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ARTICLE

THE IMPLEMENTATION OF GREEN INVESTMENT UNDER PRESIDENTIAL DECREE NUMBER 112 YEAR 2022

Rezaldy
Master of Business and State Law, Gadjah Mada University, Indonesia
email: krisnadykesumadiksa@mail.ugm.ac.id

Krisnady Kesumadiksa
Master of Business and State Law, Gadjah Mada University, Indonesia

Abstract

The amount of carbon emission has been recently increasing in expedited number due to industrial activities. This development will affect not only the environment but also the economic activities in the future. Consequently, each state, including Indonesia, is intensely formulating regulation that stipulate "green investment". This term is an investment activity that focuses on environmental issues, such as sustainability, climate change, and renewable energy. Regarding that issue, Law Number 25 Year 2007 concerning Investment, as amended by Law Number 11 Year 2020 concerning Job Creation, has accommodated it under Article 3(1)(h), where investment should be conducted in an environmentally sound manner. To urge green investment, Indonesia enacted Presidential Decree Number 112 Year 2022 concerning The Acceleration of Renewable Energy for National Electricity in order to replace the Coal Steam Power Plant (PLTU), which was deemed non-friendly to the environment. The objective of this paper is to depict the implementation of green investment in the development of renewable energy for Indonesian electricity. This is based on a normative approach to investigate legal issues. This paper shows that green investment in renewable energy should be done in a mixed approach, where Indonesia should take into account both the implementation of green investment and the electricity demand and supply condition in Indonesia itself.

Keywords: green investment, carbon emission, renewable energy, power plants, national electricity

A. Introduction

Carbon emission is a problem for governments all over the world, especially in Indonesia. Carbon emission is air pollution emanating from the utilization of fossil coal for industrial purposes.[1] According to the latest data from PT State Electricity Company (PT PLN), Indonesia's carbon emission in 2022 reached 228,6 million tons of Carbon dioxide, and it will increase by 242,7 million tons in 2023.[2] Furthermore, it is projected to increase in the coming years. The increase in carbon emissions causes many consequences for human lives, such as climate change, animal extinction, air and water pollution, and the greenhouse effect, which makes earth hotter than before.[3]

Responding to such an issue, the Indonesian Government conducted all necessary measures to decrease or eradicate carbon emissions. For example, The Ministry of Energy and Mineral Resources (MERM) urged the utilization of electric vehicles by procuring more charge stations and shared batteries.[4]

1 Nabila Putri Zahira and Dening Putri Fadillah. "Pemerintah Indonesia Menuju Target Net Zero Emission (NZE) Tahun 2060 Dengan Variable Renewable Energy (VRE) di Indonesia", *Jurnal Ilmu Sosial* 2, no. 2 (2022). doi: https://doi.org/10.21831/jis.v2i2.25; Erwin Saraswati, Nadia Rani Puspita and Ananda Sagitaputri, "Do Firm and Board Characteristics Affect Carbon Emission Disclosures?", *International Journal of Energy Economics and Policy* 11, no. 3 (Apirl, 2021): p. 14--19. doi: https://doi.org/10.32479/ijeep.10792; Ray et al., "What Is the Impact of COVID-19 Pandemic on Global Carbon Emissions?", *Science of the Total Environment* 816 (April, 2022). https://doi.org/10.1016/j.scitotenv.2021.151503"

2 (MEMR), *Energy Sector GHG Emission Inventory Data, Energy Sector GHG Emission Inventory Data*, 2015. https://www.esdm.go.id/assets/media/content/content-data-inventory-emisi-grk-sektor-energi-.pdf; Zahira and Fadillah. "Pemerintah Indonesia Menuju Target Net Zero Emission (NZE) Tahun 2060 Dengan Variable Renewable Energy (VRE) di Indonesia", *Jurnal Ilmu Sosial* 2, no.2 (2022).

3 Savira Ayu Arsita, Guntur Eko Saputro and Susanto, "Perkembangan Kebijakan Energi Nasional Dan Energi Baru Terbarukan Indonesia", *Jurnal Syntax Transformation* 2, no. 12 (December, 2021). doi: https://doi.org/10.46799/jst.v2i12.473; Widyawati et al. "Pengaruh Pertumbuhan Ekonomi, Populasi Penduduk Kota, Keterbukaan Perdagangan Internasional Terhadap Emisi Gas Karbon Dioksida (CO2) Di Negara ASEAN", *Jambura Agribusiness Journal* 3, no. 1 (2021). doi: 10.37046/jaj.v3i1.11193.

4 Hendrata Suhada. "Fuel Cell Sebagai Penghasil Energi Abad 21", Jurnal Teknik Mesin Universitas Kristen Petra 3, no. 2 (October, 2001): p. 92--100. doi: 10.9744/jtm.3.2.pp. 92-100; F.A. Quinta and H.B.S. Eko Prakoso. "Kajian Pemanfaatan Moda Transportasi Kereta Rel Listrik (KRL) Commuter Line Dalam Pergerakan Komuter Bekasi-Jakarta", Jurnal Bumi Indonesia 5, no. 2 (2016); H. Agustian, B.M. Suyitno, and Dwi Rahmalina. "Pengembangan Baterai Tipe Voldrant Dengan Pemanfaatan Material Komposit Nanokarbon Graphene Oxide Pada Aplikasi Penyimpan Energi (Studi Komparasi Dengan Aki Konvensional Tipe Kering)", Jurnal Kajian Teknik Mesin 4, no.1 (2019); A.S. Pramudiyanto and S.W. A. Suedy. "Energi Bersih dan Ramah Lingkungan dari Biomassa untuk Mengurangi Efek Gas Rumah Kaca dan Perubahan Iklim yang Ekstrim", Jurnal Energi Baru dan Terbarukan 1, no.3: p.86—99. doi: https://doi.org/10.14710/jebt.2020.9990.

