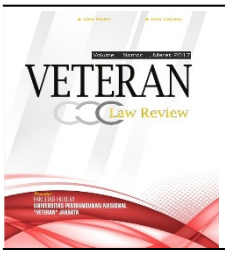

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Regulation of Foreign Investments in the Development of New Renewable Energy (EBT) in Indonesia

Imam Haryanto

Faculty of Law, Universitas Pembangunan Nasional Veteran Jakarta,
E-mail: imam.haryanto@upnvj.ac.id

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ABSTRACT

In the use of energy in Indonesia, is still completely dependent on non-renewable energy such as petroleum, coal and natural gas as the source of its energy needs. After being implemented by the government to realize the renewable energy mix it still experiences various obstacles including technical, non-technical and price competition with fossil energy which tends to be cheaper, causing development of renewable energy is hampered and the energy mix achieved is only around 6.2% overall with growth of 0.39 per year. This research will discuss the effectiveness of regulations issued by the Indonesian government relating to foreign investment in the renewable energy sector. The purpose of this research, will contribute in the form of ideas to relevant agencies, such as the Ministry of Energy and Mineral Resources of the Republic of Indonesia because it is directly related to renewable energy in Indonesia. The method that will be used in this research is empirical normative juridical, which uses facts in the field and is analyzed based on applicable laws and regulations. This research will prove that the regulations regarding investment in new renewable energy really need to be updated. This is to provide legal certainty to investors who are interested in investing and also to provide legal protection to investors.

1. Introduction

Energy becomes a necessity that is vital for human life today. Indonesia is no exception that has a variety of abundant energy in it both renewable energy such as biomass, water, solar, geothermal, wind energy to marine energy. In addition, nonrenewable energy such as oil, natural gas, coal and nuclear energy content in uranium and thorium.

Renewable energy (renewable energy) has the virtue that is not possessed by non-renewable energy (non-renewable energy), the energy will never stop or run out during the natural cycle is still ongoing, environmentally friendly and can minimize environmental pollution. While non-renewable energy is energy that will run out if used continuously and produce pollution if used.

But it has the advantage of being able to produce greater energy than renewable energy with lower concentrations.

The energy used must have 2 (two) advantages possessed by 2 (two) types of energy, which are environmentally friendly and produce large amounts of energy. So, the only way that can be used is to use renewable energy sources on a large scale and utilize the potential of existing renewable energy to the maximum extent possible. That step is what the government is currently striving for in order to maintain the stability and energy security in Indonesia amid the declining supply of non-renewable energy and increasing demand for energy itself, especially in the commercial, industrial, transportation and household sectors as well as the global challenges facing Indonesia.[1]

The fact that there is in Indonesia at this time based on information and data obtained on the use of energy, Indonesia still relies entirely on non-renewable energy such as oil, coal and natural gas as a source of energy needs. Then it is trying to optimize the use of renewable energy as written in Government Regulation 79 of 2014 concerning National Energy Policy Article 11 paragraph 2 which explains the priorities of developing national energy as follows:

- Maximizing the use of renewable energy by taking into account the economic level.
- Minimizing the use of petroleum.
- Utilizing the use of natural gas and new energy.
- Using coal as a mainstay of the national energy supply.

Looking at the results of the implementation that has been carried out by the government to realize these targets, up to 2015 in the overall breakdown of energy sources in all sectors. Petroleum is still the main focus of Indonesian society with a percentage of 43%. Then coal and natural gas have been utilized respectively 28.7% and 22%. The remainder, only 6.2% comes from the contribution of renewable energy in the national energy use mix. This means that the use of renewable energy is still not up to date and cannot cover the growth of energy consumption to 3.2% and electricity consumption around 6% annually, while the renewable energy mix is increasing 0.36% per year. This will make it difficult to achieve the 23% target by 2025.

Based on the existing energy policies in Indonesia and the problems of renewable energy that have plagued, the need for a strategy for the development of renewable energy in Indonesia that is considered to be able to significantly increase the development of renewable energy in Indonesia to achieve the target of the new renewable energy mix in 2025 and 2050. By analyzing references from various data and information available in several comprehensive digital media and libraries, energy policies in Indonesia, especially regarding renewable energy and licensing tariffs, as well as analyzing based on technological aspects as well as the factors of related

[1] Head, John. (1997). *Pengantar Umum Hukum Ekonomi: Seri Dasar-Dasar Hukum Ekonomi I,* (pp. 20). Jakarta: Program Kerjasama antara Proyek ELIPS dan Fakultas Hukum Universitas Indonesia.

parties' support to support development renewable energy. With the aim of getting civil servants towards the optimal and efficient use of renewable energy in the interests of national energy security.

