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The Urgency and Projection of The New Renewable Energy Regulation in Realizing National Energy Security*

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Abstract
Energy use in Indonesia is still dominated by the use of non-renewable energy derived from fossils, such as oil and coal. The government through the Directorate General of Electricity, Ministry of Energy and Natural Resources, targets that in 2025 Indonesia has a target of 23% of the use of new renewable energy (EBT) so that it requires an accelerated energy transition. Renewable energy has a very important role as a source of energy in the future as well as an important factor for national security, so regulation of new and renewable energy becomes an urgency as a strong legal umbrella to accelerate the development of new and renewable energy in Indonesia. However, it is necessary to project arrangements regarding new renewable energy that is able to overcome obstacles and challenges in the development of new renewable energy such as the existence of adequate technology and human resource capacity including aspects of justice and equity for the greatest prosperity of the people as mandated by the constitution. Comprehensive rules in regulating new and renewable energy are a necessity, this is useful for minimizing all challenges and obstacles while at the same time realizing national energy security in the future because energy is an important sector as an economic driver but also as a natural resource that has a strategic role for people's lives. Indonesia. This study uses normative legal research with a conceptual approach, in which the research approach departs from the views and doctrines that have developed in the science of law. This research also uses a statute approach and a comparative approach, which is an approach that is carried out by examining all laws and regulations related to aspects of new and renewable energy and other regulations. As well as comparing the laws and regulations of a country with other countries such as the Philippines, England and Germany.
Keywords: Renewable Energy; National Energy; EBT Urgency and Projection;

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A. INTRODUCTION

The energy sector holds significant importance for national development. It plays a vital role in generating foreign exchange income and acts as a catalyst for political and economic growth, while also advancing Indonesia's state of civilization. Energy is a crucial natural resource that strategically controls many people's lives. The state has the authority to regulate this resource and ensure that it is used to the fullest extent for the people's welfare, as mandated by Article 33 of the 1945 Constitution of the Republic of Indonesia (Nasional, 2016, p. 1).

Indonesia is fortunate to be rich in natural resources, including energy reserves, which have helped establish its position as a significant player in the global energy industry. The country is a major supplier of coal and liquified natural gas (LNG) worldwide, which is crucial to its economic growth. However, despite the increasing awareness of renewable energy, fossil fuels still dominate Indonesia's energy usage (Azhar, 2018, p. 86). Indonesia still heavily depends on fossil fuels, with 90% of its energy sources coming from oil, gas, and coal. However, these sources are becoming increasingly unreliable in meeting societal energy demands (Rahmat, 15 Juni 2022). With this interdependence, the government must continue to endeavor towards optimized development and bring forth new energy sources aligning with the correct economic assumptions. This includes minimizing the economic impact of fossil fuels on the electricity requirements of the community while promoting alternative energy sources based on the "Ecoregion" principle. Indonesia pledged to pursue a green economy and achieve climate neutrality after ratifying the Paris Agreement at the United Nations Climate Change Conference in 2015. The country aims to become one of the nations with zero carbon emissions (Muhammad Azhar and Dendy Adam Satriawan, 2018, p. 400).

Indonesia has vast energy resources, both fossil and renewable. However, as the economy and population grow, energy consumption also rises rapidly (Abduh, 2016, p. 4). As technology advances rapidly, energy demand has increased significantly. Electricity is essential for society, making it crucial for Indonesia to transition to renewable energy. Renewable energy offers benefits that non-renewable energy lacks. It is continuously produced as long as the natural cycle persists, eco-friendly, and reduces environmental pollution.

To encourage the growth and increased use of renewable energy, the government has implemented several regulations that provide clear guidelines for utilizing renewable energy sources. These regulations include Law No. 30/2007 on Energy, Government Regulation No. 79/2014 on National Energy Policy (KEN), Presidential Regulation No. 4/2016 on Acceleration of Electricity

Infrastructure, Minister of Energy and Mineral Resources Regulation No. 12/2017 on Utilization of Renewable Energy Sources for Electricity Supply, and other applicable laws.

Through Article 11, paragraph 2 of PP No. 79/2014, the National Energy Policy outlines national energy development priorities, including: maximizing the utilization of renewable energy considering the economic level; minimizing the use of petroleum; implementing the use of natural gas and new energy sources; and utilizing coal as the primary source of the national energy supply.

