



P-ISSN : 2964-0628
E-ISSN : 2963-4261
Edition : Vol. 1 No. 2 2022
pp : 1-17

Editorial Office: Jl. Tebet Raya No. 2 Fl. 3 Block C, Tebet Barat,
Tebet, Jakarta Selatan, Jakarta, Indonesia.

Website: <https://scientium.co.id/journals/index.php/jsdi>

E-mail: journal@scientium.ac.id scientium@scientium.ac.id

ENERGY POLICIES FOR POVERTY ALLEVIATION TOWARDS SUSTAINABLE DEVELOPMENT GOALS IN INDONESIA

Nuzul Husnah¹, Wily Arafah², Budi Santosa³, Maria R Nindita Radyati⁴

Faculty of Economics and Business, Universitas Trisakti, Jakarta, Indonesia

Correspondence author: nuzul_husnah@yahoo.com

Article Info	Abstract
<p>Keywords: Energy Policy; Poverty Alleviation; Sustainable Development Goals.</p> <p>History of Article: Received: December 29, 2022 Reviewed: January 5, 2023 Accepted: January 10, 2023 Published: January 13, 2023</p> <p>DOI: https://doi.org/10.56282/jsdi.v1i2.146</p>	<p>Lack of access to reliable, affordable, and sustainable energy sources can hinder individual and social growth, leading to poverty. It is necessary to conduct studies focusing on the energy sector to eradicate poverty in Indonesia and towards sustainable development. This research is combination research that combines quantitative and qualitative research with a sequential explanatory design. The research design uses a hypothesis testing method, which explains the effect of the independent variable, namely Energy, on the dependent variable, namely Poverty and Government Policy as a Moderation variable. A qualitative approach is content analysis on mapping central Government Policy related to Poverty Alleviation Regulations in Indonesia. The results of the study show that Energy has no significant effect on the Economy because Energy is a process that is not instantaneous. In the long term, it is proven that Energy significantly affects poverty alleviation. Government policies significantly moderate the influence of Energy on Poverty Alleviation. This means that the government budget in the Energy sector is significant in reducing poverty in Indonesia. In order to obtain more optimal results, effective and targeted efforts are needed, including sharpening energy subsidy targets, increasing local strength in creating renewable energy supplies, and utilizing New Renewable Energy (EBT) in various sectors more efficiently throughout Indonesia.</p>

©2023. This work is licensed under a CC BY 4.0 license.

A. INTRODUCTION

Poverty is a multidimensional problem that includes different dimensions of the inability to meet basic needs. Poverty is a global problem (all corners of the world without exception). The SDGs state that no poverty is the priority point. It means that the world has agreed to eliminate poverty in any form in all corners of the world.

Poverty is one of the most common problems worldwide. For this reason, the Sustainable Development Goals (SDGs) put it number one, which aims to eradicate poverty from all countries around the world. Although this is an ambitious goal, it has strengthened the commitment of many countries (Vaziri, et al., 2019).

As a member of the United Nations (UN), Indonesia is committed to overcoming the problem of poverty in line with the SDGs declaration. That means that Indonesia must also realize the targets set in the UN declaration. The government's efforts to overcome poverty in an integrative manner have actually been carried out since 1995, namely by issuing a Presidential Instruction (Inpres) for Disadvantaged Villages. The government through Presidential Regulation (Perpres) of the Republic of Indonesia number 15 of 2010 concerning the Acceleration of Poverty Reduction has formed a National Team for the Acceleration of Poverty Reduction (TNP2K). The team is directly chaired by the Vice President. This national effort shows that poverty is still a severe problem (Ishartono and Raharjo, 2016).

Indonesia's commitment is contained in all forms of policies to support the achievement of the 2030 Sustainable Development Goals. This target should be used as a spirit to carry out various serious efforts related to poverty alleviation because it is related to meeting basic human needs.

Energy is a basic human need, necessary for human development at the individual and group levels. Lack of access to reliable, affordable, and sustainable energy sources can make it difficult for individual and social growth. One of the essential steps to reduce the number of people who experience energy shortages is to increase the level of access to essential energy services in residential areas.

Emodi and Boo's research (2015) found that the availability of energy is essential for the economic growth of any country in the world. Access to clean, affordable, and reliable energy is necessary to achieve sustainable development in the modern world. Energy poverty in a country is a situation where its citizens lack electricity even to meet their basic needs such as lighting and cooking.

