Synchronization of Green Bond Regulations as Financing for Battery Electric Vehicle Conversion in Indonesia

by Yulis Setyowati

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Budi Endarto, Profesi dosen di universitas wijaya putra, email: budiendarto@uwp.ac.id.

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Budi Endarto, born in Surabaya, April 9 1968. The author in addition to working as a lecturer at the Faculty of Law, Wijaya Putra University, also works as a Capital Market Legal Consultant and Partner at Zaidun and Partners, Counselors & Attorneys at Law.

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Full Paper

Abstract

Transportation is still the largest emission-contributing sector in Indonesia. This is due to its massive growth and reliance on fossil fuels. Although the government has set an aggressive electrification target in the transportation sector, if it is not balanced with a financing scheme for energy conversion towards *battery electric vehicles,* it will not get maximum results. For this reason, *battery electric vehicle* conversion industry players can ideally take advantage of financing schemes through the issuance of *green bonds* as one of the *green finance*. However, the government needs to synchronize arrangements and coordination between sectoral institutions such as OJK, Ministry of Finance, Ministry of Industry and Ministry of Transportation to formulate *green bonds* as an alternative financing for the *battery electric vehicle* program. This is expected to encourage the acceleration of the *battery electric vehicle* conversion program and also as an effort to mitigate the energy crisis and reduce fuel energy subsidies.

Keywords: Green Bond, Conversion Finance, Battery Electric Vehicle.

1. Introduction

The 2030 Agenda for Sustainable Development (2030 Agenda) emphasizes 5 elements of development, which include people, planet, prosperity, peace and partnership.[1] Furthermore, Indonesia's efforts to realize the SDG's, one of which is through a program to accelerate the conversion of oil-fueled motor vehicles to electric vehicles by 13 million in 2030.[2] The policy has been outlined in Presidential Regulation Number 55 of 2019 concerning the Acceleration of the Battery Electric Vehicle / EV Program. In addition, to efforts the acceleration of the EV conversion program, the policy is also an effort to mitigate the energy crisis and reduce fuel energy subsidies which reach Rp. 502 Trillion per year.[3]

The EV program is also Indonesia's commitment to oversee the reduction of global carbon dioxide emissions, which was formulated in one of the points of agreement at the G-20 Summit held in Bali in 2022. The 12th point of the 52 agreement points at the G-20 Summit mentions an agreement related to the energy transition and climate crisis. The policy program is a commitment to achieve *net zero emission* which is part of the 2030 Agenda.[4]

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[1] Leonard F Hutabarat, "Pertumbuhan Hijau Berkelanjutan bagi Indonesia di Forum Internasional," *Badan Strategi Kebijakan Luar Negeri: Policy Brief* 7, no. 3 (2022): 1–7.

[2] Luthfi Anshori, "Indonesia Targetkan 13 Juta Motor Listrik dan 2 Juta Mobil Listrik Mengaspal 2030," DetikOto, 2022, https://oto.detik.com/motor/d-6241067/indonesia-targetkan-13-juta-motor-listrik-dan-2-juta-mobil-listrik-mengaspal-2030.

[3] KrisiandiDian Erika, "Jokowi: Subsidi BBM Kita Sudah Rp 502 Triliun, Negara Mana Pun Tak Kuat," KompasCom, 2022, https://nasional.kompas.com/read/2022/08/01/20575151/jokowi-subsidi-bbm-kita-sudah-rp-502-triliun-negara-mana-pun-tak-kuat.

[4] Isma, "Indonesia Serius Mewujudkan Komitmen Net Zero Emission," infopublik.id, 2022, https://www.infopublik.id/kategori/g20/638383/index.html.

However, some of these policies have not been supported by a funding model that is oriented towards *sustainable finance*. The spirit of *sustainable finance* development has been recognized since it was stated in point 18th of the G20 Bali Leaders Declaration 2022 where it was agreed that each G20 member country must develop a *sustainable finance roadmap*.[5] Sejatinya Indonesia telah menyusun Sustainable Finance Roadmap 2021-2025, yang selanjutnya ditindak lanjuti dengan diterbitkannya POJK Nomor 18 Tahun 2023 yang mengatur tentang prosedur penerbitan *thematic bond* yakni *green bond, social bond, sustainable bond dan sustainability-linked bond*.

