

Indonesian Electric Vehicle Policy, Realization and Development

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ABSTRACT

The transportation sector is now starting to shift from fossil fuels to electricity which is more environmentally friendly, as this sector is a major source of greenhouse gas emissions. Electric vehicles are a type of vehicle that is environmentally friendly because it does not produce air pollution. In Presidential Regulation No. 55 of 2019 concerning the Acceleration of the Battery-Based Electric Motor Vehicle (KBL) Program for Road Transportation which came into effect after being promulgated on 12 August 2019 is expected to be a momentum for accelerating cooperation to build an era of environmentally friendly electric cars with electricity as a substitute for energy. The use of electric vehicles is growing rapidly, and China is the largest market, followed by Europe and the United States. The development of electric vehicles is highly dependent on the national policies of a country. Indonesia's goal is to become one of the centers of the global electric vehicle industry, for that Indonesia needs to consider the challenges of cost, standards, power generation, incentive support, communication security, and conditions of integration framework. If Indonesia wants to attract investors into the country, Indonesia must also pay attention to infrastructure readiness, ease of doing business, government policies, and research and development. This research is a normative-empirical legal research. Research materials used include secondary data and primary data. The method of data collection is done through library research. The approach used is a philosophical approach, a conceptual approach, a legal approach, as a concept of thought data collection tools using document studies and interview guidelines. The data obtained were analyzed using qualitative methods and presented descriptively. The results of this study indicate that the acceleration of the KBL program requires the support of all parties in order to reduce the inhibiting factors that are considered by consumers' preferences in choosing KBL, namely price, maintenance, vehicle durability and infrastructure readiness. In terms of policy, Indonesia needs to review the readiness of planning for the procurement of the electric vehicle sector, assessing the needs of the country's economy as well as investments that have been or will be entering Indonesia.

Keywords: *Electric vehicles, Policy, Infrastructure, Research and Development*

1. INTRODUCTION

The number of motorized vehicles that are increasing day by day will have an impact on the even greater level of air pollution on earth. For the sake of maintaining health, we should avoid it so that our health is always well maintained. Many studies have been conducted related to vehicles, to avoid this one of them is to use an electric-powered car. As we all know that electrical energy is one type of energy that is environmentally friendly. With the existence of vehicles that use electrical energy sources, the level of air pollution can be reduced. The Indonesian government has issued presidential regulation no. 55 of 2019 concerning the Acceleration of the Battery-

Based Electric Motor Vehicle (KBL) Program for Road Transportation and came into effect after being promulgated on 12 August 2019 (Kompas, 2 September 2019). The sustainable use of fossil fuels has led to a steady increase from the concentration of CO₂ in the atmosphere to 400.26 ppm in 2015. To mitigate climate change and develop sustainable energy, the international community must support a comprehensive energy transition from fossil fuels to renewable energy and use alternative energy sources. The depletion of fossil fuels in the future will encourage researchers, designers, car manufacturers and transportation companies to look for alternative energy sources for vehicles, such as electricity.

The first wave of recovery in electric vehicle sales began in the early 1970s, sparked by the first California oil crisis. Due to concerns about fossil fuel supplies and transportation-related air pollution, electric vehicle batteries experienced a renaissance in the 1980s. During this period, several existing electric vehicle battery products were dedicated to meet experimental requirements. Due to increased attention to climate issues, there was a recovery in the early 1990s. Electric vehicles are an alternative transportation that can reduce greenhouse gas (GHG) emissions and increase energy security. The ecological and social benefits of electric vehicles can only be achieved through maximum public acceptance (Tulus Pangapoi Sidabutar, 2020).

In Indonesia, President Joko Widodo hopes to make Indonesia one of the centers of the global electric vehicle industry (Kompas, 2019). To speed up this process, the government is trying to dismantle the nickel industry, which will then be processed into lithium batteries, which are the main components of electric vehicles. In addition, the regulation on nickel exports in the Minister of Trade Regulation Number 1 of 2017 concerning Exports of Refined Mineral Products is tightened, if nickel with a nickel content of less than 1.7% is no longer exported in December 2019. The next question is: Is it that easy to set up an electric vehicle industry in Indonesia? What about the policies in Indonesia regarding the use of electric vehicles themselves?

2. RESEARCH METHOD

The type of the present study used in this article is normative legal research. It places more emphasis on literature study consisting of research on legal principles, legal systematics, law synchronization, and legal comparison. The present study used secondary data by applying legal materials obtained from literature study of primary legal materials, secondary legal materials and tertiary materials. The research tools for fecondary data collection were books relating to the theory and concept of research objects, related articles, scientific writing literatures and so on through literature study. The data were analyzed using a qualitative analysis and presented in a descriptive form. Qualitative analysis was performed through categorization based on the research problems and data collection. Qualitative analysis is defined as qualitative normative assessment to assess the data collected from secondary data (through literature study) and whether or not the implementation is in accordance with the existing theories and rules, so it can measure the level of effectiveness of its implementation.

