Injurity: Interdiciplinary Journal and Humanity
Volume 3, Number 12, December 2024
e-ISSN: 2963-4113 and p-ISSN: 2963-3397

LEGAL POLICY STRATEGY FOR BANKING LENDING IN SUPPORT OF SUSTAINABLE ENERGY SECTOR TO ACHIEVE COMMUNITY WELFARE

Redy Rahmad Samosir[1], Abdullah Sulaiman[2], Megawati Barthos[3]
[1,3]Universitas Borobudur, Indonesia
[2]Universitas Islam Negeri Syarif Hidayatullah, Indonesia
Email: redyrahmad@yahoo.com

Abstract

The development of the sustainable energy sector in Indonesia is an important effort in supporting the transition to a green economy. This research delineates specific issues to be addressed, focusing on three main questions: (1) What policies govern the distribution of bank credit to support sustainable energy projects undertaken by micro, small, and medium enterprises (MSMEs) in Indonesia? (2) What is the role of government policies and related regulations in supporting sustainable energy financing? (3) What are the challenges that MSMEs face in securing financing for sustainable projects? (4) What areas are the critical areas for policy improvement and regulatory support? This research could explore innovative strategies to enhance understanding of green finance options and improve the readiness of MSMEs to engage with banks. This study contributes to the understanding of the intersection between banking policy, government regulation, and sustainable energy development in Indonesia.

Keywords: sustainable energy; banking policy; community welfare; lending; micro, small and medium enterprises

INTRODUCTION

New Renewable Energy (NRE), also known as Sustainable Energy, is very important in Indonesia in facing the challenges of climate change and meeting the increasing national energy needs. In fact, although the potential of NRE in Indonesia is huge, its utilization is still not optimal, and this is due to various obstacles, including limited access to adequate financing. Sustainable energy is becoming an increasingly important global issue as awareness of climate change and its impact on the environment and economy increases (Malihah, 2022). Sustainable energy is needed in Indonesia not only to reduce greenhouse gas emissions, but also to ensure the availability of sufficient and affordable energy for the community (Apriliyanti & Rizki, 2023). The Indonesian government has recognized the importance of sustainable energy and listed it as one of the priorities in the 2005-2024 Medium-Term Development Plan. The Medium-Term Development Plan sets goals to reduce dependence on fossil fuels and increase the use of renewable energy (Setyono et al., 2019).

The development of the sustainable energy sector in Indonesia is an important part of efforts to achieve community welfare. Sustainable energy not only offers solutions to reduce environmental impact, but also makes a significant contribution to inclusive and sustainable economic growth. In this context, the strategic policy of bank credit distribution plays a crucial role in encouraging financing for the sustainable energy sector. Banks as financial institutions have the responsibility to allocate financial resources appropriately to support sustainability-oriented projects, in line with the 2005-2024 Medium-Term Development Plan (RPJM) which targets an increase in the contribution of renewable energy to the national energy mix.

Dependence on fossil fuels, including coal, gas, and oil, has dominated the world's energy market (Berlianto & Wijaya, 2022). It is well known that the use of fossil fuels

produces large emissions of greenhouse gases, such as carbon dioxide (CO2), which contribute greatly to climate change (Berlianto & Wijaya, 2022). The use of fossil energy often causes social injustice, where underprivileged communities tend to be more exposed to the negative impacts of fossil energy exploitation activities (Romadhon & Subekti, 2023). For example, many communities in coal mining areas or oil fields experience environmental and health degradation due to these activities (Rahma et al., 2022). The transition to renewable energy, as such, is also an effort to remedy social injustices and ensure that energy development is carried out in a more inclusive and equitable manner (Carley & Konisky, 2020; Heffron, 2022; Johnson et al., 2020; Levenda et al., 2021; Setyowati, 2021). Quoted from the website of the Ministry of Environment and Forestry with the title "Indonesia Energy Emergency": "Indonesia has been a net importer of crude oil since 2003 and is projected to become a full importer of gas by 2025 and coal by 2049, necessitating urgent action to promote new and renewable energy (NRE). The country faces an energy emergency, as highlighted by BPPT Head Unggul Priyanto, with fossil fuels still dominating its energy mix—producing only 700,000-800,000 barrels of the 1.6 million barrels of petroleum consumed daily, leading to a significant trade deficit. Indonesia's energy needs are expected to surge, increasing 2.3 times by 2030 and 5.7 times by 2050, primarily driven by industrial and transportation demands. While the reliance on energy imports poses challenges, it also presents an opportunity to advance NRE development, which has been stagnant. BPPT suggests that nuclear energy could play a crucial role in replacing coal, potentially fulfilling 73 percent of power plant needs, while water resources remain underutilized due to geographic challenges. Strong determination is essential for harnessing these renewable resources effectively."

