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Role of head of states at G20 High Level Conference in utilizing environmental of sustainable development on electricity in Indonesia

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Abstract. Dependence on fossil energy sources as fuel for power generation still dominates most systems to meet the needs of electrical energy in Indonesia. Efforts to reduce fossil fuels for power generation and switch to new and renewable energy are pursued by the government with the issuance of regulations concerning the National Energy Policy. The responsibility of the government in the context of national energy management has a very decisive role for the sustainability of the national energy supply that is safe, reliable and environmentally friendly. To implement the provisions of Chapter 11 (2) UURI Number 30 of 2007 concerning Energy. The regulation of the EBT issue is regulated in Chapter 4 (2) and (3) of the Republic of Indonesia Law Number 30/2007, where it is stated that: Chapter 4 (2) New energy resources and renewable energy resources are regulated by the State and utilized for the greatest prosperity of the people. The G20 agreed on the "Bali Compact", which was the result of the Energy Transitions Ministerial Meeting (ETMM), in Bali, last September 2022, which contained nine principles. The "Bali Compact" is an important part of accelerating the energy transition. The G20 Summit, the Bali Leader's Declaration document can be reached and agreed upon by all state leaders present.

Keywords. head of state, electricity, renewable energy

Introduction

One of the G20 real actions for a sustainable energy transition is by accelerating the closure of coal-fired power plants and developing equitable and sustainable renewable energy, where the process is not easy to achieve. Sustainable or towards zero or low carbon emission for energy, then one of the things that was later mentioned was facing out from fossil fuel or coal. This is because several member countries in the G20 are very rich countries and are producers of fossil energy sources, such as Saudi Arabia. In line with this, paragraph 12 of the G20 Bali Leaders Declaration concerning the government's commitment to achieve the target of Sustainable Development Goals (SDG) 7 and eliminate the gap in access to energy. The energy sector is the sector that produces CO2 and is the most expensive or costly in terms of achieving a balance between achieving the Nationally Determined Contribution (NDC) target,

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namely eliminating or reducing the threat of climate change. have not had access to energy and those who are then poor because they do not have access to energy.

The Indonesian government has prepared 30 medium-sized *Red and White Electric Bus* (BLMP) for the smooth mobility of the G20 delegates since their arrival at I Gusti Ngurah Rai International Airport, Denpasar to the meeting location at the *Bali Nusa Dua Convention Centre* (BNDCC). All of these buses are domestically made with a *Domestic Content Level* (TKDN) of 76.98 percent. This Red and White Electric Bus is a collaborative development of state-owned electric vehicles and a consortium of universities in Indonesia such as Airlangga University, Gadjah Mada University, and the Indonesian Fine Arts Institute Denpasar and the Surabaya Institute of Technology. (Adistia and others 2020)

On November 1, 2022, these electric buses have started to undergo trials by following the route from Ngurah Rai Airport to Nusa Dua. There are 60 drivers who will be divided into two working hours, 30 people each. The bus is scheduled to start operating on November 11-17 2022 starting at 6.00 WITA - 22.00 WITA. Not only that, to facilitate mobilization in the ITDC Nusa Dua Bali area, his party also provides free electric motorcycle taxis. Not prepared by the ministry but two private companies with a total of 90 electric motors.

Dependence on fossil energy sources as fuel for power generation still dominates most systems to meet the needs of electrical energy in Indonesia. Efforts to reduce fossil fuels for power generation and switch to new and renewable energy are pursued by the government with the issuance of regulations concerning the National Energy Policy. The government's commitment to support the National Energy Policy, achieving 23% of the use of new and renewable energy by 2025 is realized through various policies and regulations, one of which is the development of PLTS mini-grid in Indonesia. The existence of certainty and legal umbrella for the implementation of PLTS development is expected to be able to provide the widest possible opportunity to maximize the potential of solar energy in Indonesia. Regulations from the technical and fiscal side must continue to be updated to support investment in PLTS mini-grid development. (Bayu and Windarta 2021)

For power generation, the carbon footprint is calculated in grams of CO2 gas equivalent per kWh of electricity generated (gCO2eq/kWh). In its operation to generate electricity, practically solar power plants do not produce significant emissions when compared to coal-fired power plants. Besides carbon dioxide, solar power plants produce less sulphur dioxide, nitrogen oxides, atmospheric pollutants when compared to power plants using coal or gas.

The responsibility of the government in the context of national energy management has a very decisive role for the sustainability of the national energy supply that is safe, reliable and environmentally friendly. To carry out the provisions Chapter 11 (2) Laws of the Republic Indonesia Number 30 of 2007 Regarding Energy, the government prepares a National Energy Policy, including that of power plants that run on EBT. In the formula *National Energy Policy* (KEN), target in 2025 the role of New Energy and Renewable Energy is at least 23% (twenty-three percent) and in 2050 at least 31% (thirty-one percent) as long as the economy is fulfilled Government Regulation of the Republic of Indonesia Number 79 of 2014 concerning National Energy Policy. To fulfil the energy mix as referred to in the KEN, efforts are made to, among others, maximize the use of clean and renewable energy, minimize the role of petroleum, optimize the use of natural gas and new energy, use coal as the mainstay of national energy supply and utilize nuclear as a last resort. (Utomo and Hariningrum 2020).