During 2022, MERM had converted more than 1000 electric vehicles and targeted to increase it to 13 million vehicles in 2030.[5] Deemed not yet enough, the Indonesian Government also forces all companies to consider their Corporate Social Responsibility (CSR) actions toward the sustainability of the environment. This enforcement is based on Indonesia's statement in the latest G20 Indonesia 2022 occurred on 15-16 November 2022, where Indonesia has a commitment to fully benefit from New and Renewable Energy (EBT) as the implementation of the green economy transition.[6]

Green economy, as defined by the United Nations Environment Programme (UNEP), is low to zero carbon business activities, natural resources friendly, and globally inclusive.[7] In other words, it is a business activity that considers mostly the environmental aspects in pursuing economic growth while sustaining the environment. Moreover, one of its famous products is green investment, where the investment conducted is directed to the development of environmentally sound technologies and construction. Indonesia, as a country committed to do energy transition to increase national energy resistance, has focused on the electricity sector as the target of green investment.[8] Moreover, due to the intention and plan, the Indonesian Government enacted the Presidential Decree of the Republic of Indonesia Number 112 of 2022 concerning The Acceleration of Renewable Energy Development for Electricity (Presidential Decree Number 112 of 2022) on 13 September 2022. The presidential decree serves as a regulatory basis for Indonesia to do the activities circling the development of EBT Power Plants, including its investment, which is deemed a green investment.

5 Pramudiyanto and Suedy. "Energi Bersih Dan Ramah Lingkungan Dari Biomassa Untuk Mengurangi Efek Gas Rumah Kaca Dan Perubahan Iklim Yang Ekstrim".

6 W.R.D. Astuti, and L. M. Fathun. "Diplomasi Ekonomi Indonesia Di Dalam Rezim Ekonomi G20 Pada Masa Pemerintahan Joko Widodo", *Intermestic Journal of International Studies* 5, no. 1 (November, 2020); Arsita, Saputro, and Susanto, "Perkembangan Kebijakan Energi Nasional Dan Energi Baru Terbarukan Indonesia".

7 Vicky, et., al. "Menuju Green Economy Melalui Green Investment Sektor Energi Terbarukan UMKM", https://forbil.id/wp-content/uploads/2022/04/Menuju-Green-Economy-Melalui-Green-Investment-Sektor-Energi-Terbarukan-UMKM-1.pdf; Mihajlović, Stošić-Mihajlović, and Trajković. "During a Crisis Caused by a Pandemic, It Is Best to Invest In Green Energy", Journal of Process Management. New Technologies 9: p.8—18. doi: 10.5937/jouproman9-31416..

8 ESDM communication team, "Tidak Lagi Defisit, Sistem Kelistrikan Indonesia Semakin Andal", *Kementerian Energi dan Sumber Daya Republik Indonesia Siaran Pers no: 322. Pers/04/SJI/2019*, 2019.

According to the assertion above, there will be several questions that will be answered in this paper. *Primarily* about the green investment, the *second* part will discuss its implementation under *a quo* presidential decree. Lastly, we will explain what problems arise from the presidential decree and what plans can be offered according to the study in this paper. The method used in this paper is the juridical normative approach, where the discussion will be mainly focused on the regulatory basis and its explanation, along with the opinions made to the law itself. As a consequence, future research is possible to be don Therefore, any future research can be possibly done so that the study about Indonesian National Electricity will be coherent and cohesive.

B. Green Investment: Definition and Scope

Green Investment is defined as a responsible investment toward the activity that supports the proliferation of a good environment. The activity concerned here is the company's activity, which is directly or indirectly related to the usage, effect, or even the exploitation of surrounding environments. This kind of investment focused on replacing the environmentally damaging activities done by the companies with environment-friendly activities. It also can be done through the production of products that support environmental improvement or through a project to fix the damaged environment caused by massive exploitation. From these assertions, it is well said that green investment is aimed at sustaining the current environmental condition, improving the damaged environments, and supporting the transition of industrial activities to new and renewable practices that are environmentally friendly.[9]

Under the Act of the Republic of Indonesia Number 25 of 2007 concerning Investment (Act Number 25 of 2007), there is no strict definition of green investment. It only defines the term "investment", which is regulated as every form of investment activity, be it from domestic or foreign investors intended to do business in the Republic of Indonesia.[10] Moreover, the same

9 Vicky, et., al. "Menuju Green Economy Melalui Green Investment Sektor Energi Terbarukan UMKM"; Tran et., al. "The Factors Affecting Green Investment for Sustainable Development", *Decision Science Letters* (2020): p.365--386. doi: 10.5267/j.dsl.2020.4.002; Almansoori and Nobanee, "Green Investment as The Future of Sustainability for All Firms", (September, 2021); I.G.P.D. Awatara and Anwar Hamdani. "Implementasi Investasi Hijau Dan Strategi Daya Saing Hijau Terhadap Green Banking Di Kota Surakarta", *Jurnal Presipitasi: Media Komunikasi dan Pengembangan Teknik Lingkungan* 16, no. 2 (2019): 53-57.