The regulation of *green bonds* in Indonesia is very important so that the development is in line with environmental conservation efforts.[6] These days, governments, corporations, and institutional banks are issuing green bonds, a burgeoning class of debt securities, to raise money for environmental and climate change adaptation projects.[7] This is increasingly evident from the study data in Southeast Asia, where Indonesia is one of the countries that issued the highest green bonds, in 2019 reaching 58% among 5 other countries. However, the issuance in Indonesia is 99% still dominated by the issuance of government green bonds. This is different when compared to Malaysia and Singapore, which are dominated by the private sector.[8] Based on these data, ideally in the future Indonesia should encourage the private sector to be more active in issuing green bonds.

Related to the topic under discussion, the main problem is an unsynchronization between the regulation of the EV conversion industry and the financing model for the industry. Although Presidential Regulation No. 55 of 2019 does mention the accelerated development of the domestic EV conversion industry. As stipulated in Article 17 which states that the Government provides incentives to industrial companies engaged in this field. However, Article 19 does not clearly mention any specific types of incentives for industrial development or EV conversion business activities. In fact, in practice, the state emphasizes subsidies to motor vehicle owners who want to convert to EVs as reflected in the Minister of Energy and Mineral Resources Regulation No. 3 of 2023. From this problem, industry players in the field of battery electric vehicle conversion must also get an easy financing model. One of the financing options that can be provided to business actors in the battery electric vehicle sector is to utilize the green bond scheme.

When tracing several studies that discuss green bonds, there are differences with this study including the first conducted by Xuanmei Chenf et.all who found that empirical results show a positive relationship between green bond issuance and resource efficiency. The second study was conducted by Jijian Zhang et.all which illustrates that green bonds, a new green financial instrument, encourage companies to achieve high-quality development through green technology innovation, and third Imran Yousaf et.all who found the results of spillovers and hedging effectiveness show that crude oil-based portfolios and green bonds provide great diversification benefits for investors and portfolio managers.

From this description, it can be seen that there is an inconsistency between the regulation of green bonds as green finance and the regulation of battery electric vehicle conversion. Therefore, legal questions arise that are very important to study, namely: Whether green bonds as a financing instrument can encourage acceleration in realizing *net zero emission* which is part of the 2030 Agenda and how the synchronization model of green bond financing legislation with the *battery electric vehicle* conversion program.

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[5] Danu Damarjati, "Ini Isi Lengkap Deklarasi KTT G20 Bali, Ada Poin Alot soal Ukraina," detikNews, 2022, https://news.detik.com/berita/d-6411054/ini-isi-lengkap-deklarasi-ktt-g20-bali-ada-poin-alot-soal-ukraina.

[6] Luthfia Ayu Karina, "Peluang dan tantangan perkembangan green sukuk di Indonesia," *Conference on Islamic Management, Accounting, and Economics (CIMAE) Proceeding* 2 (2019): 259–65.

[7] Dina Azhgaliyeva, Anant Kapoor, dan Yang Liu, "GREEN BONDS FOR FINANCING RENEWABLE ENERGY AND ENERGY EFFICIENCY IN SOUTHEAST ASIA : Asian Development Bank Institute," no. 1073 (2020).

[8] Azhgaliyeva, Kapoor, dan Liu.

2. Method

The method used in this writing is normative legal research of the exploratory type, which is a method used to obtain explanations and data about things that are not yet known. Exploratory type studies are conducted to find new knowledge in a particular field. Exploratory legal studies are intended to explore a new phenomenon that may not have been or rarely used as an object of study before. This is very relevant to studies related to green bonds which are a new study in the field of financial law, especially as one of the capital market instruments in Indonesia. Especially when

associated with the battery electric vehicle program financing model, the novelty of this study will be seen more apparent.