Based on the aforementioned explanation, this research examines the problem of poverty and the influencing factors that focus on the energy sector and links it to the perspective of the SDGs in Indonesia. Then this study analyzes government policies to find government initiatives in the energy sector to alleviate poverty in Indonesia toward sustainable development.

There needs to be research linking the relationship of the Energy variable to look in more detail at a vicious circle of poverty in a resource-rich country, Indonesia. Which then reviews all its influences from the perspective of Sustainable Development Goals (SDGs) perspective.

B. METHOD

This type of research is combination research that combines qualitative and quantitative research, using a mixed-step technique, using a sequential explanatory design. In this design, the data collected first is quantitative data to be analyzed, followed by the collection and analysis of qualitative data. The design in this study uses a hypothesis testing method that explains the effect of the independent variable, namely Energy, on the dependent variable, namely Poverty and Government Policy, as a moderating variable. A qualitative approach to this research is by mapping government policies at the national level (laws, presidential regulations, ministerial regulations, and other policies) and content analysis.

Table 1. Description of Research Variables

No	Variable	Description	Indicator	Data Displayed	Source
1.	Poverty	Population living below the national poverty line by sex and age group.	The number of people below the poverty line at a particular time is divided by the total population at the same period expressed in percent (%).	SDGs 1. Indicator 1.2.1 Percentage of population living below the national poverty line by sex and age group in 34 provinces, 2017-2020	Ministry of National Development Planning (Bappenas), 2017
2.	Energy	Comparison of the number of household customers who have a lighting source from the State Electricity Company (PLN) or non-PLN electricity to the number of households.	The electrification ratio is obtained by dividing the number of household customers from both PLN and non-PLN by the total number of households multiplied by 100 percent.	SDGs 7. Indicator 7.11. Electrification Ratio	Ministry of National Development Planning (Bappenas), 2017

No	Variable	Description	Indicator	Data Displayed	Source
3.	Government policy	Government spending in each province for the Energy sector.	Provincial Government Budget in the Energy sector in 34 provinces, 2017-2020	Total in rupiah Provincial Government Budgets in the Energy sector in 34 provinces, 2017-2020	Ministry of Finance (Kemenkeu), 2022

C. ANALYSIS AND DISCUSSION

1. Electrification Ratio

Based on data from the Ministry of Energy and Mineral Resources (ESDM) in the third quarter of 2021, the electrification ratio was recorded at 99.40% in 2021, and it is targeted that all areas will have electricity in 2022. In the last seven years, the electrification ratio has increased by 14.85% from 2014 by 84.35% to 99.40% in 2021. That data shows the government's serious commitment to providing access to electricity throughout Indonesia, even though the contours of Indonesia's territory, which consists of islands, pose a challenge to the availability and distribution of electricity.

The seventh SDGs point is Clean and Affordable Energy, which Ensures Access to Affordable, Reliable, Sustainable, and Modern Energy for All. The targets for 2030 include ensuring universal access to affordable, reliable, and modern energy services. The Electrification Ratio Percentage for 2017 – 2020 in 34 provinces in Indonesia is explained in the following graph.

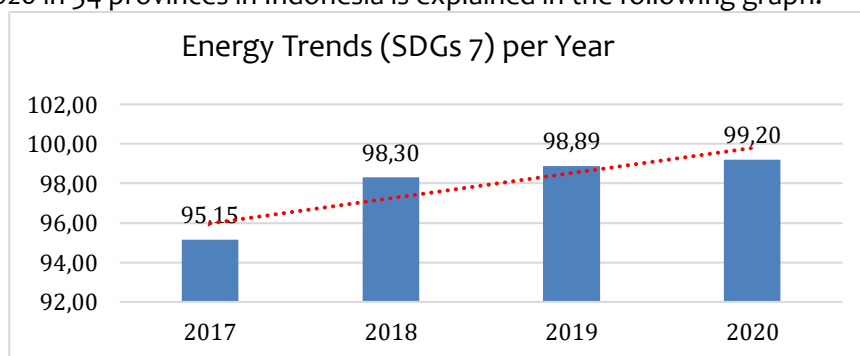


Figure 1. Trends in Energy (SDGs 7th) 2017 – 2020 in 34 Provinces

The percentage of electrification ratio from 2017 to 2020 continues to increase. In 2017, the electrification ratio was 95.15% and 98.30%. This figure continued to increase in 2019 to 98.89% and reached 99.20% in 2020.

