



Prospective Green Constitution in New and Renewable Energy Regulation

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Article

Abstract

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The format for regulating new and renewable energy in the draft law on new and renewable energy in Indonesia still contains many polemics and problems. This is motivated by various problems of conception and substance in it, such as misconceptions about nomenclature, problems with institutional formats, licensing problems, and the accommodation of nuclear energy. This paper aims to analyze the potential impacts and prospects of energy using a green constitution point of view. This study used normative juridical research with a statutory and conceptual approach. The results show that the environment is the dominant entity affected by energy management and utilization activities, both fossil energy and new renewable energy with different potential impacts. The prospect of a green constitution has been contained in the draft law on new and renewable energy, but it cannot be realized optimally because transition policies in Indonesia still have dual orientations and overlapping arrangements. The principles of a green constitution can be a guiding concept and norm for the format of regulation and implementation of the use and utilization of new and renewable energy so that it is in line with the values of environmental protection and preservation.



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INTRODUCTION

Energy is an element that is acquired from natural resources and serves to fulfil the whole human needs to allow them to perform their activities. Utilizing energy is a part of human's endeavor for the sake of survival and welfare (Faisal, 2021). Energy resources make a big contribution in a country because it integrates several important sectors, like economic growth, social welfare, and environmental condition (Iwan J. Azis, et.al., 2010).

Further, the use of energy in Indonesia is still dominated by fossil-generated energy, especially oil and coal. Based on the data from the Central Statistics Agency in 2020, primary energy production is still dominated by coal (15,527,106 terajoules) from the total primary energy production (20,600,280 terajoules). Utilization of new stone is also still dominantly used for power generation (Syaharani & Tavares, 2020). Nonetheless, as time shifts, the frequent use of fossil-generated energy surely causes serious impacts to the availability of the energy, social welfare, and natural sustainability in the future (Azhar, Satriawan, 2018). Planning, management, and use of energy will always be closely integrated with some life sectors, exclusively the ecology and environment. Thus, discussions on energy are always integrated with the rules of environmental law (Hidayah et al., 2018).

The huge and frequent use of fossil-generated energy, all this time, obviously indicates its contribution to accelerating global warming and environmental damages. As a consequence, every country like Indonesia, has to make a move of energy transition to renewable energy, in addition to establishing efficiency of energy management system (Arsita et al., 2021). Energy transition to new and renewable energy must receive serious attention from Indonesian governments, not only to work for reduction of fossil-generated use but also to establish clean and environmentally-friendly energy. This needs to be done considering that in 2020 Indonesia was the fourth largest contributor to gross emissions in the world. In addition, the energy transition is also in compliance with Indonesia's commitment to ratify the Paris Agreement on the United Nations Framework Convention on Climate Change (UNFCCC) as well as the conditions of global warming and climate change that continue to occur (Hansen et al., 2013).

The development of new and renewable energy in global discourse widely increases as a manifestation of sustainable development. Some countries, especially the developed, have been making use of such energy, while the developing countries, e.g., Indonesia, are still facing some polemics in developing renewable energy. China as the largest country uses renewable energy with a total installed capacity of nearly 700,000 MW, then the United States with 250,000 MW, Brazil with 136.00 MW, followed by Germany with 120,000 MW, while Indonesia itself is still in 10th place (Nurlaila, 2019). One of determinant factors that drives such a phenomenon to happen is the issue of energy policies not supporting this alternative energy yet. The developing countries relatively consider fossil-generated energy as the most affordable energy resources, which makes the energy the top-listed item for subsidy from the national budget and interferes renewable energy development (Febriasari, Ramdani, 2018).

New and renewable energy has become a new hope to fulfil people's needs of energy in the future. This sort of energy is seen richly preserved in nature and environmentally-friendly so that its development is strongly expected as a reliable national energy supplier. Renewable energy from the environmental aspect is generally

cleaner and safer. Its obtainability covers the whole spheres of the universe (Meilani & Wuryandani, 2010). In general, Indonesia has an enormous potential in developing new and renewable energy, such as 950 Megawatt of wind power, solar power, 75 Gigawatt of water power, 32 Megawatt of biofuel, 32 Megawatt of biomass, and geothermal that is estimated having 29 Gigawatt of power potential (Diantari et al., 2019). Nevertheless, the use and management of new and renewable energy are still less optimum in terms of implementation.