The approach used in this research is a statute approach which is used to examine the norms in the legislation which applies in Indonesia, especially those relating to green bonds and energy conversion in the form of battery electric vehicle development. The review will begin with the regulations related to Indonesia's commitment to realize the Sustainable Development Goals as stipulated in Presidential Regulation No. 59 of 2017 on the Implementation of Achieving Sustainable Development Goals. Furthermore, it will be discussed related to energy conversion policies, especially regulations related to the Conversion of Motorcycles with Fuel Motor Drivers into Battery-Based Electric, as stipulated in Presidential Regulation Number 55 of 2019 concerning the Acceleration of the Battery Electric Vehicle / EV, Minister of Transportation Regulation Number 65 of 2020 on the Conversion of Motorcycles with Fuel Motor Drivers into Battery-Based Electric Motorcycles, and Minister of Transportation Regulation Number 15 of 2022 on the Conversion of Motor Vehicles. From some of these arrangements, alternative financing that is relevant to the field of study, namely green bonds, will be studied. For this reason, it is necessary to study the Financial Services Authority Regulation Number 18 of 2023 concerning the Issuance and Requirements of Debt Securities and Sustainability-Based Sukuk. From some of these regulations, it concentrates on synchronizing efforts between battery electric vehicle conversion programs with alternative financing mechanisms using green bond instruments.

In addition, it also uses a conceptual approach related to doctrines and theories relevant to this study. The use of a conceptual approach is needed to build legal argumentation from concepts or doctrines about green bonds as green finance,and their relevance in relation to arrangements related to battery electric vehicle development programs to realize net zero emission

3. Findings and Discussion

3.1. Policy for Regulating Battery-Based Electric Motor Vehicle Program

SDGs is a long-term world program initiated by the United Nations in order to optimize all the potential and resources owned by each country. The SDGs have 17 (seventeen) goals that must be achieved. The SDGs are targeted to be achieved by 2030 with challenges that are not only quantitatively measurable but also quality-oriented.[9] As a member of the United Nations, Indonesia is also one of the countries participating in the SDGs program. The commitment of the Government of Indonesia is implemented by the enactment of Presidential Regulation No. 59 of 2017 on the Implementation of Achieving Sustainable Development Goals as a first step as well as a juridical basis in the implementation of SDGs in Indonesia.[10]

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[9] Rofiqoh Ferawati, "Sustainable Development Goals di Indonesia: Pengukuran dan Agenda Mewujudkannya Dalam Perspektif Ekonomi Islam," *Kontekstualita* 33, no. 02 (2018): 143–67, https://doi.org/10.30631/kontekstualita.v35i02.512.

[10] Fahmi Irhamsyah, "Sustainable Development Goals (SDGs) dan Dampaknya Bagi Ketahanan Nasional Dampaknya Bagi Ketahanan Nasional," *Jurnal Kajian LEMHANNAS RI* 38 (2019): 45–54.

Among the SDGs, the 7th goal related to affordable and clean energy and the 13th goal on climate action, namely to act fast in mitigating climate change and its impacts are some of the priorities that are prioritized beside the other goals. The Indonesian Government's step related to the both SDG's goals is to take steps to shift energy towards New and Renewable Energy in various fields. One of the concrete step taken by the Government is the conversion of fossil fuel (petroleum) motorized vehicles to battery-based electric vehicles. The acceleration step was carried out by the issuance of Presidential Regulation Number 55 of 2019 concerning the Acceleration of the Battery Electric Vehicle Program for Road Transportation. As a derivative of the Presidential Regulation, the Minister of Transportation Regulation Number 65 of 2020 on the Conversion of Motorcycles with Fuel Motor Drivers into Battery-Based Electric Motorcycles and Minister of Transportation Regulation Number 15 of 2022 on the Conversion of Motor Vehicles other than Motorcycles with Fuel Motor Drivers into Battery-Based Electric Motor Vehicles were issued.

The Government realizes that converting to battery-based electric vehicles is costly. For this reason, specifically for the conversion of motorcycles, the Government has determined that the highest conversion fee is worth Rp.17,000,000 (seventeen million rupiah) for motorcycles with an engine capacity of 110 cc (one hundred ten cubic centimetres) up to 150 cc (one hundred fifty cubic centimetres) as stated in Article 3 paragraph (3) of the Minister of Energy and Mineral Resources Regulation Number 1 of 2023 concerning General Guidelines for Government Assistance in the Conversion Program of Motorcycles with Fuel Motor Drivers to Battery-Based Electric Motorcycles. Of the conversion fee, paragraph (4) states that the Government provides a discount of Rp7,000,000 (seven million rupiah) for each converted motorcycle. As a commitment, the Government has budgeted 1.4 trillion rupiahs allocated to subsidize the conversion program to battery-based electric motorcycles[11] For the sustainability of the conversion program, it should be considered that in the future incentives are not only given to those who convert electric motorcycles with the help of subsidies from the Government. However, financing innovations are needed to make the conversion program a success.