Kurtubi, a member of Commission VII and Chairman of the Parliamentary Nuclear Caucus, emphasizes the urgent need to begin constructing nuclear power plants (NPPs) to prevent rising energy imports and costs. Despite this, there remains significant public resistance to nuclear energy, primarily due to safety concerns stemming from incidents like the Fukushima disaster. However, the development of fourth-generation reactors promises enhanced safety features. Nuclear energy is advantageous due to its capacity for continuous operation, low emissions, and the availability of uranium resources in Indonesia, albeit requiring enrichment. Former State Electricity Company Director Nur Pamudji supports nuclear as a viable energy option that could transform electricity usage norms, including for vehicles and cooking. Nonetheless, he notes that nuclear development should complement, rather than replace, other forms of renewable energy, as Indonesia's diverse geography necessitates tailored energy solutions based on local conditions.

Regulation of the Minister of Energy and Mineral Resources Number 12 of 2017 concerning the Utilization of Renewable Energy Resources for the Supply of Electricity is also an important legal basis in this context. This regulation provides incentives for the development of renewable energy projects and controls the sources of funding available to Micro, Small and Medium Enterprises. This regulatory support is expected to increase banks' interest in distributing credit for sustainable energy projects, while reducing the risks they face.

Table 1. Realization of New and Renewable Energy (NRE) Investment

Number	Year	Investment Value (billion US$)	Information
1	2017	1.96	
2	2018	1.53	
3	2019	1.71	
4	2020	1.36	
5	2021	1.60	

6	2022	1.60	
7	2023	1.50	
8	2024	2.6	Target 2024

Source: Kementrian ESDM (2024)

Table 1 presents data on the realization of investment in the New and Renewable Energy (NRE) sector in Indonesia during the period 2017 to 2023, as well as investment targets for 2024. This data shows fluctuations in the value of investment from year to year, with the highest value recorded in 2017 of US$1.96 billion, while in 2020 it experienced a significant decrease to reach US$1.36 billion. Although there was a slight increase in the following years, the value of investment was relatively stable in the range of 1.5 to 1.6 billion US$ between 2021 and 2023. The Government of Indonesia, through the Ministry of Energy and Mineral Resources (EMR), is targeting a significant increase in NRE investment by 2024 with a target of US$2.6 billion, reflecting a strong commitment to meeting the energy mix target from NRE. This table provides an overview of the challenges and efforts made to increase investment in the NRE sector, which is one of the main pillars in Indonesia's sustainable energy transition.

To achieve targeted outcomes, this research delineates specific issues to be addressed, focusing on three main questions: (1) What policies govern the distribution of bank credit to support sustainable energy projects undertaken by micro, small, and medium enterprises (MSMEs) in Indonesia? (2) What barriers prevent MSMEs from accessing banking credit for sustainable energy initiatives? (3) What role do government policies and relevant regulations play in facilitating the distribution of bank loans within the sustainable energy sector? This research contributes to the understanding of the intersection between banking policy, government regulation, and sustainable energy development in Indonesia. By identifying the challenges MSMEs face in securing financing for sustainable projects, the study highlights critical areas for policy improvement and regulatory support. This insight is essential for fostering a more favorable environment for sustainable energy initiatives, ultimately aiding in the transition to greener energy solutions within the MSME sector.