Such a condition is echoed from its gradual growth of renewable energy contribution to energy supply, in which from 2014 to 2016, the contribution increased a single percent, from 6 to 7 %, even until 2020 the renewable energy mix is still far from the target, which only reaches 11%. The energy welfare of Indonesian people has not been completely fulfilled. Indonesia's electrification ratio until 2020 reaches 98.93%, but is still dominated by Java, while Southeast Sulawesi is 97.41%, Papua is 94.31%, and East Nusa Tenggara is still 85.85%. In terms of access to electricity, the fulfillment of energy in Indonesia is actually not evenly distributed as a whole. The phenomenon occurs due to several factors: licensing/recommendations, land acquisition, imported goods, financing, and issues of construction interest (like, materials, unorganized management, and escalation).

In addition, in terms of legal policies, the practice of energy resource management is often far from the ideal conservational and productivity functions. Article 33 Paragraph (3) of the 1945 Constitution has rigidly regulated that energy resources must be based on the principles of 'under the control of the state' and 'for the greatest prosperity of the people'. The energy management also must pay serious attention on giving assurance to people for good and healthy life as mentioned in Article 28 Paragraph (1) of the 1945 Constitution (Redi, 2015). Thus, energy resource management that attempts to violate the principles and their values is considered unconstitutional. It can be seen in several regulations in the natural resources sector which were canceled by the constitutional court, such as the Electricity Law, water resources law, and many others.

The design of new policies on new and renewable energy currently being attempted by the governments has become one of the instruments to define the standard of success in the prospective use and management of energy. Such an agenda must be seriously directed and controlled to fit constitutional values, especially green constitution, to generate regulations based on the green legislation (Handayani, 2012). The use of renewable energy must be realized immediately, and its usage percentage must be escalated as well; not only for the sake of sustainable economic development but also protection and assurance for social security and welfare from any damages caused.

The new and renewable energy draft bill currently being discussed is an effort to realize energy security and sustainable energy. Before the law was drafted, various

energy transition policies in Indonesia had existed, starting from the level of Laws, Government Regulations, Presidential Regulations, to Ministerial Regulations. However, the existing energy transition policies do not specifically support renewable energy and are still dominated by non-renewable energy/fossil energy. To prove this, this paper is intended to first examine the impact of fossil energy on the environment, then look at the possibility of a transition, and examine the crucial issues in the design of new and renewable energy. Lastly, it examines how the green constitution is prospective in the regulation of new and renewable energy.

Compared to previous writings such as the following, this paper presents a different point of view because it prospectively examines and explores the green constitution in the draft law on new and renewable energy. However, as in the scientific tradition, this paper cannot be separated from the support of references from previous related studies, such as Faisal's article about "*Urgensi Pengaturan Pengembangan Energi Terbarukan sebagai Wujud Mendukung Ketahanan Energi Nasional*" in the Encyclopedia Social Review, which specifically discusses the current state of energy and its relationship to the principles of environmental management (Faisal, 2021) and the article of Muhammad Azhar and Dendy Adam Satriawan about "*Implementasi Kebijakan Energi Baru dan Energi Terbarukan dalam Rangka Ketahanan Energi Nasional*" in the Administrative Law & Governance Journal (Satriawan, 2018). Like the previous article, this paper upholds the spirit of energy security by examining the government's role in making policies in the energy sector. From a non-legal point of view, Partahi H. Lumbangaol's article about "*Energi Terbarukan untuk Pembangunan Berkelanjutan di Indonesia*" in the Nommensen Technical Journal is also a reference that should not be ruled out. This paper written by Lumbangaol's specifically examines the types and potentials of renewable energy (Lumbangaol, 2017).

None of the above references mention the draft of new and renewable energy law. For that, this study certainly carries novelty because in addition to studying new issues regarding the new and renewable energy bill, it also studies the green constitution from the perspective of constitutional value. This paper also has novelty benefits, especially serving as input for legislators in the process of drafting new and renewable energy laws and the benefits of energy law studies in general.

METHOD

The current research used a normative legal design. It constitutes research that focuses on studying principles or norms in positive legal state (Herwastoeti, 2021). The normative legal research covers legal values, systematics, synchronization level, and comparison (Kornelius Benuf & Muhammad Azhar, 2020). Meanwhile, in terms of approach, legislative and conceptual approaches were applied in the study of prospective green constitution over new and renewable energy control. The legal materials used consisted of legislation, official records or minutes of legislation-

making, and judges' decisions, all as primary legal materials, while secondary legal materials involved research findings, scientific journal articles, legal dictionaries, and other typical products with informative values. Furthermore, a literature review was conducted to collect the legal materials. The materials were analyzed descriptively and analytically and interpreted to generate new legal prescriptions and argumentations (Sonata, 2015).

