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The promotion of electric mobility's framework in the European Union and its implementation into the Greek legal order

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Abstract

Electro-mobility constitutes a fast-developing area. Current recharging interface technologies include cable connectors, but future interface technologies, such as wireless charging or battery swapping need to be considered as well. For this purpose, the establishment of a common framework of measures for the deployment of alternative fuels infrastructure in the European Union in order to minimise oil dependency and to mitigate the environmental impact of transport became a new challenge for the Member States.

Introduction

The uptake of electro-mobility together with the diffusion of renewable energies, within the energy mix, are among the necessary conditions for the transition and the gradual decarbonisation of energy systems, as well as for the achievement of climate targets.[1]

In this frame, electro-mobility constitutes a fast-developing area.[2] Current recharging interface technologies include cable connectors, but future interface technologies, such as wireless charging or battery swapping need to be considered as well. For this purpose, the establishment of a common framework of measures for the deployment of alternative fuels infrastructure[3] in the European Union (EU) in order to minimise oil dependency and to mitigate the

[1] Fortsakis, T.P. and Iliadou, K. (2021), *Energy Law in Greece*, Nomiki Vivliothiki, p. 145.

[2] Iliopoulos, P. (2020), 'Regulation in electro mobility', *Energy & Law*, Vol 32.

[3] The EU has already regulated a lot of E-Mobility issues (Directive 2019/944 on common rules for the internal market for electricity, Directive 2014/94 on deployment of alternative fuels infrastructure, Directive 2018/844 on the energy performance of buildings and energy efficiency, Directive 2018/2001 on the promotion of use of energy from renewable sources, Directive 2019/1161 on promotion of clean and energy efficient road transport vehicles), but there is the possibility for EU countries to introduce different national market models and describe the role of EV users, service providers, and charging points operators, role of regulator, EV tariff design, etc.

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environmental impact of transport became a new challenge for the Member States.

The first step related to the promotion of electric mobility was the adoption of EU Directive 2014/94/EU of 22 October 2014 on the deployment of alternative fuels infra-structure. This Directive has set out minimum requirements for the building-up of alternative fuels infrastructure, including recharging points for electric vehicles (EVs) and refuelling points for natural gas (Liquified Natural Gas – LNG, and Compressed Natural Gas) and hydrogen. This should be implemented through Member States' national policy frameworks, common technical specifications for such recharging and refuelling points, as well as user information requirements. This Directive was completed by the EU Regulation 2018/674/EU of 17 November 2017 supplementing Directive 2014/94/EU of the European Parliament and of the Council as regards recharging points for L-category motor vehicles, shore-side electricity supply for inland waterway vessels and refuelling points for LNG for waterborne transport. It further amended the Directive as regards connectors for motor vehicles for the refuelling of gaseous hydrogen, in order to ensure technical specifications for the interoperability of recharging and refuelling points, and to identify the required technical specifications taking into account existing European standards and related international standardisation activities.

All these initiatives highlight the need for decarbonising the transport sector and to maximise the utility of resources. In fact, the application of the principles of sustainability is one of the main determinants of the long-term survival of market economies, as well as the main key of widespread urbanisation and of systemic reorganisation of cities and urban areas.

The implementation of eco mobility in Greek legal order and the acceleration of administrative and market procedures

As Greece is committed in reducing its CO2 emissions and achieving a smooth transition towards climate neutral economy by 2050, in June 2020 the country announced its new National Plan for E-mobility. This new initiative for cleaner mobility is in line with the EU Green Deal growth strategy and part of a ten-year climate protection plan. The goal is for one in three vehicles to be electric by 2030. However, current increase in the average electricity prices, which, as noted by the Energy Exchange in Greece, rose to EUR 134.73 per MWh in September from EUR 121.72/MWh in August and EUR 46.6/MWh in September 2020, is expected to hinder e-mobility growth.

However, while national legislation should ensure that technological innovation focused on the promotion of electric mobility will be facilitated, there are many barriers to e-mobility in Greece, such us the lack of public charging points. In fact, there are only 115 charging points operating in Greece, while it is currently estimated that at least 3500 charging points will be required.[4] Moreover, the commercial availability of EV models is limited in comparison to the biggest EV markets in the EU.[5]

These main challenges of electric mobility allowed the adoption of Law 4710/2020, which prescribes new incentives for production units or other e-mobility activities, introduces tax incentives for companies to acquire e-vehicles, regulates the e-vehicles market and charging services, and creates a subsidy scheme (Go

[4] Perellis, A., Mezartasoglou, D. and Stambolis, C. (2018), *Anticipated Penetration Rate of Electric Vehicles in Greece's Motor Vehicle Market*, Presentation 3rd HAEE Energy Conference on 'Energy Transition: European and Global Perspectives', Institute of Energy for South-East Europe.

[5] Law 4277/2014 (OJ A' 156), 4439/2016 (OJ A' 222) and 4710/2020 (OJ A' 142) on the promotion of e-mobility and the issue of Ministerial Decision No. ΥΠΕΝ/ΕΣΠΑΕΝ/77472/520/2020 on the "E-moving" initiative (the "MD").