RESEARCH METHOD

The research method employed combines normative juridical and empirical juridical approaches, allowing for a thorough examination of legal frameworks and their practical implementation in the context of banking lending for sustainable energy projects. This integrated methodology focuses on existing laws and regulations while also collecting data on how these laws affect community welfare initiatives. The research includes both qualitative data, such as insights from interviews and case studies, and quantitative data on banking lending and community welfare indicators.

Data collection involves primary sources, including interviews with stakeholders like bank officials and MSME representatives, as well as surveys to understand the challenges MSMEs face in accessing loans for sustainable energy projects. Secondary sources comprise government reports, academic literature, and industry analyses. The analysis techniques include thematic analysis for qualitative data, statistical methods for quantitative data, and comparative analysis to evaluate the effectiveness of banking policies across different regions. This comprehensive approach aims to identify strategies that enhance community welfare through improved banking support for sustainable energy initiatives.

RESULT AND DISCUSSION

Banking credit distribution policy in support of sustainable energy projects run by micro, small and medium enterprises in Indonesia

The distribution of bank credit for sustainable energy projects run by micro, small and medium enterprises in Indonesia is an important effort in supporting the transition to a green economy. These policies not only contribute to the reduction of carbon emissions and environmental protection, but also support inclusive and sustainable economic growth. One of the crucial policies in this context is POJK Number 51/POJK.03/2017 concerning Sustainable Finance issued by the Financial Services Authority.

POJK Number 51/POJK.03/2017 is a regulation that regulates the application of sustainable finance principles for financial service institutions, issuers, and public companies in Indonesia. This regulation aims to integrate environmental, social, and Environmental, Social, and Governance aspects in the business practices of financial institutions. Thus, it is expected to support the financial services sector as a whole and increase the competitiveness of financial services institutions themselves in contributing to national development. Financial institutions can play an active role in supporting projects that contribute to environmental and social sustainability, including renewable energy projects run by micro, small and medium enterprises.

a. Policy Objectives and Objectives, One of the main objectives of Financial Services Authority Regulation Number 51/POJK.03/2017 is to encourage financial services institutions to allocate their financial resources to sustainable projects. This policy is expected to create a financial ecosystem that supports sustainable development, with micro, small and medium enterprises as one of the main targets for beneficiaries. In this context, policy effectiveness is measured by how well financial institutions can channel credit to the sustainable energy sector run by micro, small and medium enterprises.
b. Implementation and Policy Impact, The implementation of Financial Services Authority Regulation Number 51/POJK.03/2017 requires a commitment from financial institutions to prepare a sustainable financial action plan. Financial institutions are required to identify and assess ESG risks and integrate them in the credit decision-making process. In addition, financial institutions must also report their ESG performance regularly.

The results of the researcher's question and answer with the resource persons of the Directorate General of New, Renewable Energy and Energy Conservation and Energy Conservation of the Ministry of Energy and Mineral Resources (ESDM), found that several banks have taken significant steps in implementing this policy. For example, several major banks in Indonesia have launched green credit products specifically designed to fund renewable energy projects. This product provides more flexible terms and conditions compared to conventional credit products, making it more accessible to micro, small and medium enterprises.

c. Policy Analysis of Banking Credit Distribution Policy in Supporting Sustainable Energy Projects. This policy can be seen from the increase in the number of credits channeled to sustainable energy projects by micro, small and medium enterprises. Data shows that since the enactment of Financial Services Authority Regulation Number 51/POJK.03/2017, there has been a significant increase in the number of green loans provided by banks. However, challenges still remain, especially in terms of understanding and application of Environmental, Social, and Governance principles among banks and micro, small and medium enterprises.

The results of an interview with the OJK Institute, Department of Strategic Planning and Finance stated: "The implementation of sustainable financial policies requires a paradigm

shift among financial institutions. Banks need to look at sustainable energy projects not only in terms of risk, but also in terms of long-term opportunities and benefits for the justice and welfare of the Indonesian people."