In the same Government Regulation, Article 9 letter F, Indonesia sets targets for energy achievement including: In 2025 the role of new and renewable energy is at least 235 and in 2050 at least 315 as long as the economy is fulfilled; In 2025 the role of petroleum is less than 25% and by 2050 it will be less than 20%; In 2025 the role of coal is at least 30% and in 2050 at least 25%; In 2025 the role of natural gas is at least 22% and in 2050 at least 24%.

The progress of implementing New Renewable Energy (EBT) in Indonesia is slow, failing to meet the target percentage. Ministry of Energy and Natural Resources records show that in the first half of 2020, EBT development only reached 10.77%, falling short of the 13.4% target for that year. Indonesia aims to achieve a 25% EBT development by 2025 and 29% by 2030, despite its significant potential for renewable energy, which remains underutilized.

A major problem with the inefficient use of renewable energy is the absence of clear guidelines for its utilization. The EBT Bill was included as a priority program in 2021, but the government has yet to provide clear direction on the matter. Proper regulation of renewable energy is critical to the transition to a sustainable energy system, as it ensures legal certainty and guarantees. Since energy is a fundamental requirement for communities, it should be regulated transparently to maximize the well-being of the population.

B. METHODS

This study employs normative legal research with a conceptual approach. The research approach is based on views and doctrines that derive from legal science, which are essential for constructing a legal argument to resolve the issues at hand (Marzuki, 2011, p. 157). This research employs a statutory approach, which involves examining all laws and regulations related to the legal issues at hand (Marzuki, 2011, p. 93). In addition, this research adopts a comparative

approach that evaluates the enforcement of renewable energy regulations in multiple countries, including the United States, Germany, and the Philippines.

C. RESULTS AND DISCUSSION

1. Barriers and Challenges to the Utilization of EBT in Indonesia

Achieving sustainable development relies heavily on energy, which has undergone significant transformations over time. In the past, energy requirements were satisfied by biomass like firewood, but during the Industrial Revolution of the 1900s, the world turned to fossil fuels such as coal, oil, and natural gas. However, the increased use of fossil fuels has led to greenhouse gas emissions, which have caused climate destabilization, resulting in a rise in global temperature and sea level (Kiono, 2021, p. 154). It is predicted that the global demand for energy will continue to rise (Juwito, 2012, p. 22). This increase in energy demand is driven by Indonesia's growing population and its reliance on non-renewable energy sources such as coal and petroleum, which are becoming increasingly scarce (Azhar, 2018, p. 400). Therefore, Indonesia's energy security continues to decline annually (Sugiyono, 2016, p. 139).

Realizing this, the Indonesian government began promoting the use of renewable energy and changed its perspective towards EBT, considering it as essential energy rather than an alternative. Indonesia has six EBT resources, including energy, water, solar, wind, ocean currents, bioenergy, and geothermal. The potential for Indonesia to harness and utilize EBT sources is vast, given the enormity of Indonesia's EBT potential. EBT also offers several benefits according to Yoesgiantoro. Firstly, it has low greenhouse gas emissions both when consumed and during production. This makes renewable energy a significant component in the fight against climate change and a replacement for carbon-intensive energy sources. Secondly, it promotes better public health. The benefits of renewable energy's low carbon emissions include the avoidance of pollution to air and water, which can cause various diseases. Additionally, renewable energy provides a sustainable supply of raw materials from sources such as wind, sunlight, crop residues, heat from the earth's floor, and freshwater that will not be depleted. This diverse supply reduces dependence on any one energy source (Febriasari, 2018, p. 193).

Indonesia has great potential in harnessing renewable energy sources due to its abundant resources. As a maritime country, two-thirds of its territory is covered by sea, providing a wealth of water resources. Additionally, Indonesia boasts 251 geothermal energy sites spread across 26 provinces, constituting 40%

of the world's geothermal potential. However, despite this vast potential, the current installed capacity for utilization only reaches 4% of the total potential (Nabila, 2015, p. 151-152). The application of EBT in Indonesia remains limited and unoptimized. This is evident in the gradual development of EBT's contribution to the country's energy supply, compounded by challenges from different stakeholders, including society, government, and technology.

