Recommendations for the adoption of the Act on Electromobility and Alternative Fuels and the programming of electromobility projects into the Multiannual Financial Framework of the European Union

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## Contents

Introduction
The definition of the Act on Electromobility and Alternative Fuels4
Principles of infrastructure development and functioning
Obligations of public entities regarding the procurement of alternatively fueled vehicles
Obligations of public entities regarding the development of infrastructure for alternative fuels
Information obligations on alternative fuels
Conditions for the operation of clean transport zones
National Policy Framework for infrastructure development for alternative fuels and the manner of its application
Manner and conditions of financing electromobility and other alternative fuels
Adjustment provisions, transitional and final provisions
Conclusion
The list of projects for programming the Multiannual Financial Framework of the EU
Project 1
Establishment of a national network of fast and ultra-fast charging stations for electric vehicles within local and regional self-government units, networked in a pan-European network and provision of digital charging services
Project 212
Equipping family houses, holiday homes, apartments, multi-apartment buildings and public buildings with charging stations for electric vehicles
Project 3
Electrification of public passenger transport



### Introduction

The American Chamber of Commerce in Croatia (AmCham) recognized the transport sector as a sector that generates a quarter of the total greenhouse gas emissions in the European Union, and during 2019, it prepared the position titled **Recommendations for improving granting of incentives for a cleaner transport**. A cleaner transport and the increase in energy efficiency of transport systems certainly play an important role in achieving the objectives of the European Union defined by "The European Green Deal". Vehicles that use renewable energy sources and have reduced  $CO_2$  emissions, primarily plug-in hybrid vehicles and electric vehicles, are one of the key solutions for achieving ambitious objectives.

At the end of 2019, only 730 electric vehicles were registered in Croatia out of the total of 1,728,911 vehicles, which is 0.042%. For comparison, at the EU level, the share of newly registered electric vehicles in the third quarter of 2020 is 9.9%. Apart from the number of electric vehicles, Croatia also significantly lags behind in numbers regarding the publicly available charging infrastructure. The intercity traffic within the country, including highways, is significantly hampered.

The Integrated National Energy and Climate Plan for the Republic of Croatia for the period from 2021 to 2030 sets an ambitious objective of 13.2% of renewable energy sources in direct energy consumption in transport, and the objective, in accordance with the measures of the aforementioned Plan, is intended to be achieved by significant investment in electromobility and alternative fuels. Since the implementation of measures for the development of electromobility and alternative fuels has not yielded significant results so far, AmCham proposes the adoption of the recommendations set out in this position, which relate to:

- 1. The adoption of the Act on Electromobility and Alternative Fuels
- 2. The programming of projects regarding electromobility and other alternative fuels into the Multiannual Financial Framework of the European Union

By implementing the proposed activities, the Republic of Croatia would adequately seize the opportunities offered by the new EU leadership and the new Multiannual Financial Framework and would be able to keep pace with the exponential growth of transport electrification that is present in almost all other EU Member States.



### The definition of the Act on Electromobility and Alternative Fuels

The strategic act of the European Union "European Green Deal" is a clearly defined direction of sustainable transport that basically relies on electromobility as a lever for the reduction of greenhouse and harmful exhaust gas emissions in the transport sector. In order to achieve the objectives set by the *Regulation (EU 2019/631) of the European Parliament and of the Council on setting CO*<sub>2</sub> *emission performance standards for new passenger cars and for new light commercial vehicles*, it is expected that one third of the EU vehicle fleet will be using electrical energy for propulsion by 2030. In addition, to make this possible, the Commission has, with the European Green Deal, set an ambitious objective of 1 million charging stations for electric vehicles by 2025, which is an increase of 5 times compared to the current situation (200,000 charging stations).

Croatia belongs to the group of Central and Southeast European countries that lag behind in the availability of publicly available charging infrastructure (with approximately 400 publicly available charging stations, Croatia provides one publicly available charging station per 9,000 inhabitants, while the EU average is one publicly available charging station per 2,000 inhabitants).