Summit Conference (KTT) G20, Bali Declaration document achieved and agreed upon by all state leaders present. During the two days of the G20 Summit, 52 points of declaration

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were agreed upon before the delivery of the G20 chairmanship from President Joko Widodo to Indian Prime Minister Narendra Modi, in Bali. In a press conference delivered by President Jokowi, Wednesday evening, it was also stated that several funding commitments for the development of the energy transition in Indonesia were agreed in this G20 forum. Then the Energy Transition Mechanism, especially for Indonesia, received a commitment from the Just Energy Transition Partnership (JETP) of 20 billion USD.

The Bali Declaration recorded 52 points of agreement by the G20 heads of state to encourage the achievement of the goals of the world community through increased efforts and commitments in various sectors. Of these 52 points, there are 2 specific points related to the energy sector, where the G20 Leaders agreed to accelerate and ensure a sustainable, equitable, affordable, and inclusive energy transition of investment. The Bali Compact and the Bali Energy Transition Roadmap were also agreed to serve as guidelines for finding solutions to achieve energy market stability, transparency, and affordability. The following is the contents of the declaration related to the energy sector:

At a time of climate and energy crisis, in the midst of geopolitical challenges. Several countries in the world are also experiencing volatility in energy prices and markets as well as disruptions in energy supply. We underscore the urgency to rapidly transform and diversify energy systems, energy resilience and security and market stability, by accelerating and ensuring a sustainable, equitable, affordable and investment inclusive energy transition. Indonesia stressed at KTT G20 the importance of ensuring that global energy demand is balanced by affordable energy supplies. This is the paragraph that begins the 11th point of the Bali Declaration document. By looking at some of the explanations above, the researcher focuses this research on the constitutional juridical role of the head of state at the G20 Summit in the use of environmental of sustainable development for electricity in Indonesia.

Research Method

The type of research used in this research is normative legal research.(Michael 2019) By using primary and secondary legal materials, along with tertiary legal materials as supporting materials, namely: Law of the Republic of Indonesia Number 30 of 2007 About Energy, and Bali Leaders of Declaration

Discussion

1. Constitutional Policies of the Head of State on the Development of Legal Politics for the Utilization of Electric Energy Resources in Indonesia

Indonesia has the 1945 Constitution of the Republic of Indonesia (hereinafter referred to as the 1945 Constitution of the Republic of Indonesia) as a written constitution with the highest position in the hierarchy of national laws and regulations, Chapter 33 (3) UUD NRI of 1945 stated that : *"Earth and water and the natural resources contained therein are controlled by the state and used for the greatest prosperity of the people*"(Nizammudin 2016). Chapter 33 (3) UUD NRI of 1945 giving a mandate to the state which is one of the goals of the state, which is stated in the Preamble of the 1945 Constitution of the Republic of Indonesia in the 4th paragraph, that is: *".....protecting all and all of Indonesia's bloodshed, promoting public welfare, educating the nation's life and participating in world order based on eternal peace and social justice…."*.

There is a paradigm shift in sustainable economic development, which lays down the basic constitution Chapter 33 (3) UUD NRI of 1945 by means of the explanation of the article being deleted and there is no further explanation of the article, especially regarding the concept

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of 'controlled by the state'. This means that with the abolition of the explanation of the article, the prohibition on private parties or individuals from participating in managing natural resources will also be removed. This degrades the meaning Chapter 33 (3) UUD NRI of 1945, that is: "the mandate to exercise the right to control natural resources is not prohibited from being handed over to a third party". (Arba and others 2016).

EBT problem setting is set in Chapter 4 (2) and (3) UU RI Number 30/2007, which is stated that: Chapter 4 (2) *"New energy resources and renewable energy resources are regulated by the State and utilized for the greatest prosperity of the people"*; Chapter 4 (3) *"Control and regulation of energy resources by the State is carried out by the Government in accordance with the provisions of laws and regulations".*

UU RI Number 30/2007 mandated the government to compile *National Energy Policy* (KEN). KEN is an energy management policy that is based on the principle of sustainable justice, and is environmentally sound in order to create energy independence and national energy security. Therefore, on October 17, 2014, the government issued a Government Regulation Number 79 of 2014 about *National Energy Policy* (hereinafter referred to as the PP 79/2014). The basis for the issuance of this PP is Chapter 11 (2) UU RI Number 30/2007. This EN is a guideline to provide direction for national energy management in order to realize energy independence and national energy security to support sustainable national development. The national energy policy consists of the main policies and supporting policies implemented for the period 2014 to 2050. The main policies include energy availability for national needs, energy development priorities, utilization of national energy resources, and national energy reserves. Meanwhile, supporting policies include energy conservation, conservation of energy resources and energy diversification; environment and safety; energy prices, subsidies and incentives; infrastructure and public access to energy and industry; research, development, and application of energy technology; and institutional and funding. (Nunuk Febriananingsih 2019)

