta	PLTA	Poigar 2	30	2021	Reguler	
426	Sulut	Swasta	PLTM	Duminanga	3,5	2019	Reguler	35 GW
427	Sulut	Swasta	PLTM	Pidung	2	2019	Reguler	Non 35 GW (2016-2019)
428	Sulut	Swasta	PLTM	Ranowangko	2,2	2019	Reguler	35 GW
429	Sulut	Swasta	PLTM	Tincep 2	1,1	2021	Reguler	
430	Sulut	Swasta	PLTM	Tincep 3	2,2	2021	Reguler	
431	Sulut	Swasta	PLTM	Kilotiga	0,6	2024	Reguler	
432	Sulut	Swasta	PLTM	Tincep 1	0,4	2024	Reguler	
433	Sulut	Swasta	PLTM	Tincep 4	0,4	2024	Reguler	
434	Sulut	Swasta	PLTM	Totabuan 1	5	2024	Reguler	
435	Sulut	Swasta	PLTS	Sulut Tersebar	10	2021	Reguler	
436	Sulut	Swasta	PLTU	Sulut 3	50	2020	Reguler	
437	Sulut	Unallocated	PLTGU	Sulbagut 1 (Load Follower)	200	2022	Reguler	
438	Sulut	Unallocated	PLTU	Sulbagut 2	100	2023	Reguler	
439	Sulut	Unallocated	PLTU	Sulbagut 2	100	2024	Reguler	
440	Sumbar	Swasta	PLTM	Batang Anai-1	3	2019	Reguler	35 GW