Regulations regarding renewable energy have been regulated by the Government through Regulation of the Minister of Energy and Mineral Resources No. 27 of 2017 concerning Service Quality and Costs Related to the Distribution of Electric Power by PT PLN (Persero). Then, this provision obstructs the achievement target of the Renewable Energy mix in the electricity sector as per the National Energy General Plan (RUEN) established through Presidential Regulation No. 22 of 2017 concerning the National Energy General Plan (RUEN). Yet to achieve the renewable energy mix requires enormous investment reaching trillions of rupiah which is impossible if it does not include the tourism sector. However, on the other hand, the Ministry of Energy and Mineral Resources has the view that Ministerial Regulation Number 50 Year 2017 is a solution for the weaknesses in the implementation of renewable energy supply in the electricity sector, which has been stalled and made a heavy burden for PLN.

Existing regulations have drawn protests from private electricity developers. Business actors consisting of the Indonesian Chamber of Commerce and Industry (KADIN), the Indonesian New and Renewable Energy Society (METI), the Association of Hydro Electric Power Development Companies (APLLTA), AESI, APLIBI, APROBI and PPLSTA conveyed several points raised by the developers. The objections conveyed include, among others, the inadequate purchase price of electricity. Second, the obligation to hand over assets at the end of the contract period to the government or PT PLN (Persero) at a price of US $ 1,000 (BOOT). Third, the direct selection scheme for unsuitable developer procurement. Fourth, the non-bankable Electricity Purchase Agreement (PPA) clause. Fifth, the lack of seriousness in local content or TKDN. And sixth, burdensome fees and fees. In a letter of recommendation to Vice President Jusuf Kalla, the price of electricity purchased by PLN from the EBT power plant was determined based on the economic price based on Law No. 30/2007 concerning Energy.

However, in the FGD organized by the Center for Analysis and Evaluation of National Law, the National Legal Development Agency (BPHN) aims to discuss legal issues in the electricity sector as a reference material for the formulation of Pokja recommendations. In addition, at a working meeting held at the Republic of Indonesia House of Representatives Building, the government insisted on carrying out the commitment of the target of renewable energy mix (EBT) of 23% by 2025. The composition of the EBT mix of 23% consisted of the power generation sector and also in the transportation sector. Until now, the composition of the EBT mix, especially electricity generation, has only reached 13%.

2. Method

Research Object
The object of this research is the Regulation of Foreign Investment in the Development of Renewable Energy (EBT) in Indonesia.

Approach Method
Using the method of normative juridical approach, which is an approach that emphasizes aspects of norms or rules[2], so that the problem will be assessed and analyzed by referring to the applicable laws and regulations relating to the problem of foreign investment in new renewable energy (EBT) in Indonesia.

3. Main Heading of the Analysis or Results

The development of industrialization which always increases every year has no doubt caused the need for energy also increased. Industrialization is one of the main milestones for the country to advance its economy and the process is highly dependent on the availability of energy. the need for energy that is so large is not comparable with conventional energy reserves that exist. At present most countries still depend on their energy needs for conventional energy such as petroleum and coal. However, the energy reserves are increasingly depleted into a problem that threatens a country's energy security.

The world's population continues to grow followed by needs that also continue to increase, it is estimated that humans have used about 135 billion tons of crude oil from the 1850s to 2017 to meet various needs such as vehicle fuel, electricity needs and so forth. based on data released by the US Energy Information Administration stating that global energy consumption will increase by 28% between 2015-2040. The increase in energy consumption came mainly from countries that are not members of the Organization for Economic Cooperation and Development (OECD), especially countries in Asia that are experiencing rapid economic growth such as China and India. Even energy consumption from non OECD Asian countries constitutes 60% of total global energy consumption.[3]

As a country with the fourth largest population in the world, Indonesia is a country that has a high enough total energy consumption. Indonesia's total energy consumption in 2017 is 998.06 million BOE. The most used for household needs is 378.05 million BOE then 303.31 million BOE is used for transportation needs, 225.81 million BOE is used for industrial needs, 41.45 million BOE is used for commercial needs, 60.24 million BOE used for non-

[2] Soekanto, Soerjono. (1984). *Pengantar Penelitian Hukum,* (pp. 49). UI-Press, Jakarta.