10 Act of the Republic of Indonesia Number 25 of 2007 concerning Investment.

law gives us a mandatory obligation specified in several articles that have the same meaning to conduct an investment that is responsible and takes into account environmental sustainability.[11] It asserts that, in the very first place, Indonesia is already concerned environmentally sound investment. Even the more detailed regulations about green investment are still scattered in different laws. For example, even Indonesia's Investment Law (Act Number 25 of 2007) mandating green investment, it has not regulated the technical issues, such as how foreign investors are able to invest in Indonesia or what kind of business field is possible for green investment.

Green investment's target encompasses several fields of activity that are connected to decreasing the greenhouse effect caused by carbon emissions. According to the Coordinating Bureau of Capital Investment (BKPM), those that can be funded through green investment are climate change control, waste management, biodiversity, and renewable energy.[12] The Indonesian Ministry of Industry also stated that green investment should have these aspects, namely the utilization of environmentally friendly materials, the exercise of reduce, reuse, and recycle concept, low energy intensity, capable human resources, energy efficiency, low carbon technology, and also the utilization of alternative energies. Moreover, the National Development Bureau (Bappenas) urges BKPM in the BKPM Strategic Plan 2020-2024 (Renstra BKPM 2020-2024) to increase the investment climate, which is environmentally sound to maintain the achievement of a sustainable environment in Indonesia.[13] Therefore, for the purpose of this paper, the present green investment will be directly connected to the realization of New and Renewable Energies (EBT) as stipulated under Presidential Decree Number 112 of 2022.

C. Green Investment Under Presidential Decree Number 112 Year 2022

Recently, on 13 September 2022, Indonesia's Government enacted Presidential Decree Number 112 of 2022 concerning The Acceleration of Renewable Energy Development for Electricity. This presidential decree stipulates the enactment of the Electricity Supply Business Plan (RUPTL) by PT PLN, the formulation of the termination roadmap of the Coal Steam

11 *Ibid*.
12 Astuti and Fathun, "Diplomasi Ekonomi Indonesia Di Dalam Rezim Ekonomi G20 Pada Masa Pemerintahan Joko Widodo".
13 Badan Koordinasi Pasar Modal, "Rencana Strategis (Renstra BKPM) Tahun 2020-2024."

Power Plant (PLTU), electricity purchase, and government support for the development of renewable energy. There are 3 (three) main purposes of this presidential decree: to increase investment in the renewable energy sector, to accelerate the achievability of renewable energy pursuant to the national energy policy and transition, and to reduce greenhouse emissions. Moreover, to campaign for such purposes, the new PLTU cannot be constructed under this presidential decree, be it owned by the public or private. Of course, there are several exceptions made about this matter since this presidential decree uses a mixed approach - conducting renewable energy transition and development while maintaining the demand and supply of national electricity.[14]

Furthermore, to replace PLTU, several alternative power plants were introduced in this presidential decree, which derived from New and Renewable Energy (EBT). It is the power plants originated from Geothermal (PLTP), Water Current (PLTA), Sun/Solar Photovoltaic (PLTS Fotovoltaik), Wind (PLTB), Biomass (PLTBm), Biogas (PLTBg), Ocean Energy (PLT Energi Laut), and Biofuels (PLT BBN). In addition, this presidential decree also gives technical regulations on how PLN bought each EBT from different sources – the corporation and government, including those derived from grants (*hibah*). The basis for such purchase is stated in the Electricity Supply Business Plan (RUPTL), formulated by PT PLN, which encompasses the generation, distribution, and selling of electricity. In the latest RUPTL 2021-2030, the government, through PT PLN, dedicated to building more power plants in total 40.575 Mw, where approximately 20.923 Mw or 51,6% of total electricity should be derived from EBT, making it the "greenest" RUPTL that ever made.[15]

Concerning green investment under the presidential decree, there are two possible ways of investment schemes. It is Governmental Investment and Public Investment. While Governmental Investment comes from the government, Public Investment comes from the society, which concerns the energy sectors. The detailed schemes of both ways are described below.

a. Governmental Investment

14 Presidential Decree of the Republic of Indonesia Number 112 of 2022 concerning The Acceleration of Renewable Energy Development for Electricity.

15 PLN, "Rencana Usaha Penyediaan Tenaga Listrik (RUPTL) PT PLN (Persero) 2021-2030."; ESDM communication team, "Tidak Lagi Defisit, Sistem Kelistrikan Indonesia Semakin Andal."

The first way is through Governmental Investment. Although it is not defined under the presidential decree, Article 1 Paragraph 1 of Government Regulation of the Republic of Indonesia Number 63 of 2019 concerning Governmental Investment (Government Investment Number 63 of 2019) defines it as the long-term placement of funds and/or monetary assets in form of shares, obligations and/or direct investments in purpose to acquire economic, social and other benefits.[16] Under the same regulation, it also defines the scope of governmental investment, which it is possible to do through the shares, whether listed or unlisted in IDX, obligations, and direct investments coming from loan granting, investment cooperation, and other forms of direct investment.[17] The source of such investment is derived from the State Revenue Budget (APBN), yields, business/services income, grants (*hibah*), and other forms of legal sources.[18] The main purpose of the government conducting an investment, stated in Article 2 of the regulation, is to achieve economic, social, and/or other benefits. Economic benefit is meant to increase the affected sector of society, whereas social benefit is directed to the improvement of society's life quality, community empowerment, and community economic development.[19]

According to the statements above, it can be asserted that the government can make an investment, which is intended to give aid to the corporation that supports the development and construction of national infrastructures. For instance, this paper, is electricity infrastructures. Article 3(9) of Presidential Decree Number 112 of 2022 stipulates that the government could support the acceleration of PLTU termination through fiscal support, conducted through a funding scheme and blended finance funding derived from APBN and/or other legal sources. Moreover, the execution of fiscal support will be regulated in detail by the Minister of Funding Regulation (MoF Regulation). However, in the present time, there is no MoF Regulation

16 Government Regulation of the Republic of Indonesia Number 63 of 2019 concerning Governmental Investment.

17 *Ibid*.

