Sociae Polites

EISSN 2620-4975
ISSN 1410-3745

G20 COMMITMENT IN THE ACHIEVEMENT OF SDG 7: OPPORTUNITIES AND CHALLENGES

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Abstract

Renewable energy is one of the issues that is the focus of every country, not only developed and developing countries. The energy transition is the focus of state policy in creating renewable energy. SDG 7 is one of the references for each country to oversee the energy transition policy towards renewable energy. One of the efforts made in helping each country achieve the SDGs 7 target is international cooperation. One form of international collaboration that pays attention to renewable energy is the G20. Through the G20, it is hoped that countries will collaborate to achieve SDG 7 targets. Therefore, this article aims to analyze the opportunities and challenges faced by the G20 in implementing commitments to achieve SDGs7. Literature studies originating from official documents, journal articles, and internet sources are used to analyze further the opportunities and challenges facing the G20. The study results show that the G20 cooperation allows member countries to work together to achieve SDG 7. Still, the different characteristics and resources between developed and developing countries are challenging in the energy transition process toward renewable energy.

Keywords: Cooperation, Energy Transition, G20, SDG 7

1. Introduction

1.1. Background

At the Indonesian Presidency at the G20 Summit in November 2022, three main topics affecting the global political economy will be raised, namely the issue of global health after Covid-19, the issue of digital economy transformation, and the energy transition. And climate change. These three issues are fundamental to discuss at the global governance level, such as the G20, to be able to issue inclusive recommendations to address these three issues. Of the three problems that are also very crucial are the issues of energy transition and climate change due to global uncertainty. This is coupled with the complexity of the conflict between Russia and Ukraine, making global energy even more abundant. The implications have been felt by the U.S., such as rising fuel oil, global food prices, higher consumption, and other problems that threaten global energy. One solution to reduce energy saving and transition is to use electric vehicles as environmentally friendly public transportation vehicles capable of suppressing the use of oil energy in private vehicles.

According to the author, there are several important things when the transition changes the behavior of consumers of private vehicles to electric-based vehicles, namely: **First,** the public will know that traditional fuels are oil-based and increasingly limited, so

there must be alternative options to replace oil as the leading supplier of public vehicles, OPEC as the organization in charge of selling oil says that global oil demand by 2040 will reach 120 million barrels. Oil demand touched 7.3 bpd from 2017 to 2023. And it will touch 104.5 bpd in 2023 and 200 bpd in 2040. So it requires an investment of US$11 Trillion (Sebayang 2018).

Second environmentally friendly because it does not contribute to significant carbon emissions as much as it causes air pollution and becomes unhealthy. Data from the Human Resources Development Center of the Ministry of Energy and Mineral Resources said that gasoline, diesel, and gas contribute the most carbon emissions globally, especially Carbon dioxide. The implications make the occurrence of world climate disasters as many as 797 climate disasters. Then increase the temperature of the earth's pans between 0.45-0.75 degrees Celsius. Even for the four main sectors, namely water, health, fisheries, and agriculture, it can potentially lose 15 trillion in 2024 (ESDM 2022). In terms of air pollution, according to UNEP data, it is said that 70 percent of air pollution problems are due to vehicles. The implication is that about 6.5 million people die yearly from poor air quality. This happens in Asia Pacific, including Indonesia (KLHK 2021).

Third, cheap and durable because electricity is more accessible to produce than oil. The use of electric vehicles is 5x cheaper compared to oil-fueled vehicles. Even based on the trial of vehicles from Jakarta to Bali, oil-fueled vehicles broke the one-million-rupiah mark. Meanwhile, with electric vehicles, it only takes two hundred thousand rupiahs. And Indonesia's imported oil must reach 1.3-1.5 million barrels daily. This means that the consumption is substantial (Sandi 2021).

Fourth is a change in the behavior of technological integration with humans, namely the 5.0 era. As a car exporter, Rudi Salim said electric cars like Tesla are safe from collisions and fires. Because the car does not have an engine, it even features Autopilot, Ultrasonic Sensors, eight surround cameras, and an All-Wheel Drive (4WD) drive. So that there is an integration between technology and human needs (Lynda 2019).

