



ELECTRIC VEHICLES: IMPLEMENTATION OF LAW NO. 22 OF 2009 AND MINISTERIAL REGULATION NO. 5 OF 2021 FROM A CONSTITUTIONAL POLITICAL PERSPECTIVE (A STUDY OF BUKITTINGGI)

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Article History :

Submission : January 14, 2026
Revised : March 13, 2026
Accepted : May 10, 2026
Published : May 16, 2026

Keywords : Electric
Bicycles; Regulations;
Traffic Law

Abstract

The issues addressed in this study are the weak enforcement of laws regarding electric bicycle users and the public's lack of knowledge about the regulations, particularly in the city of Bukittinggi, because the regulations do not yet address these matters in detail. This study aims to examine the legal review and understanding of electric bicycle usage in Bukittinggi and to analyze the rules and understanding of electric bicycle usage in Bukittinggi from a constitutional political perspective. This study employs a qualitative research design with a sociological–legal approach. Data collection techniques include observation, interviews, and documentation. The study utilizes theories of the legal system, legal certainty, legal compliance, and constitutional politics. The results of this study indicate that the enforcement of laws regarding electric bicycles in Bukittinggi has not been effective due to the absence of detailed regulations concerning the use of electric bicycles, such as penalties and prohibitions on their use on Bukittinggi's main roads. From a constitutional political perspective, the current regulations on the use of electric bicycles on public roads cause more harm than benefit because there are no detailed rules, and numerous violations have been identified, which can endanger road users.

Abstrak

Permasalahan dalam penelitian ini masih lemahnya Penerapan Hukum bagi Pengguna Sepeda Listrik dan kurangnya pengetahuan masyarakat terhadap aturannya terkhusus di Kota Bukittinggi dikarenakan aturannya belum memuat hal–hal terkait secara detail. Penelitian ini bertujuan untuk mengkaji tentang tinjauan yuridis serta pemahaman Penggunaan Sepeda Listrik di Bukittinggi dan untuk mengkaji dari perspektif siyasah dusturiyah terhadap aturan dan pemahaman Penggunaan Sepeda Listrik di Bukittinggi. Penelitian ini menggunakan jenis Penelitian kualitatif dengan Pendekatan Yuridis Sosiologis. Teknik pengumpulan data dalam penelitian ini adalah observasi, wawancara dan dokumentasi. Menggunakan Teori Sistem Hukum, Kepastian Hukum, Ketaatan Hukum dan Siyasah Dusturiyah. Hasil Penelitian ini bahwa penerapan hukum terkait sepeda listrik di Bukittinggi belum efektif dikarenakan belum adanya regulasi yang detail terkait Penggunaan Sepeda Listrik seperti sanksi dan larangan Penggunaan di Jalan Raya Bukittinggi. Berdasarkan perspektif siyasah dusturiyah terkait aturan penggunaan sepeda listrik di jalan raya memberi banyak mudharat daripada maslahat karena belum adanya aturan yang detail dan ditemukan banyaknya pelanggaran yang terjadi sehingga dapat merugikan pengguna jalan.



INTRODUCTION

Some time ago, there was a shift from fossil fuels to electric vehicles due to fuel shortages caused by global instability¹ stemming from the conflict between Iran and the United States in the Strait of Hormuz. In response, the Indonesian government has proposed policies regarding the transition from gasoline to electric vehicles; however, on the other hand, the use of electric vehicles continues to involve numerous violations—both by the public and by government authorities in enforcing the relevant laws—and such violations remain widespread.(Zou et al., 2016)

There have been several studies on electric bicycles and Law No. 22 of 2009, including one written by nurrizqa salsabilah syah putri(Nurrizqa Salsabiila Syah Puteri, 2024), hendra lesmanadkk(Hendra Lesmana &, 2023), alifia eka pradini dkk(Alifia Eka Pradini*, a Rusmilawati Windari, 2025), mutiara hemawati dkk(Hermawati et al., 2024), lusi adinda miranti putri(Putri & Malau, 2024), ariani dewi astuti(Astuti et al., 2025), mirakel valentino tendean dkk(Mamengko, 2025), satria dkk(Pramudya, 2024), lisa safitri dkk(Syafitri et al., 2024), luh putu dewi dkk(FRAMIYANTI et al., 2024), safina dwita putri dkk(Safina Dwita Putri et al., 2024)

