

# Implementation of the European Union Legal Framework for Electric Vehicles in Montenegro

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**Abstract:** Transitioning to electric drive and using energy from renewable sources can help in the decarbonization process globally. Wider usage of electric vehicles and charging infrastructure development depend on the legislative and regulatory framework. In this paper, we have analyzed the legal and regulatory framework for electromobility in the European Union. This paper provides a comprehensive survey of the regulatory framework in Montenegro for electric vehicles. We have analyzed the applicability of the European Union legal framework for electric vehicles in Montenegro and the challenges in this area. This analysis is conducted to propose adequate measures that should be implemented in Montenegro to accelerate electric vehicle adoption.

## 1. INTRODUCTION

A decrease in greenhouse gas emissions must be imperative for modern society. One of the key goals of modern society is to decrease the consumption of electricity from fossil fuels. Using electricity from renewable sources in every sector could bring benefits for environmental protection. The key goal of the European Union is a sustainable, competitive, secure, and decarbonized energy sector [1].

The energy industry and transportation sector are recognized as major pollutants in Europe [2]. Ambitious goals which are targeted by the European Union could be achieved through the decarbonization process of the energy industry and transportation sector, globally [1, 3-7].

The most important documents in the domain of climate change have recognized the transportation sector as one of the key sectors for decreasing greenhouse gas emissions [1, 3, 7].

The strategy of the European Union and national legislation of many countries promote decreasing electricity consumption in the transportation sector [7-10]. The principle of the

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European Union in the transportation sector is technological neutrality [11]. Laws and regulations do not promote any specific fuel in the transportation sector. Currently, the transition to clean energy in the transportation sector is based on the use of electricity as a main fuel. Therefore, a gradual decrease in the number of traditional vehicles in the transportation sector is crucial for a complete transition to electric driving. Current data about the number of electric vehicles in use and data about charging infrastructure show growth [12].

The key problem for electromobility development is charging infrastructure. Charging infrastructure development must be in accordance with an increase of electric vehicles in use. Adequate charging infrastructure is based on the optimal number of charging stations and connections between them. Charging infrastructure for electric vehicles must provide simple charging, like charging conventional vehicles at gas stations.

In the European Union legislative development of charging infrastructure is not defined clearly. There is no clearly defined minimum number of chargers for comfortable travel across Europe. Therefore, an analysis of current legislation in this area is required. Also, for more comfortable traveling across the European Union it is necessary to provide an adequate connection between charging stations. Additionally, funding in this area must be in accordance with legislation that promotes wider usage of electric vehicles.

Progress in electromobility could be achieved through the coordination of legislative framework, strategic, institutional, and financial aspects. The concept of electromobility is based on directives, regulations, decisions, recommendations, and opinions. Key aspects of the legislative in this concept will be illustrated in this paper [1, 3, 6-11, 13-25].

This paper aims to show the current legislation of the European Union for the electromobility concept. The key focus of this paper is the current state of electromobility in Montenegro [26-45]. Also, a brief overview of the current state in this area in the Southeast European countries will be shown.

This paper is organized as follows: Section 2 presents the European Union legislative for the e-mobility concept. Section 3 presents the current state of electromobility in Montenegro. Also, in Section 3 we have proposed some measures that should be implemented in Montenegro in this area. Finally, we summarize this paper in Section 4.

## **2. THE EUROPEAN UNION LEGISLATION FOR ELECTROMOBILITY: A REVIEW**

Institutions of the European Union adopt legislative acts like regulations, directives, decisions, recommendations, and opinions. A regulation is a legal act of the European Union that becomes immediately enforceable as law in all member states simultaneously. Directives require European Union Member States to achieve a certain result. Member States could decide how to achieve results. They must adopt measures to incorporate them into national laws to achieve the objectives set by the directive. A decision is a legal act of the European Union binding in its entirety. A decision that specifies those to whom it is addressed is binding only on them. Recommendations and opinions are non-binding acts. Each Member State of the European Union is responsible for transposing European Union acts into national law.