Fifth, it can change consumerism's behavior toward excessive ownership of private vehicles. The implications are to create congestion and contribute to carbon emetics. Based on the results of a survey from *Nissan FUTURES – Electrification and Beyond* released on February 4, 2021, 64 percent of Indonesia, Philippines, Malaysia, and Thailand consider vehicle electricity as their choice. There are 66 percent of people will choose electric vehicles in the future. Then 50 percent of Indonesian will choose electric vehicles for their next vehicle because they are environmentally friendly and safe because of technology assistance (Gakindo 2021). People will change their behavior toward electric vehicles for three main reasons integrating technology with vehicles, the government's readiness to provide electric vehicles, and social factors such as the environment (Aryanti 2017).

The sixth public will shift to using public vehicles so that the consumption of personal vehicle costs can be directed to other production needs. Ahmad Syafrudin, Executive Director of the Elimination of Leaded Fuel, said that community losses due to the low fuel quality have implications for public health, especially Lung health due to air pollution. The losses can reach 50 trillion more, especially in DKI Jakarta (Novika 2020). Therefore the rational choice of electric vehicles may be considered for socioeconomic and environmental interests. Although it must still be reviewed that obtaining an electric vehicle requires a friendly financial. It takes the government's approach as a regulator, peer companies as producers, and society as consumers.

Several studies discuss the role of the G20 as a global regime, especially in the energy sector, including the research titled The emotional impacts of renewable energy and Tourism (Zhou 2019) Investments on international tourism in 2019, published in the Journal of Business Economics and Management found that new renewable energy can be of positive value for G20 member countries, primarily through environment-based investment projects. These positive implications make considerable profits in the field of tourism. The yield reached 1.26 trillion, equivalent to 10 percent of world GDP in 2015. Then there are three effects of connecting renewable energy with tourism: a) the direct impact of dependence on fossil energy can be suppressed. And it will be of positive value for air pollution quality in G20 countries. So that it can increase visitors in the field of tourism b) The effect of sustainability, namely by using new renewable energy technology, will make the relationship between government and energy long-term. Thus, it can increase tourism visits, and c) the saving effect is that the country can be more efficient in spending energy costs when compared to using fossil energy, which has the potential to run out quickly. In addition, renewable energy is more environmentally friendly, and the implications can increase the number of tourists.

Then the second article is entitled Assessing national renewable energy competitiveness of the G20: A Revised Porter's Diamond Model (Fang 2018), published in 2018 in Renewable and Sustainable Energy Reviews. This article argues that internal and external facts influence the creation of a sound energy policy. So, to create a competitive advantage, it takes resources and competitive and superior performance as well. This article says that several fundamental factors affect competitive competitiveness: the geographical environment, climate, temporal and spatial dependence, the lengthy investment in renewable energy and significant capital, and the quality of labor.

After that, an article entitled The G8 and G20 as Global Steering Committees for Energy: Opportunities and Constraints published in the journal Global Policy in 2011, wrote that the involvement of the G8 and G20 has opportunities and challenges to overcome global energy problems. The role of the G20 is marked by the absence of key players, lack of legitimacy, and unclear and specific efficiency policies. Reductions in fossil energy can potentially have positive values for world energy sustainability. The involvement of both organizations can provide an opportunity to make energy a dominant issue. But what needs to be considered is that significant powers must relinquish their authority to look ahead to the future of global energy. It takes vital strategic players to control and manage coordinated energy. The last article is (Westphal 2011) Do energy consumption and environmental quality enhance subjective well-being in G20 countries? Published in 2021 in the journal Environmental Science and Pollution Research found that new renewable energy is a solution to reducing carbon emissions in G20 countries. Carbon emissions are the cause of the poor level of people's welfare. G20 countries account for 80 percent of carbon emissions. This paper shows that new renewable energy can increase personal interest, and non-renewable energy can reduce emotional well-being. So policymakers must be able to make renewable energy a solution to creating sustainable prosperity (Kumari and et.al 2021).