This article aims to examine the implementation of Law No. 22 of 2009 and the level of compliance among electric bicycle users in Bukittinggi, and to analyze these findings according to fiqh siyasah tanfidziyah. In connection with the management of road traffic and transportation, regulations were established in the form of Law No. 22 of 2009 on Road Traffic and Transportation (hereinafter referred to as UULLAJ No. 22/2009).(Muhamad Lucky Souma, 2024) Broadly speaking, Article 47(1) of UULLAJ No. 22/2009 categorizes and classifies vehicles into two groups: "motorized vehicles and non – motorized vehicles" where every vehicle propelled by human and/or animal power The regulatory gap regarding the classification of electric bicycles in Indonesian legislation has ultimately sparked a debate regarding the legal status of electric bicycles for use on public roads.(Kautsar & Choerunnisa, 2024)

This research data focuses on the city of Bukittinggi because the use of electric bicycles in the city has increased dramatically since 2024; furthermore, as a tourist destination, Bukittinggi has a large number of electric bicycle users among students.(Ulkhairina et al., 2025)

METHODS

This study is a field study employing a qualitative approach based on the socio legal approach. This approach is used to examine the implementation of law in social practice and to analyze the relationship between legal norms and the realities observed in the field. Through this approach, the study not only examines the normative aspects of legislation but also investigates how the law

is understood, applied, and complied with by the community. Research data was collected through observation, interviews, and documentation. Observations are conducted to obtain a direct picture of the practices and phenomena that are the subject of the research. In-depth interviews are conducted with informants selected purposively based on their involvement and knowledge of the issues under study. Meanwhile, documentation is used to supplement field data through the collection of documents, archives, legislation, and various relevant written sources. The data sources in this study consist of primary and secondary data. Primary data was obtained directly from interviews with informants and field observations. Secondary data was obtained from various sources, such as laws and regulations, books, scientific journals, previous research findings, and other documents related to the research focus.(Saharuddin, 2019)

Data analysis was conducted using a qualitative descriptive approach based on the Miles and Huberman data analysis model, which comprises three stages: data reduction, data presentation, and drawing conclusions. During the data reduction stage, the researcher selected, focused, simplified, and grouped the data in accordance with the research focus. Next, the data was presented systematically in narrative form to facilitate the interpretation process. The final stage involved drawing conclusions and verification to obtain valid and accountable research findings. In analyzing the data, this study utilized legal system theory, legal certainty theory, legal compliance theory, and *Siyasah Dusturiyah* theory as analytical tools to comprehensively understand the phenomena under investigation.(Dahyul Daoipn, 2024)

RESULT AND DISCUSSION

RESULT

Legal Understanding of the Use of Electric Bicycles in Bukittinggi

Electric bicycles, also known as e-bikes, are a type of electric vehicle derived from the development of conventional bicycles.(Nawawi, 2025) Whereas conventional bicycles are propelled by pedals, electric bicycles are equipped with a battery and an electric motor to assist with propulsion. The advent of electric bicycles has introduced a new approach to mobility that is reshaping the global transportation sector. In operation, electric bicycles are designed as environmentally friendly transportation that prioritizes the use of renewable energy. An electric bicycle is a specific type of vehicle with two wheels equipped with mechanical components in the form of an electric motor. Electric bicycle users are all individuals who own or ride electric bicycles on roads within the city of Bukittinggi, whether on main roads or within complexes or specific areas. (Peng et al., 2024)

According to Law of the Republic of Indonesia No. 22 of 2009 on Road Traffic and Transportation, Articles 1(7) through 1(10) state: "Article 7) A vehicle is a means of transportation on the road consisting of motor vehicles and non-motor vehicles. Article 8) A Motor Vehicle is any vehicle propelled by mechanical equipment in the form of an engine, excluding vehicles that run on

rails. Article 9) A Non – Motorized Vehicle is any vehicle propelled by human and/or animal power. and Article 10) A Public Motor Vehicle is any vehicle used for the transportation of goods and/or people for a fee.(Kurniawijaya, 2021)

Since those provisions do not provide a definition of "certain vehicles powered by electric motors," electric bicycles do not fall under any category—neither motorized nor non – motorized vehicles. A definition of "certain vehicles powered by electric motors" can only be found in Regulation of the Minister of Transportation of the Republic of Indonesia No. PM 45 of 2020, Article 1, Paragraph 2, which states:(Bagas, 2021)

"Certain Vehicles Using Electric Motors are vehicles powered by electric motors used to transport people within specific operational areas and/or lanes." Therefore, the author concludes that none of the vehicles referred to in the law fall under the definition of an electric bicycle itself. However, we can refer to Law of the Republic of Indonesia No. 22 of 2009 on Road Traffic and Transportation, Article 1, Paragraph 24, which states: "A traffic accident is an unexpected and unintentional event on the road involving a vehicle, with or without other road users, resulting in human casualties and/or property damage."