NO	PROVINSI	PENGEMBANG	JENIS	NAMA PROYEK	KAPASITAS (MW)	TARGET COD	PROGRAM	FLAG
441	Sumbar	Swasta	PLTM	Muara Sako	3	2019	Reguler	35 GW
442	Sumbar	Swasta	PLTM	Batang Sumpur	7.6	2019	Reguler	35 GW
443	Sumbar	Swasta	PLTM	Sikarbau	2	2019	Reguler	35 GW
444	Sumbar	Swasta	PLTM	Tuik	6,3	2019	Reguler	35 GW
445	Sumbar	Swasta	PLTM	Siamang Bunyi	1,7	2019	Reguler	35 GW
446	Sumbar	Swasta	PLTM	Sangir Hulu	10	2019	Reguler	35 GW
447	Sumbar	Swasta	PLTM	Pinti Kayu (PLTM tersebar SUMBAR)	10	2022	Reguler	
448	Sumbar	Swasta	PLTM	Gumanti I (PLTM tersebar SUMBAR)	4	2022	Reguler	
449	Sumbar	Swasta	PLTM	Sianok Duku (PLTM tersebar SUMBAR)	6,6	2022	Reguler	
450	Sumbar	Swasta	PLTM	Tongar	6	2023	Reguler	
451	Sumbar	Swasta	PLTM	Bukit Cubadak (PLTM tersebar SUMBAR)	9,2	2024	Reguler	
452	Sumbar	Swasta	PLTM	Kerambil (PLTM tersebar SUMBAR)	1,4	2024	Reguler	
453	Sumbar	Swasta	PLTM	Batang Patimah (PLTM tersebar SUMBAR)	2,8	2024	Reguler	
454	Sumbar	Swasta	PLTM	Bukit Sileh (PLTM tersebar SUMBAR)	0,7	2024	Reguler	
455	Sumbar	Swasta	PLTM	Pasinggrahan (PLTM tersebar SUMBAR)	0,5	2024	Reguler	
456	Sumbar	Swasta	PLTM	Laruang Gosan (PLTM tersebar SUMBAR)	4	2024	Reguler	
457	Sumbar	Swasta	PLTM	Rabi Jonggor (PLTM tersebar SUMBAR)	4,5	2024	Reguler	
458	Sumbar	Swasta	PLTM	Tras (PLTM tersebar SUMBAR)	1,6	2024	Reguler	
459	Sumbar	Swasta	PLTP	Gn.Tandikat-Singgalang (PLTP tersebar SUMBAR)	55	2023	Reguler	
460	Sumbar	Swasta	PLTP	G.Talang (PLTP tersebar Sumbar)	20	2025	Reguler	
461	Sumbar	Swasta	PLTP	Sumani (PLTP tersebar SUMBAR)	55	2025	Reguler	
462	Sumbar	Swasta	PLTP	Simisioh (PLTP tersebar SUMBAR)	20	2025	Reguler	
463	Sumbar	Swasta	PLTP	Talamau (PLTP tersebar SUMBAR)	55	2025	Reguler	
464	Sumbar	Swasta	PLTSa	Sampah Kota PT Godang Tua Jaya KSO PT OVI Energi (PLTSa	10	2018	Reguler	Non 35 GW (2016-2019)
465	Sumsel	Swasta	PLTB	Biogas PT. Sampoerna Agri (PKS Selapan Java) (PLTB tersebar	2	2016	Reguler	Non 35 GW (2016-2019)
466	Sumsel	Swasta	PLTB	Biogas PT. Sampoerna Agri (PKS Permata Bunda) (PLTB	2	2016	Reguler	Non 35 GW (2016-2019)
467	Sumsel	Swasta	PLTB	Biogas PT Megah Hijau Lestari (PLTB tersebar SUMSEL)	2,5	2017	Reguler	Non 35 GW (2016-2019)
468	Sumsel	Swasta	PLTM	Babatan (PLTM tersebar SUMSEL)	4,9	2021	Reguler	
469	Sumsel	Swasta	PLTM	Sungai Air Dikit (PLTM tersebar SUMSEL)	6	2022	Reguler	
470	Sumsel	Swasta	PLTM	Karyanyata (PLTM tersebar SUMSEL)	4	2022	Reguler	
471	Sumsel	Swasta	PLTM	Telanai Banding Agung (PLTM tersebar SUMSEL)	6	2024	Reguler	
472	Sumsel	Swasta	PLTM	Selabung (PLTM tersebar SUMSEL)	4,5	2025	Reguler	
473	Sumsel	Swasta	PLTP	Way Selabung (PLTP tersebar SUMSEL)	10	2024	Reguler	
474	Sumsel	Swasta	PLTP	Tanjung Sakti (PLTP tersebar SUMSEL)	55	2025	Reguler	
475	Sumsel	Swasta	PLTSa	Sampah Kota Swasta 2 (PLTSa tersebar Sumatera )	10	2017	Reguler	Non 35 GW (2016-2019)
476	Sumsel	Swasta	PLTU	Sumsel-7 #1	150	2018	Reguler	35 GW
477	Sumsel	Swasta	PLTU	Sumsel-7 #2	150	2018	Reguler	35 GW
478	Sumsel	Swasta	PLTU	Sumsel-6 #2	300	2020	Reguler	
479	Sumsel	Unallocated	PLTGU	Sumatera-1	400	2024	Reguler	
480	Sumut	Swasta	PLTA	Sidikalang-1	15	2019	Reguler	35 GW
-					KAPASITAS	TARGET		
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NO	PROVINSI	PENGEMBANG	JENIS	NAMA PROYEK	(MW)	COD	PROGRAM	FLAG
481	Sumut	Swasta	PLTA	Kerjasama Jepang	20	2025	Reguler	
482	Sumut	Swasta	PLTA	Siborpa (PLTA tersebar SUMUT)	120	2025	Reguler	
483	Sumut	Swasta	PLTA	Pahae Julu (PLTA tersebar SUMUT)	9	2025	Reguler	
484	Sumut	Swasta	PLTA	Pahae Julu (PLTA tersebar SUMUT)	9	2025	Reguler	
485	Sumut	Swasta	PLTA	Aek Kualu (PLTA tersebar SUMUT)	27	2025	Reguler	
486	Sumut	Swasta	PLTA	Upper Sibundong (PLTA tersebar Sumut)	25	2025	Reguler	
487	Sumut	Swasta	PLTA	Aek Kuala (PLTA tersebar SUMUT)	17	2025	Reguler	
488	Sumut	Swasta	PLTA	Kerjasama Jepang	20	2025	Reguler	
489	Sumut	Swasta	PLTB	Biomasssa PTPN III (PLTB tersebar SUMUT)	3,5	2016	Reguler	Non 35 GW (2016-2019)
490	Sumut	Swasta	PLTB	Biomassa PT Growth Asia (eksisting) (PLTB tersebar SUMUT)	20	2016	Reguler	Non 35 GW (2016-2019)
491	Sumut	Swasta	PLTB	Biomassa PT Growth Asia (eksisting) (PLTB tersebar SUMUT)	20	2016	Reguler	Non 35 GW (2016-2019)
492	Sumut	Swasta	PLTB	Biogas PT Siringo-ringo (PLTB tersebar SUMUT)	1	2016	Reguler	Non 35 GW (2016-2019)
493	Sumut	Swasta	PLTB	Biogas POME (PLTB tersebar SUMUT)	1	2016	Reguler	Non 35 GW (2016-2019)
494	Sumut	Swasta	PLTB	Biogas POME (PLTB tersebar SUMUT)	3	2016	Reguler	Non 35 GW (2016-2019)
495	Sumut	Swasta	PLTB	Biogas PT Pratama Wijava Energi (PLTB tersebar SUMUT)	2	2018	Reguler	Non 35 GW (2016-2019)
496	Sumut	Swasta	PLTGU	Sumbagut-3	250	2018	Reguler	35 GW
497	Sumut	Swasta	PLTGU	Sumbagut-1 Peaker	250	2018	Reguler	35 GW
498	Sumut	Swasta	PLTM	Huta Padang	10	2019	Reguler	35 GW
499	Sumut	Swasta	PLTM	Batang Toru 4 (PLTM tersebar SUMUT)	10	2022	Reguler	
500	Sumut	Swasta	PLTM	Aek Godang (PLTM tersebar SUMUT)	4	2022	Reguler	
501	Sumut	Swasta	PLTM	Aek Rambe (PLTM tersebar SUMUT)	5.2	2022	Reguler	
502	Sumut	Swasta	PLTM	Sisira (PLTM tersebar SUMUT)	8.2	2022	Reguler	
503	Sumut	Swasta	PLTM	Bingai (PLTM tersebar SUMUT)	7	2022	Reguler	
504	Sumut	Swasta	PLTM	Silinda (PLTM tersebar SUMUT)	6	2022	Reguler	
505	Sumut	Swasta	PLTM	Lae Luhung (PLTM tersebar SUMUT)	10	2022	Reguler	
506	Sumut	Swasta	PLTM	Aek Simadoras (PLTM tersebar SUMUT)	5,1	2022	Reguler	
507	Sumut	Swasta	PLTM	Tanjung Lenggang (PLTM tersebar SUMUT)	10	2022	Reguler	
508	Sumut	Swasta	PLTM	Simare (PLTM tersebar SUMUT)	3	2024	Reguler	
509	Sumut	Swasta	PLTM	Pargaringan (PLTM tersebar SUMUT)	8	2024	Reguler	
510	Sumut	Swasta	PLTM	Tanah Pinem (PLTM tersebar SUMUT)	10	2024	Reguler	
511	Sumut	Swasta	PLTM	Poring 1 (PLTM tersebar SUMUT)	9	2024	Reguler	
512	Sumut	Swasta	PLTM	Poring 2 (PLTM tersebar SUMUT)	9	2024	Reguler	
513	Sumut	Swasta	PLTM	Kamangin Nagori (PLTM tersebar SUMUT)	2	2024	Reguler	
514	Sumut	Swasta	PLTM	Aek Tulas (PLTM tersebar SUMUT)	2	2024	Reguler	
515	Sumut	Swasta	PLTM	Anggoci (PLTM tersebar SUMUT)	9	2024	Reguler	
516	Sumut	Swasta	PLTM	Adian Nangka (PLTM tersebar SUMUT)	1,5	2024	Reguler	
517	Sumut	Swasta	PLTS	PT Surya Panca Khatulistiwa (PLTS tersebar SUMUT)	40	2017	Reguler	Non 35 GW (2016-2019)
518	Sumut	Swasta	PLTSa	Sampah Zero Waste (Mining Landfill) (PLTSa tersebar	1	2016	Reguler	Non 35 GW (2016-2019)
519	Sumut	Swasta	PLTSa	Sampah Kota (PLTSa tersebar SUMUT)	1	2018	Reguler	Non 35 GW (2016-2019)
520	Sumut	Swasta	PLTSa	Sampah Kota (PLTSa tersebar SUMUT)	1	2021	Reguler	