Measures for decarbonization of each sector are comprised in the international conventions on climate changes. The transportation sector has been analyzed through those documents. The transportation sector's effect on climate change is unquestionable [46]. This sector is responsible for approximately one-quarter of greenhouse gas emissions in the European Union [46]. The first global legally binding agreement about climate change and decreasing greenhouse gas emissions was adopted in Paris in December 2015 [3]. This agreement is well known as the Paris Agreement. The long-term goal of this agreement is to decrease global warming until 2030. The key to this agreement is to make an effort to limit temperature increase at 1.5 °C compared to 1990 [3].

The European Union, as the leader in controlling climate change, adopted the European Green Deal [1]. Rapid change to sustainable and smart mobility must be imperative in the transportation sector. It is assessed that emissions from the transportation sector must be decreased by 90% striving for climate neutrality until 2050 [1].

The concept of electromobility is comprised of acts that are adopted by the transportation sector as well as acts adopted for climate change mitigation, the energy sector, construction of facilities, energy efficiency, and public procurement.

The European Parliament and the Council of the European Union have adopted Directive 2009/33/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of clean and energy-efficient road transport vehicles in order to accelerate electric vehicle adoption [9]. In accordance with this Directive, Member States shall ensure that all contracting authorities, contracting entities as well as certain operators have to take into account lifetime energy and environmental impacts. Energy consumption, emissions of CO<sub>2</sub>, emissions of NO<sub>x</sub>, nonmethane-hydrocarbons (NMHC), and particulate matter (PM) have to be in focus when purchasing road transport vehicles. It is recommended that relevant information related to financial instruments available in the Member States for urban mobility and the promotion of clean and energy-efficient road transport vehicles should be published on the Internet. Also, information about green public procurements should be available online.

The European Union Commission carried out AN ex-post evaluation of Directive 2009/33/EC in 2015 [13]. It is concluded that Directive 2009/33/EC did not trigger a market uptake of clean vehicles across the European Union, in particular, due to shortcomings as regards its scope and the provisions of vehicle purchase.

The European Commission's communication of 20 July 2016 entitled "A European Strategy for Low-Emission Mobility" [14] and communication of 31 May 2017 entitled "Europe on the Move: an agenda for a socially fair transition towards clean, competitive and connected mobility for all" focuses on accelerating decarbonization process of the transportation sector [15]. Also, it is concluded that emissions of air pollutants from the transportation sector need to be significantly reduced without delay [14, 15]. That can be achieved by supporting a shift towards public transport and green public procurements to promote clean vehicles. As a result of the above-mentioned communications and ex-post evaluation of Directive 2009/33/EC, it is adopted Directive (EU) 2019/1161 of the European Parliament and of the Council of 20 June 2019 amending Directive 2009/33/EC on the promotion of clean and energy-efficient road transport vehicles [10]. Based on this Directive each Member State must implement minimum procurement targets for clean road transport vehicles to support transition to low-emission mobility across the Union. Those

targets are expressed as the minimum percentage of clean vehicles in the total number of road transport vehicles covered by the aggregate of all contracts from this area [10]. There are two reference periods lasting until years 2025 and 2030. Directive (EU) 2019/1161 has extended the scope of Directive 2009/33/EC by including practices such as lease, rental, and hire-purchase of vehicles, as well as contracts for certain services such as public road transport services, special purpose road transport passenger services, non-scheduled passenger transport, refuse collection services and parcel transport services [10]. Services in focus could be identified by codes from Common Procurement Vocabulary [10].