This increase is undoubtedly in line with the government's target of 2022 to achieve an electrification ratio of up to 100 percent throughout Indonesia. This ratio is essential to see electricity use in Indonesian households as a basic need for daily activities. The increasing achievements

show that the government continues to carry out these basic needs seriously and shows an improving trend every year.

2. Variabel Results of Direct Relationship Analysis among Variables

Table 2. Results of the Direct Relationship Test among Variables

Connection	Path Coefisien	t-statistic	p-Values	Result
Energy -> Economy	0,186	1,378	0,168	No Significant Influence
Energy -> Poverty Alleviation	-0,206	2,422	0,015	No Significant Influence

Source: Data Processing Results, 2021

Hair et al. (2014) stated that the results of the t-statistic value were above 1.96 (minimum limit) or the p-value was below 5%, so the research hypothesis had a significant effect. Based on table 2, the direct relationship has a t-statistic value below 1.96 and a p-value above 0.05. So, the relationship between Energy and the Economy Does Not Have a Significant Effect. As for the relationship between Energy and Poverty Alleviation, it obtained p-values below 0.05, so that Energy had a significant effect on poverty alleviation.

3. Results of Moderation Relationship Analysis among Variables

Table 3. Results of the Moderation Relationship Test between Variables

Moderation Relations (Government Policy)	Path Coefisien	t-statistic	P Values	Result
M-Energy → Poverty Alleviation	-0,231	2,208	0,027	Significant Influence

Source: Data Processing Results, 2021

Table 3 shows that the role of Government Policy in moderating the effect of Energy on Poverty has a t-statistic above 1.96 and p-values below 0.05, which means that the relationship has a Significant Influence. Thus, Government Policy can increase/decrease the influence of Energy on Poverty Alleviation.

4. Calculation results of R Square and Effect Size

R-square predicts how much influence the independent variables have on the dependent variable. The size of the R square value shows the strength or weakness of other variables affecting these variables. Divided into 3: strong (0.75), moderate (0.50), and weak (0.25) (Hair et al., 2014). The R-square results are based on the test results, as shown in table 4 below.

Table 4. Calculation of R-square value

	R Square	Result
Poverty	0,610	Moderate
Economic Performance	0,244	Weak

Source: Data Processing Results, 2021

Based on the table above, the R-square value is 0.610. It means that the poverty variable has a moderate effect so that the Poverty variable can be influenced by the Energy variable by 61%, while other variables outside the research model influence the remaining 39%. The independent variable can already represent the poverty alleviation factor with a moderate R square. As for the Economic Performance variable, the R-square value is 0.244, which means that the Energy Variable has a weak effect on the Economy. The economic variable is only 24% influenced by the Energy variable, while other variables outside the research model influence 76%.

The effect size shows the effect size between one variable and another variable. According to (Hair et al. 2014) that an effect size value of 0.02 indicates a minor effect, an intermediate value if the effect size value is 0.25, and a large when the effect size value is 0.35. The effect size calculation is presented in table 5 below.

Table 5. Effect Size Calculation (f square)

	Poverty	Result	Economic Performance	Result
Energy	0,006	Minor	0,006	Minor
Economy	0,325	Mayor	0,325	Mayor
M-Energy	0,004	Minor	0,004	Minor

Source: Data Processing Results, 2021

Government policy in moderating the effect of Energy on poverty alleviation resulted in a result of 0.004 (minor).

5. Discussion

a. The Effect of Energy on the Economy

The study results show that Energy has no significant effect on the Economy. This research is supported by the research of Fariz et al. (2015), who found that the nature of the effect of energy consumption on economic growth is different in the short term towards a long-term balance. In the short term, energy consumption has no significant effect.

The economic growth variable in the first period has not been able to respond to changes in energy consumption. Then in the second period, economic growth responds positively and sharply to changes in energy consumption. However, in the third period, economic growth responded

negatively and reached its lowest point in the fourth to fifth period. Furthermore, economic growth experienced fluctuations with an initial decline, although not sharp, and increased at a lower proportion than the previous increase. These fluctuations still occur in a positive value and last not extended, then economic growth reaches a balance with a positive value. Permanently, in contrast to the response to changes in capital and labor, economic growth will respond positively to changes in energy consumption.