NO	PROVINSI	PENGEMBANG	JENIS	NAMA PROYEK	KAPASITAS (MW)	TARGET COD	PROGRAM	FLAG
521	Sumut	Swasta	PLTSa	Sampah Kota Swasta 3 (PLTSa tersebar Sumatera )	10	2023	Reguler	
522	Sumut	Swasta	PLTU	Sumut-2 #1	300	2023	Reguler	
523	Sumut	Swasta	PLTU	Sumut-2 #2	300	2024	Reguler	
524	Sumut	Unallocated	PS	Sumatera Pump Storage-1	500	2025	Reguler	
525	Sumut	Unallocated	PS	Sumatera Pump Storage-1	500	2025	Reguler	
526	Sumut	Unallocated	PLTA	Lau Gunung (PLTA tersebar SUMUT)	7,5	2019	Reguler	Non 35 GW (2016-2019)
527	Sumut	Unallocated	PLTA	Lau Gunung (PLTA tersebar SUMUT)	7,5	2020	Reguler	
528	Sumut	Unallocated	PLTA	Mandoge (PLTA tersebar SUMUT)	30	2022	Reguler	
529	Sumut	Unallocated	PLTA	Sibundong-4	75	2023	Reguler	
530	Sumut	Unallocated	PLTA	Cinendang (PLTA tersebar SUMUT)	80	2025	Reguler	
531	Sumut	Unallocated	PLTG	Nias	20	2020	Reguler	
					32.544			