Charging infrastructure must be the focus of each Member State. Therefore, Directive 2014/94/EU of the European Parliament and of the Council of 22 October 2014 on the deployment of alternative fuels infrastructure have been adopted to help transition to alternative fuels [11]. Based on this Directive, a common framework of measures for the deployment of alternative fuel infrastructure across the European Union has been established. Each Member State shall adopt a national policy framework for the development of the market as regards alternative fuels in the transportation sector and the deployment of the infrastructure intended for vehicles that use alternative fuels. The national policy framework is well known as NOP. An assessment of the current state and future development of the market of alternative fuels in the transportation sector is in NOP. Also, NOP consists of national targets and objectives for the deployment of alternative fuel infrastructure that could be revised if it is necessary during the development. Also, it consists of measures that could ensure that national targets and objectives are contained in the national policy framework. Commission Delegated Regulation (EU) 2018/674 of 17 November 2017 and Commission Delegated Regulation (EU) 2019/1745 of 13 August 2019 supplementing and amending Directive 2014/94/EU of the European Parliament and of the Council as regards charging points for L-category motor vehicles, shore-side electricity supply for inland waterway vessels, hydrogen supply for road transport and natural gas supply for road and waterborne transport and repealing Commission Delegated Regulation (EU) 2018/674 are supplementing Directive 2014/94/EU [16, 17].

Additionally, the use of smart metering systems for electric vehicle charging at public charging stations is recommended, if it is technically and economically feasible. It is recommended by Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2001/48/EC and 2006/32/EC [18]. Distribution System Operators should have a significant role in charging infrastructure development. Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU treats the e-mobility concept [19]. Member States should ensure a necessary regulatory framework for the connection of public and private charging stations on distribution networks. Distribution system operators have to cooperate on a non-discriminatory basis with legal entities that own or manage charging stations.

Directive on the deployment of alternative fuels infrastructure and following Regulations are connected closely with Regulation (EU) No 1315/2013 of the European Parliament and of the Council of 11 December 2013 on Union guidelines for the development of the trans-European transport network and repealing Decision No 661/2010/EU [20]. The aim of the trans-European transport network (TEN-T) is to strengthen of economic, social, and

territorial cohesion of the Union, as well as contribute to the creation of a single European transport area.

Regulation (EU) 2022/869 of the European Parliament and of the Council of 30 May 2022 on guidelines for trans-European energy infrastructure, amending Regulations (EC) No 715/2009, (EU) 2019/942 and (EU) 2019/943 and Directives 2009/73/EC and (EU) 2019/944 establishes guidelines for the timely development and interoperability of priority corridors and areas of trans-European energy infrastructure [21].

Considering changes in the alternating fuel vehicle market, there are justified reasons for amending Directive 2014/94/EU [22]. The main reason, related to electric vehicles, is the circumstance that charging infrastructure is not developing equally across the European Union. Also, Member States do not have an equal level of ambition considering electric vehicle market development in NOP's. Therefore, binding minimum targets for Member States at the state level must provide adequate directives for future development, which have to be implemented in NOP [22].

The Regulation (EU) 2019/631 of the European Parliament and of the Council of 17 April 2019 setting CO<sub>2</sub> emission performance standards for new passenger cars and for new light commercial vehicles, and repealing Regulations (EC) No 443/2009 and (EU) No 510/2011 establishes CO<sub>2</sub> emissions performance requirements for new passenger cars and for new light commercial vehicles [23]. The CO<sub>2</sub> emission performance binding standards were set out in this Regulation for the year 2025 and year 2030. New standards for a decrease of average emission in the total amount of vehicles are established. Average emissions in the total amount of vehicles must be decreased by 15 % by the year 2025 and 37.5 % by 2030, compared to reference values from 2021. CO<sub>2</sub> emissions will be measured using the Worldwide Harmonised Light Vehicles Test Procedure, known as WLTP. Considering heavy-duty vehicles CO<sub>2</sub> emissions will have to decrease by 15 % until the year 2025 and 30 % by 2030, compared to reference values from the year 2019. Car manufacturers are obliged to ensure that reference values of CO<sub>2</sub> emissions and fuel consumption, which are established in certificates of compliance, are in accordance with values in use. These values should be in accordance with Commission Regulation (EU) 2017/1151 of 1 June 2017 supplementing Regulation (EC) No 715/2007 of the European Parliament and of the Council on type-approval of motor vehicles concerning emissions from light passenger and commercial vehicles (Euro 5 and Euro 6) and on access to vehicle repair and maintenance information, amending Directive 2007/46/EC of the European Parliament and of the Council, Commission Regulation (EC) No 692/2008 and Commission Regulation (EU) No 1230/2012 and repealing Commission Regulation (EC) No 692/2008 [24]. Regulation (EU) 2019/631 will be amended until December 31<sup>st</sup>, 2024 with new targets for CO<sub>2</sub> emissions [22].