18 *Ibid*.

19 M.F. Aziz, Surti Handayani, and H.M.A, Nasution. "Telaah Yuridis Investasi Pemerintah Menyelamatkan UMKM Pariwisata Akibat Pandemi Covid-19", *Jurnal JENTERA 3, no. 1* (2020); Alamsyah, J. Zakaria, and Mapparenta. "Pengaruh Tenaga Kerja, Investasi Swasta dan Investasi Pemerintah terhadap Produksi pada Sektor Industri di Kabupaten Sidengreng Rappang", *YUME Journal of Management* 3, no.1 (2020); A. Dewantha, "Kedudukan Hukum Lembaga Penyalur Dalam Pembiayaan Ultra Mikro Sebagai Instrumen Investasi Pemerintah", *Jurist-Diction* 4, no.2 (March, 2021).

yet which regulates the government fiscal support. Even so, governmental investment is still possible to do, especially in the electricity sector.[20]

In the further ruling under Article 22 of Presidential Decree Number 112 of 2022, the government, in developing renewable energy power plants, could give fiscal and non-fiscal incentives toward the business entities. Fiscal incentives are embodied in income tax facilities, import facilities, property tax facilities, geothermal development support, and/or financing facility supports. Then, non-fiscal incentives are given by Central and Regional Governments in accordance with the applicable law. For the electricity sector, Presidential Decree Number 112 of 2022 gives its regulation under Article 20 concerning The Purchase of Electricity from Power Plants Built by Central or Regional Government. This ruling stated that the mechanism for buying the electricity was conducted based on the assignment delivered by the Ministry of Energy and Mineral Resources (MEMR) Regulation. In the latest assignment, as regulated under The Regulation of the Minister of Energy and Mineral Resources Number 2 of 2011 concerning The Assignation to PT PLN to Purchase Electricity from Geothermal Power Plants (Regulation MEMR Number 2 of 2011), it is regulated that the MEMR gives a full power for PT PLN to purchase the electricity from geothermal energy. It is purchased from the chosen tender of geothermal energy. Therefore, the funding of the purchase, of course, originated from the government allocation in APBN.[21]

The realization of governmental investment is materialized in a scheme called "Public-Private Partnership" (PPP). PPP is defined as a scheme where government and private companies conclude cooperation to procure public infrastructures, bound by a legal contract depending on its risk distinction. It is proposed to involve more business entities in the national infrastructure development and as a source of investment for the government to procure more public infrastructures. The commonly used model for PPP is the "Build, Operate, and Transfer Model" (BOT Model). In this model, the government acts as the land owner, while the private company acts as the contractor responsible for building the infrastructure. The contractor is given the rights to build and operate the infrastructure during the contract period, and then finally

20 *Ibid* (n 14).
21 *Ibid*.

it is given to the government as the land owner of the infrastructure at the end of the contract period. It is clear that in this model, governments conduct an investment by lending their land and/or other immovable assets to be worked and operated by the contractor to turn them into more useful infrastructures.[22] According to the latest data from PT Penjaminan Infrastruktur Indonesia (PT PII), more than 40 projects that were conducted through this scheme, with an approximate amount of investment value reaching IDR 538 Trillion.

Furthermore, according to Presidential Decree of the Republic of Indonesia Number 14 of 2017 concerning The Amendment of Presidential Decree of the Republic of Indonesia Number 4 of 2016 concerning The Acceleration of Electricity Infrastructure Development (Presidential Decree Number 14 of 2017), government could give its support/investment through (1) State Capital Participation; (2) State Loan Continuation, be it from domestic or foreign source; (3) PT PLN's Loan from Financial Institutions; (4) Incentives and Taxation Facilitations; and/or (5) Other forms of funding as regulated by Indonesian Law.[23] The source of these investments mainly derived from APBN. In 2022, the Indonesian government allocated a subsidy for electricity from APBN in the amount of IDR 59.6 trillion. Moreover, in the latest APBN 2023 passed by the government, there is a slight increase of IDR 72.3 trillion due to the utilization of a co-firing system in PLTU - mixing the coal with other renewable ingredients--such as biomass--to power up the PLTU - so that the Electricity Supply Cost (BPP) increased. It is well known that the co-firing system implemented in PLTU could decrease carbon emission, proven that during 2022, PT PLN used this system in 36 PLTU, which produced 575.4 GWh of electricity and decreased carbon emission in the amount of 570 Kilo Tonnage of CO2 by utilizing 542 Kilo Tonnage of

22 M. Gasali. "Regulasi Dan Strategi Dalam Penyediaan Indrastruktur Air Minum Dengan Skema Skema Public Private Partnership (PPP) Di Kabupaten Indragiri Hilir", *Jurnal BAPPEDA,* 3, no. 1 (2017); Y. Gultom, Y. "When Extractive Political Institutions Affect Public-Private Partnerships: Empirical Evidence from Indonesia's Independent Power Producers under Two Political Regimes", *Energy Policy Elsevier* 149 (February, 2021); H. Noho, "Politik Hukum Pengaturan *Build Operate Transfer* (BOT) di Indonesia: Di Masa Lalu, Saat ini, dan Akan Datang", *Jurnal Hukum Media Bhakti* 3, no. 1 (May, 2019): p.88--99; I. Puspitasari and B, Santoso. "Perjanjian Kerjasama Pemerintah dan Swasta dengan Pola BOT Build Operate Transfer dalam Pembangunan Jalan Tol (Studi Pembangunan Jalan Tol Semarang-Solo)", *Law Reform* 14, no.1 (March, 2018).