Source: RUPTL PT PLN 2016-2025

## Annex II

## List Projects Power Plant of EPC PT PLN (Planned)

Nic				KAPASITAS	TARGET		
INO	PROVINSI	JEINIS		(MW)	COD	PROGRAIVI	FLAG
1	Aceh	PLTA	Kumbih-3	48	2023	Reguler	
2	Aceh	PLTG	Sinabang-1	6	2018	Reguler	35 GW
3	Bengkulu	PLTA	Ketahun-1	25	2023	Reguler	
4	Bengkulu	PLTG	Muko-muko	25	2017	Reguler	35 GW
5	Bengkulu	PLTP	Hululais (FTP2)	55	2018	Reguler	35 GW
6	Bengkulu	PLTP	Hululais (FTP2)	55	2019	Reguler	35 GW
7	DKI Jakarta	PLTMG	Senayan	100	2017	Reguler	35 GW
8	Gorontalo	PLTS	Gorontalo Tersebar	2	2016	Reguler	Non 35 GW (2016-2019)
9	Jambi	PLTA	Merangin-5 (PLTA tersebar	20,69	2025	Reguler	
10	Jabar	PLTU	Indramayu-4 (FTP2)	1.000	2019	FTP-2	35 GW
11	Jabar	PLTU	Jawa-6 (FTP2)	1.000	2025	FTP-2	
12	Jabar	PLTU	Jawa-6 (FTP2)	1.000	2025	FTP-2	
13	Jateng	PLTMG	Karimunjawa	2	2020	Reguler	
14	Jateng	PLTS	Karimunjawa	1	2021	Reguler	
15	Jatim	PLTMG	Bawean	2	2017	Reguler	Non 35 GW (2016-2019)
16	Jatim	PLTMG	Kangean	2	2017	Reguler	Non 35 GW (2016-2019)
17	Jatim	PLTMG	Sapudi	1	2017	Reguler	Non 35 GW (2016-2019)
18	Jatim	PLTS	Bawean	1	2020	Reguler	
19	Kalbar	PLTM	Melanggar	0,5	2019	Reguler	35 GW
20	Kalbar	PLTM	Mahap	1,3	2019	Reguler	35 GW
21	Kalbar	PLTM	Jitan	3,4	2019	Reguler	35 GW
22	Kalbar	PLTM	Kalis	3	2019	Reguler	35 GW
23	Kalbar	PLTM	Kembayung 1	4,5	2019	Reguler	35 GW
24	Kalbar	PLTM	Kembayung 2	2,5	2019	Reguler	35 GW
25	Kalsel	PLTA	Kusan	65	2025	Reguler	
26	Kalsel	PLTG	Kalsel Peaker 2	100	2021	Reguler	
27	Kalsel	PLTGU	Kalsel Peaker 1	200	2018	Reguler	35 GW
28	Kaltara	PLTMG	Nunukan 3	20	2020	Reguler	
29	Kalteng	PLTG	Bangkanai (FTP2)	70	2017	Reguler	35 GW
30	Kalteng	PLTG	Bangkanai (FTP2)	70	2017	Reguler	35 GW
31	Kaltim	PLTA	Boh	100	2024	Reguler	
32	Kaltim	PLTA	Kelai	55	2025	Reguler	
33	Kaltim	PLTA	Boh	100	2025	Reguler	
34	Kaltim	PLTG	Kaltim Peaker 2	100	2017	Reguler	35 GW
35	Kepri	PLTG	Mobile PP Tanjung Pinang	25	2017	Reguler	35 GW
36	Lampung	PLTG	Lampung Peaker #1	100	2018	Reguler	35 GW
37	Lampung	PLTG	Lampung Peaker #2	100	2018	Reguler	35 GW
38	Maluku	PLTA	Wai Tala	16	2023	Reguler	
39	Maluku	PLTM	Wae Mala	1	2019	Reguler	35 GW
40	Maluku	PLTM	Makariki	2	2019	Reguler	35 GW