A report by the Energy & Climate Intelligence Unit in July 2023 revealed that Indonesia is ranked last among 159 countries in terms of preparing for net-zero emissions. This is worrying considering Indonesia's involvement in global climate change discussions. The reasons behind Indonesia's inadequate efforts in preparing for NZE include (Nugroho, 02 Agustus, 2023, p. 6):

First, Indonesia is perceived as lagging in NZE planning. Its plan to achieve NZE is set for 2060, and even then it has only reached the stage of discussion or proposal without any policy set, while other countries have planned for NZE in 2050 or earlier. Second, Indonesia is still heavily reliant on fossil fuels, as it has an abundant supply of them compared to other Asian countries, and is situated in a fertile, tropical region that is frequently hit by volcanic activity. While Indonesia possesses immense potential for renewable energy through water, geothermal, solar, wind, and bioenergy, only a small fraction of this potential has been utilized. Furthermore, the country lacks specialized regulations on renewable energy. At present, only the Oil and Gas Law and the Mineral and Coal Mining Law are in place. Moreover, Law Number 30 of 2007 on Energy does not include an integrated environmental-economic energy policy. Government Regulation No. 79/2014 for the National Energy Policy sets targets for national energy supply and energy source shares, but it does not address controlling emissions from energy supply and utilization. Additionally, PP No. 79/2014 projects that by 2025, fossil fuels will still make up two-thirds of Indonesia's energy mix, indicating their continued dominance in national energy consumption.

Indonesia continues to rely on fossil energy sources to meet its energy needs while neighboring and developed countries have shifted towards renewable energy. The Indonesian government should prioritize reducing dependence on fossil energy by increasing the utilization and development of new and renewable energy sources across different sectors while maintaining national energy security (Ahsan, 2021, p. 82).

The obstacles hindering the maximum utilization of renewable energy in Indonesia can be identified as follows. Firstly, Indonesian society remains reliant on conventional sources of energy such as oil and coal. Secondly, there are

limited human resources with adequate expertise in renewable energy. Thirdly, renewable energy production incurs a higher cost than energy derived from fossil fuels. Fourth, objective evaluations reveal insufficient funding for renewable energy projects. Fifth, limited technological capabilities in managing and utilizing renewable energy persist and necessitate importing from outside sources. Sixth, present regulations lack the legal structure for renewable energy development and are currently sectoral, focusing on laws relating to geothermal energy.

Additionally, the obstacles facing renewable energy development in Indonesia include low demand, intermittent use of renewable energy (such as solar and wind), which hinders the PLN network, high dependence on foreign technology and equipment for renewable energy infrastructure due to a lack of domestic industry growth, resistance from local communities towards renewable energy power plant projects, limited domestic financing options, especially soft loans with lengthy repayment terms, and inadequate supporting infrastructure, particularly in Eastern Indonesia (Reform, 2019, p. 13).

On one hand, Indonesia possesses an increasing potential for renewable energy sources. On the other hand, it is among the world's fastest-growing energy consumers, with the latest data revealing a reliance on conventional materials such as domestic coal and imported petroleum products to meet energy needs. On the other hand, it is among the world's fastest-growing energy consumers, with the latest data revealing a reliance on conventional materials such as domestic coal and imported petroleum products to meet energy needs. Nonetheless, renewable energy usage is becoming increasingly prevalent. Renewable energy sources have been steadily increasing their contribution to the country's overall energy mix, demonstrating Indonesia's positive movement towards green energy in the future. The development and transition of new and renewable energy (NRE) must also be accompanied by government efforts to address diverse challenges, including market scale, replacement costs, environmental pressures, and policy incentives (Nurfiani Syamsuddin, 2023, p. 4965).