Additional incentives for e-mobility development could be found in Directive (EU) 2018/844 of the European Parliament and of the Council of 30 May 2018 amending Directive 2010/31/EU on the energy performance of buildings and Directive 2012/27/EU on energy efficiency [25].

Incentives intended for promoting the transition to alternative fuels in the transportation sector must be the focus of the government of each Member State. Additionally, the development of charging infrastructure for alternative fuels must be included in national

plans for each Member State of the European Union. There are some legal acts that address the lack of those measures for promoting alternative fuels in the transportation sector.

In terms of electromobility, it is clear that the transition to electric driving is not equal in the countries of the European Union. Incentives for promoting electromobility are different in Member States [12]. Additionally, progress in the development of charging infrastructure is disproportional. That illustrates the number of charging stations in the Member States of the European Union [12]. Also, funding programs intended for electromobility promotion are not utilized equally by Member States, which is addressed in the special report "Infrastructure for charging electric vehicles: more charging stations but uneven deployment makes travel across the EU complicated" published by the European Court of Auditors [47].

### **3. EUROPEAN UNION'S MEASURES IN MONTENEGRO FOR ELECTROMOBILITY**

#### **A. Legislation in Montenegro considering electromobility**

The concept of electromobility in Montenegro will be presented through the analysis of the current state of the transportation sector in Montenegro. Also, we will present policies and measures of the European Union that have to be implemented in Montenegro to promote the use of electric vehicles. Results of the only project which has positive effects on electric vehicle adoption in Montenegro will be shown. That project regards the allocation of incentives for the purchase of fully electric and hybrid vehicles.

The number of registered road motor vehicles and trailers in Montenegro in 2022 was 266,747 [26]. The number of first-time registered road motor vehicles and trailers in Montenegro in 2022 was 21 796 [26]. Data about the number of electric vehicles on roads show minor participation in the total number of road motor vehicles in Montenegro. There are only 0.13 % of electric vehicles [26]. The average age of the following registered vehicles in 2022 in Montenegro was: passenger vehicles 15.75 years, vans 20.73 years, buses 14.7 years, goods road vehicles 14.94 years, and motorcycles 9.64 years [27]. Based on the above-presented data about the current state in Montenegro, we can conclude that the transition to alternative fuel drive must start as soon as possible.

Montenegro is proclaimed as an ecological state by the Constitution of the Republic of Montenegro. Additionally, Montenegro ratified the United Nations Framework Convention on Climate Change and the Paris Agreement. With these ratifications, Montenegro legally has to follow instructions within these agreements. Every sector in Montenegro must focus on decreasing the negative effects on the environment. In the transportation sector, concept of the electromobility could bring benefits to environmental protection.

The concept of electromobility is not adequately treated by the legal and strategic framework of Montenegro. Analysis of environmental protection documents and laws on traffic has been conducted. It shows that the transportation sector in Montenegro is recognized as one of the major pollutants, but there are no measures that could help transition to alternative fuels. There are no short-term or long-term strategies that could accelerate electromobility development on the local or state level.