23 Presidential Decree of the Republic of Indonesia Number 14 of 2017 concerning The Amendment of Presidential Decree of the Republic of Indonesia Number 4 of 2016 concerning The Acceleration of Electricity Infrastructure Development.

Biomass.[24]

According to this text, it can be stated that the government can make green investments through their allocation in APBN, which will be used to boost the development of Renewable Energy Power Plants in Indonesia through PPP schemes with private companies.

b. Public Investment

Governmental Investment is not sufficient enough to depend on when talking about green investment. Public participation in investment should also be given thought since it is the supreme thing that makes it possible to realize Renewable Energy Power Plants faster. Moreover, since many of our society are concerned about environmental sustainability, they urge and drive themselves to make contributions to environmental improvement, such as the renewable energy and electricity sectors.

To begin with, under Presidential Decree Number 112 of 2022 Article 23(11), The Ministers or Chiefs who carry out government affairs in investment and capital inclusion should give specific implementation of business licensing facilities and investment facilitation on the development of renewable energy. Of course, it will be conducted by BKPM and the Coordinator Ministry of Maritime and Investment (Markomarves). In BKPM Strategic Plan 2020-2024, BKPM has a mission to achieve a productive, independent, and competitive economic structure while achieving a sustainable environment.[25] This strategic plan also implied two main policy directions: to improve innovation for the achievability of investment targets and the improve qualified investment to boost economic improvement. Most importantly, the second policy direction point f specifies that, in conducting the improvement of environmentally sound investment, BKPM will formulate the list of investment recommendations of closed and opened business fields that damage the environment, uplifting the refinement of investment which prioritizes environment sustainability, and urges the coordination with connected ministries and bureaus in boosting the inclusive and sustainable investment.

In doing so, BKPM released an Investment Guidebook for the Electricity Sector in 2015, which gives a clear image of how the investment should be

24 *Ibid* (n 5).
25 *Ibid* (n 13).

done in the electricity sector. This guidebook includes the possibilities for the public to conduct investments in the electricity sector. There is an investment scheme that makes it possible for the public to invest – it is through the *Independent Power Producer* (IPP) Scheme. The IPP is described as a private company that produces electricity as their economic activity outside the PT PLN milieu. In doing so, the IPPs usually build their power plants derived from varying sources, and later, their power plants will be purchased by PT PLN.[26] For example, PT Paiton Energy, the largest IPP in Indonesia, sold more than 13.500 Gwh/year, or approximately 10% of overall national electricity, encompassing Java and Bali Island.

With the IPP Scheme, Presidential Decree Number 112 of 2022 regulates it under Article 14 - Article 19, referred to as "The Purchase of Electricity Power from Power Plants Totally Built by Business Entity". This presidential decree uses the wording "Business Entity" to depict IPP. There are 2 (two) possible manners to conduct the purchase of electricity - through direct appointment and direct selection. The differences between both manners are explained in the table below.

26 Gultom, Y. "When Extractive Political Institutions Affect Public-Private Partnerships: Empirical Evidence from Indonesia's Independent Power Producers under Two Political Regimes", *Energy Policy Elsevier* 149 (February, 2021); IPP Office, "Independent Power Producers Procurement Programme (IPPPP) An Overview"; S. T. Paulin. "Perkembangan Joint Venture Company dalam Pembangunan Infrastruktur Ketenagalistrikan", *Jurnal Hukum TORA* 7, no. 2 (August, 2021).

Table 1

Adressat, Procedure and Requirement Regulated for Direct Appointment and Direct Selection Scheme

	Direct Appointment	**Direct Selection**
Adressat	• PLTA, which utilize state-owned dams or reservoirs as their energy source; • PLTP from the holder of Geothermal License (IPB), contract holder, power holder, and license holder of geothermal exploitation; • Expansion of PLTP, PLTA, PLTS Fotovoltaic, PLTB, PLTBm or PLTBg; and • Excess Power from PLTP, PLTA, PLTBm or PLTBg.	• PLTA; • PLTS Photovoltaic or PLTB accompanied or not accompanied with battery, private or state land owner; • PLTBm or PLTBg; and • PLTA, which serves as *peaker,* PLT BBN, or PLT Energi Laut.
Procedure	1. Proposal and feasibility study submission; 2. System planning and project feasibility evaluation; 3. Listed in RUPTL; 4. Due diligence examination; 5. Qualified developer appointment and approval from the director; 6. Power Purchase Agreement (PPA) finalization and signatory.	1. Listed in the RUPTL; 2. Due diligence invitation to the IPPs 3. Document Submission 4. Due diligence examination; 5. Qualified developer appointment and approval from the director; 6. Power Purchase Agreement (PPA) finalization and signatory.

Requirement	a. For PLTA and its peaker, PLTS Photovoltaic, PLTB, PLT BBN, or PLT Energi Laut: conducted based on its capacity quota offer; b. For PLTBm and PLTBg: purchase is conducted to the IPP, which has sufficient feedstock for continuous power plant operation; c. For PLTP from the holder of Geothermal License (IPB), contract holder, power holder, or license holder of geothermal exploitation: purchase is conducted toward the holder of Geothermal License (IPB), contract holder, power holder, or license holder of geothermal exploitation, which finished exploration and have geothermal stockpiles for continuous power plant operation; d. For PLTP from the holder of Electricity Supply Business License (IUPTL): purchase is conducted toward the holder of Electricity Supply Business License (IUPTL), which has supply commitment for geothermal steam for continuous power plant operation.	