In line with the results of the researcher's interview with a traffic police officer in Bukittinggi, the following question was posed to the interviewee: "If an electric bicycle rider is involved in a road accident—whether as the perpetrator or the victim—is it classified as a traffic accident?" "Yes, because all accidents that occur on public roads are classified as traffic accidents." It can be concluded that if a violation occurs on a public road involving an electric bicycle user as either the perpetrator or the victim, it can be classified as a traffic accident or LAKA LANTAS. Based on the researcher's field observations, electric bicycle users in the city of Bukittinggi are predominantly children under the age of 18, and the researcher even found instances where children riding these electric bicycles were below the minimum age requirement for electric bicycle riders, as stipulated in Regulation of the Minister of Transportation of the Republic of Indonesia No. PM 45 of 2020 Regarding Certain Vehicles Using Electric Motors, Article 4, paragraph (2), namely:

In the case of users of certain vehicles who are between 12 (twelve) and 15 (fifteen) years of age, such users must be accompanied by an adult. From the above rule, it can be concluded that electric bicycles are not intended for children under 12 (twelve) years of age, and even those aged 12 to 15 must still be under adult supervision.

There are no specific regulations governing electric bicycles. On public roads, they are not regulated under the Traffic and Road Transport Act.

It is therefore understandable that there is a lack of detailed regulations from one of the law enforcement agencies—in this case, the police—even, as we know, any enforcement action must have a legal basis, particularly within the scope of police operations (United Nations Office on Drugs and Crime., 2011).

The only regulation mentioned is the Law on Road Traffic and Transportation, which contains absolutely no discussion regarding electric bicycles. Similarly, interviews with electric bicycle users in the city of Bukittinggi. The following are the results of the researcher's interview with one of the sources—a child under the age of 18—in response to several questions:

Legally speaking, the use of electric bicycles in Bukittinggi already meets certain criteria, such as the following: first, justice is a norm of life that everyone aspires to in their social order. Social institutions such as the state, as well as international organizations that bring nations together, appear to share the same vision and mission regarding justice, although their perceptions and conceptions of the issue may differ.

It is understandable that the interviewee was not aware of the regulations in effect regarding the operation of electric bicycles in the city of Bukittinggi, did not meet the minimum age requirement for riding an electric bicycle—especially on the main roads of Bukittinggi—and was not using any safety equipment. Furthermore, an interview with the child interviewee such as

"I don't know the rules. I'm 11 years old and in fifth grade. I use it to go to school so my parents don't have to drive me anymore—especially since walking is tiring—so I asked my parents to buy one for me. I ride it myself, but I only wear my school uniform; I don't wear a helmet or anything else."

It is understandable that the interviewee was unaware of the applicable regulations and was still under the minimum age for operating an electric bicycle, yet took the vehicle onto the public road without using any safety equipment. The interview with the child interviewee continued with the following responses:

"I don't know the rules. I'm 11 years old. I asked my parents to buy me an electric bike because I want to use it for riding around, and I usually use it when I go to group study sessions with friends who live nearby. I ride it myself, but I didn't know I was supposed to wear a helmet."

It is therefore clear that the individuals mentioned above were unaware of the applicable regulations, had not reached the minimum age for operating an electric bicycle, were not wearing any safety equipment, and were riding electric bicycles on public roads. All three of these minors were interviewed in the presence of their parents or guardians.(Siti Ulfatin Chusnul Choirriyah¹, Sunardi², 2025) It can also be concluded that all three were unaware of the applicable regulations, were under the minimum age for electric bicycle riders, did not wear helmets or any other safety equipment, and were riding the electric bicycles on the main roads of Bukittinggi City without being accompanied by an adult, as stipulated in Ministry of Transportation Regulation No. PM 45 tahun 2020 regarding Certain Vehicles Using Electric Motors. Similarly, the results of interviews with electric bicycle riders who were adults or above the minimum age for electric bicycle riders. The researcher posed several questions to the respondents regarding compliance with traffic regulations related to the use of electric bicycles, with the following responses:

"I'm a 20 – year – old college student. I use an electric bike to get around the Tonrangeng area, but I didn't know there were rules, so I wasn't wearing a helmet and was riding on the main road."