RESULTS AND DISCUSSION

National Energy Transition Policy and Its Impacts to Environment

Energy sources in Indonesia consists of two types: fossil-generated and renewable resources (Yandri et al., 2018). Fossil-generated energy includes oil, gas, and coals, whose availability is quite limited in the nature, and is unrenewable. Meanwhile, renewable energy is referred to as any kinds of energy resources generated from any producible resources (only if being managed well), such as geothermal power, wind power, bioenergy, and solar power (Nabila, 2016). The use of energy in Indonesia is massively dominated by fossil-generated energy, especially oil, coals, and gas. Furthermore, the use of energy has become a crucial issue that needs further review because it is integrated with some sectors of life. Overpopulation and social mobility with its economic growth positively correlate with the increase in energy demands, whether in industrial, transportation, and household sectors (Kusuma, Rukhmana, 2016). Fossil-generated energy that has been the core energy of Indonesia has gradually shown its disability to supply needs of energy that tendentiously increase. Basically, this kind of phenomenon occurs due to several factors, namely decreasing trend of energy production in Indonesia from year to year and deflation tendency of alternative resources found in Indonesia.

Energy sector is a vital sector in Indonesia since it serves to evoke economic growth and contributes to export commodity (Mulyana, 2018). Any activities to improve economic growth through energy sector also cause negative impacts to natural resources, like water, air, and soil (Sugiyono, 2020). There are a number of impacts possibly caused by the use of energy, primarily pollutions and environmental damages.

The impacts of using and utilizing energy may happen to each stage of activities. To begin with, pollutions and environmental damages happen due to energy resource exploration and exploitation for generating energy raw materials. The activities are technically carried out through massive land acquisition that takes time and is potential to ruin and pollute the environment and its surrounding ecosystems.

Second of all refers to the use of energy. Fossil-generated energy used will pollute the environment, especially in transportation sector. Vehicles running on oil produce carbon, both monoxide (CO) and dioxide (CO₂). Pollutions come as the impacts of using energy. The use of energy may cause pollutions due to solid and liquid wastes and pollutants produced by emission from fossil-generated energy combustion, such

as SO₂, NO_x, and carbon dioxide (CO₂) particles (Sugiyono, 2020). Pollutants generated from the combustion may possibly cause smoke, acid rain, global warming, and climate change (Astra, 2010).

In addition, impacts occur when utilizing energy. The utilization of energy can be in the forms of utilizing heat, kinetic energy, chemical, light, and nuclear. For instance, in utilizing electrical energy from air conditioner (AC), for example, it is hugely potential to ruin the environment since it produces chlorofluorocarbon (CFC) as one of emissive components causing damages on ozone (protective layer of the Earth from UV). Adding to that, the use of nuclear energy may be the biggest threats causing pollutions and environmental damages due to its serious potential to cause radiation.

Besides pollutions and environmental damages, there are other impacts closely related to the environment and other sectors in general. Moreover, the use of energy affects natural resources. Fossil-generated is unrenewable energy resources so that its frequent use and utilization will affect the obtainability of energy resources (Rudenko & Tanasov, 2020). This causes energy crisis possibly perceived by future generation. The data of alternative energy in Indonesia indicate that oil resources remain for approximately 10 years, gas for 30 years, and coal for 146 years, with the assumption that the energy still remains stagnant and no productions increase. This means that in such a period, one way or another, Indonesia must import energy resources from other countries (Kholiq, 2015).

Furthermore, the use and utilization of energy cause damages on natural diversity and ecosystem. Indonesia is one of countries with the biggest natural diversity like Brazil, but it vanishes when continually being explored and exploited for the greatest mining, especially in forest areas. The characteristics of geothermal industry and mining need huge land acquisition, and its ideal location will take place at around foothills that are mainly forest areas. Thus, damages on natural diversity and ecosystem are possible to occur.

In addition to affecting the environment, the use and utilization of energy also cause damage to human's health. The use of fossil-generated energy to produce emissive particles, like SO₂, NO_x, and CO₂ will give impacts to human's health. The SO₂ emission may cause problems of respiratory tract and lung's inflammation. Particles, like dust, may cause sore eye, sore throat, and bronchitis (respiratory tract injury) (Laras A'nnisa, 2020). Furthermore, the CO₂ emission did not directly affect the human's health in a short term of period, but getting accumulated as a long-term effects since the emission mostly harms the environment, especially in the form of global warming and ecosystem damages (Sugiyono, 2020).