The Law on environmental protection regulates the ways and conditions of environmental protection [28]. According to the Law on air protection, motor vehicles are

recognized as mobile emission sources [29]. A national strategy for air quality management is adopted every four years. According to the Law on air protection, it is adopted to improve air quality and reduce negative effects on health and the environment [29].

The principle of environmental protection is recognized by the Law on public procurement [30]. It is defined that public procurement authorities purchase work, goods or services according to principles of energy efficiency. Principles of Directive (EU) 2019/1161 are not treated by the current Law on public procurement in Montenegro [30]. Changes in this law should consider green public procurements for buying motor vehicles that will help transition to e-mobility.

The national policy framework is not established in the legal framework in Montenegro for electromobility, according to Directive 2014/94/EU. The initial step to transition to electric drive should be the establishment of this document. In this document, minimum targets for the deployment of adequate charging infrastructure will be established.

Distribution system operators have to integrate charging stations for electric vehicles in the distribution network. The rules for the functioning of the electricity distribution system [31] do not address the problem of electromobility. In the context of electromobility, Montenegro is an underdeveloped country. At the beginning of development in this area, it is necessary to support the transition to electric drive with measures for promoting this concept. It is necessary to consolidate regulations for Distribution system operators to accept a new category of consumers. Some European Union governments are supporting electric drivers by decreasing of fee for connection to the electricity distribution system. In Montenegro Decision on the determination of fees for connection to the electricity distribution system does not address the problem of electromobility [32]. If we are considering the deployment of fast charging stations, it is necessary to impact the fee for engagement of network capacity [31, 32].

With appropriate tariffs, utilities can better manage the new source of demand that originates from EV charging and avoid investment in network infrastructure associated with unmanaged growth in peak demand.

At the state and local levels, decision-makers should create specialized electricity tariffs that can be used to influence electric vehicle users' charging behavior. That tariffs should discourage electric vehicle charging during peak periods and encourage electric vehicle charging when electricity is less expensive to produce or procure or when renewable energy resources are available.

The tariff model for electromobility is not defined in Montenegro legislation. The institutions of Montenegro should specify prices for electric vehicles to accept a new category of consumers.

The Law on road transport [33] and the Law on roads [34] are in force in Montenegro. The Law [33] regulates the conditions and manner of carrying out activities of public transport of passengers and cargo in road transport. The Law [34] regulates the legal position of public and uncategorized roads, development, maintenance, and protection of roads. In terms of electromobility, The Law [33] regulates the placement of power lines on roads. The Law [34] recognizes places for charging stations as accompanying facilities on roads and as commercial objects.

The Law on road traffic safety regulates technical checks for motor vehicles [35]. Analysis of this document states that there are no obstacles to electric vehicles [35].

There are no limitations for the import of electric vehicles in Montenegro, according to the Rulebook on technical requirements for vehicles imported or first placed on the market in Montenegro [36]. In the above-mentioned Rulebook, there are defined steps to follow which show that the imported vehicle meets necessary standards. That is defined by the term homologation.

Tax policy for the e-mobility concept in Montenegro is favorable and regulated by The Law on Tax on The Use of Passenger Motor Vehicles, Vessels, Aircrafts, and Airplanes [37]. The tax on the use of passenger motor vehicles is paid by individuals and entrepreneurs annually in Montenegro, in accordance with engine displacement. Multiple vehicle categories are excluded from the mentioned tax such as motor vehicles on electric drive.

A step forward in the promotion of electromobility can be achieved through the Regulation on the amount of costs for technical inspection of vehicles and the Decision on determining the amount of annual fee for the use of roads within the registration of road motor vehicles, tractors and trailers [38, 39]. Until now, electric vehicles weren't treated in the above-mentioned documents [38, 39].

Electromobility development is treated with the construction of new and reconstruction of existing buildings by the Directive (EU) 2018/844. However, this concept is not treated by the Law on Spatial Planning and Construction of Structures in Montenegro [40]. The changes in this area must be the focus of the Government in the next period.