Source: BKPM Guidebook of Investment in Electricity Sector 2015.[27]

Based on this table, both possible manners apply to different sources of electricity and procedures but have similar requirements for their purchase. Moreover, the involvement of the public in this scheme is

27 Badan Koordinasi Penanaman Modal, "Panduan Investasi Sektor Ketenagalistrikan di Indonesia."

possible through public investment in the IPPs. As all we know, the IPPs were embodied as a corporation/legal entity complying under Indonesian Company Law - UU PT, UU Penanaman Modal, etc,. In this condition, it is possible for IPPs to receive an investment from societies through every possible means, such as shares, obligations, grants, mutual funds, etc,.

Several IPPs were opening an opportunity for investment, which derived from societies. For example, PT Adaro Power, the subsidiary of PT Adaro Energy Indonesia Tbk. (ADRO), opens a large opportunity for society to include an investment since their IPO on 3rd January 2022. ADRO has a strong commitment to environmental issues and encourages their investors to conduct green investments in their effort to study and develop more renewable energy in the future. In 2021, ADRO managed to increase Solar PV Capacity, which decreased the carbon emission by 500 tons per year. Another example is depicted by PT Kaltimex Energy as the leading company in the development of renewable energy. It proliferates a technology called "WABIO" that utilizes biogases to produce electricity, requiring the most environmentally friendly fuels, such as crop wastes, livestock wastes, grains, and agricultural wastes. It also develops "CGIE", which converts the wastes to energy, and "Biofabrik" which produces oil from plastic wastes. Even Though, at present, there is no wide opportunity for investment in the Indonesian Stock Exchange (BEI), PT Kaltimex Energy is still the most favored target for investors interested in the development of renewable energy.

D. Problem and Future Plans

As explained above, green investment is exceedingly closely related to resources, especially renewable energy. A country's energy resources have an enormously crucial role not only in social and economic but also in national development. Considering that Indonesia is a rich country in natural resources, it does not mean that it will be able to fulfill Indonesia's requirements in the future. Indonesia, at this time, depends on fossil energy resources, and the continuous use of this fossil energy can lead to a scarcity of resources. (Faisal, 2:2021)

Principally, there are two kinds of energy resources, which are non-renewable energy and renewable energy. First, non-renewable energy is energy resources obtained by burning fossil fuels, such as oil, natural gas,

and coal. Fossil fuels are made by decomposing the remains of organisms naturally over a very long period. The use of fossil energy is dominated by the supply of electricity, bearing in mind that the people's need for electricity is so great that it is not certain that Indonesia will experience an energy deficit in the future. Therefore, to overcome this, the government must immediately make the use of renewable energy a top priority in order to meet national energy needs and reduce dependence on the use of fossil energy, which also has a negative impact on the environment. (Satya Widta Yudha 2017)

Second, according to the International Energy Agency (IEA), Renewable Energy is energy that comes from natural processes that are continuously replenished and can be produced sustainably without having to wait millions of years like fossil-based energy. Renewable energy is an alternative energy that can be used by humans in the modern era as a substitute for non-renewable fossil energy. Fundamentally, new or renewable energy is divided into two. Referring to Law Number 30 of 2007, new energy is energy that is currently not used massively by humans and is still in the technological development stage. Meanwhile, renewable energy is energy that comes from renewable energy sources whose availability of sources can be reused after the sources are used.

Considering that the Government of Indonesia has committed to reducing greenhouse emissions by 29% by 2030. The results of COP 21 are known as the Paris Agreement, which was later ratified by Law Number 16 of 2016 concerning Ratification of the Paris Agreement to The United Nations Framework Convention on Climate Change emphasized the importance of achieving the target of increasing the earth's temperature threshold below 2 degrees Celsius and trying to reduce the limit of temperature increase to 1.5 degrees Celsius above the earth's temperature in pre-industrial times. This commitment to the energy transition not only brings awareness of environmental sustainability in Indonesia but also awareness that the energy transition from fossil-based energy to new and renewable energy requires sophisticated technology and loads of money. This has been one of the driving forces for his formulation of not only regulations regarding new and newest energy but also the accompanying investment policies. The climax is with the existence of a Draft Law on New and Renewable Energy, which will later become a legal framework not only for the exploitation of new and renewable energy but also

as the basis for the formulation of green investment policies in Indonesia.[28]

However, the use of new and renewable energy is difficult to implement due to several obstacles, including:

a. Judicial Problem

With the G 20 Summit being held in Indonesia, where the main discussion was regarding the commitment of the Indonesian government in terms of utilizing new and renewable energy to meet national energy needs, it reaffirmed that the use of energy from fossil fuels is no longer appropriate because apart from having a negative impact on the environment and the number it's also getting less and less. Actually, the matter in question of transition from non-renewable energy to renewable energy has been around for a long time. This can be seen in several legal provisions.