This suggests that in order to achieve maximum effectiveness, banks must have a better understanding of the long-term benefits of sustainable energy projects.

d. Obstacles and Challenges in Implementation, Several obstacles still hinder the full effectiveness of the Financial Services Authority Regulation Number 51/POJK.03/2017. One of the main obstacles is the lack of understanding and education about sustainable finance among micro, small and medium enterprises and banks. Many micro, small and medium-sized enterprises are not yet aware of the financing opportunities available for sustainable energy projects, while many banks are still using traditional risk assessment approaches that are less suitable for renewable energy projects.

Another inhibiting factor is the inadequacy of data and information on Environmental, Social, and Governance performance. Financial institutions often find it difficult to collect and analyze relevant data to accurately assess Environmental, Social, and Governance risks and opportunities. This causes difficulties in making credit decisions based on the principles of sustainable finance.

The hampering of micro, small and medium enterprises in accessing banking credit for sustainable energy projects

Green financial products, such as green bonds and green loans, are important instruments in financing sustainable energy projects. However, many micro, small and medium enterprises still do not fully understand the concept and benefits of these financial products (Hadi et al., 2022). According to research conducted by the World Bank, the low understanding of micro, small and medium enterprises towards green finance products is one of the main obstacles in accessing sustainable energy financing. Green finance products are designed to provide financial support to projects that contribute to environmental sustainability, but are often considered complex and difficult to access by micro, small and medium-sized enterprises.

Green bonds, as one of the green financial products, are debt instruments issued to raise funds to support green projects. This instrument is usually marketed to investors who have concerns about the environment (Cendekiawan & Firmansyah, 2024). However, many micro, small and medium enterprises do not have enough knowledge about how green bonds work, what requirements must be met, and how to access them. This is due to the lack of education and training programs available to micro, small and medium enterprises on green finance products. Researchers found that most micro, small and medium-sized businesses are confused by the terminology and technical requirements that often accompany these products.

Green loans are another form of green financial product provided by banks to fund sustainable projects. Although green loans have great potential to support renewable energy projects, micro, small and medium-sized enterprises' understanding of these products is also limited. Many micro, small and medium enterprises do not know about green loans or do not understand the criteria needed to get these loans (Fidela et al., 2020). According to a report from the Financial Services Authority in 2019, many micro, small and medium enterprises feel that information on green loans is not available in a transparent and easily accessible manner.

Based on the results of the discussion during the researcher's interview with representatives of the Ministry of Investment / Investment Coordinating Board (BKPM), this lack of understanding is not only caused by the complexity of green financial products themselves, but also by the lack of initiative from financial institutions in socializing and

educating micro, small and medium enterprises about these products. Adequate education and training are urgently needed to improve the understanding of micro, small and medium enterprises about green finance products and how they can leverage these products to fund sustainable energy projects.

Limited in understanding, micro, small and medium enterprises also often face obstacles in accessing relevant information regarding sustainable energy financing. Access to adequate information is an important prerequisite for micro, small and medium enterprises to be able to take advantage of green financial products. However, in many cases, information regarding financing opportunities, requirements, and application processes is not easily accessible to micro, small and medium-sized enterprises.

One of the main obstacles is the lack of an integrated and easily accessible information platform (Valdiansyah & Widiyati, 2024). Information on green financial products is often scattered across multiple sources and is not centralized, making it difficult for micro, small and medium enterprises to obtain a comprehensive picture. For example, information about green bonds and green loans may be available on the websites of banks or financial institutions, but they are not always presented in a way that is easy for micro, small and medium-sized enterprises to understand.

Financial Services Authority Regulation Number 51/POJK.03/2017 concerning the Implementation of Sustainable Finance requires financial services institutions to develop policies and strategies that support sustainable finance. Article 2 of this regulation stipulates that financial institutions must improve financial literacy and provide transparent information to the public, including micro, small and medium enterprises. However, the implementation of these regulations is often not optimal. Many financial institutions have not fully fulfilled this obligation, so information on green financing remains difficult for micro, small and medium enterprises to access.