## **B. Incentives in Montenegro for electromobility in Montenegro**

We would like to address the first positive incentive in Montenegro for promoting changes in the transportation sector: The Rulebook on fuel consumption and CO<sub>2</sub> emissions for new passenger cars available in Montenegro made by the Ministry of Ecology, Spatial Planning and Urbanism, annually. Entrepreneur, who sells a vehicle has to show this rulebook to buyers, so the buyers can participate in environmental protection.

Allocation of subsidies for the purchase of electric and hybrid vehicles was started after the establishment of the Environmental Protection Fund (ECO Fund) in Montenegro. There are four successfully realized public calls for the allocation of subsidies for the purchase of electric and hybrid vehicles to individuals, legal persons, and entrepreneurs in 2021 and 2022.

The first allocation of subsidies for promoting e-mobility development has been realized through the public call: "Public call for the allocation of Environmental protection fund subsidies to individuals, legal entities and entrepreneurs for the purchase of electric and hybrid vehicles (category M1) for the year 2021" [41]. The subject of the public call was the allocation of subsidies for the purchase of new passenger vehicles of category M1 that have: exclusively electric drive, use two sources of energy - an electric motor and a SUS engine ("plug-in hybrid"), as well as vehicles that use a SUS engine and an electric motor ("full hybrid"). A brief description of vehicle categories can be found in the Rulebook on detailed conditions that must be met by vehicles in road traffic [42]. The total amount of subsidies for the purchase of electric and hybrid vehicles category M1 was 100,000.00 €. Half of the amount was intended for the purchase of fully electric vehicles, while the other half was intended for the purchase of hybrid vehicles. The main criterion for the allocation of subsidy was CO<sub>2</sub> emission [g/km]. In this public call, it is established that the ECO fund will subsidize the following: electric vehicles with CO<sub>2</sub> emissions of 0 [g/km], plug-in



hybrid vehicles with CO<sub>2</sub> emissions that are less than 50 CO<sub>2</sub> [g/km] and full hybrid vehicles with CO<sub>2</sub> emissions up to 130 CO<sub>2</sub> [g/km]. In accordance with this public call, subsidies for the purchase of electric and hybrid vehicles can benefit individuals, legal entities, and entrepreneurs. Additionally, the ECO Fund can allocate subsidies for the purchase of only one vehicle per person and a maximum of two vehicles to legal entities and entrepreneurs. The ECO fund will allocate subsidies in the following amount: 5,000.00 € for the purchase of electric vehicles and 2,500.00 € for the purchase of plug-in and full hybrid vehicles. Data about the results of the first public call are illustrated in Fig. 1, Fig. 2, and Fig. 3.