<b>N</b> 1 -				KAPASITAS	TARGET		
INO	PROVINSI	JEINIS		(MW)	COD	PROGRAIVI	FLAG
41	Maluku	PLTM	Isal 3	2	2019	Reguler	35 GW
42	Maluku	PLTM	Nua (Masohi)	4,4	2019	Reguler	35 GW
43	Maluku	PLTM	Nua (Masohi)	4,4	2019	Reguler	35 GW
44	Maluku	PLTM	Wae Mala	1	2020	Reguler	
45	Maluku	PLTM	Makariki	2	2020	Reguler	
46	Maluku	PLTM	Isal 3	2	2020	Reguler	
47	Maluku	PLTMG	Ambon	70	2018	Reguler	35 GW
48	Maluku	PLTMG	Bula	10	2018	Reguler	35 GW
49	Maluku	PLTMG	Wetar	5	2018	Reguler	35 GW
50	Maluku	PLTMG	Namrole	10	2019	Reguler	35 GW
51	Maluku	PLTMG	Seram Peaker	30	2020	Reguler	
52	Maluku	PLTMG	Langgur	20	2020	Reguler	
53	Maluku	PLTMG	Namlea	10	2020	Reguler	
54	Maluku	PLTMG	Saumlaki	10	2020	Reguler	
55	Maluku	PLTMG	Dobo	10	2020	Reguler	
56	Maluku	PLTMG	Saparua	10	2022	Reguler	
57	Maluku	PLTMG	Moa	10	2022	Reguler	
58	Maluku	PLTU	Ambon 2	50	2020	Reguler	
59	Maluku	PLTU	Ambon 2	50	2021	Reguler	
60	Malut	PLTMG	Ternate 2	40	2018	Reguler	35 GW
61	Malut	PLTMG	Bacan	20	2018	Reguler	35 GW
62	Malut	PLTMG	Sanana	15	2018	Reguler	35 GW
63	Malut	PLTMG	Morotai	10	2019	Reguler	35 GW
64	Malut	PITMG	Tidore	20	2020	Reguler	
65	Malut	PITMG	Tobelo	20	2020	Reguler	
66	Malut	PITMG	Maba	10	2023	Reguler	
67	NTB	PITA	Brang Beh 1	12	2023	Reguler	
68	NTB	PITA	Brang Beh 2	6	2024	Reguler	
69	NTB	PITMG	Bima 2	20	2020	Reguler	
70	NTB	PITP	Sembalun (ETP2)	10	2024	FTP-2	
71	NTB	PITP	Sembalun (FTP2)	10	2024	FTP-2	
72	NTB	PITU	Lombok 2	50	2019	Reguler	35 GW
73	NTB	PITU	Lombok 2	50	2020	Reguler	
74	NTT		Wae Bancang L - Manggarai	10	2020	Reguler	
75	NTT	PITA	Wae Bancang II - Manggarai	6.5	2021	Reguler	
76	NTT	PITMG	Kupang Peaker	40	2017	Reguler	35 GW
77	NTT	PITMG	Flores	10	2018	Reguler	35 GW
78	NTT	PITMG	Wainganu	30	2010	Reguler	35 GW
79	NTT	PITMG	Bote	5	2019	Reguler	35 GW
80	NTT	PLTMG	Alor	10	2019	Reguler	35 GW

Nie				KAPASITAS	TARGET		FLAC
INO	PROVINSI	JEINIS		(MW)	COD	PROGRAIVI	FLAG
81	NTT	PLTMG	Kupang Peaker 2	50	2021	Reguler	
82	NTT	PLTP	Ulumbu 5	20	2019	Reguler	35 GW
83	NTT	PLTP	Mataloko (FTP 2)	20	2019	FTP-2	35 GW
84	NTT	PLTP	Ulumbu 6	20	2024	Reguler	
85	NTT	PLTU	Timor 1	50	2019	Reguler	Non 35 GW (2016-2019)
86	NTT	PLTU	Timor 1	50	2019	Reguler	Non 35 GW (2016-2019)
87	Papua	PLTA	Orya 2	14	2023	Reguler	
88	Papua	PLTM	Amai	0,7	2018	Reguler	35 GW
89	Pabar	PLTM	Waigo	1	2018	Reguler	35 GW
90	Papua	PLTM	Mariarotu I	1,3	2019	Reguler	35 GW
91	Papua	PLTM	Mariarotu II	1,3	2019	Reguler	35 GW
92	Papua	PLTMG	Timika	40	2018	Reguler	35 GW
93	Papua	PLTMG	Merauke	20	2018	Reguler	35 GW
94	Papua	PLTMG	Jayapura Peaker	40	2018	Reguler	35 GW
95	Papua	PLTMG	Serui	10	2019	Reguler	35 GW
96	Papua	PLTMG	Sarmi	5	2019	Reguler	35 GW
97	Papua	PLTMG	Biak	20	2019	Reguler	35 GW
98	Papua	PLTMG	Nabire 2	20	2019	Reguler	35 GW
99	Papua	PLTU	Jayapura 2	50	2020	Reguler	
100	Papua	PLTU	Jayapura 2	50	2021	Reguler	
101	Pabar	PLTA	Warsamson	20	2023	Reguler	
102	Pabar	PLTM	Ransiki	2,4	2019	Reguler	35 GW
103	Pabar	PLTMG	Kaimana	10	2017	Reguler	35 GW
104	Pabar	PLTMG	Sorong	50	2017	Reguler	35 GW
105	Pabar	PLTMG	Raja Ampat	10	2017	Reguler	35 GW
106	Pabar	PLTMG	Bintuni	10	2018	Reguler	35 GW
107	Pabar	PLTMG	Manokwari 2	20	2019	Reguler	35 GW
108	Pabar	PLTMG	Fak-Fak	10	2019	Reguler	35 GW
109	Pabar	PLTU	Sorong	50	2019	Reguler	35 GW
110	Pabar	PLTU	Sorong	50	2019	Reguler	35 GW
111	Sulsel	PLTA	Bakaru 2	70	2021	Reguler	
112	Sulsel	PLTA	Poko	65	2022	Reguler	
113	Sulsel	PLTA	Bakaru 2	70	2022	Reguler	
114	Sulsel	PLTA	Poko	65	2023	Reguler	
115	Sulsel	PLTA	Bakaru 3	146	2023	Reguler	
116	Sulsel	PLTGU	Sulsel Peaker	300	2018	Reguler	35 GW
117	Sulsel	PLTGU	Sulsel Peaker	150	2019	Reguler	35 GW
118	Sulsel	PLTMG	Selayar 2	10	2021	Reguler	
119	Sulsel	PLTU	Sulsel 2	200	2019	Reguler	35 GW
120	Sulsel	PLTU	Sulsel 2	200	2020	Reguler	