Based on the interview results, the researcher concluded that although electric bicycle users meet the minimum age requirement for riders, they do not comply with existing regulations—specifically, riding on main roads and failing to wear helmets. Furthermore, interviews with electric bicycle users in Bukittinggi revealed that they are aware of the regulations and do comply with traffic rules regarding the use of electric bicycles, as indicated by the interview results

"I'm a 21-year-old college student. I use an electric bike to go shopping and for short trips. But there's still no information about the rules, so when I ride out, I go on the main road and don't wear a helmet."

It can be concluded that, although the interviewee has reached the minimum age for riding an electric bicycle, he is unaware of and does not comply with the existing regulations. Furthermore, interviews with electric bicycle users at their sales stalls included several questions regarding their knowledge of the regulations and whether they have complied with traffic regulations related to the use of electric bicycles.

"I'm 40 years old and work as an ice seller. I use it to transport my merchandise and for various errands, like buying supplies and ingredients at the market since it's nearby. I also use the electric bike to deliver goods and customer orders. As for the rules, I'm not sure if there are any, but when I'm out on the main road, I don't wear a helmet."

Based on the results of several interviews, it can be concluded that although the interviewees have reached the minimum age for riding electric bicycles, they still do not comply with the rules. Rules such as the use of safety equipment and restrictions on riding in certain areas. From the three interviews with adult e – bike riders, the researcher can conclude that they have not complied with existing regulations in accordance with Ministry of Transportation Regulation No. PM 45 of 2020 because they were unaware of the regulations regarding this matter.

Through a theoretical analysis of the interview results above, the researcher found that a community's legal culture consists of people's ways of thinking as they strive to organize their lives; this is known as written, unwritten, and combined legal cultures. Consequently, electric bicycle users' lack of awareness regarding existing regulations has led to violations committed by the legal community itself, resulting in a legal culture characterized by non – compliance with existing regulations becoming the norm. From a legal perspective, all road users, including electric bicycle riders, are required to comply with the provisions of Law No. 22 of 2009. However, in practice, these regulations have not been optimally implemented in Bukittinggi. According to the theory proposed by H.C. Kelman in Achmad Ali's book, there are three types of compliance: first, compliance based obedience, where a person obeys a rule solely out of fear of punishment. Second, identification based compliance, where someone obeys a rule only out of fear that their good relationship with someone might be damaged. Third,

internalization based compliance, where someone obeys a rule because they genuinely feel that the rule aligns with the intrinsic values they hold. If the majority of the public's compliance with a rule is based solely on compliance that is, fear of punishment then their level of compliance is very low. Conversely, if their obedience is based on internalization, their adherence to the legal rule will truly align with the intrinsic values they hold.

DISCUSSION

Constitutional politics is a branch of political jurisprudence that describes and examines issues related to state legislation. In addition, this study also addresses the concept of the rule of law in politics, the reciprocal relationship between the government and citizens, and the rights of citizens that must be protected. The government, in this case the Bukittinggi City Transportation Agency, is the organization responsible for regulating and administering state affairs. Without a government, it is difficult to imagine a country functioning properly. The functions of the government include enforcing the law and reconciling the interests of society.(Siddiqy et al., 2025)

One branch of political jurisprudence is called *Siyasah Dusturiyah*, which refers to the government's authority to enact and enforce laws. Etymologically, the term "*siyasah dusturiyah*" consists of two syllables: "*siyasah*" and "*dusturiyah*." "*Siyasah*" means governance, decision – making, policy – making, administration, and oversight. Meanwhile, "*dusturiyah*" refers to laws or regulations. Generally, *Siyasah Dusturiyah* refers to political science related to fundamental regulations regarding the form of government and the limits of its authority, the method of electing the head of state, the standard limits of authority for the administration of public affairs, and the provisions regarding the rights that are obligatory for individuals and society, as well as the relationship between the rulers and the people.(Rinaldo & Pradikta, 2021)

Constitutional Jurisprudence examines state law pertaining to the fundamental rules governing the structure of government, laws regulating the rights of citizens, and laws governing the separation of powers. There are two key factors that are inseparable from the issues of constitutional jurisprudence. General principles, hadith, and the spirit of Islamic teachings in governing society take precedence. Next are the texts of the Qur'an. Second, although not entirely, are the findings of the scholars' *ijtihad*, which include norms that can change in response to changing situations and conditions(Pauzi, 2019)

(Safina Dwita Putri et al., 2024)

Second, justice is a central tenet of Islamic teachings; every Muslim is entitled to the same rights and obligations. This is based on the fundamental principle that all believers are equal in status, and what distinguishes them is the degree of their piety. Based on the explanation above, we can analyze that everyone in this case, road users in the city of Bukittinggi is entitled to justice, whether they are electric bicycle users, non electric bicycle users, or other road users. The phenomenon observed by researchers in the field is that violations by electric bicycle users frequently occur; as is known, these vehicles currently lack

legal authorization for use on public roads, thereby posing a hazard to other road users. Justice is a quality that all humans must possess; in law, this is known as Equality Before the Law—all people are equal before the law and is similarly explained in the Quran, Surah al – Hadid, verse 25.