1.2. Research Question

Thus, based on the background and previous research, this article claims that implementing new renewable energy policies in G20 countries has the potential to bring

opportunities and challenges to maintain global energy security. This article will evaluate and identify the chronology of the discussion of new renewable energy in the meetings of G20 countries. This means renewable energy has become an orientation in maintaining global energy security, especially among G20 countries. Thus, this research will answer the question, what are the opportunities and challenges of new renewable energy management by G20 countries?

1.3. Purpose and objective

This study aims to describe and identify the chronology of the implementation of G20 countries' policies on new and renewable energy. The objectivity of this research is that conventional energy is depleting its availability. Therefore, G20 member countries must be able to find other alternatives for global energy management to maintain global energy security. By managing new renewable energy, it has the potential to be a stimulus and challenge for G20 countries to maintain a stable global energy supply.

2. Literature Review

International Regime

The neoliberal theory is one of the theories that develop the role of institutions in international relations. Neoliberals refine classical liberal theory. Neoliberals assume that the part of international organizations is that of actors contributing to building cooperation and peace. International organizations can create regulations through conventions agreed upon by representatives of countries. Furthermore, several important points about neoliberalism are: a) the state is no longer the only actor in international relations. The state is an actor that pursues only national interests. The implication is that the state continuously calculates rationally to always benefit from the interests it wants to achieve; b) in conducting the state's interests in international relations, the state will prioritize its interests over the interests of other countries, known as the absolute game. This means that through cooperation, each actor will pursue their interests and benefits in international relations; c) the constraints of cooperation faced by countries are when the nature of cooperation leads to asymmetry or fraud committed by other countries; d) countries have the potential to benefit together but must be returned from the ability of available resources and the loyalty of the country in cooperation commitments (Dugis 2016, 74) (Lamy 2011, 121).

If you look at the cycle of international relations starting in 1950, which shows the dominance of the state in the study of international relations. Then continued in the 1970s, international relations already involved international organ actors. After that, international relations actors were added to multinational companies in the 1980s. It was finally perfected in the 1990s with international organizations, multinational corporations, international regimes, and epistemic communities. The international regime is part of the transformation of international relations actors because the international regime covers all fields of study of international relations.

Stephen D. Krasner " International Regimes are defined as ***principles, norms, rules, and decision-making procedures*** around which actor expectations converge in a given issue area. Keohane and Nye: Define regime as "sets of governing arrangements" that include "networks of rules, norms, and procedures that regularized behavior and control its effects." The regime must be understood as something more than a momentary

arrangement that any change in power and interest can change. Therefore, a distinction must be made between regimes and agreements for analytical purposes. Agreements are *ad hoc*, often "one-shot" arrangements. The regime is facilitating agreement. The characteristics of the regime area. Formal: Legislature, Legal framework, Bureaucracy. b. Informal: a network of interacting organizations or a set of shared norms c) Creating shared value and meaning among members. d) able to influence the behavior of members. Therefore, the international regime has achievements in the form of outputs, outcomes, and impacts. Because international cooperation that the regime always has facilitated faces different challenges (S. D. Krasner 1982) (S. D. Krasner 2005) (R. O. Keohane 1998). So, it must be seen in terms of the level of collaboration, the complexity of the problem, and the ability of resources to solve it. Thus, assessing how the institution is organized, the distribution of power and resource power, and the energy and capacity expended is essential. Thus, the international regime as an actor in international relations has contributed to creating principles and norms to become rules and sanctions that affect the actions and behavior of its members in carrying out cooperation (S. D. Krasner 1982) (R. O. Keohane 1998) (Nye. 2011) (R. O. Keohane 2004).

3. Research Methods

This research uses qualitative methods with a case study approach. This paper provides a comprehensive analysis of energy transition commitments in the G20. In addition to providing an analysis of the energy transition from the perspective of the G20, this paper also provides a comprehensive analysis of the challenges and opportunities of the energy transition. In conducting this analysis, this paper uses document studies derived from the results of the G20 declaration in Bali, literature sources derived from journal articles, research preceding, and references derived from the internet.