A business culture that tends to be conservative and less innovative among micro, small and medium enterprises is also an inhibiting factor in accessing information. Many micro, small and medium-sized enterprises are reluctant to seek information or participate in training programs because they feel that the process is time-consuming and irrelevant to their needs (Fauziah et al., 2020). Researchers found that this attitude can be overcome with a more proactive approach from banks and governments in providing relevant and easily accessible information.

Barriers to access to information can also be seen from the lack of support from business associations and supporting institutions for micro, small and medium enterprises. Business associations and supporting institutions often have an important role in disseminating information and providing technical support to micro, small and medium-sized enterprises (Suyadi & Suryani, 2018). However, many associations do not have special programs to support sustainable energy financing. Existing programs often focus more on general business aspects and do not pay special attention to green financing opportunities and mechanisms.

Lack of information and education is a significant challenge that hinders micro, small and medium enterprises from accessing banking credit for sustainable energy projects (Maryama, 2018). These challenges require comprehensive attention and solutions, including improving financial literacy, providing an integrated information platform, and greater support from governments, financial institutions, and business associations. By overcoming these barriers, it is hoped that micro, small and medium-sized enterprises can more easily access the financing needed to fund sustainable energy projects, which in turn will contribute to environmental sustainability and improve people's well-being.

The role of government policies and related regulations in supporting the distribution of banking loans for the sustainable energy sector

The Role of Government Policy in the Distribution of Bank Loans for Sustainable Energy. Government policies have a very important role in supporting the distribution of bank loans for sustainable energy projects. This policy provides the necessary regulatory framework to encourage banks to channel credit to sectors that contribute to reducing carbon emissions and improving energy efficiency. Through the analysis of various government policies, it can be understood how these regulations facilitate the distribution of green credit and overcome existing obstacles.

First, government policies that support sustainable energy can be seen from the 2005-2024 National Medium-Term Development Plan (RPJMN). The RPJMN provides strategic direction for the development of renewable energy in Indonesia, with the aim of increasing the use of renewable energy to reach certain targets. One of the main policies in the RPJMN is to increase investment in renewable energy, which is expected to be supported by the banking sector through the distribution of green credit. This policy provides a basis for banks to allocate credit funds to renewable energy projects, in the hope of improving people's welfare through reducing energy costs and creating jobs.

Financial Services Authority Regulation No. 51/POJK.03/2017 concerning the Implementation of Sustainable Finance for Financial Services Institutions, Issuers, and Public Companies is a key policy in supporting the distribution of bank credit for sustainable energy projects. Article 2 of this regulation requires financial services institutions to integrate sustainability principles in their business activities. This includes the development of financial products that support renewable energy projects and increasing financial literacy regarding green financing among customers and business actors.

Financial Services Authority Regulation Number 60/POJK.04/2017 on Green Bonds also provides a significant boost to sustainable energy financing. This regulation allows the issuance of green bonds that are used to fund projects that have a positive impact on the environment. Article 3 of this regulation states that funds obtained from green bonds should be used for projects that contribute to the reduction of carbon emissions and the improvement of energy efficiency. With this regulation, banks and other financial institutions have additional instruments to channel credit to renewable energy projects, ultimately supporting national sustainability goals.

Law No. 3 of 2004 on Bank Indonesia also plays an important role in supporting the policy of disbursing credit for sustainable energy. This law regulates monetary policy and financial stability that supports sustainable economic growth. Article 7 of this Law states that Bank Indonesia is responsible for achieving and maintaining rupiah value stability, which also includes financial system stability. In this context, the disbursement of credit for sustainable energy projects can be seen as part of efforts to maintain long-term economic stability through environmentally friendly investments.

Regulation of the Minister of Energy and Mineral Resources Number 12 of 2017 concerning the Utilization of Renewable Energy Resources for the Provision of Electricity is an energy sector policy that supports the distribution of bank loans. Article 2 of this regulation regulates the obligation to provide electricity from renewable energy sources by private power companies. This policy encourages investment in the renewable energy sector and opens up opportunities for banks to provide financing for renewable energy projects. In its implementation, this policy is expected to increase banking participation in supporting sustainable energy through easier and more affordable credit distribution.