Figure 1: Charging points: The increase is not in accordance with a growing demand for electric vehicles



Association (ACEA) shows that despite strong growth, the available charging infrastructure for electric vehicles in the EU still falls far below what is needed, and remains unevenly distributed across member states.

Source: <u>https://www.acea.be/press-releases/article/charging-points-growth-not-keeping-pace-with-rising-demand-for-electric-veh</u> (Accessed 1 December 2020)



In order to enable the development of the infrastructure for alternative fuels, all for the purpose of meeting the needs of current and future drivers, primarily of electric vehicles, many Member States have adopted plans and a legislative framework for achieving European objectives regarding the infrastructure and increase in the number of electric vehicles on roads.

An example of good practice is Poland, which adopted the Act on Electromobility and Alternative Fuels that defines national regulations regarding the development of electromobility, but also the exact competencies and obligations of individual stakeholders in the system, as well as the financing of the implementation of legally defined objectives. AmCham proposes defining the Croatian national Act on Electromobility and Alternative Fuels based on the Polish Act, adapted to national specificities.

### Principles of infrastructure development and functioning

There are currently two basic entities in the field of electromobility on the market in Croatia: Charge Point Operator and the E-mobility Service Provider. Their rights and obligations are not regulated and it is proposed to regulate them in accordance with the recommendations below.

### Rights and obligations of the Charge Point Operator

The Act should define at least the following rights and obligations of the Charge Point Operator in accordance with which the Operator:

- 1) enables E-mobility Service Providers, on the principle of equal treatment, access to publicly available charging stations for charging electric vehicles,
- 2) enables that a publicly available charging station meets a minimum of standardized technical requirements,
- 3) ensures a safe use of a charging station,
- 4) ensures that a charging station is equipped with an adequate software solution,
- 5) transmits data on the amount of the electricity consumed and other operating conditions for the use of a charging station to the electricity distribution system operator and the E-mobility Service Provider,
- 6) provides information on the rules for using the charging station and prepares instructions for its use, and
- 7) ensures minimum service quality.

### **Rights and obligations of the Public E-mobility Service Provider**

The E-mobility Service Provider is a stakeholder that enables access to and payment at public charging stations by using a mobile application or RFID (Radio Frequency Identification) cards. The E-mobility Service Provider enters into a contractual



relationship with the Charge Point Operator and end users, and:

- 1) provides the charging service at charging stations within the operational competence of the Charging Service Operator, and
- 2) on its website provides information on the price of the charging service and the conditions for providing the aforementioned service.

# Obligations of public entities regarding the procurement of alternatively fueled vehicles

The Polish Act defines short-term obligations of public entities regarding the procurement of alternatively fueled vehicles (all vehicle categories, including buses for public urban passenger transport), with an emphasis on electric vehicles, as specified below:

- A supreme or central national administration body ensures that the share of electric vehicles in a vehicle fleet used by public authorities and majority stateowned enterprises is 10% in the first 2 years from the entry into force of the Act, 20% in the first 5 years and ultimately up to a minimum of 50% in the next 10 years.
- 2) A local self-government unit ensures that the share of electric vehicles in the vehicle fleet that is being used is 10% in the first two years from the entry into force of the Act.
- 3) A local self-government unit ensures that the share of zero-emission buses in the vehicle fleet that is being used is 5% in the first 3 years, 10% in the first 5 years and 20% within 7 years from the entry into force of the Act.