No	PROVINSI	JENIS	NAMA PROYEK	KAPASITAS	TARGET	PROGRAM	FLAG
				(MW)	COD		
121	Sulteng	PLTM	Halulai	1,2	2019	Reguler	35 GW
122	Sulteng	PLTMG	Luwuk	40	2017	Reguler	35 GW
123	Sulteng	PLTU	Palu 3	50	2018	Reguler	35 GW
124	Sulteng	PLTU	Palu 3	50	2018	Reguler	35 GW
125	Sulteng	PLTU	Tolitoli	25	2021	Reguler	
126	Sulteng	PLTU	Tolitoli	25	2021	Reguler	
127	Sultra	PLTA	Konawe	21	2024	Reguler	
128	Sultra	PLTA	Watunohu	15	2024	Reguler	
129	Sultra	PLTM	Lapai 1	4	2019	Reguler	35 GW
130	Sultra	PLTM	Riorita	0,5	2019	Reguler	35 GW
131	Sultra	PLTM	Toaha	0,5	2019	Reguler	35 GW
132	Sultra	PLTMG	Wangi-Wangi	5	2020	Reguler	
133	Sultra	PLTMG	Bau-Bau	30	2025	Reguler	
134	Sulut	PLTA	Sawangan	6	2020	Reguler	
135	Sulut	PLTA	Sawangan	6	2020	Reguler	
136	Sulut	PLTG	Minahasa Peaker	150	2018	Reguler	35 GW
137	Sulut	PLTM	Lelipang	0,5	2018	Reguler	35 GW
138	Sulut	PLTMG	Tahuna	10	2020	Reguler	
139	Sulut	PLTP	Kotamobagu I (FTP 2)	20	2025	FTP-2	
140	Sulut	PLTP	Kotamobagu II (FTP 2)	20	2025	FTP-2	
141	Sulut	PLTP	Kotamobagu III (FTP 2)	20	2025	FTP-2	
142	Sulut	PLTP	Kotamobagu IV (FTP 2)	20	2025	FTP-2	
143	Sulut	PLTU	Sulut 1	50	2019	FTP-1	35 GW
144	Sulut	PLTU	Sulut 1	50	2020	FTP-1	
145	Sumbar	PLTA	Masang-3	89	2024	Reguler	
146	Sumut	PLTA	Simonggo-2	90	2023	Reguler	
147	Sumut	PLTA	Ordi-5 (PLTA tersebar SUMUT)	27	2025	Reguler	
148	Papua	PLTM	Digoel	2,6	2019	Reguler	35 GW
				8.020			

Source: RUPTL PT PLN 2016-2025

# Appendix III Power Generation In The Mounth of Wells (Wellhead) (Permen ESDM No. 11/2017)

Direct Appointment	Tender	Natural Gas Price		LNG Price
<ul> <li>The price of gas ≤ 8% ICP/MMBTU (at plant gate)</li> <li>Gas allocation guarantee is according to GSA</li> <li>The depreciation of the power generation investment value at least 20 years</li> <li>Power generation efficiency with Specific Fuel Consumption (SFC) equal to diesel oil (HSD) is 0.25 liter/kWh</li> </ul>	<ul> <li>The price of gas &gt; 8% ICP/MMBTU</li> </ul>	<ul> <li>Minister sets the price of natural gas for power generation.</li> <li>In accordance with the economic of gas field without escalation. If escalation is necessary it will be based on an agreement.</li> <li>If downstream infrastructure is exist then the price of gas is at the plant gate, if none then prevailing price in the upstream.</li> <li>PLN/business entities may purchase a maximum of 11.5% of natural gas ICP/MMBTU if the power generation is not located at the mouth of wells (wellhead).</li> <li>If the price of natural gas exceeds 11.5% ICP, MMBTU, PLN /business entities may use LNG.</li> </ul>	•	In accordance with the economic of field and using a formula agreed upon price of Free on Board (FOB). If the price of LNG in domestic is greater than 11.5% ICP/MMBTU (Parity to Oil) at price of FOB, PLN/business entities authorized to import LNG as long as the price is below 11.5% ICP/MMBTU at regasification terminals of buyer (landed price). In the case of LNG to be imported the price is over 11.5% ICP/MMBTU (landed price), PLN/business entities can buy pipeline gas at a price of more than 11.5% ICP/MMBTU or buy LNG in domestic at a higher price than 11.5% ICP/MMBTU at price of FOB.