Law Number 4 of 2023 concerning the Development and Strengthening of the Financial Sector (P2SK) also has an important role in supporting credit distribution for sustainable energy. Article 3 of this law states that one of the goals of financial sector

development is to support inclusive and sustainable economic growth. Thus, this regulation provides a legal basis for financial institutions to allocate credit funds to sectors that contribute to environmental sustainability, including renewable energy.

There are various policies and regulations that support the implementation of bank credit distribution for sustainable energy, which still faces various challenges. One of the main challenges is the lack of understanding among banks about the benefits and risks of renewable energy projects. Many banks still consider renewable energy projects to be high-risk investments, resulting in low levels of credit disbursement to the sector. Therefore, efforts are needed to increase financial literacy among banks and other stakeholders regarding the long-term benefits of green investment.

Challenges related to coordination between various government agencies and the banking sector. Policies that support the distribution of green credit are often not followed by effective coordination between the government, banks, and business actors. This results in policy implementation not running optimally. To overcome these challenges, closer cooperation is needed between the government, financial services authorities, Bank Indonesia, and the banking sector in developing programs that support credit disbursement for sustainable energy. In this context, law and economics are very relevant. The effectiveness of a legal policy is not only determined by its normative provisions, but also by its application and implementation in the social context of society. Therefore, the policy of distributing green credit must be followed by concrete steps that ensure effective implementation in the field.

In supporting the distribution of bank credit for sustainable energy, the government may also consider the development of fiscal and non-fiscal incentives for banks participating in green financing. These incentives can be in the form of tax reductions, interest subsidies, or awards for banks that have successfully achieved the target of distributing green credit. In addition, the government can also develop training and education programs for banks and micro, small and medium enterprises on the benefits and financing mechanisms of renewable energy.

Existing government policies and regulations have provided a solid basis to support the distribution of bank credit for sustainable energy. However, the success of the implementation of this policy is highly dependent on understanding and cooperation between various parties involved, including the government, financial institutions, and business actors. With the right policies and effective implementation, it is hoped that the distribution of credit for renewable energy projects can increase, which in turn will contribute to community welfare and environmental conservation.

CONCLUSION

An effective legal policy strategy for distributing banking credit to support Indonesia's sustainable energy sector requires a combination of specific government regulations and financial product innovation, exemplified by policies like POJK Number 51/POJK.03/2017 and POJK Number 60/POJK.04/2017, which aim to foster the development of green financial products. However, the implementation of these policies faces significant challenges, including limited information, high risk perception among micro, small, and medium enterprises (MSMEs), strict credit requirements, and a lack of capacity and resources. To improve access to green finance, collaboration among governments, banks, and MSMEs is crucial, as well as enhanced technical support and educational initiatives. Future research could focus on evaluating the effectiveness of these policies in promoting green financial products and investigating targeted capacity-building programs to better equip MSMEs for engaging with banking institutions and overcoming existing barriers.

REFERENCES

Apriliyanti, K., & Rizki, D. (2023). Kebijakan Energi Terbarukan: Studi Kasus Indonesia Dan Norwegia Dalam Pengelolaan Sumber Energi Berkelanjutan. *Jurnal Ilmu Pemerintahan Widya Praja*, *49*(2).

Berlianto, D. M. F., & Wijaya, R. S. (2022). Pengaruh transisi konsumsi energi fosil menuju energi baru terbarukan terhadap produk domestik bruto di Indonesia. *E-Jurnal Perspektif Ekonomi Dan Pembangunan Daerah*, *11*(2). https://doi.org/10.22437/pdpd.v11i2.17944

Carley, S., & Konisky, D. M. (2020). The justice and equity implications of the clean energy transition. *Nature Energy*, *5*(8). https://doi.org/10.1038/s41560-020-0641-6

Cendekiawan, M., & Firmansyah, A. (2024). Pengembangan Green Bonds Di Indonesia: Upaya Pemerintah Untuk Mewujudkan Keuangan Berkelanjutan. *Journal of Law, Administration, and Social Science*, *4*(1). https://doi.org/10.54957/jolas.v4i1.714