2. Utilization of Renewable Energy in Achieving National Resilience

The concept of renewable energy refers to energy derived from sources that are replenished naturally at a fast enough pace for constant use without running out. Such sources include solar and wind power, hydroelectricity, and geothermal energy (Daryanto, 2007, p. 26). According to Law Number 30 of the

Year concerning Energy, renewable energy is defined in Article 1 paragraph (6) as "energy sources produced from sustainable energy resources, properly managed, including geothermal, wind, bioenergy, sunlight, water flow and fall, as well as movement and temperature differences in the ocean layer." Renewable energy sources are environmentally friendly because they do not produce pollutants or contribute to climate change and global warming. These energy sources are derived from sustainable natural processes, including wind, water, sunlight, geothermal, and biofuels. Indonesia has significant potential for renewable energy due to its geographical location and resources. Potential sources of renewable energy in Indonesia include geothermal energy, solar energy, water, ocean energy, and bioenergy.

Meanwhile, the International Energy Agency (IEA) defines energy security as the uninterrupted availability of energy sources at affordable prices. The assessment parameter used to evaluate this is the continuous availability of energy sources at reasonable prices. Moreover, a country is considered to have energy security if it can provide energy for 90 days of oil-equivalent import needs (Amir, 2014, p. 1). According to Yergin, energy security became a global concern when Saudi Arabia ceased exporting crude oil to industrialized nations in the early 1970s. During that period, oil was the primary energy source for Western European nations and the United States, with Saudi Arabia serving as the major exporter. Saudi Arabia's independent decision effectively disrupted the economic activities of oil-importing countries, which relied solely on Saudi Arabia's oil at the time. The international community became aware of the significance of sustaining a reliable energy supply and avoiding dependency on a single type of energy source or producer. (Amir, 2014, p. 1-2). Two key terms related to energy security are short-term energy security and long-term energy security. Short-term energy security refers to the "security of supply", particularly during emergencies such as natural disasters. Therefore, short-term energy security entails the responsiveness of the energy system to sudden changes/disruptions in energy supply and demand. Meanwhile, long-term energy security refers to the provision and utilization of energy by environmental constraints while promoting economic development. Objectivity and a balanced approach are necessary to ensure a sustainable energy supply (Nurrohim, 2012, p. 81).

Nature provides free and abundant energy sources that all living things can utilize. However, to support human activities on Earth, people must manage and develop the energy already available in nature to meet their needs. Law No. 30/2007, Article 2, regulates the principles of energy exploitation and management. The principles of Benefit, Equitable Efficiency, Increasing Added

Value, Sustainability, Community Welfare, Preserving Environmental Functions, National Resilience, and Integration.

The principles regulated in Article 2 of the Energy Law have the following meanings: The principle of utility, the meaning of this principle is that energy management efforts must meet the needs of the community; The principle of equal efficiency, the meaning of this principle is that energy management must achieve equal access to energy at economical and affordable prices; The principle of increasing added value, the meaning of this principle is that energy management must achieve optimal economic value; The principle of sustainability, the meaning of this principle is that energy management must ensure the supply and use of energy for present and future generations; The principle of community welfare, the purpose of this principle is that energy management must achieve the greatest possible community welfare; The principle of preservation of environmental functions, the purpose of this principle is that energy management must ensure a better quality of environmental functions; The principle of national resilience, the purpose of this principle is that energy management must achieve national capacity in energy management; The principle of integration, the purpose of this principle is that energy management must achieve integrated energy management across sectors. Through the principles in conducting energy business and management as stated in Law No. 30 of 2007 on Energy, it is hoped that the direction of national energy business, development and management can realize equitable energy development. Equitable energy is providing equal access to energy to all Indonesian people through infrastructure development in the ESDM sector and optimizing the potential of local energy sources at affordable and sustainable prices, this is in accordance with the mandate of the 1945 Constitution, Article 33, namely that energy must be used for the greatest benefit. people, nation, and state (Ministry of Energy and Mineral Resources).

Indonesia is a country that has the potential for renewable energy sources in very large quantities due to the astronomical and geographical influence of Indonesia. Potential renewable energy sources contained in Indonesia include geothermal energy, solar energy, water, sea/ocean, and bioenergy. So that in the future Indonesia can realize national energy security, which is expected to be able to provide prosperity for the Indonesian people.