### Appendix IV

### The Electricity Purchase Price from Renewable Energy

### (Permen ESDM No. 12/2017)

Ne			The Electricity	Purchase Price
NO.	Type of Renewables		BPP $_{PS}$ > BPP $_{PN}$	BPP $_{PS} \leq$ BPP $_{PN}$
1	Solar PV PP	Tender based on capacity quota (min. 15 MW) to be offered	Max. 85% x BPP <sub>PS</sub>	100% x BPP <sub>PS</sub>
2	Wind PP	Tender based on capacity quota (min. 15 MW) to be offered	Max. 85% x BPP <sub>PS</sub>	100% x BPP <sub>PS</sub>
		Ceiling price	Max. 85% x BPP <sub>PS</sub>	100% x BPP <sub>PS</sub>
3	Hydro PP	Direct selection	Price is determined based on	direct selection process
		<ul> <li>a. Hydro PP ≤ 10 MW: Capacity Factor at least 6</li> <li>b. Hydro &gt; 10 MW: Capacity Factor based on elements</li> </ul>	5% ectricity system needs	
	Diamaga DD	Ceiling price (Capacity $\leq$ 10 MW)	Max. 85% x BPP <sub>PS</sub>	100% x BPP <sub>PS</sub>
4	BIOMASS PP	Direct selection (Capacity > 10 MW)	Price is determined based	on direct selection process
E	Biogas PP	Ceiling price (Capacity $\leq$ 10 MW)	Max. 85% x BPP <sub>PS</sub>	100% x BPP <sub>PS</sub>
5		Direct selection (Capacity > 10 MW)	Price is determined based on	direct selection process
6	Waste to Energy PP	Ceiling price	Max. 100% BPP <sub>PS</sub>	Agreed by both parties
7	Geothermal PP	Ceiling price	Max. 100% BPP <sub>PS</sub>	Agreed by both parties

BPP <sub>PS</sub> and average BPP <sub>PN</sub> are a BPP <sub>PS</sub> and an average BPP <sub>PN</sub> in previous year that had been stipulated by Minister based on PLN's proposal.

#### Note:

- BPP<sub>PS</sub> : Biaya Pokok Penyediaan Tenaga Listrik di pembangkitan di sistem setempat (cost of power generation in the local electricity system)
- BPP<sub>PN</sub> : Rata-rata Biaya Pokok Penyediaan Tenaga Listrik pembangkitan nasional (*the average cost of national power generation*)

## Appendix V

The Electricity Purchase Price From Mine-Mouth And Non Mine-Mouth Power Generation

(Permen ESDM No. 19/2017)

	Mine-Mouth	Non Mine-Mouth			
Capacity	All capacity	> 100 MW	≤ 100 MW		
Ceiling Price	75% x BPP <sub>PS</sub>	100% x BPP <sub>PS</sub>	100% x BPP <sub>PS</sub>		
(BPP <sub>PS</sub> ≤ BPP <sub>PN</sub> )					
Ceiling Price	75% x BPP <sub>PN</sub>	100% x BPP <sub>PN</sub>	Auction or B to B		
$(BPP_{PS} > BPP_{PN})$					

## Appendix VI (1)

## Cost of Power Generation 2016 per Sub System

## (Kepmen ESDM No. 1404 K/20/MEM/2017)

NO		WILAYAH / DISTRIBUSI / SISTEM / SUB SISTEM	BPP (Rp. /kWb)	BPP (¢USD/kWb)
Α	SUM	IATERA	1.194	8,98
1	SUM	IATERA BAGIAN UTARA	1.383	10,39
	a	SUMUT	1.235	9,28
	a.1	Nias	2.049	15,40
	b	Aceh	1.383	10,39
	b.1	Pulau Weh	1.733	13,02
	b.2	Pulau Simeuleu	1.817	13,65
2	SUM	IATERA BAGIAN TENGAH DAN SELATAN	1.235	9,28
	a	SUMBAR	1.074	8,07
	a.1	Kepulauan Mentawai	2.096	15,75
	b	RIAU & KEP RIAU	1.349	10,14
	b.1	Bintan	1.583	11,90
	b.2	Tanjung Balai Karimun	1.706	12,82
	b.3	Natuna	2.089	15,70
	b.4	Anambas	2.149	16,15
	С	S2JB (SUMSEL, JAMBI, BENGKULU)	1.046	7,86
	c.1	Pulau Enggano	2.322	17,45
	d	LAMPUNG	1.034	7,77
3	BAN	GKA	1.817	13,66
4	BELI	TUNG	1.619	12,17
5	SUB	SISTEM KEPULAUAN KECIL LAINNYA	2.096	15,75