4. Result and Discussion

4.1. Dynamics of Energy Issues in the G20

The international community's commitment to establishing an energy system at the global level is inseparable from adopting the *Paris Climate Agreement* and *Sustainable Development Goals* (SDGs). The G20, for example, is considered to have an essential role in creating energy systems in the future, considering that its members consist of developed and developing countries. In addition, 80 percent of total primary energy consumption comes from G20 member countries. Likewise, the percentage of total CO2 emissions produced by G20 countries shows that the G20 is a multilateral cooperation forum that can act as an agenda-setter in global energy governance. G20's attention to energy issues began in 2009 during the US Presidency, which focused on eliminating inefficient fossil fuel subsidies. The discussion of energy issues became more comprehensive at the G20 in 2012 during Mexico's G20 Presidency. The seriousness of attention to energy was further followed up by establishing an energy working group, the Energy Sustainability Working Group, which was formed in 2013 at the G20 Presidency of Russia. In 2014 the G20 endorsed the G20 Principles on Energy Collaboration. G20's commitment to achieving SDGs 2030 at a meeting of G20 Energy Ministers in Beijing in 2016 (Roehrkasten and Westphal 2016).

Today, 'energy transition' is a concept that is applied not only by countries at the national level but also by regional and international bodies and non-governmental

organizations. Therefore, the presence of the G20 in responding to this issue aims to carry out structural changes in the energy sector that are adjusted to the economic potential and resources owned by every country. G20 can help encourage the global energy transition with the existence of member countries that are producers and consumers of the energy sector. In addition, the G20 also consists of permanent member states of the UN Security Council, which is expected to significantly contribute to overseeing the energy transition process. G20 support for achieving SDG 7 targets is reflected in the collaboration generated in every meeting held regularly (Pastukhova and Westphal 2020).

Some of the targets for achieving SDGs 7 in 2023 include: 1) universal access to affordable and modern energy; 2) an increase in the share of renewables in the global energy mix; 3) increased energy efficiency; 4) Increased international cooperation aimed at facilitating research related to clean energy technologies including renewable energy and energy efficiency. In addition, international cooperation is also aimed at creating cleaner fossil fuel technologies and encouraging investment in clean energy infrastructure; and 5) expansion of infrastructure and technology to supply modern sustainable energy to developing countries. From this target, international cooperation in the renewable energy sector is essential in achieving SDG 7. (unstats.un.org n.d.)

Global cooperation is essential to use rules, norms, and standards related to emissions trading. In this regard, several roles can be carried out by the G20 in the energy sector, such as: 1) overseeing policy coordination at the domestic level of each member country, 2) influencing the policies of other countries; and 3) encouraging multilateral cooperation by establishing norms and rules. In addition, the G20 can also encourage capacity building for developing countries (Andrews-Speed and Shi 2016).

G20's support for creating renewable energy can also be seen in the renewable energy investment of G20 countries, such as China, Mexico, and Australia. The impact that the G20 has formed in encouraging renewable energy investment can be seen from the steps of the G20 Finance Deputy and Central Bank, who started the G20 Green Finance Study Group (GFSG). The group identifies market and institutional barriers to creating green investment. This is done to address environmental problems and climate change that are increasing. China has been the most active G20 country in implementing a systematic approach to green finance, including green bonds, insurance, stock markets, and other pillars of financial services. (Vaughan and Kraemer 2018)

The track record of G20's commitment to responding to energy transition issues can be seen from several commitments in every meeting conducted by the G20. Establishing a working group on the energy sector shows the seriousness of the G20 forum in eliminating inefficient fossil energy subsidies to create green investment. In addition, the G20 commitment is also seen in several policies taken by G20 countries in encouraging the energy transition process. The sub-discussion below explains the latest commitments made by the G20 at the Bali Summit 2022.