The results of Granger causality analysis in the research of Susanto and Dwi (2013) show that energy consumption is considered not to affect economic growth. An increase in economic growth indicates an increase in the prices of goods and services produced by the economy. Communities contribute to economic growth and are entitled to higher wages and salaries. Meanwhile, energy consumption is considered to be independent of economic growth.

Fariz (2015) declares that as Indonesia's electricity infrastructure is more centered on the regions of Java, Madura and Bali (Jamali), it caused a development gap in the energy sector which hinders economic growth in areas that have low electrification rates, but on the other hand creates a waste of energy in areas with high levels of electrification.

Environmental sustainability problems due to increasing CO₂ emissions from the energy sector are also believed to hamper economic growth in Indonesia. The research implications show that energy consumption in Indonesia as a factor of production has shown diminishing returns, so that appropriate policies are needed to influence the energy demand side in the form of energy efficiency (Fariz, 2015).

b. The Effect of Energy on Poverty Alleviation

The study results show that Energy has a significant effect on Poverty Alleviation. This research is supported by the research of Diallo and Richard (2020); the study results also highlight that the lower the level of access to electricity in a region, the higher the regional poverty level. Allcott et al. (2016) revealed that the lack of reliable electricity supply in India would eventually affect the poverty rate in the area.

Research by Karekezi et al. (2012) revealed that access to electricity and clean cooking solutions improves living standards and facilitates human development, gender equality, and security. Access to energy is starting to break the vicious cycle of poverty, where people are trapped in deprivation and lower incomes. Households without access to modern energy have fewer opportunities and less time to generate income, especially in agriculture.

Energy is a vital component of any sustainable development strategy. Without modern energy services, the poor will continue to be poor, and the

sick will continue to be sick. With electricity, schools and homes would remain with adequate lighting, businesses would find it easier to thrive, and streets would remain dark at night. Ensuring adequate access to energy is essential if national development strategies, such as those for health, education, rural development, and gender equality, are successful (European Union, 2018).

Access to energy can undoubtedly increase people's access to adequate, affordable, and sustainable energy services, either through rural electrification, improved management and use of biomass, increased energy use, renewable energy, increased energy efficiency, other broad-reaching measures, or a combination of these steps.

c. The Role of Government Policy Variables Moderates the Effect of Energy on Poverty Alleviation

The study results show that Government Policy significantly moderates the influence of Energy on poverty alleviation. If people look further at the Effect Size results, the Government Policy in moderating the influence of Energy on poverty alleviation, the result is 0.004 (minor). It means that even though government policy has a significant effect in moderating energy on poverty alleviation, it is just that it has a negligible effect.

Pratiwi (2021) states that energy management in Indonesia could be more optimal; this is seen not only from its use, which does not stimulate the economy but also produces high CO₂ emissions. Several factors have contributed to this; first, economic growth is driven more by labor-intensive activities than energy consumption (non-energy-intensive). Second, the energy consumption of most Indonesian people is dominated by non-productive activities such as transportation and the use of electronic devices in the household. Third, more than 70 percent of energy consumption in Indonesia still uses fossil energy, namely petroleum at 35 percent and coal at 37 percent. The increasing use of energy can affect environmental emissions in Indonesia. Several recommendations from the results of this study are, first, the government needs to establish and implement policies that promote energy efficiency so that energy intensity is getting lower. Second, a low-carbon technology transformation is needed. Third, the government must encourage using New and Renewable Energy (EBT) in various sectors, especially transportation, households, and power plants. Finally, the People's Representative Council (DPR) and the government must immediately issue the New Renewable Energy Law (*UU EBT*) to support the development of EBT investments.

Furthermore, Paramita and Deasy (2022) said that the achievement of EBT in 2020 in the national energy mix has only reached 11.2 percent, and the contribution of EBT in the electricity sector has only reached 12.1 percent. To fund climate change mitigation and adaptation actions, the role of the state

budget (APBN) is needed. An effective and efficient electricity subsidy management policy must be carried out by considering the cost of developing EBT. With the reform of energy subsidies, there will be additional fiscal space to support efforts to develop cleaner and more sustainable energy.