# Obligations of public entities regarding the development of infrastructure for alternative fuels

The Polish Act defines the obligations of local and regional self-government units in terms of achieving the objectives concerning the number of charging stations for electric vehicles (EVC). The Act stipulates that in the period of 2.5 years from the entry into force of the Act, the following should be ensured:

- 1) 1000 charging stations in municipalities with a population over 1,000,000 people, in which at least 600,000 motor vehicles are registered and there are at least 700 motor vehicles per 1,000 inhabitants,
- 2) 210 charging stations in municipalities with a population over 300,000 people, in which at least 200,000 motor vehicles are registered and there are at least 500 motor vehicles per 1,000 inhabitants,
- 3) 100 charging stations in municipalities with a population over 150,000 people, in which at least 95,000 motor vehicles are registered and there are at least 400 motor vehicles per 1,000 inhabitants,
- 4) 60 charging stations in municipalities with a population over 100,000 people, in which at least 60,000 motor vehicles are registered and there are at least 400 motor vehicles per 1,000 inhabitants.



Following the example of the Polish Act and taking into consideration the population and the degree of motorization, AmCham proposes the application of adjusted values in Croatian local and regional self-government units, i.e. municipalities, as referred to in the Polish Act. The National Policy Framework should thoroughly prescribe the number and types of charging stations to be built in a specific area.

In order to move closer to the EU objectives of a minimum one million publicly available charging stations in the EU (200,000 currently available), Croatia will have to ensure a minimum of 5,000 publicly available charging stations (just over 400 currently available).

### Information obligations on alternative fuels

AmCham proposes the establishment of a Register of Infrastructure for Alternative Fuels. The competent ministry should have access to data collected in the Register as well as the possibility of disposing of real data for the purpose of reporting to the European Commission on achieved objectives regarding the use of renewable energy sources in the transport sector, and to carry out analyses from these data that could further improve the process of electrification of the Croatian transport system.

For the purposes of the aforementioned, the Charge Point Operator is obliged to send to the Register at least the following dynamic data on:

- 1) the type of charging stations it manages,
- 2) the type of purpose (private, public, semi-public),
- 3) the coordinates of charging stations,
- 4) the availability of charging stations in real time,
- 5) the actual prices of access services (within an hour of price change),
- 6) kilowatt-hours received from end users,
- 7) minutes of using the charging service and the total time the vehicle spent in the parking area.

### Conditions for the operation of clean transport zones

In order to prevent the negative effects on human health and the environment related to the emission of pollutants from the transport sector, AmCham proposes the establishment of clean transport zones in areas with a large number of residential and public buildings, in which only vehicles powered by the following would be able to enter:

- 1) electricity (plug-in electric vehicles and battery electric vehicles),
- 2) hydrogen,
- 3) natural gas.

The Act should regulate the concept of a Clean Transport Zone and define the competent bodies in charge of establishing it. The act regulating Clean Transport Zones should define at least the following:



- 1) the borders of clean transport zone areas,
- 2) the manner of organizing restrictions of entry into a clean transport zone, and
- 3) the manner of organizing circulation in a clean transport zone.

### National Policy Framework for infrastructure development for alternative fuels and the manner of its application

The Act on Electromobility and Alternative Fuels should prescribe the obligation to revise the National Policy Framework that would define at least the following:

- 1) an assessment of the current situation and future development of the market of alternative fuels in the transport sector,
- 2) a national objective regarding the number of public charging stations in the area of local and regional self-government units, and the ratio of normal power charging stations (<50kW) and high power charging stations (> 50kW),
- a national objective for equipping tourist accommodation units, family houses, multi-apartment buildings and public buildings with charging stations for electric vehicles,
- a national objective regarding charging stations for charging with compressed natural gas (CNG) and charging stations for charging with liquefied natural gas (LNG),
- 5) activities necessary for achieving the aforementioned national objectives,
- 6) activities for supporting the development of infrastructure for alternative fuels in public transport services,
- a list of municipalities and transport networks in which, according to market needs, charging stations for charging with compressed natural gas (CNG) should be located,
- 8) an assessment of the need to install liquefied natural gas (LNG) charging stations in seaports outside the basic TEN-T network, and
- 9) an assessment of the need to install charging stations in seaports for charging vessels with electricity from the mainland.