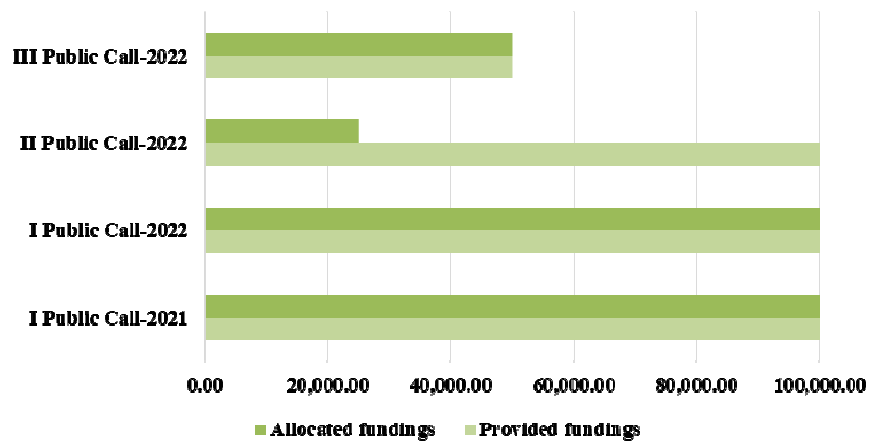


Fig. 1. A review of provided and allocated funding

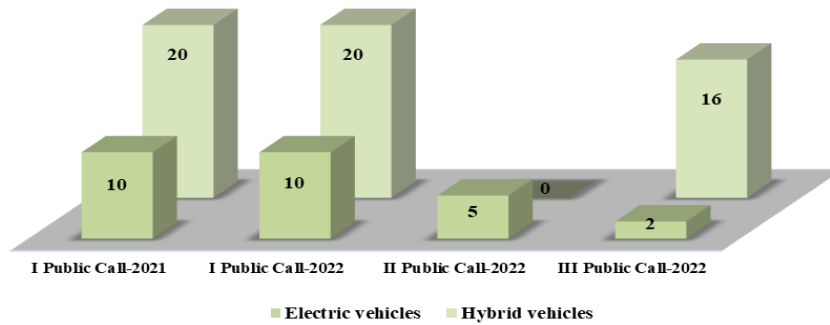


Fig. 2. A review of vehicles that are the subject of subsidies

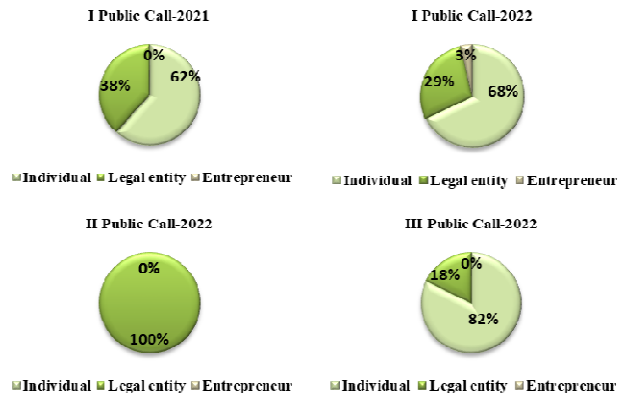


Fig. 3. A review of allocated subsidies by category of users

In 2022 ECO fund continued to promote the idea of wider usage of vehicles that will have a positive effect on the environment. Therefore, three public calls for the allocation of subsidies for the purchase of electric and hybrid vehicles were realized. “Public call for the allocation of Environmental protection fund subsidies to individuals and entrepreneurs for the purchase of electric and hybrid vehicles (categories L, M1 and N1) for the year 2022” was announced on 19<sup>th</sup> of April, 2022 [43]. The list of vehicle categories that can be subject to purchase was extended. The subject of these public calls was the allocation of subsidies for the purchase of new fully electric vehicles categories L, M1, and N1, and plug-in and full hybrid vehicles categories M1 and N1. The total amount of subsidies for the purchase of electric and hybrid vehicles category was 100,000.00 € without the difference between electric and hybrid vehicles, as it was in the year 2021. Conditions about the number that could be subject to this call are the same as they were in 2021. In accordance with this public call, the ECO Fund will allocate subsidies per vehicle in the following amount: 5,000.00 € for fully electric vehicles categories M1 and N1 and 2,500.00 € for plug-in and full hybrid electric vehicles categories M1 and N1. The maximum amount of subsidy that can be obtained for the purchase of electric vehicles from category L is 20% of eligible costs. The maximum amount of subsidy from category L1 to category L7 vehicles is: 300.00 €, 500.00 €, 1,000.00 €, 1,250.00 € and 1,500.00 €, respectively. The main criteria for the allocation of subsidy were CO<sub>2</sub> emission [g/km], as in the public call from 2021. Data about the results of the first public call in 2022 are illustrated in Fig. 1, Fig. 2, and Fig. 3.