One of the provinces of Papua is one of the richest provinces in Indonesia with an area three times the area of Java Island, but the vast natural wealth cannot be processed because there is no adequate road network to connect the production centre areas so that there are still many areas in Papua that are still isolated and underdeveloped. Similar to the electricity condition in Papua Province, based on the 2018 Electricity Statistics, it is known that the electrification ratio in Papua Province is 61.42% which is the second lowest of the electrification ratio throughout Indonesia. (Nurmela and Hiron 2019). The above problems can only be overcome by diversifying energy sources both in terms of type and amount through the use of various alternative energy sources, especially renewable energy sources. Because the OTEC system is installed in coastal or offshore areas, the potential for OTEC in Papua Province is found in areas along the waters of Papua Province which have a sea depth of ± 1000 m. The maximum efficiency of the OTEC system in Nabire waters is 0.76 while in Biak, Bonggo, and Jayapura waters it has almost the same maximum efficiency of 0.84. (Widyartono and Rahmadian 2019)

2. The Juridical Implications of the Heads of State in KTT G20 Constellation on the Utilization of Electric Energy Resources in Indonesia

The energy ministers of the G20 countries expect the acceleration of the energy transition to become a shared commitment in the declaration points of the KTT G20, in Bali, on 15-16 November 2022. To be part of the key solution to the ongoing global energy crisis. at the moment. G20 countries agreed to accelerate the energy transition including ensuring the achievement of sustainable global development targets, by 2030. In particular, for access to modern energy that is reliable, sustainable and affordable for all. The G20 agreed on the "Bali

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Compact", which was the result of the Energy Transitions Ministerial Meeting (ETMM), in Bali, last September 2022, which contained nine principles. "Bali Compact" is an important part of accelerating the energy transition. (Dewan Energi Nasional Republik Indonesia 2022)

The Energy stressed the importance of developing innovative and affordable technologies to support the energy transition, including the importance of collaborative knowledge transfer and technological innovation. They also agreed to increase investment and encourage the flow of funds to developing countries to accelerate the energy transition and the importance of strengthening cooperation. The nine principles are to strengthen trust and clarity in national planning, implementation and evaluation. Improve energy security, market stability and affordability; Securing resilient, sustainable and reliable energy supplies, infrastructure and systems. Another principle is to improve the implementation of energy efficiency, diversify the energy system and mix, and reduce emissions from all energy sources. (Sihombing and Suwarno 2021)

Next, catalyse inclusive and sustainable investment on a large scale towards low emission energy systems or Net Zero Emissions; Collaborate in mobilizing all funding sources to achieve the goals of the 2030 Agenda for Sustainable Development Goals (SDGs) and the Paris Agreement. In addition, leveraging innovative, affordable, intelligent, low-emissions or Net Zero Emissions technologies, as well as building and strengthening an innovation ecosystem to encourage research, development, demonstration, dissemination and application. Indonesia is trying to make a number of breakthroughs, including the issuance of Presidential Regulation No. 112 of 2022 concerning the Acceleration of Renewable Energy Development for the provision of Electricity. (Utami 2016)

The most important breakthrough is compiling *Legal Planing* (RUU) *New Energy and Renewable Energy* (EBT). This design is intended to provide legal certainty, strengthen institutions and governance, create a conducive investment climate and utilize NRE resources for the development of the national economic industry. The G20 is also committed to finding solutions to achieve energy market stability, transparency and affordability. They agreed to accelerate the energy transition by strengthening supply chains, security, diversification of power and energy systems (Priananda and others 2020). The G20 will rapidly scale up the deployment of low-emission power generation, including renewable energy sources, and measures to improve energy efficiency, reduction and elimination technologies, taking into account national circumstances. Leaders of the G20 group understand the importance of accelerating development towards a transition to a low-emission energy system, including rapidly increasing the deployment of clean power generation, including renewable energy.

Conclusion

The energy transition became important at the G20 summit and the energy transition consisted of its own power plan. Then from mobility, the closest is in the automotive industry. Indonesia certainly wants to organize the G20 by example and this example is not only in the energy sector but in the transportation sector as well. Of course, Indonesia hopes that the activities carried out are the beginning of the acceleration so that electric vehicles in Indonesia can be targeted at a minimum of 20% by 2030. Indonesia hopes that national production can continue to grow. For the EV ecosystem, PLN is expected to prepare the batteries, including electric charges. There should be one standard for charging stations. The advantages of natural resources make Indonesia the right producer country for EV. Indonesia is rich country in nickel (about 23% of the world) and cobalt which is the main raw material for making batteries. Therefore, EV manufacturers can produce affordable EV vehicles in Indonesia, where

approximately 30%-35% of EV prices are for battery components. With the ownership of natural resources and human resource capabilities, Indonesia is predicted to become an EV Battery Production Hub in ASEAN in 2026 and become a major player at the global level in the following year.

This encourages countries in the world, especially the Indo-Pacific region, that the countries at KTT G20 agree that the use of electrical energy is a good momentum for sustainable environmental management or can be said to be environmental of sustainable development, especially in the aspects of funding and infrastructure development. renewable energy in Indonesia, so that the national community and the world can enjoy it collaboratively.

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