# Manner and conditions of financing electromobility and other alternative fuels

In recent years, the Environmental Protection and Energy Efficiency Fund (EPEEF) has been conducting tenders aimed at encouraging the construction of a network of charging stations and the purchase of electric vehicles. In order to implement the plans proposed by this Act, it will be necessary to ensure an additional source of funding as well as a better use of available funds from the Multiannual Financial Framework of the European Union.

As one of the possible sources of financing, AmCham proposes reallocation of excise duties on fuel in such a way that for each liter of fuel sold, a certain amount is set aside that will directly finance the achievement of the objectives set by the Act. In the case of Poland, a Fund for co-financing clean transport projects was established,



for which 2 euro cents are set aside for every liter of fuel sold.

In addition to the aforementioned, and for the purpose of a more efficient financing of electromobility, it is additionally proposed to program the following electromobility projects from the Operational Program Competitiveness and Cohesion (OPCC) 2021-2027.

### Adjustment provisions, transitional and final provisions

With the adoption of this Act, amendments to existing acts are also proposed for the purpose of regulating at least the following:

- rights and obligations of investors and tenants of multi-apartment buildings during the construction of electricity connections and charging stations for electric vehicles,
- sanctioning of owners of conventional vehicles parked in parking spots intended for charging electric vehicles,
- marking of parking spots of public charging stations for electric vehicles,
- the circulation of electric vehicles on traffic lanes intended for the circulation of vehicles for public urban passenger transport,
- the possibility of balancing the peak power of charging stations in real time at the request of the distribution system operator or transmission system operator,
- exemption from paying the Special tax on motor vehicles,
- introduction of a tax relief for private use of official plug-in vehicles (if the company owns plug-in vehicles (BEV and PHEV), whose employees use them for private purposes, such use should be exempt from income taxes in kind, following the example of the United Kingdom and the Netherlands),
- the appearance of the technical inspection label in such a way that a traffic warden can unambiguously determine the type of energy product used by an improperly parked vehicle.

## Conclusion

Since the use of sustainable alternative fuels in transport is one of the main determinants of the European Green Deal, with this position AmCham proposes the adoption of the Act on Electromobility and Alternative Fuels and the programming of projects regarding electromobility and other alternative fuels into the Multiannual Financial Framework of the European Union, all in order to meet the minimum requirements of this expansively growing economic activity.

"The list of projects for programming the Multiannual Financial Framework of the EU" defines 3 projects worth approximately EUR 190 million, which would be used during the next seven-year period for:



- the establishment of a national network of fast charging stations on the main roads and within the cities of the Republic of Croatia,
- equipping 20,000 family houses, apartments, holiday villas, multiapartment buildings and public buildings with charging stations for electric vehicles,
- electrifying the public passenger transport of the Republic of Croatia.

The adoption of the Act in question and the implementation of the aforementioned projects would strengthen the sustainability of the energy, transport and environmental system of Croatia and have positive effects on tourism, employment and the domestic economy in general.



### The list of projects for programming the Multiannual Financial Framework of the EU

### **Project 1**

Establishment of a national network of fast and ultra-fast charging stations for electric vehicles within local and regional selfgovernment units, networked in a pan-European network and provision of digital charging services

In order for Croatia to move closer to the EU objectives, it will be necessary to provide a minimum of 5,000 publicly available charging stations by 2025 (around 400 currently available), out of which a minimum of 1,500 evenly distributed fast and ultra-fast charging stations will need to be ensured per each local self-government unit. Considering the capital-intensive investments in fast and ultra-fast charging stations (approximately EUR 50,000 per charging station, which includes the cost of connection to the distribution network, the cost of site preparation, the cost of the device itself) and the relatively low level of unit infrastructure use, the attractiveness of a private equity investment is currently characterized as risky and this project therefore proposes co-financing in the highest possible percentage based on the positive and successful experiences of other EU countries (e.g. Czech Republic, Poland, Romania or Hungary) in designing and implementing similar projects during the OPCC 2014-2020. Charging stations need to be installed in the immediate proximity of highways and freeways, while the rest of the charging stations are planned to be installed in cities, as well as in places of special interest to citizens (supermarkets, shopping malls or company headquarters, etc.).