3. Comparison of EBT Regulations in Different Countries

a. England

The UK's new renewable energy planning system will be devolved to the Scottish, Welsh and Northern Irish administrations. Each UK country has policies

in place to provide guidance to local authorities (LAs) and other relevant bodies on planning policy and the operation of the planning system. Planning in the UK is usually the responsibility of district councils, as in Scotland and Wales, planning permission is handled by a single tier authority, and in Northern Ireland the Assembly takes direct control of planning decisions through six regional offices. There are therefore two aspects of planning law, namely planning control, which relates to resolving conflicts on the ground when applications are submitted, and development planning, which relates to the strategic framework within which decisions are made, represented by regional, sub-regional and local development (Parks, 2007, p. 4).

To overcome the challenges of climate change that occur in various regions of the world, the European Union (EU) has adopted a series of quite ambitious policies to reduce greenhouse gas (GHG) emissions by 2020 by 20% compared to 1990, increasing the share of renewable energy in consumption. final energy to 20% in 2020, and realize energy savings of 20% in 2020 compared to the official basic energy consumption level. Designing the policy framework appropriately is key to facilitating sufficient private capital flowing into clean energy investments. It is important to understand how to create an effective framework for clean energy investments and appropriate risk-return profiles .

The UK has a legal obligation under European Union law to generate 20% of its total energy consumption from renewable sources by 2020, and a statutory policy target to reduce national greenhouse gas (GHG) emissions to 80% of 1990 baseline levels by 2050. However, in 2019, the UK government amended the Climate Change Act 2008 to introduce the term "net zero" into the law. The Amendment Bill states that "the effect of the amendments to this Act is that the minimum percentage by which the UK's net carbon account for 2050 must be below the 1990 baseline in order to increase from 80% to 100%". The UK has a legal obligation under EU law to generate 20% of all energy consumption from renewable sources by 2020, and a legally binding policy target set in 2008 to reduce national climate change emissions by 80% by 2050, so the 2019 amendments to the Act will enable it to achieve net zero carbon emissions by 2050. Over the last two decades, significant policy instruments have been introduced and modified, including increased construction and design standards (e.g. Building Control Regulations), mandatory energy labeling (Energy Performance Certificates (EPC) and Display Energy Certificates), measures that are expected to be stable enough for the management of new renewable energy sources, financial sanctions and incentives (e.g. Green Deal, Feed-in Tariff (FiT), Energy Efficiency Opportunities Scheme, Climate Change Levy) (Yuehong Lu, 2020, p. 7).

b. Germany

Germany is one of the largest countries in the world that has implemented GRE (Green Renewable Energy). GRE is environmentally friendly renewable energy as an alternative to old energy, especially fossil energy. GRE uses energy such as wind power, solar power, and hydro power as environmentally friendly energy producers (Setiawan, 2018, p. 1183). Germany has initiated a progressive use of renewable energy through the Energiewende program. Energiewende literally means energy transition or transformation. The program was launched in 2010 and has three main goals until 2020, namely to reach 40% of renewable energy by 2020, to reduce energy consumption by 20%, and to reduce GHG (Greenhouse Gas) emissions based on 1990 calculations. Germany. intends to replace energy that is considered dirty but free of GHG (Greenhouse Gas), namely nuclear energy, with renewable energy such as solar and wind energy, which is considered cleaner and without CO2 emissions (Sunarko, 25 Oktober 2018, p. 75).

It should be recognized that among the major industrialized countries, Germany is the leader in new renewable energy sources, ranking first in installed wind power capacity and second in photovoltaic capacity. Germany's capacity is not due to the promotion of natural resources owned by the German state, but rather to the German state's policy in the field of new renewable energy development, which has led to an extraordinary expansion of the new and renewable energy sector (PD Dr. Lutz Mez, p. 1). Renewable energy policy in Germany began after the first oil crisis. For about a decade and a half, RES policy was dominated by the regulation of research funding, from personnel and training to prototype development and laboratory production. Measures adopted to create a market for RES-E technology include a 100/250 MW wind program, a 1,000 MW rooftop solar program, and the creation of a legal basis for utilities (PD Dr. Lutz Mez, p. 2). This means an energy policy that emphasizes environmental modernization and climate change policies as well as job creation and socio-economic development. Key examples relate to energy policy, including tax reform (eco-tax on energy), phasing out nuclear power, and strengthening renewable energy sources and combined heat and power (CHP) (PD Dr. Lutz Mez, p. 6). The growth of EBT in Germany is often cited as a model success story among other developed countries because of the very large growth in German electricity consumption from renewable sources. Since 1990, the consumption of electricity from renewable sources has increased from around 3 percent of total electricity generation to 30 percent in 2015. Because of this growth in renewable electricity, Germany is considered a global leader in the promotion, development, and production of renewable electricity. Germany is a pioneer in