[3] Dumairi. (2007). *Kontribusi Investasi Mendongkrak Perekonomian Indonesia.* (pp. 37). Semarang, Pustaka Print.

energy needs, while 19.44 million BOE was used to meet the needs of other sectors.

With such huge energy consumption both domestically and globally, each country will continue to explore and exploit nature to meet the growing energy needs. Natural exploration which is carried out continuously in the long term has a great influence on the sustainability of the environment. The massive use of petroleum energy is carried out by almost all countries, it turns out to have caused environmental damage in various places. The depletion of the earth's ozone layer is one result of the use of petroleum energy and coal that is not environmentally friendly. Gas emissions resulting from the use of petroleum and coal energy have damaged the ozone layer which basically serves to protect every living thing on earth. If this continues, it cannot be guaranteed that the earth we live in is still habitable or not in the future.

Conventional energy reserves are getting thinner every year as well as the bad impact on the environment has pushed countries in the world collectively to begin to reduce dependence on conventional energy by shifting to developing the use of renewable energy. In addition to its use that is environmentally friendly, renewable energy is a promising source of energy for the livelihood of human beings because of the amount that will never run out.

For Indonesia, energy is an important aspect as the driving force of the country's economy. Almost all lines of life require energy supplies. Every citizen has the right to get access to adequate energy to meet their needs and welfare. This is a state obligation that has been mandated in the Constitution of the Republic of Indonesia to provide energy for the needs of the people, as written in Article 33 paragraph 3 which states that energy is a source of natural wealth that must be used as well as possible for the prosperity of the people. Therefore, it is important for Indonesia to always meet its national energy needs because it is an important aspect for the survival and welfare of the people of Indonesia.[4]

Indonesia is a country located in the equatorial area precisely at 11o LS-6o LU and 95o BT-141o BB. Indonesia has a tropical climate that has 2 seasons throughout the year, namely dry and (rainy) seasons. In general, equatorial regions have high average solar radiation throughout the year.

The potential of solar power in Indonesia is generally at a good level which can be used as a benchmark in the development of Solar Power Plants (PLTS). Almost all regions in Indonesia have the potential to be developed PLTS, with an average irradiation distribution reaching 4.8 kWh / m2. The largest amount of solar radiation is in eastern Indonesia, 5.1 kWh / m2 / day with a 9% monthly variation, while for the western part of Indonesia which is 4.5 kWh / m2 / day with a monthly variation of 10%.

[4] Pramono, Nindyo. (2006). *Bunga Rampai Hukum Bisnis Aktual*, (pp. 63). Bandung: Aditya Bakti.

One of the PLTS technologies that are currently being developed in Indonesia is PLTS Photovoltaic On Grid technology. The technology is a type of PLTS technology that is interconnected directly with the electrical system. Electrical energy generated by solar panels is directly channeled to the PLN grid. PLTS Photovoltaic Technology On Grid is not equipped with batteries and only works during the day.

In Indonesia there are several PLTS that have been built using On Grid type, namely Cirata PLTS, located in Purwakarta, West Java, with a capacity of 1 MWp built on 1 ha land and Oelpuah PLTS, located in Oelpuah Village, Kupang Tengah District, Kupang Regency, Nusa South East Southeast with the largest capacity in Indonesia at 5 MWp is built on 7.5 hectares of land.

The prospect of developing PLTS Photovoltaics On Grid in Indonesia is very good, This is supported by:

a. The National Energy Policy (KEN) which targets 2025 New and Renewable Energy (EBT) can contribute up to 23%, one of which is through the development of PLTS.
b. Based on 2016 ESDM Ministry data, there are 12,659 villages in Indonesia that have not been properly electrified. As many as 2,915 villages have no electricity at all, while 9,000 other villages have only 2-3 hours of electricity a day.
c. Technically the development of PLTS Photovoltaics on Grid can maintain the voltage at the end of the transmission or distribution network to avoid voltage drop.