4.2. Bali Summit 2022 and Commitment to Achieving SDGs 7

G20's concern for renewable energy transition is also on the agenda in Indonesia's G20 Presidency in 2022. As the G20 presidency in 2022, Indonesia must face challenges related to commitments in the energy transition. In this regard, not all G20 members have the same knowledge, economy, or public demands on the issue of energy transition. The renewable energy sector requires a lot of financing, which is determined mainly by the

economic conditions of each member country. In the case of Indonesia, the country that produces the eighth largest carbon emissions in the world, renewable energy development is still relatively low compared to other G20 countries. The capital investment required is enormous in the development of renewable energy. Dependence on coal is another cause of the downward action of renewable energy in Indonesia. Various efforts have been taken by the Indonesian government in the energy sector, including carbon tax policies and green financing schemes. However, efforts to increase renewable energy investment, which is still accompanied by using coal as one of the commodities supporting the country's economic growth, make the energy transitionary complex (Suoneto and Harsono 2022).

To encourage the energy transition, G20 member countries are committed to continuing their commitments through declarations produced at the Bali Summit. In this regard, the G20 Energy Ministers have also agreed on the Bali Compact, which results from the Energy Transitions Ministerial Meeting (ETMM) held in Bali on September 2, 2022. Nine principles are an essential part of accelerating the energy transition. The core of the nine principles in the Bali Compact includes: 1) Strengthening planning, implementation, and review at the national level by involving all levels of government; 2) Improved energy security, stability, and market affordability. In this regard, open, transparent, and competitive international markets and increasing inclusive investment in renewable energy are some of the strategies used in the improvement energy security; 3) Securing supply, sustainable energy availability, infrastructure and systems that can meet energy demand; 4) Increase efforts energy efficiency by driving cost-effectiveness in all sectors; 5) Diversifying energy systems and mixes, reducing emissions, improving and integrating renewables, clean energy and implementing new technologies; 6) Encourage sustainable inclusive investment in creating low-emission energy systems and phasing out inefficient fossil fuel subsidies; 7) Creating collaboration and mobilization of financing in order to achieve the SDGs and the Paris Agreement; 8) Improving innovative technology through cooperation and partnership; and 9) Strengthening innovation, one of which is through research and public-private collaboration (G20 Information Centre 2022).

Through the commitments agreed by the Energy Ministers, the G20 countries showed that they decided to carry out the energy transition process without leaving anyone behind, despite each country's different situations and conditions. This transition process cannot be separated from developing innovative and affordable technologies to support the energy transition. Therefore, collaboration in knowledge transfer and technological innovation is needed. Implementing commitments in the Bali Compact is essential, especially regarding sustainable cooperation among G20 member countries in supporting the energy transition process. The commitment to energy transition is also reflected in the results of the G20 declaration in Bali on November 15-16, 2022.

At the 2022 G20 Declaration in Bali, G20 leaders underlined a need for energy system diversification in responding to the energy crisis, supply disruptions, and price volatility. This energy diversification is necessary to create stability, security, and a sustainable, affordable, and inclusive energy transition. Different national conditions among member countries require support for developing countries in terms of access to access to affordable energy and affordable technology. Therefore, there is a need for financing and technology cooperation in mitigation actions in the energy sector. This effort is a form of G20 commitment to achieving SDG 7 and reducing the energy gap.

Collaboration in research and innovation is an effort mentioned in the G20 Declaration in Bali (G20 Indonesia 2022).

Cooperation and cooperation are vital points in the energy transition commitment at the G20. The agreement of the Bali Compact and the results of the 2022 G20 Declaration in Bali show that sustainable collaboration and cooperation are needed in addressing the challenges of energy transition amid political and economic uncertainty global as well as different national conditions among G20 member countries. The resulting collaboration at the G20 Bali Summit is expected to provide opportunities for developing countries to innovate in energy transition technology. Implementing the commitments agreed at the G20 forum is faced with several challenges behind the opportunities that can be expected in G20 cooperation in the energy sector.

4.3. Opportunities and Challenges

Dependence on the use of fossil energy is one of the challenges faced by every country in transitioning to the use of renewable energy. The transition to renewable energy is certainly not an easy one. Adequate technology is needed to make the transition. This is the biggest challenge for developing countries that do not yet have sufficient access to modern energy and are still using energy sources with environmental and health implications.