3.2. Green Bond Regulation in Indonesia

In general, regulations related to sustainable finance are regulated in POJK Number 51/POJK.03/2017 concerning the Implementation of Sustainable Finance for Financial Services Institutions, Issuers, and Public Companies (POJK 51/POJK.03/2017). Considering the background of the preparation of POJK 51/POJK.03/2017, it is an effort to realize an economy that grows stably, inclusively and sustainably with the ultimate goal of providing economic and social welfare to all people, as well as protecting and managing the environment wisely in Indonesia. Thus, it can be seen that orientation in the process of economic development must prioritize the harmony of economic, social and environmental aspects. It is realized that the implementation of development only targets to the economic growth, it is feared will cause social inequity and a decrease in environmental quality. Efforts to realize this harmony require support from the financial system that can prevent the practice of funding or investing in business activities that use excessive resources that have the potential to increase social inequality and cause environmental damage.

In addition to POJK 51/POJK.03/2017, there is also a more specific regulation related to debt securities, namely Financial Services Authority Regulation Number 18 of 2023 concerning the Issuance and Requirements of Debt Securities and Sustainability-Based Sukuk (POJK 18/2023) which replaces Financial Services Authority Regulation Number 60 of 2017 concerning the Issuance and Requirements of Environmentally Friendly Debt Securities (Green Bond). The background to the issuance of POJK 18/2023 is that to realize sustainable development that is able to maintain economic stability, a national economic system is needed that prioritizes harmony between the sustainability of the economic,

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[11] Direktorat Jenderal Ketenagalistrikan, "Pemerintah Dorong Badan Usaha Untuk Konversi Motor Listrik," Kementerian Energi dan Sumber Daya Mineral, 2023, https://www.esdm.go.id/id/berita-unit/direktorat-jenderal-ketenagalistrikan/pemerintah-dorong-badan-usaha-untuk-konversi-motor-listrik.

environmental and social aspects. POJK 18/2023 regulates the procedures for issuing green bonds, social bonds, sustainable bonds and sustainability-linked bond.

The basis for the issuance of POJK 18/2023 is that the application of sustainable finance principles as a manifestation of Indonesia's beautiful and sustainable mission is a tangible form of Indonesia's commitment to the international community by providing funding sources to mitigate and adapt to climate change. Thus, the capital market as one of the financial institution systems is expected to apply the principles of sustainable finance. If we look at the regulation related to green bonds, it is motivated by the concept of sustainable development, where economic activities must also be understood to prevent greater negative impacts of climate change.[12]

This is more visible since Indonesia ratified the Paris Agreement through Law Number 16 of 2016 concerning Ratification of the Paris Agreement to The United Nations Framework Convention On Climate Change. The agreement related to the efforts in mitigating climate change is followed by 197 countries that have agreed through the Paris Agreement in 2015, in order to mitigate the climate change that occurs on earth, the participating countries of the agreement agreed to hold the increase of global warming below 2 ° C and continue the efforts in preventing the temperature rise to 1.5° C.[13]

The phenomenon of climate change according to Daniel Murdiarso is a change of climate elements in the long term (between 50 (fifty) and 100 (one hundred) years) which is influenced by human activities that produce greenhouse gas (GHG) emissions. With the existence of climate change, the increasing earth's temperature is being a serious threat to humanity and the planet, as the same time as the potential cause to drown coastal areas in various parts of the world. Therefore, there is a need for more effective cooperation between countries in order to avoid this potential threats.[14]

The impact of climate change has become a global concern, making the issue of climate change increasingly concern for countries in the world. Based on this awareness, several UN member states developed the United Nations Framework Convention on Climate Change (UNFCCC), and negotiated to find the best way and compromise in sharing roles and obligations in making efforts to control climate change and deal with its impacts. Indonesia as an archipelagic country that has a variety of natural resources and high diversity, has great potential to be affected by the negative impacts of climate change, and at the same time has a great responsibility to take part in mitigating and adapting to the negative impacts of climate change.