Diallo & Kouame's research (2020) shows that Côte d'Ivoire countries with lower access to electricity have higher poverty rates. To effectively combat energy poverty in Côte d'Ivoire, the Côte d'Ivoire government should promote renewable energy sources and, more specifically, off-grid technologies (diesel, biomass, etc.) through strengthening the institutional framework and implementing incentive measures, such as reduced duties and taxes on renewable energy equipment. Governments can also deploy Solar Home System access in off-grid villages to increase household income and welfare.

The implementation of energy subsidy reform is based on current problems, including analysis of the 2019 Susenas data, which indicates that non-targeted subsidies cause leakage of benefits because many of these two forms of subsidies are enjoyed by the wealthy (inclusion error). The policy directions for energy subsidies in 2022 will be given to beneficiaries registered in the DTKS (Integrated Social Welfare Data). The implementation of the energy subsidy policy transformation is carried out in a prudent and gradual manner. It means that the transformation policy will be carried out based on the government's readiness, especially regarding the availability of data, facilities, and infrastructure. Therefore, the transformation of the energy subsidy policy can be implemented either in stages or simultaneously according to the government's future capabilities (Paramita and Deasy, 2022).

Research by Nugroho et al. (2015) revealed that the fuel and LPG price subsidy policy increased real GDP, which encouraged economic growth in the future. It was due to the sharp increase in government spending compared to consumption, investment, and net exports. This policy increased the amount of fuel and LPG consumption due to lower selling prices. This policy also reduces the level of poverty in the future. In addition, Hedaia, who researched the impact of the removal of energy subsidies in 2014 on all income and poverty groups in Egypt, revealed that the elimination of energy subsidies had an impact on increasing the poverty rate in the country.

The importance of increasing the accuracy and validity of subsidy beneficiaries in order to comply with the principles of fairness and prudence. Therefore, strong coordination between the Government, including at the regional level, is crucial in the data collection process so that it is more targeted (Paramita and Deasy, 2022).

d. Poverty Alleviation Policy Mapping

The government's seriousness in poverty alleviation efforts is shown by the issuance of government policies related to poverty alleviation. Table 6 describes the national-level government regulations consisting of Laws, Presidential Instructions, Presidential Decrees, Ministerial Regulations related to Poverty Alleviation in Indonesia, and the calculation of Energy calculations in these regulations.

Table 6. Central Government Policy Mapping related to Poverty Alleviation in Indonesia

No	Government Policy related to Poverty Alleviation	Ministries /Affiliations	Substance	Sector	
				E	En
1	Law No: 13 of 2011, concerning Handling of the Poor	President of the Republic of Indonesia	The state's obligation to free the poor from poverty is carried out through efforts to respect, protect and fulfill the rights to basic needs.	3	0
2	Instruction of the President of the Republic of Indonesia No. 1 of 2009 concerning the Implementation of Assistance Programs for Target Households in the Context of Poverty Alleviation	President of the Republic of Indonesia	Smooth implementation of the direct cash assistance program to target households in the context of compensating for the reduction of fuel subsidies (BBM)	3	0
3	Decree of the President of the Republic of Indonesia No. 10 of 2006, concerning the National Team for the Development of Biofuels to Accelerate Poverty and Unemployment Reduction	President of the Republic of Indonesia	Establishment of the National Team for the Development of Biofuels to Accelerate Poverty and Unemployment Reduction in the context of accelerating poverty and unemployment reduction through the development of biofuels	3	4
4	Decree of the President of the Republic of Indonesia No. 8 of	President of the Republic of Indonesia	Amend Presidential Decree No. 124 of 2001 concerning the Poverty Alleviation Committee to support and	1	0