3. FINDINGS AND DISCUSSION

3.1 Indonesia's policy on the use and development of electric vehicles

According to data from the International Energy Agency (IEA) in the "Global Electric Vehicle Outlook 2019", the development of global electric vehicles is currently growing rapidly. In 2018, the number of electric vehicles in the world exceeded 5.1 million, an increase of 2 million from the previous year, and sales of new electric vehicles almost doubled. The People's Republic of China remains the world's largest electric vehicle market, followed by Europe and the United States. In terms of market share of electric vehicles, Norway is still the world leader. In 2018, new electric vehicle sales reached 46%, more than twice the share of Iceland's second largest market, and 6 times the share of Sweden's third largest market, at 17%. Leading countries in electric vehicle policies are taking measures such as fuel economy standards related to incentives for zero-emissions and low-emissions vehicles, economic means to bridge the cost gap between electric vehicles and traditional vehicles, and support for the establishment of charging infrastructure.

This shows the fact that there is a need for policy incentive support from the government regarding this electric vehicle. The Indonesian government can use incentives in its policies to attract investment to Indonesia and attract people to use electric vehicles. By making the switch from traditional cars to electric cars more attractive, political incentives are an effective way to increase sales of electric cars.

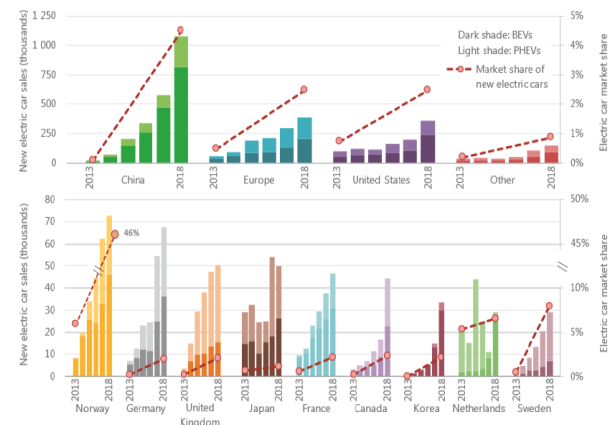


Figure 1. Global Electric Car Sales and Share in 2013-2018 (Till Bunsen et al., 2019)

The convenience of the Indonesian business sector ranked 73rd in 2019, and year-on-year growth is expected to attract foreign investors to the country. The best development in 2018 was the trade war between China and the United States, with the worst affected products coming from the United States and China. Indonesia can take advantage of the impact of high tariffs on imported goods entering the country. The most serious is the impact of China's tariffs on

aircraft, other vehicles, textiles and clothing. On the other hand, in China, the impact of US tariffs is a serious problem for machinery, electrical equipment, chemicals and metals. But Indonesia failed to take advantage of this momentum. Thailand was the fastest country to seize the opportunity and announced steps to attract companies affected by the Sino-US trade war. Although Indonesia's business ranking rose, the data only refers to Jakarta and Surabaya. According to 2016 Asian Competitiveness Institute (ACI) data, the competitiveness value of each province ranges from the highest Jakarta, DKI (3/2008), to the lowest Papua (1,5192). This shows that investment in Indonesia will not be evenly distributed, it will only be channeled to areas that support investment inflows. Equitable infrastructure needs to be considered so that Indonesia can reach businesses with a wider scope.

Presidential Regulation Number 55 of 2019 needs to be clearly stated to accelerate the plan for electric vehicles which is considered the beginning of the era of electric vehicles in Indonesia. The derivative regulations are expected to provide legal protection for investors who wish to enter Indonesia to obtain legal certainty in the development of their investments. Derivative regulations should describe hybrid technologies and production incentives in more detail, and be issued by relevant ministries and agencies in collaboration with business and science.

3.2 The prospects of business planning for the electric motor vehicle sector in Indonesia

The discussion on the Acceleration of the Battery-Based Electric Motor Vehicle (KBL) Program for Road Transportation and which came into effect after being promulgated on 12 August 2019 must be supported by an adequate supply of electrical energy. KBL is a vehicle that is driven by an electric motor and gets its power supply from the battery directly in the vehicle or from outside. KBL is one of the technological achievements for energy in determining national energy demand. The switch from conventional vehicles to KBL will reduce the high dependence of the transportation sector on fuel oil. Therefore, the success of the acceleration of the KBL program must be supported by an adequate supply of electrical energy.