Utilizing nuclear-generated energy also causes problems on the human's health. The radioactive waste injures genes, and active radiation is dangerous for humans as its impacts last for hundred years, such as brain and intelligence injuries. Some

tragedies due to leakage of nuclear reactors in some countries serve as lessons of massive use of nuclear energy.

In addition to impacts caused by fossil-generated energy use, renewable energy currently being developed is also potential to affect the environment and humans, but with fewer number of negative impacts than those of fossil-generated energy. For example, solar energy from contaminated solar radiation is a serious danger to everyone and can cause fires, wind energy that uses high poles for wind turbines can also cause disruptions to sunlight entering people's homes, Ocean Wave Energy which can interfere and exploit underwater biota (fish and marine mammals) through noise disturbance and/or release of hydraulic oil and chemicals, geothermal energy with little potential to emit toxic gases from geothermal mining, and so on. A complete description of the potential impact of new and renewable energy can be found in the research results by John Twidell & Tony Weir on "Renewable Energy Resources" (Weir, twidell, 2015).

Based on the description, any systems that utilize energy will always give impacts to humans and environment, both positive and negative. In other words, humans cannot be separated from energy use to support their daily life (Irwansyah, 2017). This condition is sure to happen, unavoidable; showing how such casual interrelatedness between humans and energy resources occur (Lewis, 2012).

Energy transition to new and renewable energy has become an endeavor to, at least, minimize negative impacts caused by energy utilization to the environment. Energy transition is strongly expected to be an ideal step to make the Earth better so that it can supply the life with sufficient resources in the future. The endeavor of energy transition must be always promoted and led to the national goals in order to assure the human's rights for better and healthier life and to fulfill the greatest prosperity of the people.

The energy transition policy is the initial agenda of the implementation of the energy transition. The Indonesian government basically already has several policies that contain the spirit of energy transition, but these policies are still scattered in various regulations, ranging from laws, government regulations, to ministerial regulations.

Prior to the drafting of the Law on New and Renewable Energy, various policies regarding the energy transition had been established in laws-level regulations such as Law Number 30 of 2007 concerning Energy. Overall, the law regulates the utilization and use of fossil energy as the dominant energy source, yet the spirit of energy transition can be seen in Article 20 paragraph 3 which mandates an increase in the supply of new and renewable energy, at both national and regional levels. In addition to that, Law Number 21 of 2014 concerning Geothermal is also one of the national energy transition policies. In Indonesia, geothermal energy sources are classified as one type of renewable energy.

At the level of government regulation, there are 2 policies concerning energy transition, including Government Regulation no. 79 of 2014 on National Energy Policy and Government Regulation No. 7 of 2017 on Geothermal for Indirect Utilization. National Energy Policy as stated in Government Regulation no. 79 of 2014 became the main instrument of energy transition. The instrument is due to the policies statement of energy strategy that needs to be achieved in the future. The National Energy Policy (Government Regulation No. 79 of 2014) focuses on strategies to ensure sustainability, security of supply and efficient use of energy as well as the realization of the optimal energy mix by 2050. The policy outlines the country's goals, such as achieving a final energy intensity reduction of 1% per year by 2025 and increasing the share of new and renewable energy in the energy mix to at least 23% by 2025 and at least 31% by 2050. The market share of oil in the energy mix should shrink to less than 25% by 2025 and less than 20% by 2050, and the reduction goal for coal to fall to 30% or less of the energy mix by 2025 and 25% or lowered by 2050. Targets of 22% of natural gas in the energy mix by 2025 and 24% by 2050 have also been set.

Then, at the presidential regulation level, there are 3 policies related to energy transition, namely: (1) Presidential Regulation No. 22 of 2017 concerning the General Draft of National Energy; (2) Presidential Decree No. 4 of 2016 concerning the Acceleration of Electricity Infrastructure Development; and (3) Presidential Decree No. 66 of 2018 concerning the Second Amendment to Presidential Regulation Number 61 of 2015 concerning the Collection and Use of Oil Palm Plantation Funds. One of the policies most closely related to the energy transition is stated in the General Draft of National Energy. The National Energy General Plan (RUEN) is a mandate of Law Number 30 of 2007 concerning Energy. Based on Article 17 Paragraph (1) of the Law, the government prepares a draft RUEN based on the National Energy Policy. The targets in the RUEN that are considered in the energy demand projection are city gas, electric vehicle targets, the primary energy mix for power plants, and the use of Dimethyl ether (DME) for LPG substitution. In addition to RUEN, Presidential Regulation Number 4 of 2016 concerning the acceleration of electricity infrastructure development, in article 14, mandates the acceleration of electricity infrastructure development and the use of renewable energy. In addition, the national and local governments must provide assistance through fiscal incentives, licensing procedures facilitating and other mechanisms, determine the purchase price of electricity for each type of renewable energy source, and support the formation and work of independent power generators so that they can provide renewable energy-based electricity to PT. PLN.