It is not easy to discuss multilateral cooperation in the energy sector. Clashes between various interests can color cooperation. For example, differences in priorities between energy producers and consumers and priorities towards market preferences or beliefs in state capitalism can be obstacles to creating Collaboration and cooperation in the energy sector. In addition, the politicization of energy issues at the national and international levels is also one of the challenges in collaboration at the international level (Andrews-Speed and Shi 2016). Responding to this challenge certainly requires a balance between cooperation and competition in the energy sector, which all countries need.

Talking about the challenges in the energy transition in achieving SDG7 is undoubtedly a complex shift at the global level and in G20 member countries. The complexity of existing problems cannot be separated from the position of developing countries in the G20 forum. Developing countries in the G20 membership represent the voice of developing countries worldwide, so talking about energy transition will undoubtedly have implications for the readiness of non-G20 developing countries.

The problems that arise in the energy transition are inseparable from the new grouping of North and South countries. This new grouping of North and South is based on disagreements over climate and transition policies, their impact on development, who is responsible for cumulative emissions, and who pays. The things that are the cornerstone of this North-South division affect the energy transition process that must be carried out. The need for energy transition in developing countries coincides with other priority issues such as economic growth, health, and poverty. For example, India uses several strategies in the energy transition to address this issue. One of the strategies implemented is constructing a natural gas distribution system. The expansion of natural gas used to reduce pollution is accompanied by economic development and job creation programs (Yergin 2022).

The energy transition is also faced with a huge cost problem. High costs, for example, are required to accelerate the decommissioning of steam power plants. Thus, technology requirements, supporting industry readiness, project implementation

requirements, and other technical aspects become the next challenge after the funding factor. Therefore, national policies are needed in each country to address these challenges. For example, the Indonesian government has issued Presidential Regulation Number 112 of 2022 concerning the Acceleration of Renewable Energy Development for Electricity Supply. In addition, the Indonesian government is also drafting a New Renewable Energy Bill. This bill aims to provide a legal foundation, strengthen institutions and management, create a conducive investment climate, and utilize renewable energy for national and economic development (The Jakarta Post 2022).

Talking about renewable energy development in several countries, there are different performances due to funding and technology factors. A snapshot of renewable energy development in some regions can be seen from Africa, which only accounted for 1.3% (586,434 MW) of solar power capacity globally in 2019. The same is true in Asia, where Asian countries (excluding China, India, Japan, and South Korea) contribute 5.4% (330,786 MW). In the wind energy sector, Africa contributed 0.9% of global capacity in 2019, while in Asia, excluding China, India, Japan, and South Korea, the total contribution of wind energy was 2.0% of the total global amount. The ease or difficulty of accessing financing is one of the triggers for accelerating the pace of the clean energy transition. The cost factor is crucial because it is needed for innovation and infrastructure needs. In addition to financing factors, renewable energy patents mostly come from China, the United States, the European Union, Japan, and South Korea. This illustrates that the current position of developing countries is as consumers of clean technology (Babayomi, Dahoro and Zhang 2022).

Behind the challenges mentioned above, G20 members, as the largest market, can play a role in technology investment in renewable energy and energy efficiency by managing energy demand. Internal policy coordination and the role of G20 developed countries in providing examples of implementing G20 commitments can encourage other countries to participate in realizing sustainable energy is better (Graaf and Westphal 2011).

The momentum of G20 cooperation is an opportunity to create partnerships in the energy transition. Through G20 collaboration, G20 countries can share experiences in the energy transition process regarding challenges and policies that have been implemented. Cooperation through the exchange of experiences in energy transition practices can encourage consensus in addressing the challenges faced in the energy transition. This knowledge exchange can be from the planning side, the role of fossil fuels in the transition period, to market integration carried out. Transparency in pricing can also be a point of collaboration, thus facilitating the private sector to invest. G20 financial pathway cooperation is also needed to create innovative financing in the energy transition (International Energy Agency 2018).

The G20's opportunity to respond to the energy transition is inseparable from the position of G20 member countries. For example, the presence of industrialized countries in the G20 and regular G20 meetings can help balance the interests of each member country's energy transition process. Through G20 cooperation, it is also possible to have a global mechanism for information exchange in terms of the investment risk climate. This will help investors to know the opportunities and risks of energy investment. International partnerships in technology through the G20 are expected to help developing countries develop and utilize low-carbon technologies (Goldthau 2017).