No	Government Policy related to Poverty Alleviation	Ministries /Affiliations	Substance	Sector	
				E	En
	2002, concerning Amendments to Presidential Decree No. 124 of 2001 concerning the Poverty Alleviation Committee		expedite the implementation of the duties of the Poverty Alleviation Committee		
5	Decree of the President of the Republic of Indonesia No. 34 of 2002, concerning Amendments to Presidential Decree No. 124 of 2001 concerning the Poverty Alleviation Committee as Amended by Presidential Decree No. 8 of 2002	President of the Republic of Indonesia	Amend Presidential Decree No. 124 of 2001 which was amended in Presidential Decree No.8 of 2002 to further facilitate the implementation of the duties of the Poverty Alleviation Committee	1	0
6	Decree of the President of the Republic of Indonesia No. 124 of 2001 concerning the Poverty Alleviation Committee	President of the Republic of Indonesia	Establishment of the Poverty Alleviation Committee, which is a cross-actor forum at the central and regional levels that functions as a forum for coordination and sharpening of policies and programs for poverty reduction	1	0
7	Regulation of the Minister of Home Affairs No.42 of 2010, concerning Provincial and District/City Poverty Reduction Coordinating Teams	Ministry of Home Affairs of the Republic of Indonesia	Guidelines relating to implementing programs and policies in poverty alleviation in Provinces and Regencies/Cities, according to the duties and responsibilities of each agency.	15	0
8	Regulation of the Minister of Home Affairs of the Republic of	Ministry of Home Affairs of	Guidelines for work procedures and work alignment, as well as institutional and human	6	0

No	Government Policy related to Poverty Alleviation	Ministries /Affiliations	Substance	Sector	
				E	En
	Indonesia No. 53 of 2020, concerning Work Procedures and Work Alignment as well as Institutional and Human Resource Development Provincial Poverty Reduction Coordinating Teams and District/City Poverty Reduction Coordinating Teams	the Republic of Indonesia	resource development for provincial poverty reduction coordinating teams and district/city poverty reduction coordinating teams		
9	Regulation of the Minister of Agriculture of the Republic of Indonesia No. 20/PERMENTAN/RC .120/5/2018 concerning Guidelines for Agriculture-Based Poverty Surgical Program for the 2018 Fiscal Year	Minister of Agriculture of the Republic of Indonesia	Guidelines for implementing the Working Program with the aim of empowering/increasing the capacity of the poor in carrying out agricultural businesses in order to increase income and welfare through integrated agricultural activities	4	0
10	Regulation of the Minister of Agriculture of the Republic of Indonesia No. 43/PERMENTAN/RC .110/11/2018 concerning Guidelines for Agriculture-Based Poverty Surgical Program for the 2019 Fiscal Year	Minister of Agriculture of the Republic of Indonesia	Pedoman dalam melaksanakan Program Bekerja dengan tujuan meningkatkan produktivitas komoditas pertanian melalui peningkatan kapasitas masyarakat miskin dalam melaksanakan usaha pertanian yang terintegrasi	4	0

No	Government Policy related to Poverty Alleviation	Ministries /Affiliations	Substance	Sector	
				E	En
11	Regulation of the President of the Republic of Indonesia No. 54 of 2005 concerning the Poverty Reduction Coordinating Teams	President of the Republic of Indonesia	Formation of a Coordinating Teams for Poverty Reduction which has the task of taking concrete steps to accelerate the reduction of the number of poor people throughout the territory of the Republic of Indonesia through coordination and synchronization of the preparation and implementation of sharpening poverty reduction policies	1	0
12	Regulation of the President of the Republic of Indonesia No. 13 of 2009, concerning Poverty Reduction Coordination	President of the Republic of Indonesia	Improving Presidential Regulation No. 54 of 2005 concerning the Poverty Reduction Coordination Teams to improve coordination which includes synchronization, harmonization, and integrity of various poverty reduction programs and activities	5	1
13	Regulation of the President of the Republic of Indonesia No. 15 of 2010, concerning the Acceleration of Poverty Reduction	President of the Republic of Indonesia	Institutional strengthening at the national level that handles poverty reduction to accelerate poverty reduction which includes target setting, program design and integration, monitoring and evaluation, and budget effectiveness	7	0
14	Regulation of the President of the Republic of Indonesia No. 96 of 2015, concerning Amendments to Presidential Regulation No. 15 of 2010 concerning	President of the Republic of Indonesia	Adjustment of the membership of the National Team for the Acceleration of Poverty Reduction to support and further expedite the implementation of the tasks of the National Team for the Acceleration of	2	0