At the ministerial regulation level, many policies are issued based on the energy transition. For example, the Regulation of the Minister of Energy and Mineral Resources No. 12 of 2017 concerning the Utilization of Renewable Energy Sources for the Provision of Electricity and its amendments to the Regulation of the Minister

of Energy and Mineral Resources No. 50 of 2017 and Regulation of the Minister of Energy and Mineral Resources No. 49 of 2018 concerning the Use of Rooftop Solar Power Generation Systems by Consumers of PT. PLN. These regulations support the use of renewable energy, especially for the use of electric power. In addition, the Ministry of Finance also issued various fiscal and non-fiscal incentive policies for the development of renewable energy.

In national Energy Policy, the Government of Indonesia makes coal as the mainstay of national energy supply, this is stated in Article 11 paragraph 2 letter d of PP No. 79 of 2014 and Attachment I page 37 of Presidential Regulation No. 22 of 2018 (RUEN). In fact, as of June 2020, of the total 71 GW of installed power generation capacity in Indonesia, most of it comes from PLTU, as much as 35.2 GW or 49% of the total installed capacity. The Indonesian government projects that electricity generation by 2025 will be from coal, as much as 54.6%. In addition, the use of coal as a source for power generation is now entering a new phase with the promotion of downstream coal which is currently classified as new energy along with renewable energy in the New and Renewable Energy Bill. This means that the renewable energy is likely to be marginalized by the promotion of downstream coal which is considered as a new energy. This somehow indicates dual orientation of the energy transition policy in Indonesia. Then, there was an overlap between the General National Energy Draft and the Electricity Supply Business Plan (RUPTL) made by PT PLN. The policy in RUEN clearly supports carbon emission reduction. However, the government apparently signed the Electricity Supply Business Plan (RUPTL) of PT PLN, which clearly contradicts the RUEN. The implementation of targets in the RUPTL that are not in line with the RUEN will lead to overlapping policies in the renewable energy sector. In addition, the energy transition policy in Indonesia is still unclear, especially regarding who is responsible for the implementation of renewable energy.

It is realized that the existing energy transition policies do not fully support renewable energy. It is based on various factors such as multiple orientations and overlapping settings as mentioned above. This dual orientation can be seen in the new and renewable energy bill. In the bill there is an effort to convert coal into gas or liquid with claims of cleaner combustion. This kind of coal energy is cheap for producers but expensive for society. From this it can be seen that the energy transition policy can determine the potential impact and sustainability of natural resources and the environment in the future.

Prospective Green Constitution in New and Renewable Energy Regulation

The inclusion of environmental norms in Article 28H Verse (1) and Article 33 Verse (4) of the 1945 Constitution is referred to as constitutionality symptom of environmental policies, constituting the second phase of environmental policy

development. A juridical-ethical consequence of the articles is the policy, especially regarding energy, issued by the governments, which must absolutely adopt, affirm, and apply environment-based sustainable development (Rafiqi, 2021). This sort of concept is known as 'Green Constitution', which in nature, is not a new term as it has been existing since the 1970s, and is often used to explain interconnectedness of certain issues, exclusively regarding legal policies, through the conceptions of environmental protection and human's rights over the environment (Coffey, 2003).

In international legal instruments, green constitution terms can be put in a level with Article 25 of Universal Declaration of Human's Rights pronouncing that, "everyone has the rights to a standard of adequate life for the health and well-being over himself and his family" (Al-Fatih & Aulia, 2021). Meanwhile, Article 12 Paragraph (1) of International Covenant on Economic, Social and Culture Rights rigidly states that, "The states parties to the present covenant recognize the right of everyone to the enjoyment of the highest attainable standard of physical and mental health" (Al-Fatih et al., 2020). These terms denote that every citizen deserves to get constitutional assurance of life and to feel good and healthy environment for growing and thriving (Faiz, 2016). Besides, the insertion of environmental rights control in the constitution manifests the commitment for environmental protection and management from the state (Prakoso, 2014).