renewable energy policy. Germany has successfully played a pioneering role in initiating and supporting various programs to promote renewable energy. This makes Germany an important player in influencing renewable energy policy decisions in many other countries. The German Renewable Energy Sources Act (EEG) is generally regarded as an undoubted success. The high level of renewable energy penetration in Germany is the result not only of the specific features of the German energy regulatory framework, but also of the ideas and processes that led various political bodies to adopt the framework to take into account the current design and approach of German renewable energy regulation (Harabut, 2017, p. 132-133).

Germany has made fundamental policy decisions to move toward a long-term sustainable energy supply. In September 2010, the German government adopted a comprehensive new strategy called the Energy Concept. It sets out the principles of a long-term integrated energy path for Germany up to 2050 and defines renewable energy as the basis for future supply. The Federal Government has deliberately set Germany on a path to become one of the most energy-efficient and environmentally friendly economies in the world, while at the same time maintaining affordable energy prices and a high level of economic prosperity. (Harabut, 2017, p. 136).

With regard to the legal framework for the electricity sector, the most important measure for the promotion of renewable energy sources in the electricity sector in Germany is the Renewable Energy Sources Act (Erneuerbare-Energien-Gesetz, EEG). Passed in 2000, it is the successor to the 1991 Electricity Feed Act (Stromeinspeisungsgesetz, StrEG), which in the 1990s provided an important impetus for the expansion of renewable energy sources, particularly wind power. The aim of the EEG is to accelerate the market introduction of technologies for the generation of electricity from wind power, solar radiation, biomass, geothermal energy, hydropower, and mine gas (Harabut, 2017, p. 139). The laws and policies enacted by the German government in 1990 have been very successful and have inspired more than 80 countries around the world to enact similar laws related to the management of new renewable energy sources (Karim, 2018, p. 10).

c. Philippines

Historically, the Philippines was one of the first countries in Asia to adopt large-scale renewable energy sources to meet the country's electricity needs. The Philippines was driven by two major energy crises in 1973 and 1979 that shook

the world. With this crisis, the Philippine government in 1985 experienced a change in the supply of energy resources, namely that almost half of the Philippines' energy supply was considered renewable. However, there has been a paradox in renewable energy policy that has hindered the sustainable development of renewable energy, especially for developing countries like the Philippines. This paradox is that on the one hand, the Philippines has a desire for renewable energy sources to become sources that produce cleaner and unlimited energy potential; on the other hand, the undesirably high cost of development and multiplication is a challenge in itself for the Philippines. In the end, with these challenges and the pressure caused by the crisis that the Philippines experienced, the development of renewable energy in the Philippines has now become a reality from the shadows of the past that were almost impossible to realize (Raposas, 2021).

The Philippines has two main policies for the development of renewable energy, namely: The Biofuels Act of 2006 (Republic Act No. 9367) and the Renewable Energy Act of 2008 (Republic Act No. 9513). The Biofuels Act of 2006 aims to reduce dependence on imported fuels by mandating the use and promoting the development of locally produced biofuels. It provides for the production, blending, storage, transportation, handling, distribution, use, and sale of biofuels, biofuel blends, and biofuel feedstocks in the Philippines. Meanwhile, the Renewable Energy Act of 2008 aims to accelerate the exploration and development of renewable energy resources and reduce the country's dependence on fossil fuels to minimize the impact of international market price fluctuations. The Act provides fiscal and non-fiscal incentives to promote the efficiency and cost-effectiveness of renewable energy systems. The Feed-in Tariff (FiT) scheme is the main feature implemented in this Act (Rosellon, 2017, p. 10). It should be noted, however, that the Philippines has been implementing renewable energy policies since 1977, or a few years after the OPEC oil shock, through Presidential Decree No. 1068 (Raposas, 2021, p. 11).