Issuance of Regulation of the Minister of Energy and Mineral Resources (ESDM) No. 12 of 2017 Regarding the utilization of renewable energy sources (EBT) for the supply of electricity, one of which is contained in the development of PLTS [6]. According to the government, the issuance of the Minister of Energy and Mineral Resources Regulation No.12 / 2017 is intended to improve the efficiency of production costs for EBT power plant developers so that it is expected to produce competitive electricity prices. This Ministerial Regulation is also one of the government's efforts to parse the issue of EBT electricity prices which are considered too expensive so that so far it cannot be absorbed by PLN.[5]

But there are deficiencies in the development of PLTS in Indonesia, namely the issuance of Ministerial Regulation No. 12/2017 there is a bad impact for PLTS developer investors because in these rules set a maximum electricity purchase price of 85% of the local Cost of Production (BPP). If the local BPP is above the national average BPP, the purchase price of electricity is the highest at 85% of the local BPP. However, if the local BPP is equal to or below the national average BPP, the purchase price is the same as the local BPP. The pattern of determining the electricity tariff has the potential to harm investors, because it is only based on one party's BPP, PT. State Electricity Company (PLN). In

[5] Rajagukguk, Erman. (2007). *Hukum Investasi di Indonesia: Pokok Bahasan.* (pp.40). Jakarta: Fakultas Hukum Universitas Indonesia.

fact, based on Article 7 of Law 30/2007 on energy, it states that "Energy prices are based on fair economic values".

Before the Minister of Energy and Mineral Resources Regulation No. 12/2017 was issued, the purchase price of electricity from PLTS refers to Minister of Energy and Mineral Resources Regulation No. 19/2016 concerning Purchasing Electric Power from solar energy by PT. PLN (Persero). In the Minister of Energy and Mineral Resources Regulation No. 19/2016, the government set a feed in tariff (FIT) for electricity from solar energy by setting prices in the range of Rp. 1,885 / kWh - Rp. 3,250 / kWh. This rate varies depending on the region where PLTS is located. For example in the western regions, especially Jakarta, West Java, Central Java, Yogyakarta and East Java which have the lowest rates of Rp. 1,885 / kWh and the eastern region especially Papua has the highest tariff of Rp. 3,225 / kWh. The purpose of Feed in Tariff is to offer cost-based compensation to renewable energy producers, provide price certainty and long-term profitable contracts.

The development of PLTS Fotovoltaik On Grid because it has a high electricity purchase value in the range of Rp. 1,885 / kWh - Rp. 3,250 / kWh depending on the area of the PLTS development. This is what drives massive investment in the development of solar power plants in Indonesia. Unlike the Minister of Energy and Mineral Resources Regulation No. 12/2017 which makes the development of PLTS Photovoltaics On Grid slowed down by pegging electricity purchases from solar energy only 85% of the local BPP. The emergence of the Minister of Energy and Mineral Resources Regulation No. 12/2017 because PLN is burdened with the Feed in Tariff mechanism in the previous regulation, which is Minister of Energy and Mineral Resources Regulation No. 19/2016 because the purchasing costs of solar energy are too high which causes it cannot be absorbed by PLN. The cause of investment on the development of PLTS Photovoltaics On Grid is slowing down allegedly due to the issuance of regulation of the Minister of Energy and Mineral Resources No. 12/2017.

With the energy potential and economic development of countries that are different from one another, the ability of each country to meet its energy needs is also different from one another. With different energy capacities and different levels of use of technology in the energy sector, each country needs to collaborate to complement one another so that each country can meet its national energy needs. The cooperation that is established is usually through investment or investment to help the development of infrastructure and technology in the energy sector in a country.

Adequate infrastructure and technological sophistication are important aspects that must be owned by the state to be able to meet its national energy needs, especially in developing the renewable energy sector. Adequate infrastructure and technology will be able to encourage the optimization of a country's energy use. On the other hand, infrastructure and technology always meet challenges, namely in terms of funding needs. Every country needs a large amount of funding to be able to build energy infrastructure and develop its technology. Large needs related to funds can be met by collaborating

through investments with other countries. Therefore, it is important for every country including Indonesia to be able to build a good investment climate in order to increase the amount of investment in the energy sector in order to be able to encourage the optimization of energy utilization in the country. At present China has become one of Indonesia's main partners in developing renewable energy. The position of China as a global leader in renewable energy is expected to provide significant progress towards the development of the renewable energy sector in Indonesia. However, this has become a serious challenge for the Indonesian government. In the midst of the abundant potential of natural resources including in the field of renewable energy, Indonesia's ability to meet national energy needs through increased investment so far still faces many problems and problems that still continue to require resolution in the form of concrete actions from the Government.