Along with a public call for individuals, legal entities, and entrepreneurs, the ECO Fund announced the Public call for the allocation of subsidies for the purchase of electric and hybrid vehicles (categories L, M1, and N1) in the public sector for the year 2022 [44]. The public sector has an important role in promoting e-mobility. Therefore, through this public call, it is enabled that the public sector creates financially justified investment in e-mobility development. The total amount of subsidies for the purchase of electric and hybrid vehicles category was 100,000.00 €. The amount of subsidy depends on the type and category of vehicles, as in the previously mentioned public call. Also, the main criterion for the

allocation of subsidies for the purchase of vehicles is CO<sub>2</sub> emissions. The Central bank of Montenegro, Montenegro Post and Radio-television of Montenegro expressed willingness to participate in e-mobility development. These three bodies awarded subsidies for the purchase of electric vehicles in the amount of 25,000.00 €. Detailed data about the results of this public call are illustrated in Fig 1, Fig. 2, and Fig 3.

The fourth public call: “Public call for the allocation of Environmental protection fund subsidies to individuals and entrepreneurs for the purchase of electric and hybrid vehicles (categories L, M1, and N1)” was announced on December 26<sup>th</sup> 2022 [45]. The total amount of subsidies for the purchase of electric and hybrid vehicles categories L, M1, and N1 was 50,000.00 €. The conditions for this public call are the same as for the second-mentioned public call, announced by the ECO Fund [43]. Data about this public call are illustrated in Fig. 1, Fig. 2, and Fig. 3.

Subsidies for charging station development are not provided in Montenegro, although the ECO Fund intends to invest in its development. Additionally, it is important to address that data about charging infrastructure for electric vehicles is currently not available in Montenegro. The register of charging stations in Montenegro must be provided as soon as possible.

### **C. E-mobility in the countries surrounding Montenegro**

Considering countries surrounding Montenegro, it is concluded that Serbia, Bosnia and Herzegovina, and North Macedonia do not transpose legislation of the European Union into their national laws. These countries do not have NOP which is the key for the development in this area. At the beginning of the transition to electric drive, Serbia and Bosnia and Herzegovina are providing funding for the purchase of electric vehicles. North Macedonia does not have incentives for the purchase of electric vehicles. On the other hand, Slovenia and Croatia, as full Member States of the European Union have NOP. Their national laws consist of the European Union legislation for the e-mobility concept. These countries are providing more incentives for the purchase of electric vehicles than the above-mentioned countries. Moreover, there are incentives for the installation of the charging stations. Besides, the number of electric vehicles on the roads and the number of available charging stations do not indicate readiness to fully transition to electric drive.

## **4. CONCLUSION**

The aim of the European Union is low-carbon mobility. Policies that are implemented for promoting electric vehicle adoption have positive effects on the decrease of greenhouse gasses from the transportation sector. Additionally, the European Union must adopt clear guidelines about the minimum number of charging points. Also, funding must be concentrated on charging infrastructure development for promoting electromobility.

The question of climate change is global. So, every country worldwide must make an effort to mitigate the negative effects of the transportation sector on the environment. The long-term objective in the energy mix is the increase of renewable sources, so it is expected that cooperation between the energy and transportation sectors could bring outstanding benefits for climate change mitigation.

The European Union should encourage non-member states to follow the policies which are adopted in this area.

After the consideration of national legislation in Montenegro, we can conclude that the concept of electromobility is not adequately treated in this country. Montenegro, a country that intends to be a full member of the European Union, must transpose policies in this area into national laws. The first step for development in this area must be the establishment of NOP. Also, short-term and long-term strategy for the development of charging infrastructure is demanding. The only aspect of development in this area is incentives for buying electric vehicles.

Observing the current state of the transportation sector, we can conclude that progress in this sector will be very difficult and demanding. Therefore, interaction on the local and state levels will be the key factor for adopting electric vehicles.

Future studies could be related to considering steps in the development of electromobility in countries that are leaders in adopting electric vehicles in the transportation sector, to follow the steps for electric vehicle adoption in Montenegro. Also, it will be interesting to investigate the willingness of drivers to transition to electric driving in Montenegro.

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