Recognizing Indonesia's position both for the sake of climate change mitigation and adaptation as well as in the framework of fulfilling the constitutional mandate, Indonesia is actively involved in anticipating the impacts of climate change, which began since the signing of the UNFCCC in a high-level conference of the Earth Summit on Environment and Development (UNCED) in Rio de Jeneiro Brazil in 1992. The results of the Climate Change Convention were ratified by the Government of Indonesia based on Law Number 6 of 1994 concerning the United Nations Conference on Environment and Development or the United Nations Framework Convention on Climate Change. The UN Framework Convention on Climate Change as stated in Article 2 is aimed to stabilize the concentration of greenhouse gases in the atmosphere at certain level from human activities that endanger the climate system. To achieve this goal, the basic principles of the convention emphasize the equality principle, and the precautionary principle.

One of the financial instruments to support mitigating the greater negative impacts of climate change is green bonds. The proceeds of green bonds, as a thematic bond, or an amount equal to the proceeds, will only be used to finance or refinance projects that have a definite positive impact on the

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[12] Sodikin, "Perumusan Hak Atas Lingkungan Hidup Yang Baik Dan Sehat Dalam Undang-Undang Dasar Negara Republik Indonesia Tahun 1945 Serta Upaya Perlindungan Dan Pemenuhannya," *Supremasi Jurnal Hukum* 3, no. 2 (2021): 106–25.

[13] Faris Faza Ghaniyyu dan Nurlina Husnita, "Upaya Pengendalian Perubahan Iklim Melalui Pembatasan Kendaraan Berbahan Bakar Minyak di Indonesia Berdasarkan Paris Agreement," *MORALITY : Jurnal Ilmu Hukum* 7, no. 1 (2021): 110, https://doi.org/10.52947/morality.v7i1.196.

[14] Adi Budiarso, *Kebijakan Pembiayaan Perubahan Iklim: Suatu Pengantar*, *2019*, vol. 1, 2019.

environment and are in line with the GBP Core Component[15]. Additionally, it established the eligible green projects, which include the following "but are not limited to": clean transportation, sustainable water and wastewater management, climate change adaptation, circular economy and/or eco-efficient projects, renewable energy, pollution prevention and control, clean transportation, environmentally sustainable management of living natural resources and land use, and green building.[16] Thus, green bonds are one of the financing alternatives including the financing of projects included in the KUBL category such as energy efficiency projects, sustainable pollution prevention and control, as well as clean water empowerment and waste preservation.[17]

If we look at the growth of global green bonds, it is quite fast and popular as the results of a study from Caroline Harrison, et all which states that the marketplace for green bonds has rapidly expanded since it was first introduced a decade ago, and financial forecasts suggest that it popularity will continue to increase as more institutions hear demands from client-investors who desire investments with positive environmental impacts [18].

However, in the development of green bonds, what must be considered is the regulatory support for its issuance as stated by Echo Kaixi Wang as the experience in the US, which states "The US green bond market needs necessary regulatory assistance in the form of a tiered green bond system, mandatory quarterly disclosures from bond issuers to investors, and severe penalties for issuers misusing bond proceeds in order to grow further" [19]. The green bond market has developed into a new capital markets infrastructure that includes reporting, usage of proceeds obligations, external validation, and green norms. The way players engage on the capital markets is changing as a result of this new infrastructure, and ESG performance demands are rising [20].

The market for green bonds has developed into a brand-new capital market infrastructure that includes external validation, fund commitments, green rules, and reporting. The way players engage in the financial markets is changing as a result of this new infrastructure, and ESG performance standards are rising. And therefore, it deserves a place to support sustainable development-oriented business activities, including battery electric vehicle conversion programs.

3.3. Synchronizing *Green Bond* Arrangements with the Policy to Accelerate *Battery Electric Vehicle* Conversion

Long-term projections indicate that the transportation industry will emit the most energy. This is because, in spite of the government's ambitious electrification plans, the industry is becoming more and more dependent on fossil fuels. The Indonesia Energy Transition Outlook 2022 provides information on energy transition planning particularly pertaining to the transportation industry. "Over time, it is anticipated that the energy sector with the highest emissions will be the transportation sector. This is the outcome of the industry's expansion while maintaining a high reliance on fossil fuels, even in the face

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[15] Budiarso.

[16] Budiarso.

[17] Abdul Syukur At-Tibasiy, Fadly Mane, dan Indah Yuliana, "Mekanisme Green Bond di Indonesia," *Jurnal Al-Amwal: Jurnal Ekonomi dan Perbankan Syariah* 11, no. 2 (2019): 259–72, https://doi.org/10.24235/amwal.v11i2.4698.