First, Law Number 30 of 2007 concerning Energy Article 2 in conjunction with Article 8(1) which states that, "Energy is managed based on the principles of benefit, fair efficiency, increased added value, sustainability, community welfare, preservation of environmental functions, national resilience, and integration by prioritizing national capabilities", and "Every energy management activity must prioritize the use of environmentally friendly technology and comply with the provisions required in laws and regulations in the environmental sector". Based on these provisions, national energy management must be based on environmentally friendly technology by considering benefits, sustainability, and environmental preservation.[29]

Second, to follow up on this regulation, the government issued Government Regulation Number 79 of 2014 concerning the National Energy Policy, which this national energy policy is intended to manage energy based on the principles of justice, sustainability, and environmental insight in order to create energy independence and national energy security. In article 9 paragraph (1) stipulates that in 2025, the role of New Energy and Renewable Energy is at least 23% and in 2050, at least 31% as long as the economy is fulfilled.[30]

28 C. A. Horowitz. "Paris Agreement", International Legal Materials 55, no.4 (2016): p.740--755; H. Siraj. "Indonesian Policy in Ratifying The 2015 Paris Agreement", Global: Jurnal Politik Internasional 21, no. 1 (2019); Afrizal and D. Mashur, "Kebijakan Hutan Indonesia Era Joko Widodo sebagai Implementasi Paris Agreement", Jurnal Kebijakan Publik 9, no.2 (May, 2019); E. Sofia. "Implikasi Hukum Paris Agreement Melalui Program REDD+ Berbasis Blue Carbon Di Indonesia", Jurnal Magister Hukum Udayana 8, no. 2 (2019).

29 Law Number 30 of 2007 concerning Energy.

30 Government Regulation Number 79 of 2014 concerning the National Energy Policy.

If we look at the provisions of Article 11 paragraph (2) of the Government Regulation which regulates the realization of an energy-economic balance, the priority for national energy development is based on the principle of maximizing the use of renewable energy. Water, geothermal energy, movement energy and ocean layer temperature differences, wind energy, and solar energy are directed to electricity. However, in this government regulation, there is also an inconsistency, in which Article 11(2)(d) regulates that in order to realize an energy economic balance, the use of coal as the mainstay of the national energy supply is made a priority for national energy development. So, in its application, there are difficulties because there is no legal certainty.[31]

Furthermore, the Government, through the Ministry of Energy and Mineral Resources, has issued various policies, such as Minister of Energy and Mineral Resources Regulation Number 39 of 2017 concerning the Implementation of Physical Activities for the Use of New and Renewable Energy and Energy Conservation. Physical Activities Utilization of New Energy and Renewable Energy and Energy Conservation are carried out to utilize energy both directly and indirectly from new energy sources and renewable energy for the generation of electric and non-electric power as well as increasing the efficiency of energy utilization.[32]

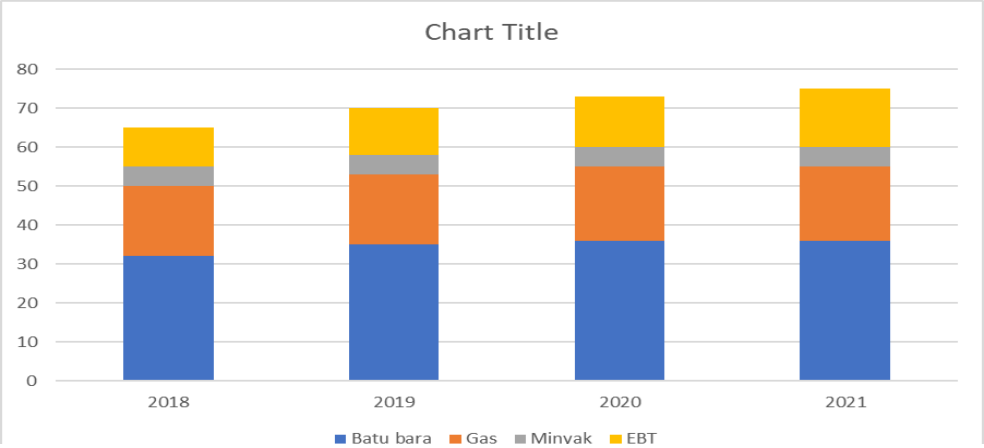
To support this, the Ministry of Energy and Mineral Resources issued Ministerial Regulation Number 50 of 2017 concerning the Utilization of Renewable Energy Sources for the Provision of Electricity. This regulation acts as a form of government realization in the context of providing sustainable electricity, whereby PT. PLN (Persero) is required to buy electricity from power plants that utilize renewable energy sources, including sunlight, wind, hydropower, biomass, biogas, geothermal, movement, and sea layer temperature differences.[33]

Based on data from the National Energy Council in the 2022 Energy Outlook, in 2021, Indonesia has power plants with a total capacity of 75 GW, consisting of 71 GW of on-grid generators and 3 GW of off-grid

31 *Ibid*.
32 Minister of Energy and Mineral Resources Regulation Number 39 of 2017 concerning The Implementation of Physical Activities for the Use of New and Renewable Energy and Energy Conservation.
33 Ministry of Energy and Mineral Resources issued Ministerial Regulation Number 50 of 2017 concerning Utilization of Renewable Energy Sources for the Provision of Electricity.

generators. This figure shows the addition of power plants in the last four years, as shown that Power generation is still dominated by coal power, which fills up to half of the total national capacity, followed by gas energy, around 28%. Meanwhile, EBT-based power plants have only reached 15%.