#### An example of good practice of such a project co-financed by OPCC 2014-2021: Czech Republic

The proposed example of the project concept was approved for co-financing and was successfully implemented in the Czech Republic during 2019 and 2020 (over EUR 40 million in grants were approved). The Czech Government divided the total envelope of grants into 4 separate supplier selection procedures, allowing competitive tendering of market players, while the three main criteria for obtaining EU co-financing were: project readiness at the time of tender opening (e.g. contracted sites for the acceptance of fast and ultra-fast charging stations, prepared project documentation, etc.), value for money and proven operational ability in managing the network of public charging stations in the local market.

#### Assessment of the total value of the investment

For 1,500 fast and ultra-fast charging stations, with the implementation deadline by the end of 2024, it is necessary to ensure a minimum of EUR 60,000,000 in grants from OPCC.



### **Project 2**

### Equipping family houses, holiday homes, apartments, multiapartment buildings and public buildings with charging stations for electric vehicles

It is proposed to implement a continuous (multi-year) program to encourage the construction of home charging stations for electric vehicles, which would provide natural persons, crafts and legal persons with an adequate incentive for the installation of a home charging station for charging electric vehicles. It is extremely important that this measure is not co-financed by national EPEEF funds (40% of eligible investment costs), but by EU funds (70-85% of eligible investment costs), since power lease, as the highest investment cost, is not an eligible investment cost for the Fund. It is therefore proposed to co-finance the costs of a charging station and the corresponding construction and electrical installation works with as large a share as possible.

AmCham proposes that the measure be implemented in such a way that the owners of private apartments and holiday homes can respond to a public invitation, and that the application procedure itself be as simple as possible, given the low investment value for the implementation of this type of project.

In addition, it is proposed that the construction of charging stations for electric vehicles be an integral part of public invitations which continuously co-finance projects concerning energy efficiency and renewable energy sources for multi-apartment and public buildings.

#### Assessment of the total value of the investment

Taking into account all the above, for the implementation of this measure, which would equip at least 20,000 accommodation units with a home charging station for electric vehicles, it is necessary to ensure EUR 71,000,000 in grants.



### **Project 3**

### Electrification of public passenger transport

The market of electric buses in the EU is growing at rates of over 100% per year and the regulation by which the European Commission proposes an obligation that by 2030, 75% of buses for public urban passenger transport be electric is currently in the adoption phase. Electric buses are currently not in operational use in the Republic of Croatia. Therefore, significant co-financing of electric buses and the corresponding charging infrastructure is proposed. AmCham proposes that all charging stations that will be installed for the needs of public urban passenger transport must be equipped with an adequate software solution that will, among other things:

- Provide the operator of public urban passenger transport with an insight into the attributes of charging sessions for each individual driver. Among other things, by using the software solution, it is possible to monitor the amount of energy taken in a unit of time, which will be useful for competent persons when planning and organizing transportation.
- To provide the Ministry of Maritime Affairs, Transport and Infrastructure with real data it would have at its disposal for the purposes of reporting to the European Commission on the achieved objectives concerning the use of renewable energy sources (RES) in the transport sector, and for carrying out analyses from these data that could further improve the process of electrification of the Croatian transport system.
- To enable the payment for the charging service during the hours of the day in which public urban passenger transport vehicles are in operational use. The aforementioned functionality of the software solution enables the operator to generate additional revenues and reduce dependence on subsidies, since public urban passenger transport vehicles will generally use the charging stations during night hours, while the rest of the daily time range of hours will be available for commercialization of the charging service.

#### Assessment of the total value of the investment

Taking into account all of the above, in order to implement this measure, by which public city passenger carriers would purchase the first 100 electric buses with the corresponding charging infrastructure during the seven-year period, it is necessary to ensure EUR 60,000,000 in grants.



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