The picture above shows that G20 cooperation to fulfill the commitment to achieve SDG 7, especially in terms of the energy transition, is not an easy thing. The

differences in characteristics and resources owned by each member country provide their challenges in the energy transition process toward the creation and utilization of renewable energy. Behind the challenges faced, at least the G20 is expected to provide direction and encourage concrete steps to create collaboration for the energy transition in achieving SDGs 7.

The role of the G20 as a regime that has a contribution to supporting the transition. Changes in new and renewable energy are crucial and require collaboration and synergy. Because the case of changes in new renewable energy must be managed multilaterally. Change in renewable energy is a fundamental issue in global politics, so countries must be able to pull their egos and not become new problems. According to Keohane and Nye, multilateral-based cooperation must refer to three crucial elements: mutual interest, the shadow of the future, and the number of actors.

In the mutual element of interest, regime member countries must have the exact wants, needs, and claims regarding the issues discussed. Because the change in new renewable energy is an issue that requires collaboration, in this element, countries must prioritize the issue of change in new renewable energy as a priority issue. Foreign policy and diplomacy. This means that the pattern of cooperation built must be altruism that emphasizes common interests rather than the interests of countries or groups. The change in new renewable energy is a global problem but its implementation and implementation at the local level. The mutual interest element also emphasizes that cooperation that is built must be mutually beneficial, and economic and political interests are prioritized for the sake of common interests, namely the climate change environment. Mutually of interest also emphasizes long cooperation, not single play but multi-play. This means that the cooperation carried out must take place continuously and control the progress of cooperation based on the planning of proposals.

The next element is the shadow of the future, which means that regime members must have a shadow of the end regarding cooperation issues. In this section, countries should prioritize results-oriented cooperation and collaboration. This means that each member must be able to realize the future shadow of cooperation and the implications of the issue. Assessing the importance of the problem of changes in new renewable energy, the impact is very significant. This can be seen from the many natural events due to climate change. Some natural events include landslides, floods, tsunamis, and heating due to greenhouse gases, food security, and other problems. Several further problems are the implications of climate change. Countries should thus make this impact a reason for collaboration and synergy. From the collaboration, countries realize that the effects of climate change are very significant and seriously threaten the stability of state security and human security.

The last element is the number of actors. In this element, the actors who work together must run symmetry, not asymmetry. This means countries that cooperate must be able to walk together and let go of egocentrism. Cooperation must find coordinators and leaders who embrace all parties in this section. No actor should become a coward to hinder cooperation. In this regard, there should be sanctions and rewards for countries that commit to carrying out cooperative missions in accordance with the plan of proposal. Thus, there are no cooperating actors who hinder and do not go according to the agenda.

Therefore, three important things must be emphasized: addressing collaboration patterns, assessing the urgency and malignancy of problems, and preparing resource capacity to solve problems. Thus, assessing the importance of setting institutional

agendas, preparing skills and energy, and the distribution of power and power so that cooperation patterns can run in balance.

5. Conclusions and Recommendations

The achievement of SDG 7 in the energy sector is one of the priority agendas in the G20 forum. The dynamics of G20 discussions and commitments in the energy sector show that the issue of the energy transition is a global issue that must be addressed with genuine efforts not only at the national level but also at the international level through the G20 high school work. The energy transition step echoed by the G20 is not an easy commitment. The dynamics of energy issues that include price volatility, availability of energy supply, funding factors, and differences in resources owned by developing countries are challenges in driving the energy transition and creating broad and easier access for every country.

G20 cooperation that prioritizes collaboration and consensus is expected to respond to several challenges developing countries face in carrying out the energy transition. Cooperation in research, innovation, and funding is expected to help developing countries carry out the energy transition, especially in achieving SDGs7. The best practices of G20 member countries in implementing the energy transition can be used to determine national policies that are adjusted to each country's potential and characteristics.

As an informal cooperation, monitoring the implementation of commitments agreed upon at the G20 forum is needed. Although the resulting commitments are not binding, at least these commitments can be used as a reference for each country in mapping the potential and challenges that arise from implementing these commitments.

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