[18] Caroline Harrison, Candace Patridge, dan Aneil Tripathy, "What's in a Greenium: An Analysis of Pricing Methodologies and Discourse in the Green Bond Market," *Journal of Environmental Investing* 10, no. 1 (2020): 64–76, http://www.thejei.com/whats-in-a-greenium-an-analysis-of-pricing-methodologies-and-discourse-in-the-green-bond-market/.

[19] Stephen Kim Park, "Green bonds and beyond: Debt financing as a sustainability driver," *The Cambridge Handbook of Corporate Law, Corporate Governance and Sustainability* 596, no. March 2018 (2019): 596–610, https://doi.org/10.1017/9781108658386.049.

[20] Aaron Maltais dan Björn Nykvist, "Understanding the role of green bonds in advancing sustainability," *Journal of Sustainable Finance and Investment* 11, no. 3 (2021): 233–52, https://doi.org/10.1080/20430795.2020.1724864.

of the government's ambitious electrification goals. By 2050, emissions from the transportation sector will increase at a rate of 2.7% year, nearly double current levels in the PES. According to the Planned Energy Scenario (PES), the industrial sector's emissions will increase quickly at a rate of 3.2% annually despite energy efficiency initiatives aimed at reducing the sector's energy intensity by 1% annually".[21]

However, ironically, this is not balanced with a financing scheme that is oriented towards the ultimate goal, in this case supporting mitigation of the greater negative impact of climate change. Or even more concrete is the absence of a design for financing that accommodates the energy transition program, it is described that "One major obstacle to speeding up Indonesia's energy shift is getting funding for renewable energy projects. Both local financing capacity and financing sources must increase. It is important to create new finance models and bolster national financing institutions' ability to support their application. Improved communication between financiers and developers would improve knowledge on how to reduce project risks and boost project bankability." [22]

This statement shows that obtaining funding for renewable energy investment is a major obstacle in accelerating the energy transition in Indonesia, including in the transportation sector. For this reason, it is necessary to expand and increase the capacity of funding sources. In addition, innovations as new financing models are needed, as well as strengthening the capacity of national financing institutions. Additionally, the level of communication between companies and investors will raise project bankability and enhance awareness of how project risks can be managed. Referring to this view, the sustainability of the conversion program should be considered so that in the future the financing is not only borne by those who convert electric motors with the help of subsidies from the Government. For this reason, a funding model is needed to succeed the conversion program, including the opportunity to issue green bond instruments.

The capital market, as part of the national economic system, definitely adapts the current national development paradigm which is also environmental friendly, including the sub of the capital market, namely bonds. Therefore, the State has signed a sustainable finance roadmap, the implementation of which is contained in the issuance of the Sustainable Finance Roadmap Phase II (2021-2025). The roadmap is directed at the Sustainable Development Goals or SDGs and its relation to Indonesia's commitment to international agreements related to climate change mitigation.[23] The Roadmap mentions 7 (seven) components of sustainable finance related to:

a. Policy;
b. Products;
c. market infrastructure;
d. Ministry/Institution coordination;
e. Non-Governmental Support;
f. Human Resources; and
g. Awareness.

In addition to this, Indonesia's commitment to climate change mitigation as stipulated in the Paris Agreement in the form of emission reduction is also implemented with the Acceleration of Battery-Based Electric Motor Vehicle Program as stipulated in Presidential Regulation Number 55 of 2019. Derived from this Presidential Regulation, a number of sectoral regulations from related ministries were born, such as Minister of Energy and Mineral Resources Regulation Number 3 of 2023, and so on. The problem of financing the development of KBL businesses can actually be resolved through one form of green finance in Indonesia, namely green bonds. In addition to being based on Article 1 number 3 and Article 6 paragraph (2) POJK Number 18 of 2023, Article 8 also states that KUBL which can be financed

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[21] V L Sinta Verindrasti, "Positioning Indonesia in the International World Through Energy Transformation," *Journal of Social Political Sciences JSPS* 3, no. 2 (2022): 166–87.

[22] Verindrasti.