The renewable energy policy of the Philippines is also governed by Republic Act No. 11234 or the Energy Virtual One-Stop Shop Act (EVOSS), which establishes a set of rules and regulations to streamline the online permit and certification application process for power generation, transmission or distribution projects. This online system allows for the coordination, submission, and processing of all necessary data and information into a single decision-making portal for permit or certification application actions with the implementation of energy-related projects. The Department of Environment and Natural Resources (DENR), under the Energy Virtual One-Stop Shop Act (EVOSS), requires the following as part of the ESIA (Environmental and Social

Impact Assessment) process, including 1. Permits such as ECC (Environmental Compliance Certificate), beachfront lease agreements, and permits from relevant government agencies such as the Bureau of Fisheries and Aquatic Resources, Department of Tourism (DOTr), Philippine Coast Guard, Department of Energy (DOE), and so on (Behr, 2022, p. 168). Geographically, the Philippines is located on the Pacific Ring of Fire. Therefore, the Philippines is a country with high geothermal energy potential. Currently the most economically powerful country in Asia, the Philippines is the only ASEAN country that plans to use the sea as an alternative renewable energy source. The first marine energy project in the Philippines will include Marine Thermal Energy Conversion, a project that seeks to convert waves and tides into a renewable energy source (Arie Rahmadi, 2017, p. 110).

4. Projections of Renewable Energy Regulations for National Resilience

Law No. 30 of 2007 on Energy (Energy Law), as the main legal basis for the national energy policy, has established the principles and objectives of energy management, namely, usefulness, rationality, fair efficiency, increasing added value, sustainability, community welfare, preservation of environmental functions, national resilience, and integration by prioritizing national capabilities. Consistently, this principle is also included in Government Regulation Number 79 of 2014 on National Energy Policy (PP KEN); in this PP, the principles of energy management policy are fair, sustainable, and environmentally sound in order to create national energy independence and security.

The principles of energy law adopted by the Energy Law and PP KEN are relevant to various studies conducted by energy law experts, especially in countries that use new and renewable energy as primary energy on a massive scale. Prest and Soutter (2018: 809) revealed that, based on expert research, there are core principles of energy law that are very important, namely the protection of the environment, human health, the fight against climate change, energy security, and reliability.

Renewable energy, as one of the resources owned by Indonesia, must be managed fairly for the Indonesian people, as stated in the phrase "Salus Populi Suprema Lex", a saying which means that the state is obliged to act optimally in realizing the welfare of the people, as the concept of a welfare state; this is also clearly stated in Article 33 paragraph (3) of the 1945 Constitution of the Republic of Indonesia. The wealth of energy resources in Indonesia is controlled by the

state as stipulated in the Constitution, namely in Article 33 (3) of the 1945 Constitution, which reads: "The earth and water and the natural wealth contained therein shall be controlled by the state and used for the greatest prosperity of the people. Strictly speaking, Article 33 Paragraph (3) of the 1945 Constitution of the Republic of Indonesia contains 3 (three) important elements, namely (Purba, 2014, p. 257-258): 1. Substance (natural resources); 2. Status (controlled by the state); 3. Goals (for the greatest prosperity of the people). Based on the Constitution, the existence of control and exploitation of natural resources, which are fundamental to the life of the nation and state, is carried out by the state (Redi, 2014, p. 3).

The people are collectively constructed by the 1945 Constitution, which gives the State a mandate to carry out policies (beleid) and actions in administration (bestuursdaad), regulation (regelendaad), management (beheersdaad) and supervision (toezichthoudensdaad) for the purpose of maximizing the prosperity of the people (Indonesia, 2015, p. 1009). Therefore, all energy sources must be controlled by the state and used and exploited optimally for the greatest prosperity of the Indonesian people in order to realize one of the ideals of the Indonesian nation, which is to promote the common good.

D. CONCLUSION

The implementation of EBT is already going as it should. This can be seen from several government policies that have been issued. Even though the application of EBT is not optimal because it is not easy to change fossil energy sources to renewable energy, it is not impossible to achieve if there is political will from the government. The government should prepare a stronger legal umbrella for the development of renewable energy. At present, the future of energy in Indonesia still depends on management principles. The government should adhere to the principles of equity and sustainability in formulating energy policies, including those for the greatest good of the people.

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