Fauziah, F., Nurfadillah, M., & Karhab, R. S. (2020). Meningkatkan Produktivitas Pelaku UMKM melalui Pelatihan Perencanaan Bisnis. *Jurnal Abdimas Mahakam*, *4*(1). https://doi.org/10.24903/jam.v4i1.716

Fidela, A., Pratama, A., & Nursyamsiah, T. (2020). Pengembangan Usaha Mikro Kecil dan Menengah (UMKM) dengan Program Pemasaran Desa Jambu Raya di Desa Jambu , Kabupaten Sumedang. *Jurnal Pusat Inovasi Masyarakat*, *2*(3).

Hadi, F., Endarto, B., & Gandryani, F. (2022). Aspek Hukum Green Bond Sebagai Pembiayaan Energi Baru Terbarukan Di Indonesia. *Jurnal RechtsVinding*, *11*(3).

Heffron, R. J. (2022). Applying energy justice into the energy transition. *Renewable and Sustainable Energy Reviews*, *156*. https://doi.org/10.1016/j.rser.2021.111936

Johnson, O. W., Han, J. Y. C., Knight, A. L., Mortensen, S., Aung, M. T., Boyland, M., & Resurrección, B. P. (2020). Intersectionality and energy transitions: A review of gender, social equity and low-carbon energy. In *Energy Research and Social Science* (Vol. 70). https://doi.org/10.1016/j.erss.2020.101774

Kementrian ESDM. (2024). *Menteri ESDM Ungkap Strategi Penuhi Target Bauran Energi dari EBT*. Kementrian ESDM.

Levenda, A. M., Behrsin, I., & Disano, F. (2021). Renewable energy for whom? A global systematic review of the environmental justice implications of renewable energy technologies. *Energy Research and Social Science*, *71*. https://doi.org/10.1016/j.erss.2020.101837

Malihah, L. (2022). Tantangan Dalam Upaya Mengatasi Dampak Perubahan Iklim Dan Mendukung Pembangunan Ekonomi Berkelanjutan: Sebuah Tinjauan. *Jurnal Kebijakan Pembangunan*, *17*(2). https://doi.org/10.47441/jkp.v17i2.272

Maryama, S. (2018). Kendala Usaha Mikro Dalam Mengakses Kredit Usaha Rakyat (KUR). *Liquidity*, *4*(1). https://doi.org/10.32546/lq.v4i1.82

Rahma, N. D., Rizka, Y., Nufus, W., Saraswati, N. A., & Chairani, S. (2022). Dampak Pertambangan Batu Bara Pada Kesehatan Lingkungan: A Systematic Review. *Health Safety Environment Journal*, *2*(2).

Romadhon, F. D., & Subekti, R. (2023). Analisis Pengaturan Energi Terbarukan Dalam Kendaraan Berbasis Elektrik Untuk Mendukung Perlindungan Lingkungan (Analisis Komparatif Antara Indonesia, Brazil, dan Pakistan). *Jurnal Pacta Sunt Servanda*, *4*.

Setyono, J. S., Mardiansjah, F. H., & Astuti, M. F. K. (2019). POTENSI PENGEMBANGAN ENERGI BARU DAN ENERGI TERBARUKAN DI KOTA SEMARANG. *Jurnal Riptek*, *13*(2).

Setyowati, A. B. (2021). Mitigating inequality with emissions? Exploring energy justice and financing transitions to low carbon energy in Indonesia. *Energy Research and Social Science*, *71*. https://doi.org/10.1016/j.erss.2020.101817

Suyadi, S., & Suryani, S. (2018). Analisis Pengembangan Usaha Mikro Kecil dan Menengah (UMKM) di Kabupaten Bengkalis-Riau. *Jurnal Infoskop*, *1*(Upaya pengembangan umkm).

Valdiansyah, R. H., & Widiyati, D. (2024). Peranan Sustainable Finance Pada Industri UMKM Indonesia: Peluang Dan Tantangan. *Journal of Law, Administration, and Social Science*, *4*(1). https://doi.org/10.54957/jolas.v4i1.713