NO	WILAYAH / DISTRIBUSI / SISTEM / SUB SISTEM	BPP (Rp. /kWh)	BPP (¢USD/kWh)
В	JAWA BALI	868	6,52
1	DKI	867	6,51
	Kepulauan Seribu (Non Koneksi Kabel Laut Jawa	2.332	17,52
	a Bali)		
2	BANTEN	866	6,51
	a Pulau Panjang	2.332	17,52
3	JABAR	866	6,51
4	JATENG	868	6,52
	a Karimun Jawa	2.332	17,52
5	JATIM	870	6,54
	a Madura Isolated	2.332	17,52
	b Bawean	1.964	14,76
	c Gili Ketapang	2.332	17,52
6	BALI	881	6,62
	Sistem 3 Nusa (Nusa Penida, Nusa Lembongan,	1.745	13,11
	<sup>a</sup> Nusa Ceningan)		
7	SUB SISTEM KECIL LAINNYA	2.332	17,52
С	KALIMANTAN	1.373	10,31
1	KALBAR	1.655	12,43
2	KALSELTENG	1.203	9,04
3	KALTIMRA	1.357	10,20
4	SUB SISTEM KECIL LAINNYA	2.332	17,52

# Appendix VI (2) Cost of Power Generation 2016 per Sub System (Kepmen ESDM No. 1404 K/20/MEM/2017)

NO		WILAYAH / DISTRIBUSI / SISTEM / SUB SISTEM	BPP (Rp. /kWb)	BPP (¢USD/kWb)
D	รบ	LAWESI & NUSA TENGGARA	1.421	10,68
1	SU	LUTTENGGO	1.696	12,74
	_	Sulawesi Bagian Utara (Manado, Gorontalo,	1.669	12,54
	a	Kotamobagu)		
	b	Toli - Toli	2.026	15,22
	с	Tahuna	2.332	17,52
	d	Palu	1.016	7,63
	e	Luwuk	1.759	13,22
2	SULSELRABAR		1.078	8,10
	_	Sulawesi Bagian Selatan (Makassar, Mamuju,	1.016	7,63
	a	Palopo, Pinrang, Watampone, Pare-Pare)	 	
	b	Kendari	1.801	13,53
	с	Bau - Bau	2.137	16,06
	d	Selayar	2.114	15,88
3	NT	B	1.821	13,68
	а	Bima	1.880	14,12
	b	Lombok	1.629	12,24
	с	Sumbawa	1.978	14,87
4	NT	Т	2.332	17,52
	а	Sumba	1.887	14,18
	b	Timor	2.226	16,73
	С	Flores Bagian Barat	1.751	13,16
	d	Flores Bagian Timur	2.070	15,55
5	SU	B SISTEM KECIL LAINNYA	2.332	17,52

NO	WILAVAH / DISTRIBUSI / SISTEM / SUB SISTEM	BPP	BPP
NO	WILATAN / DISTRIBUSI / SISTEM / SUB SISTEM	(Rp. /kWh)	(¢USD/kWh)
E	MALUKU & PAPUA	2.008	15,09
1	MALUKU & MALUKU UTARA	2.305	17,32
	a Ambon	1.680	12,62
	b Seram	2.330	17,51
	c Saparua	1.626	12,22
	d Buru	1.728	12,98
	e Ternate - Tidore	1.971	14,81
	f Sanana	1.811	13,61
	g Bacan	1.811	13,61
[	h Halmahera (Tobelo, Malifut, Jailolo, Sofifi, Maba)	1.685	12,67
	i Daruba	1.587	11,93
	j Tual	1.657	12,45
	k Dobo	2.063	15,50
	l Saumlaki	1.686	12,67
2	PAPUA & PAPUA BARAT	1.802	13,54
	a Jayapura	1.959	14,72
	b Sarmi	2.332	17,52
	c Biak	1.753	13,17
	d Serui	1.778	13,36
	e Nabire	1.604	12,06
[	f Wamena	2.332	17,52
[	g Timika	1.786	13,42
[	h Merauke	1.704	12,80
	i Tanah Merah	1.704	12,80
[	j Manokwari	1.760	13,23
	k Sorong	1.305	9,81
	l Teminabuan	2.332	17,52
	m Fak Fak	2.332	17,52
	n Kaimana	2.332	17,52
	o Bintuni	2.332	17,52
	p Raja Ampat	2.332	17,52
3	SUB SISTEM KECIL LAINNYA	2.332	17,52
	ΡΑΤΑ - ΡΑΤΑ	983	7 29