Energy is a crucial issue in the history of environmental development. In fact, most of the environmental problems are the result of mistakes in planning, managing, and utilizing natural resources for energy. In historical records, there are several major environmental pollution events related to energy management and utilization, such as the Chernobyl nuclear tragedy (Ukraine, 1986), the tragedy of the toxic gas leak from the Union Carbide Pesticide plant (India, 1984), the Exxon Valdez Oil Pollution (Alaska, 1984). 1989), Three Mile Island Nuclear Accident Tragedy (United States, 1978), Lapindo Hot Mud Tragedy (Sidoarjo Indonesia, 2006). From this historical record, we can know the magnitude of the environmental impact if the management and utilization of energy resources is done incorrectly.

The ideal choice to address the pros and cons of utilizing energy for development is initiating energy transition to using new and renewable energy, which considered more economic and safer. One of set endeavors to optimize the management of renewable energy is inserted in the form of General Plans of National Energy (RUEN) issued in 2017, in which the governments have targeted dissemination of new and renewable energy from 11.9% to, at least, 23% until 2025, and 31% in 2050, at least. In addition, to support the policy, the governments also design a Draft New and Renewable Energy Bill that is later set as the umbrella act for using and utilizing new and renewable energy. This constitution is to complete the incomplete aspects in Regulation No. 30 of 2007 concerning Energy.

The Draft Bill of New and Renewable Energy is designed in the construction of legal framework regarding policy stipulation, management, supply, and utilization of new and renewable energy to get the implementation more structured and directed, from national to regional level. The stipulated projection is by acceleration of new and renewable energy development in replacement of fossil-generated energy as the majority energy supply for industrial and power plant needs in Indonesia. It means, there is an intention to set Draft New and Renewable Energy Bill as a formal document to describe important points in the endeavor of energy transition to clean energy. The spirit of energy transition in the draft bill reflects green energy spirit so that prospective green constitution has been basically contained in it, and can be found under the following terms:

1. The preamble considers point b, c, and d: the spirit of national energy transition, which is sustainable, clean, and environmentally-friendly;
2. Article 2: Economic values with justice and preservation and sustainability. The values of preservation and sustainability are defined as the actualization of New and Renewable Energy to assure the preservation of environmental functions, in terms of energy supply and utilization for the next generation;
3. Article 3: One of the goals of using new and renewable energy is to open up job vacancies, improve social welfare and prosperity with justice, and preserve the environment;
4. Article 9 and 24: One of licensing requirements must include environmental aspects;
5. Article 21 and 40: The central Government and Regional Government make use of New and Renewable Energy with due consideration of technological, social, environment-conservational, and sustainable aspects;
6. Article 41: Control over environmental management with work security and health becomes the responsibility of enterprise entities that carry out New and Renewable Energy projects to assure the standard and quality of environmental management and work health.

Some of the terms are still considered insufficient to indicate the governments' tendency on protection and preservation of the environment because of the presence of huge tendency regarding economic consideration. Some of the substances in the draft bill still remain to be substantial issues that need solutions. To actualize prospective green constitution in new and renewable energy control, polemics in New and Renewable Energy Draft Bill must be solved immediately.

Firstly, the misconception of new and renewable energy matters. The titling of the draft bill using new and renewable energy is mis-conceptualized in terms of meaning. Many perceive the phrase as a unity; yet, it is derived from two different concepts; new energy and renewable energy. The term 'new energy' is only found in Indonesia as other countries do not define it comprehensively, especially referring to

the meaning of new energy and set it up as the same as renewable energy. In Glossary of Environment Statistics, new and renewable energy is defined as “any energy sources including solar energy, geothermal energy, wind power, hydropower, ocean energy (thermal gradient, wave power and tidal power), biomass, draught animal power, fuelwood, peat, oil shale and tar sands” (Georgeson et al., 2017). From the definition, it is clear that other countries do not rigidly differentiate new energy from renewable one. Instead, they put the terms as a unity as phrase of New and Renewable Energy (NRE).

Regarding regulations in Indonesia, new and renewable energy are different, regarding the sources, new energy emphasizes the development of unrenewable energy, such as fossil-generated energy sources, while renewable does the development of sustainable energy sources. In addition to sources, the differences of new energy and renewable energy are also referred to the impacts after its usage, with new energy giving negative impacts on the environment, e.g., pollutions and/or environmental damages, even health risks on humans (Azhar & Satriawan, 2021). The separation of the definition can be found in General Conditions of Article 1 No. 30 of 2007 regarding Energy, and some other regulations.

Even though they come from different energy sources, regulations in Indonesia do not provide any different provisions for the development of new energy and renewable energy. New energy and renewable energy are considered as two energy sources that must be prioritized for development. The consequence of this state is that both sources of energy are interpreted as having the same position as energy that deserves to be prioritized and receive various incentives and facilities. This condition will also affect the priority of energy management and utilization as well as the spirit of energy transition to the use of environmentally-friendly energy that provides welfare for the people.