Indeed, We have sent Our messengers with clear proofs, and We have revealed with them the Scripture and the Balance so that mankind may uphold justice. We have revealed iron which possesses great strength and many benefits for mankind so that Allah may know those who support His religion and His messengers, even though they cannot see Him. Indeed, Allah is All Powerful and All Mighty.

The verse above explains that justice must be upheld by the relevant authorities in this case, the government particularly in the enforcement of laws governing electric bicycle users in Bukittinggi

Third, the General Interest: The Quran and the Sunnah emphasize the flexibility of Islamic law in an effort to ensure its appropriate application in human life. Therefore, all Islamic legal rules must align with this principle so that all intended objectives can be achieved effectively and fully. 102 In this regard, the Transportation Department has not yet followed up on Regulation of the Minister of Transportation of the Republic of Indonesia No. PM 45 of 2020. Where the mandate or implementation has not been fulfilled or achieved in accordance with Quranic Surah An – Nisa 4:58. According to the principles of Islamic jurisprudence, the use of electric bicycles in Bukittinggi, when viewed from the perspective of public interest and the benefit of many people, falls under the category of public interest; therefore, every policy must remain within the framework of religious teachings and applicable laws and regulations.

Furthermore, despite the central government's efforts to establish regulations regarding the use of electric bicycles on public roads in Indonesia—particularly in Bukittinggi these measures do not yet appear to have had a significant impact. Although the police, particularly the Traffic Police as law enforcement officers in the community, have carried out their duties, the absence of a legal framework to legitimize their actions has prevented relevant parties from fully performing their responsibilities. However, the obstacles in implementing these regulations can be addressed through the issuance of regulations by the Department of Transportation, as explained in the Quran: behind every difficulty, there is certainly ease.

The passage above indicates that the government and relevant authorities, in addressing the use of electric bicycles on the roads of Bukittinggi, need to immediately follow up on existing regulations; for if, by the time this thesis is completed, no relevant regulations have been established, it will cause harm to many people. The government also needs to apply the general principles of good governance, as research findings, based on respondents' feedback, indicate that the government has not yet implemented these principles effectively. Based on the research findings regarding the constitutional political perspective on the use of electric bicycles on the roads of Bukittinggi City, the government has not

fulfilled its mandate to implement relevant regulations in Bukittinggi City, resulting in uncertainty and the potential for greater harm in the future if regulations regarding the legitimacy of riding electric bicycles on the roads of Bukittinggi City remain unconfirmed.

Thus, based on the concept of constitutional politics, the government has a responsibility to promote the public good through regulation and law enforcement. The lack of public awareness and oversight indicates that this role has not yet been fully realized.

CONCLUSION

The use of electric bicycles in the city of Bukittinggi currently lacks standardized and detailed regulations regarding legality, prohibitions, penalties, or provisions addressing violations related to the use of electric bicycles in the city of Bukittinggi. This is because relevant departments and agencies have not yet followed up on regulations already established at the national level, resulting in legal uncertainty for other road users who are legally permitted to be on the roads of Bukittinggi. Regarding the regulations envisioned by the Bukittinggi City Transportation Department, there is a need for detailed regulations concerning the use of electric bicycles, as well as regulations regarding the contribution of electric bicycles to Local Revenue (PAD), specifically in the city of Bukittinggi. Meanwhile, the Bukittinggi City Police Department hopes that regulations will be established to enforce a ban on the use of electric bicycles.

From the perspective of Fiqh Siyasah Dusturiyah, the use of electric bicycles on public roads in the city of Bukittinggi highlights the need for clearer and more comprehensive regulations to ensure public order, safety, and the public good. Although electric bicycles provide benefits to some members of the public as a practical, economical, and environmentally friendly mode of transportation, the reality on the ground shows that the use of electric bicycles without adequate regulations has the potential to cause various violations and safety risks for other road users.

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