No	Government Policy related to Poverty Alleviation	Ministries /Affiliations	Substance	Sector	
				E	En
	the Acceleration of Poverty Reduction		Poverty Reduction and a change in cabinet for the 2014-2019 period		
15	Regulation of the President of the Republic of Indonesia No. 166 of 2014, concerning the Poverty Reduction Acceleration Program	President of the Republic of Indonesia	Sharpening social protection programs in an effort to increase the effectiveness and efficiency of the program to accelerate poverty reduction	2	0
16	Instruction of the President of the Republic of Indonesia No. 4 of 2022	President of the Republic of Indonesia	Eliminate extreme poverty throughout the territory of the Republic of Indonesia in 2024, through program integration and synergy, as well as cooperation between ministries/agencies and local governments	9	3
Total				67	8

Information:

E : Economy

Ed : Energy

Table 7. Analysis of the Results of Hypothesis Testing and Mapping of Government Regulations

Variable	Poverty Alleviation	Government Regulation Mapping	Analysis
Energy	Influential	8	- The Energy variable significantly affects poverty alleviation, but when viewed from the central government regulations related to poverty alleviation, there are only 8 (eight) mentions of Energy. So here it is necessary to increase the
Government Policy on Energy	Influential		

			<p>government's seriousness in strengthening energy access, one of the leading sectors in poverty alleviation, because Energy is a crucial component of every development strategy, including poverty alleviation.</p> <ul style="list-style-type: none"> - There is a need to increase access to energy because it can increase people's access to adequate, affordable, and sustainable energy so that it will be able to increase living standards and facilitate human development. - The need for attention related to energy in overcoming problems: <ol style="list-style-type: none"> 1. The gap in the development of Indonesia's energy infrastructure and electricity infrastructure is currently still more centered on the Java, Madura and Bali regions. 2. Energy development is also seen to benefit the upper class society, but does not have a significant impact on poverty alleviation. 3. Banyak subsidi tetapi ternyata kurang tepat sasaran kepada masyarakat miskin.
--	--	--	---

Poverty alleviation cannot be separated from community building. The electricity network, which currently only covers 81.5% of the population, is significant for increasing the welfare and opportunities of the villagers. Indonesia's development still leaves various problems of disparity (gaps) and connectivity; this situation shows uneven development and needs to be on target. Energy development is also seen to benefit upper-class society and has a less significant impact on poverty alleviation. Energy must open up various other job opportunities so that it does take not only profits but also empowers the weak.

D. CONCLUSION

1. The relationship between the Energy variable and the Economy has a t-statistic value of 1.378 (below 1.96) and a p-value of 0.168 (above 0.05). From these results, it can be concluded that Hypothesis 1 has no significant

effect, which means that Energy has no significant effect on the Economy. Ensuring adequate access to energy is very important in the national development strategy, so efforts to improve people's access to adequate, affordable and sustainable energy services should be necessary. Access to energy can break the vicious cycle of poverty, allowing people to escape the trap of cycles of deprivation and low incomes.

2. The relationship between the energy performance variable and poverty alleviation has a t-statistic value of 2.422 (above 1.96) and a p-value of 0.015 (below 0.05). From these results, it can be concluded that Hypothesis 2 has a significant effect. It means that Energy has a significant effect on Poverty Alleviation. This research suggests that for energy development that touches all sectors so that it does not only benefit the upper class, assistance must be right on target and have a significant effect on poverty alleviation. The energy industry must open up various job opportunities so that it not only makes profits but also empowers the weak.
3. Government policy significantly moderates the influence of Energy on Poverty Alleviation, although it has a negligible effect on measuring the effect size. It means that the government budget in the Energy sector significantly reduces poverty in Indonesia, although it has a negligible effect. In order to obtain optimal results, the study results suggest sharpening energy subsidy targets on a prudent and gradual basis based on the validity aspect of beneficiary data, encouraging the use of New and Renewable Energy (EBT) in various sectors, and strengthening the value of local strengths in creating supply energy through the use of local renewable data sources.

REFERENCES

- Allcott, H., et al. (2016). How Do Electricity Shortages Affect Industry? Evidence from India. *The American Economic Review*, 106(3), pp. 587–624. <http://www.jstor.org/stable/43821465>.
- Bappenas. (2017). Metadata Indikator Tujuan Pembangunan Berkelanjutan (TPB)/Sustainable Development Goals (SDGs) Indonesia. Kementerian Perencanaan Pembangunan Nasional (Bappenas).
- Diallo, A., and Kouame, M. R. (2020). Does access to Electricity affect poverty? Evidence from Cote d'Ivoire. 40 (3), pp. 2521-2537.
- Emodi, N.V., and Boo, K.J. (2015). Sustainable Energy Development in Nigeria: Overcoming Energy Poverty. *International Journal of Energy Economics and Policy*, 5 (2), pp. 590-597.
- European Union. (2018). *Energy For Poverty Reduction and Sustainable Development*. European: European Union.
- Fariz, M., and Muljaningsih, S. (2015). "Pengaruh Konsumsi Energi Terhadap Pertumbuhan Ekonomi di Indonesia Periode 1980-2012." *Jurnal Ilmiah Mahasiswa FEB* 3.