In Indonesia, the urgency to develop renewable energy is very large given the ever-increasing population and the capacity of conventional energy, namely petroleum as the biggest energy use in Indonesia continues to decline. Petroleum reserves in Indonesia are only about 0.2% of the total world oil reserves. The rate of consumption of fuel oil (BBM) as a processed material continues to increase while production of fuel in the period of 10 years tends to decrease, from 267.40 million barrels or around 800 thousand barrels per day in 2006 to around 251.87 million barrels or around 690 thousand barrels per day in 2015. Consumption of fuel continues to increase while production continues to decline causing the level of Indonesian petroleum exports also declined so that Indonesia is very dependent on imports of petroleum from outside. This can be seen from the average import dependency ratio which increased from 37% in 2007 to 44% in 2015. Indonesia's high dependence on external supplies will certainly greatly affect Indonesia's national energy security.

In addition, high dependence on petroleum will further worsen Indonesia's environmental conditions. It is undeniable that the use of fuel oil is one of the main causes of global warming. Greenhouse gas emissions generated by the use of fossil fuels in Indonesia were estimated to reach 1,800 Mt CO2-eq in 2005 and starting in 2000 increased by 400 Mt CO2-eq. Carbon dioxide generated from the use of fossil fuels reached 322 Mt of CO2, increasing 425 Mt of CO2 in 2013.

The availability of oil energy sources which continues to decrease without being accompanied by increased production and efforts to develop renewable energy types to increase energy capacity will cause energy scarcity to occur in Indonesia. Reducing dependence on conventional energy, especially petroleum, is very important to do as early as possible, given the depleting oil reserves every year as well as the adverse impact on the environment. At present, Indonesia needs to maximize the potential of renewable energy whose capacity is large enough to meet the growing need for energy in Indonesia.

The potential of renewable energy that is quite large in Indonesia does not necessarily make all Indonesian people can feel the benefits of renewable

energy. In the midst of its great potential, the use of renewable energy in Indonesia is still far below the standard which only covers 3% of the accumulated energy consumption in Indonesia. This certainly needs to be further enhanced considering Indonesia's natural conditions which are rich in renewable energy sources such as geothermal, wind and biomass energy.

Renewable energy is also seen to be of no economic value when compared to conventional energy such as gas and petroleum. Production costs for petroleum tend to be lower compared to renewable energy production. Many countries including Indonesia still subsidize the production of renewable energy in their countries in order to compete in the global market. This high production cost is caused by the use of renewable energy which is still small. Therefore, the government needs to increase the use of renewable energy to be able to achieve economical production costs.

In order to maximize the potential of renewable energy in Indonesia, the use of renewable energy must be accompanied by adequate technological improvements. One of the things that also contributed to the high cost of renewable energy production was due to the high price of renewable energy technology. To be able to develop renewable energy technologies and infrastructure, Indonesia needs large amounts of investment. China as a global leader in renewable energy today with a high amount of investment is one of the main funding suppliers for the development of renewable energy in Indonesia.

The Head of the Investment Coordinating Board (BKPM) in his 2016 visit to China stated that China had an interest in investing in Indonesia in the renewable energy sector of USD 2.16 billion. This value was obtained from four companies interested in investing their capital in Indonesia through processing coal into methanol with an investment of USD 1.5 billion, waste processing facilities into biomass energy amounting to USD 250 billion. Then the two solar panel production companies with an investment value of USD 150 billion and USD 360 million respectively.

Regulations that support the development of new renewable energy (EBT), especially related to investment, are believed to attract many investors. The General Chair of the Renewable Energy Society (METI), said that his party encouraged the government to facilitate the development of renewable energy through regulations and policies that provide certainty to entrepreneurs and investors in the renewable energy sector. If investors get certainty regarding their investment in renewable energy, then the energy mix target of 23% by 2025 can be fulfilled. Going forward, the development of renewable energy in Indonesia can run better and contribute to efforts to reduce emissions and carbon footprint in Indonesia and the world. The Director General of New, Renewable Energy and Energy Conservation (Dirjen EBTKE) of the Ministry of Energy and Mineral Resources, said the development of EBT is an important component in realizing sustainable energy and maintaining national energy security. EBT investment must continue to be massively increased to achieve the 23% EBT mix target by 2025 as per the National Energy General Plan (RUEN).

4. Conclusion

Regulation regarding investment in new renewable energy will be a supporting facility for the development of the national economy in Indonesia. Therefore, to support the development of the national economy, growth in other sectors is needed, such as infrastructure development, technological innovation, adequate human resource capacity, and most importantly, national resilience to water, food and energy. The implementation of investment regulations on renewable energy will be a legal umbrella for investors who will invest in new renewable energy. Appropriate regulations, which can provide legal certainty and legal protection for investors, will provide a favorable climate for new renewable energy investments.

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