Secondly, the institutional format for renewable energy management is through the optimization of local governments' roles. In New and Renewable Energy Draft Bill, there is no clear divisions of duties and functions between the Central Government and local Government. The non-optimization of local governments' roles is not persistent with the spirit of synergy as stipulated in Law No. 23 of 2014 concerning Regional Government. The division of government affairs in the energy and mineral resource sector has been regulated and can be seen in attachment to regulations concerning regional government on point of CC. Further, the governance division can be seen in the table below:

Table 1. Governance Division of Energy and Mineral Resources of New and Renewable Sub-sector

Central Government	Provincial Government	Regional Government
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<ul style="list-style-type: none"> a. Stipulation of geothermal work areas b. Auction of geothermal work areas c. Issue of license for cross-provincial direct utilization of geothermal energy d. Issue of license for indirect utilization of geothermal energy e. Stipulation of electricity/geothermal steam prices f. Stipulation of enterprises as the managers of water-generated power plants g. Issue of certificate of registration of cross-regional supporting service business h. Issue of business license for biofuel trading as alternative energy with the capacity of over 10,000/year 	<ul style="list-style-type: none"> a. Issue of license for cross-provincial direct utilization of geothermal energy within a province b. Issue of certificate of registration of supporting service business within a province c. Issue of certificate of registration, training, and supervision on biofuel traders as alternative with the capacity of over 10,000/year 	<ul style="list-style-type: none"> Issue of license for cross-regional direct utilization of geothermal energy within a region
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Source: Author analysis, 2022

In Law No. 23 of 2014 concerning Regional Government, if we look closely, the division of authorities regarding renewable energy is only focused on geothermal energy source. Even though the potential for renewable energy sources that can be utilized in the future is quite large, the authority distribution has not been regulated yet. Besides geothermal sources, some renewable energy sources include wind power, biomass, sunlight, water flows and waterfalls, garbage, agricultural product waste, livestock waste or manure, movement and differences in sea layer temperature, and other renewable energy sources. Therefore, the New and Renewable Energy Draft Bill should be comprehensively and clearly regulated, especially in terms of how authority division in the utilization of renewable energy should be made. The synergy between stakeholders can make national economy and sustainable development come true in order to secure and assure the welfare of the people.

The institutional format of implementing the use of renewable energy must involve the central Government and local Government, either at the provincial or regional level. It is intended to accelerate renewable energy development so that it can be carried out properly, and the targets are able to uplift economy and to ensure environmental sustainability. As prospective existence of renewable energy is going to

increase, the existing potentials must be immediately developed and executed by actively involving the local Government.

Thirdly, the core is the weight equation for licensing the use of new energy and renewable energy. The New and Renewable Energy Draft Bill provides similar proportion of licensing facilities for the Central Government and/or Regional Governments in the development of New Energy and Renewable Energy. The equation is going to be rather problematic since the types of energy sources and its management are carried out differently. For example, the use of nuclear energy should be carried out by tightening safeguards for permits, not by making permit issuance process easier (Azhar & Satriawan, 2021). The weight equation for the permit should be reviewed by considering and calculating the potential impacts caused by each of new energy and/or renewable energy sources.

Fourthly, nuclear energy as a part of new and renewable energy sources is included. The plan to utilize nuclear energy in New and Renewable Energy Draft Bill raises pros and cons all this time. Despite its low emission, nuclear is a high-risk activity. Indonesia, as one of the countries, located in "ring of fire" or hotspot of tectonic plate activity, has a high risk of earthquakes and tsunamis; so, utilizing nuclear energy is quite dangerous. In terms of cost, nuclear energy is basically more expensive than renewable energy. This is due to expensive development costs, risks and high costs of radioactive waste management. Currently, more and more countries are starting to abandon nuclear energy because of these factors (Azhar & Satriawan, 2021).

Consulting Academic Papers and New and Renewable Energy Draft Bill, it is not explained comprehensively what are the due considerations for Indonesia to utilize nuclear energy. The draft bill only explains that the central Government will provide a sustainable storage area for radioactive waste, but how it is managed remains unexplained further. In legal aspect, Government Regulation No. 79 of 2014 concerning National Energy Policy mandates that nuclear energy will be used as a last resort with strict attention to safety and priority of the potentials of new and renewable energy in advance. Based on these thoughts, the governments should not include nuclear energy in the draft bill.