- Fauzi, A., and Oxtavianus, A., (2014). Pengukuran Pembangunan Berkelanjutan di Indonesia. *Jurnal Ekonomi Pembangunan*, Vol: 15, No: 1, June 2014, pp. 68-83.
- Hair, J. F., et al. (2014). Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research. *European Business Review*, Vol 26, No: 2, pp. 106-121.
- Houghton, J, and Shahidur, R, K. (2009). *Handbook on Poverty and Inequality*. Washington DC., USA: World Bank.
- Intergovernmental Panel Climate Change - IPCC. (2018). Summary for Policymakers. Global Warming of 1.5 °C. In *An IPCC Special Report on the Impacts of Global Warming of 1.5 °C above Pre-Industrial Levels and Related Global Greenhouse Gas Emission Pathways, in the Context of Strengthening the Global Response to the Threat of Climate Change, Sustainable Development, and Efforts to Eradicate Poverty*; Masson-Delmotte, V.P., Zhai, H.-O., Pörtner, D., Roberts, J., Skea, P.R., Shukla, A., Pirani, W., Moufouma-Okia, C., Péan, R., et al., Eds.; IPCC: Geneva, Switzerland, p. 32.
- Ishartono and Rahajo. (2016). Sustainable Development Goals (SDGs) dan Pengentasan Kemiskinan. *Social Work Journal*, Vol: 6, No: 2, pp: 154-272.
- Jaclyn, B. (2015). Crisis proportions: EU energy markets impacting energy poverty . *Fierce Energy*. Newton. June 30, 2015.
- Junjua, P.Z., and Kamal, U.A. (2014). The Role of Education and Health in Poverty Alleviation A Cross Country Analysis. *British Journal of Economics, Management and Trade*. 4 (2) pp. 896-924.
- Ngoyo, M.F.S. (2015). Mengawal Sustainable Development (SDGs): Meluruskan Orientasi Pembangunan Yang Berkeadilan. *Jurnal Sosioreligius*. Vol: I No: 1 June 2015, pp. 77-88.
- Pratiwi, D.R. (2021). Analisis Hubungan Kausalitas Pertumbuhan Ekonomi, Konsumsi Energi dan Emisi CO₂ di Indonesia pada Periode 1980 – 2019, *Jurnal Budget* Vol 6 No: 1, 2021. Pusat Kajian Anggaran Badan Keahlian DPR RI.
- Riyanta, S and Kurniati, P.N. (2018). Strategi Tata Kelola Kolaboratif Antara Aktor Pemerintah dan Non Pemerintah dalam Pengentasan Kemiskinan. *Jurnal Analis Kebijakan*, Vol. 2, No.2, 2018 pp. 24-38.
- Salim, E. (1990). *Konsep Pembangunan Berkelanjutan*, Jakarta.
- Santilan, et al. (2020). Analysis of Energy Poverty in 7 Latin American Countries Using Multidimensional Energy Poverty Index, *Journal of Energies*, 2020, 13, 1608.
- Sugiyarto, et al. (2015). Kemiskinan dan Ketimpangan Pendapatan Rumah Tangga di Kabupaten Bojonegoro. *Jurnal Agro Ekonomi* Vol: 26, No: 2, December 2015.
- Sugiyono. (2017). *Metode Penelitian Kombinasi (Mixed Method)*. Bandung: Alfabeta.
- Susanto, et al. (2013). “Uji Kausalitas antara Konsumsi Energi dan Pertumbuhan Ekonomi Di Asean.” *Buletin Ekonomi* 11(1) pp. 1–6.
- United Nations Development Programme. *World Energy Assessment Energy and the Challenge of Sustainability*, 1st ed.; UNDP: New York, NY, USA, 2000; p. 44.