Electric) for EV acquisition by companies and individuals. For this purpose, Eco mobility was based to a generous tax-based incentives to businesses for purchasing EVs and a regulatory framework for EVs charging services market. On this basis, new urban planning regulations for charging infrastructure were adopted by Greek administration.[6]

The Ministerial Decision No. ΥΠΕΝ/ΕΣΠΑΕΝ/77472/520/2020 on the "E-moving" initiative (the "MD") further establishes and regulates the "E-moving" initiative, which provides significant incentives to consumers and professionals for the acquisition of EVs or plug-in hybrid vehicles, as well as for the purchase and installation of charging infrastructure. According to the MD, it is necessary to promote e-mobility and facilitate the penetration of EVs in the Greek market in order to reduce gas emissions and fulfil the targets of the national energy and climate plan. As anticipated, the initiative provides subsidies (of a total public expenditure of EUR 45.8 million) in the form of an environmental bonus for the purchase or lease of EVs. The three following categories may participate in the initiative, with varying subsidies: individuals[7], taxi owners[8], and legal entities.[9]

Conclusion - Perspectives

It is obvious that electro-mobility constitutes a fast-developing area in Europe.[10] However, it is necessary to adjust the issues of sustainability and of public interest for the promotion of Eco mobility. In fact, electro-mobility is not a goal in itself, but one of the main tools to achieve important national and European objectives. This needs to be achieved by means of an array of policy initiatives, including the development of a sustainable alternative fuels strategy as well as of the appropriate infrastructure. As a result, ramping up the production, deployment and use of sustainable alternative fuels is a key priority of European transport, energy and climate policies.

The Commission has proposed to reduce the EU's greenhouse gas emission by 2030 by at

[6] In fact, Eco mobility has also brought changes in Greek public procurement law, enabling public offices to purchase EVs. The 1990 law only referred to conventional fuel, meaning that tenders for e-vehicles were often rejected by auditing authorities. After identifying and raising this issue at a meeting with the stakeholder group, the Centre of Renewable Energy Sources and Savings recommended a change that would enable green public procurement, stimulating the e-mobility market. The law was adapted in March 2020 to include a clear reference to alternative fuel vehicles and e-vehicles.

[7] For the purchase or lease of an EV with retail price before tax ("RPBT") up to EUR 30,000, the environmental bonus is 20 %, with a maximum of EUR 6,000; for the purchase or lease of an EV with RPBT between EUR 30,000 and EUR 50,000 the environmental bonus is 15 %, with a maximum of EUR 6,000; for the purchase of a two-wheel/three-wheel vehicle, the environmental bonus is 20 % of the purchase price before VAT, with a maximum of EUR 800; and for the purchase of an electric bicycle, the environmental bonus is 40 % of the purchase price before VAT, with a maximum of EUR 800. Moreover, if an individual voluntarily replaces an old vehicle (manufacture date 2013 or older) with an EV, there is an additional subsidy of EUR 1,000 for cars and EUR 400 for two-wheel/three-wheeled vehicles (excluding e-bikes). Individuals can also apply for a subsidy of EUR 500 for the acquisition of a home EV charger. The initiative runs until 31 December 2021, unless all the available funds are consumed prior to this date."

[8] The subsidies are higher in this category: for the purchase or lease of an EV with RPBT up to EUR 50,000, the environmental bonus is 25 %, with a maximum of EUR 8,000; and for the purchase or lease of a hybrid plug-in vehicle with emissions up to 50grCO2/km and RPBT up to EUR 50,000, the environmental bonus reaches 15 %, with a maximum of EUR 5,500. In each case, if the owner has an old taxi (built before 2013) this must be withdrawn, for which the owner will receive an additional subsidy of EUR 2,500.

[9] Environmental bonuses are available to companies to buy or lease up to three vehicles (or up to six vehicles if the legal entity has business activity on an island) as follows: EVs with RPBT up to EUR 50,000, for which the environmental bonus reaches 15 % of the RBPT, with a maximum of EUR 5,500; Hybrid commercial EVs (with low emissions up to 50grCO2/km) up to 3.5 tons, with RPBT up to EUR 50,000, obtain an environmental bonus of 15 % of the RPBT with a maximum of EUR 4,000; and E-two wheels/three-wheels earn an environmental bonus of 20 % of their purchase price before VAT with a maximum of EUR 800.

[10] Current recharging interface technologies include cable connectors, but future interface technologies such as wireless charging or battery swapping need to be considered as well. Legislation should ensure that technological innovation is facilitated.

least 55 % compared to the previous 40 % reduction target. This has a relevant impact on the required uptake of sustainable alternative fuels, vehicles and infrastructure. To achieve these ambitious targets, the uptake of zero-emission vehicles and the related infrastructure needs to accelerate significantly in all market segments of light-duty and heavy-duty vehicles.

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