The problems mentioned above are crucial issues that need serious attention, in terms of the regulations of new and renewable energy in the future. The prospective green constitution can be grasped if improvements are made to the problems entailing New and Renewable Energy Draft Bill. Otherwise, when no even changes are made, it may cause conflicts that harm values of green constitution.

The value of green constitution is a solution to prevent and tackle environmental problems in energy sector. By applying concepts, characteristics and values of green constitution, it is expected that an ecocracy government can be established. The term 'ecocracy' government is referred to as a governmental system based on the principles of sustainable development with environmental-mindedness. The development that is

based on the green principles is a commitment to the environment as a development activity without compromising environmental sustainability (Nurmardiansyah, 2015).

Steps towards sustainable development and energy security are more than technical in nature since they must get started with visionary policies and ensured that their implementation is consistent with the strong enforcement system. This requires the commitment of all parties from the national leaders and all their apparatus, not only businesses as usual. It can be said that a visionary and safe policy is a sort of policy based on green constitution with a green legislation modeling of policy formulation process. This is needed in order to make energy transition successful so that the utilization and use of energy can be safer and effective to reduce negative impacts on the environment. The embodiment of the values of green constitution will interact with other principles as illustrated in the following diagram:

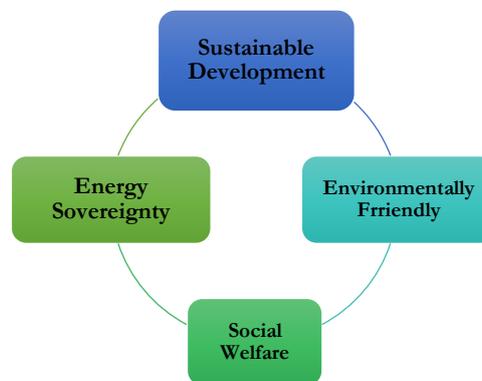


Chart 1. Green Constitution Interaction

The principles of green constitution, which refer to the values of the 1945 Constitution in Article 28 Paragraph (1) and Article 33 Paragraph (4), interact with human rights on national development that is environmentally-minded within healthy environment. The environmentally-minded development is effective to ensure the sustainability of environment and to decrease negative impacts in the environment despite the continuity of the development that may cause harm. To actualize national goals, sustainable development is aimed as an endeavor to carry over sustainable development and environmental sustainability.

The concept of development in Indonesia that relies on natural resources is directed at its empowerment to pay attention to the preservation of functions and balance of the environment so that it is expected to provide social welfare. In support of sustainable development, it is also necessary to strive for energy independence and sovereignty. The energy independence and sovereignty are expected to engrave economic values, and the existing national energy can truly fit to the national interest and for the greatest prosperity of the people.

Green constitution has become a basic norm that contains some basic ideas about environmental sovereignty and democracy, whose values can be equated as values with democracy and nomocracy concepts. Therefore, environmental legal norms contained in it have explicitly required all laws, regulations and policies in various development sectors, such as energy, to comply with and submit to them (Hafidz, 2011).

The policy agenda and action for the implementation of new and renewable energy that possess prospective green constitution can be performed by prioritizing the orientation on environmental protection and sustainability. This constitutes constitutionality of protection and environmental sustainability. Further, the interaction that occurs between these principles by adhering to the principles of green constitution is the key to the success of the transition to new and renewable energy.

CONCLUSION

Energy management and utilization activities always intersect and cause impacts on other aspects of life, such as environment. The use and utilization of energy, in addition to polluting the environment, can also have an impact on natural resources, biodiversity and ecosystems, and human health. The utilization of new and renewable energy is currently being developed. On the other hand, it has the potential for a smaller impact on the environment and humans. The national energy transition policy is one of the mitigation instruments for the impact of energy use and utilization. However, until now the energy transition policy implemented in Indonesia still has many problems, ranging from dual orientation, overlapping arrangements to economic interests.

The New and Renewable Energy Draft Bill as an effort initiated by the governments for energy transition is basically a prospect to actualize green constitution. Nonetheless, there are some crucial issues in the draft bill needing revision and potential to cause environmental problems, including: misconceptions about nomenclature, problems with institutional formats between central and regional relations, licensing issues, and the accommodation of nuclear energy. The principle of green constitution becomes a guiding concept and norm for a new and renewable energy control format so that it is in harmony with the values of environmental protection and preservation. Therefore, the agenda of managing and utilizing new and renewable energy will be effective to highly assure the rights to good and healthy environment and welfare for the people.

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