Chart 1
Data on the Amount of Power Plants in Indonesia from Distinguished Resources in 2018 - 2021



Source: National Energy Council.[34]

Based on these data, the use of new and renewable energy in Indonesia in the context of providing electricity has been implemented but the results are still far from what was expected owing to the fact that the production price for new and renewable energy generators (EBT) is still relatively high, addition to the lack of domestic industry support related to renewable energy generator components and the difficulty in obtaining low-interest funding, which is also the causes of delays in the development of renewable energy. To support the development use of new and renewable energy, the Government issued Presidential Regulation Number 112 of 2022, as previously explained.

b. Economic Problem

One of the main problems that hinder the use of new and renewable energy in Indonesia is the limited capital used to produce national electricity. Considering that the potential use of renewable energy in Indonesia is very large, the green investment opportunities are also immense. In line with this, the

34 (MEMR), *Energy Sector GHG Emission Inventory Data*; PLN, "Rencana Usaha Penyediaan Tenaga Listrik (RUPTL) PT PLN (Persero) 2021-2030."; Badan Koordinasi Penanaman Modal, "Panduan Investasi Sektor Ketenagalistrikan di Indonesia."

government, through Presidential Regulation number 112 of 2022 concerning the Acceleration of Renewable Energy Development for the Provision of Electricity.

Utilization of new and renewable energy in Indonesia requires not only large capital but also adequate technology. In this regard, the Indonesian government will open opportunities in the exploitation of new and renewable energy by opening up investment in the new and renewable energy sector. Coupled with the existence of a draft law on new and renewable energy, which will later become a legal framework not only for renewable and energy exploitation, but also as the basis for formulating investment policies in Indonesia.[35]

From an investor's perspective, based on the dominant theory, foreign investors when planning to invest consider two main points, namely certainty and efficiency. Certainty is a component related to a country's legal policy, in this case, it is directly related to renewable energy legal rules. The keys to certainty here are stable and unchanging policies so that these policies are promulgated while still paying attention to investors' legitimate expectations. Stable and transparent policies to ensure certainty are needed, bearing in mind that oftentimes foreign investment and the exploitation of renewable energy can be hampered by the existing social conditions society. Lack of awareness and involvement of stakeholders and local communities because the information that is not transparent will lead to rejection, and this often happens in Southeast Asian countries, one of which is Indonesia.[36]

The existence of a drafted law on new and renewable energy will provide more legal certainty regarding regulations regarding investment in the new and renewable energy sector. This can be seen in the EBT Bill dated January 25th, 2023. Article 14(1), (2) and Article 29(1), (2) stipulate that the central or regional governments provide licensing facilities in the control of renewable energy,

35 Paryono. "POLITIK HUKUM INDUSTRI KETENAGALISTRIKAN BERBASIS NILAI NILAI TRANSENDENTAL", *Law and Justice Jurnal* 3, no. 1 (April, 2018); D.S. Nurwahyudin and U. Harmoko. "Pemanfaatan Dan Arah Kebijakan Perencanaan Energi Panas Bumi Di Indonesia Sebagai Keberlanjutan Maksimalisasi Energi Baru Terbarukan", *Jurnal Energi Baru dan Terbarukan* 1, no. 3 (2020): 111--123; Tenaga and Terbarukan, "Pembangkit Listrik Tenaga Aneka Energi Terbarukan."

36 Tran, et., al. "The Factors Affecting Green Investment for Sustainable Development"; Almansoori and Nobanee, "Green Investment as The Future of Sustainability for All Firms"; Vicky, et. al. "Menuju Green Economy Melalui Green Investment Sektor Energi Terbarukan UMKM"; Saunila et al. "Why Invest in Green Technologies? Sustainability Engagement among Small Businesses", *Technology Analysis and Strategic Management* 31, no.7 (November, 2018).

in the form of legal certainty regarding procedures, timeframes, and costs.

Therefore, considering Indonesia's commitment to the Paris Agreement to The United Nations Framework Convention on Climate Change to reduce greenhouse emissions by 29% in 2030 and to maintain national energy security and independence, a strong synergy is needed between the government and the legislature to accelerate the process legislation on the draft law concerning renewable energy and its derivative regulations, in order to provide more legal certainty regarding investment, because legal certainty regarding investment in the new and renewable energy sector is requisite.

E. Conclusion

Since there is an increasing amount of carbon emission in Indonesia, the government has taken every necessary measure to prevent and even decrease the carbon emission in Indonesia. The government's policy of enacting a carbon tax is deemed ineffective since it does not affect the big companies in reducing their carbon emission. Green investment is campaigned by the government in order to implement the mandate from the Indonesian Investment Law – that investment should consider environmental sustainability. The electricity sector is the most noticed in Indonesia since Indonesia has stated its intention to do an energy transition that will be achieved in 2025. In doing so, the Indonesian government should enact laws that support energy transition and green economy.

The recently enacted regulation, Presidential Decree Number 112 of 2022, gives a brief image that the Indonesian government is willing to support energy transition while urging societies to make green investments in the electricity sector. From the abovementioned explanation, it can be asserted that both the government and society can do green investments in the electricity sector. Even BKPM gives a clear guide for those who are willing to do it. Even so, we believe this regulatory regime is still far from perfect. The utilization of PLTU is still possible to do, where this ruling is deemed contrary to the object or purpose of Presidential Decree Number 112 of 2022. Even if such utilization is conducted with a mixed approach, we believe that it will only slow down the achievability of the energy transition in 2025, as already planned by the Indonesian Government.

To conclude this part, the implementation of the Presidential

Decree Number 112 of 2022 should be accompanied by the other law. The Indonesian Government has planned a Draft Act of the Republic of Indonesia concerning New and Renewable Energy, which regulates the utilization of new and renewable energies for every energy sector. With this statement, we hope that this draft act will be enacted soon so that Indonesia's intention in doing energy transition will be achieved sooner.