According to the results of a survey conducted by the Chamber of Commerce and Industry (Kadin), several factors that become consumer preferences for switching from conventional vehicles to KBL include: (a) price; (b) care; (c) vehicle durability; and (d) readiness of supporting infrastructure. According to GM Toyota Astra Motor, Fransiscus Soerjopranoto, the price difference between conventional vehicles (internal combustion engines) and KBL is relatively the same. If the prices of both are relatively the same, then environmental friendliness and fuel economy are not considered factors for consumers in choosing KBL

(Kompas, September 4, 2019). Therefore, in accelerating the conversion of conventional vehicles to KBL, support from the government is needed in the form of providing incentives to the community and the local KBL industry (www.tribunnews.com, 4 September 2019).

According to Plt. President Director of PT. PLN, Sripeni Inten Cahyani, said that PLN's readiness to support KBL was carried out by preparing the infrastructure for the Public Electric Vehicle Charging Station (SPKLU). The government through PLN provides incentives to the public in the form of a 75% discount on electric power added for electric motorbike owners and a 100% discount or free for electric car owners, so that electric vehicle owners can use charging stations in their respective homes without electrical power constraints (cnbcindonesia.com, August 31, 2019). As an effort to socialize KBL, the Ministry of Transportation plans to rent around 100 units that will be used internally by other ministries, which will be followed by other ministries (bisnis.tempo.co, 9 September 2019).

As a comparison to KBL policies in other countries, according to the Minister of Trade Airlangga Hartarto, the Chinese government has provided incentives in the form of price subsidies for vehicles without emissions. The amount of subsidies issued by the government is Rp. 133 million per unit. In addition to price incentives, the Chinese Government exempts VAT and registration (cnnindonesia.com, 12 August 2019). In the Netherlands, a policy of banning the use of all gasoline and diesel-fueled vehicles will be implemented no later than 2030. The policy will be implemented gradually from 2020, starting with the policy of banning the use of diesel vehicles in Amsterdam. Then, in 2022, buses and trains will be allowed through within the city if they have electric or hydrogen powered engines. Elimination of emissions on all means of transportation in the city is implemented no later than 2030 (dunia.tempo.co, 29 August 2019). The success of KBL in a number of countries has been proven by the increase in the volume of KBL from year to year.

The supply of electric cars for several countries in Europe in 2015 reached 1.26 million. This figure is more than 100 times the 2010 estimate, which crossed the 1 million electric car mark on the road. In most parts of the United States, in 2015, KBL volume increased by 34%. Meanwhile in Europe, the volume of KBL reaches almost one third of the volume of cars in Europe, where the Netherlands is the largest contributor to KBL in Europe, which is 23% of the total KBL in Europe. And, Asia accounts for 36%, of which in 2015 one in four electric cars was in China, and one in ten was in Japan. In 2014-2015, the highest increase in KBL demand occurred in China, Korea, England, Sweden, Norway, the Netherlands, and Germany.

4. CONCLUSION

With the issuance of Presidential Decree No. 55 of 2019 concerning the Acceleration of Battery-Based Programs for Road Transportation, the government is committed to developing transportation energy system that leads to the policy of electric-based vehicles (KBL). Underlying the government's commitment to shifting conventional vehicles to KBL is the new technology for transportation energy to anticipate the projected growing demand for fuel oil. The main impact of the mass transition of road transportation to electric cars is the increase in the need for electrical energy on a large scale. As an acceleration of the KBL program, support from all parties is needed in order to reduce the inhibiting factors that are considered by consumers' preferences in choosing KBL, namely price, maintenance, vehicle durability and infrastructure readiness. Through the supervisory function, the DPR can play a role in ensuring that the acceleration of the conversion of conventional vehicles to KBL goes well, which is supported by the readiness of its supporting infrastructure.

The government's performance in providing incentives for the industry and community using KBL in a targeted manner. In terms of policy, Indonesia needs to review the readiness of planning for the procurement of the electric vehicle sector, assessing the needs of the country's economy as well as investments that have been or will be entering Indonesia. There is also a need for policy incentives to attract people to switch from gas-emitting vehicles to electric vehicles. Infrastructure support also needs to be considered so that investment in Indonesia is evenly distributed and not concentrated in one particular area. The need for procurement of technology and business research as well as law to support the cultivation of this electric vehicle target is evenly distributed in Indonesia. The government is expected to take decisive action so that in the eyes of the world Indonesia can see its potential and not be underestimated by world investors.

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