[23] Neneng Hayati, Erwin Yulianto, dan . Syafdinal, "Peranan Keuangan Berkelanjutan Pada Industri Perbankan Dalam Mendukung Sustainable Development Goals," *Jurnal Akuntansi Bisnis dan Ekonomi* 6, no. 1 (2020): 1633–52, https://doi.org/10.33197/jabe.vol6.iss1.2020.473.

by Green Bond, one of which is related to environmentally friendly transportation, which in this case can be associated with the development of battery electric vehicles

The development of green bonds requires investors who invest in the green bonds. When it is examined from the perspective of the legal aspects of investment, an investment should be supported by a number of aspects. One of these aspects is a solid legal framework, in this case the legal arrangement in the field of investment, especially related to sustainable finance, including the green bond. The goal is to provide legal protection and legal certainty for investors, which is expected to increase the trust of these investors.[24] One of the manifestations of the establishment of a solid legal framework is to synchronize and harmonize regulations related to green bonds with regulations related to the battery electric vehicle program.

Synchronization in question is to see the conformity and harmony with statutory regulations based on the systematization of positive law, namely between higher laws and lower laws and regulations.[25] Several models of legal synchronization have been studied in various fields of law with the aim of realizing conformity and harmony with statutory regulations.[26]

The synchronization model can be carried out both horizontal synchronization, which is the process of adjusting laws and regulations with other regulations in the same hierarchy, and vertical synchronization, which refers to the conformity between a law and the hierarchical level of other higher regulations. Basically, the synchronization process is an effort to maintain the consistency of laws and regulations based on the concept of hierarchy of laws and regulations. When it is associated with the concept, the regulation between POJK green bonds and regulations related to the electric motor vehicle program requires synchronization so that it can be implemented in accordance with the main objective of realizing affordable and clean energy.[27]

The synchronization related to the financing scheme through green bonds must also be carried out between the Ministry of Finance institutionally as the ministry authorized to administer central taxes, the Financial Services Authority as the regulator and supervisor in the financial services sector in Indonesia, the Ministry of Industry as the coordinator of the development of the national motor vehicle industry development road map and the Ministry of Energy and Mineral Resources which is currently in charge for electricity affairs.

4. Conclusion

The study found that industry players in the field of battery electric vehicle conversion should ideally be given alternative financing related to the industry. So that business actors in the field of battery electric vehicles can take advantage of financing schemes through the issuance of green bonds. Thus, there is a mutually supportive relationship between green bonds as green finance and battery electric vehicle conversion arrangements. So that green bonds as a financing instrument can encourage acceleration in realizing net zero emissions which is part of the 2030 Agenda. To realize this, at least two strategic steps are needed, namely synchronizing the model of green bond financing legislation with the battery electric vehicle conversion program which is expected to accelerate the acceleration of the battery electric vehicle program currently being promoted in Indonesia. Second, coordination is needed between sectoral institutions such as OJK, Ministry of Finance, Ministry of Industry and Ministry of Transportation in order to increase green bonds as a financing instrument for the conversion of battery

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[24] Has Rahmah, *Hukum Pasar Modal* (Jakarta: Prenada Media, 2019).

[25] Litari Elisa Putri* & [2] St. Laksanto Utomo, "PREFEREN DALAM PROSES Konstitusional Indonesia yakni Undang-Undang Dasar Republik Indonesia Tahun," 2021.

[26] Nahrowi Nahrowi, "Sinkronisasi Hukum Perkawinan Beda Agama Di Indonesia," *Al-Syakhsiyyah: Journal of Law & Family Studies* 2, no. 1 (2020): 112–33, https://doi.org/10.21154/syakhsiyyah.v2i1.2163.

[27] Loisa Merlin Tegay, Taufiqurrohman Syahuri, dan Mardi Candra, "Sinkronisasi Aturan Hukum Dalam Sistem Desentralisasi Regulasi Bagi Daerah Otonomi Khusus Papua," *SALAM: Jurnal Sosial dan Budaya Syar-i* 9, no. 4 (2022): 1167–78, https://doi.org/10.15408/sjsbs.v9i4.27274.

electric vehicles which is part of business activities oriented towards sustainable development. Through the synchronization model of green bond financing regulations with the battery electric vehicle conversion program and coordination between sectoral institutions, it is expected to accelerate the commitment to realize net zero emission and as an effort to mitigate the energy crisis and reduce fuel energy subsidies in Indonesia.

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