POLICY BRIEF No 2019/32, MAY 2019

Greece Is Pushing the Brake in Electric Car Revolution

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Key points

This policy brief focuses on Greece's slow movement in the electric vehicle (EV) sector, in contrast with the rest EU countries. It highlights the importance of electric cars and the causes of Greece's delay, which are mainly the absent succinct legislation and the high ownership and operation cost. The brief also presents recommendations in order to promote electric cars in the Greek market, specifically through:

- investment in development of required infrastructure
- fiscal incentives and favorable regulations
- familiarization of users with electric vehicles

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Introduction

One of the most important environmental issues in cities is air pollution due to traditional motor vehicles, which run on diesel or gasoline and emit harmful substances to the environment and public health. Over the past ten years, the use of electric vehicles, since it is considered a solution to this problem, has started to be more promoted by many governments, except Greece, who has been moving very slow in this sector.

The Greek Government has started its attempts on the development of electric vehicle sector since 2010, with the implementation of a package in order to support the EVs' penetration in the Greek market. In 2011, a scientific commission under the Ministry of Environment, Energy and Climate change made an assembly in order to study the prospect of researching, developing and initiating electric vehicles in the Greek transport sector. After 2013, the country moved to an intensive electricity mix with less carbon consumption. In 2014, a new legislative amendment was made concerning the operation of recharging facilities in order to further promote electric cars. According to EU directives, by the end of 2020, Greece should have a secure number of charging stations,

specifically 13,000, which must be publicly accessible in order to facilitate the EVs' circulation in the road network.

How is Greece so many steps behind in the EV sector right now?

Greece is currently falling behind in the electric vehicle sector development, considering the existing policies and infrastructure. In fact, Greece is one of the top 3 countries with the lowest market shares of electricity chargeable vehicles in Europe. According to *European Automobile Manufacturers' Association (ACEA)* statistics, Greece had 0.23% ECV market share with 199 units sold in 2017. There is a clear difference in the electric vehicle sector development, if someone compares Greece with some of the biggest EU car markets, for example, United Kingdom or Germany, which had an ECV market share of 1.9% and 1.6% in 2017, accordingly.

Greece is not capable of supporting the electric vehicle market growth mainly due to the ongoing economic recession. The economic situation of the country is a significant parameter, which influences the capability to provide fiscal incentives in order to develop the EV market and boost the consumer's willingness to pay for EVs.

The total cost of ownership and operation of a small to medium-size electric car in Greece includes the capital acquisition costs, which include the vehicle and battery cost, and the battery terminal cost as well as costs like fuel, depreciation, taxes, insurance and maintenance. According to a comprehensive analysis of the owning and operating costs of a small to medium-size electric car in 21 EU member states over the first three years of its ownership and with assumed 20,000 km of driving a year, *LeasePlan's Car Cost Index*, in Greece the total monthly cost of ownership is 953€, in contrast with the amount of 468€ for petrol-running cars and 427€ for diesel-running cars. This important difference in cost reduces their market competitiveness and prevents drivers from switching from conventional models to electric vehicles.

Apart from the vehicle cost, there is another significant boundary for the EV adoption in Greece and this is the so-called "range anxiety". The term "range anxiety" refers to the consumers' fear that their electric vehicle won't have enough stored power in order to handle daily driving. This fear is caused by the lack of publicly accessible charging stations in the country. Most drivers will probably be unwilling to move to electrically chargeable vehicles in large numbers, until there is the necessary infrastructure and said cars can provide a significantly greater range than the current one.

Who has been standing in the way of the EV revolution in Greece?

Apart from the above-mentioned boundaries concerning the development of electric vehicles in the Greek market, we should also consider some groups that will be affected by such a change and have many interests at stake. Such stakeholders are:

Car Dealers

In Greece, this is an around €2.5 bn market (for new cars, used cars and spare parts) with 10,000 jobs and around 70 companies. The risk for all the existing dealers and repair shops if the car industry converts to electric, mainly arises in the case that new brands, such as Tesla or the many Chinese or some new European ones, will produce new electric vehicles. Probably car dealers wouldn't want a redistribution of the car retail market. Furthermore, when it comes to spare parts and maintenance, there may be some decrease in revenues, since maintenance costs of electric vehicles tend to be 40% lower than those concerning traditional cars.

Fossil Fuels' Producers

Another major stakeholder is the oil sector, which is dominant in Greece and a major exporter. The oil industry is a more than €10 bn market with 25,000 jobs, two large refineries, which control the bulk of oil products' supply, and many smaller companies. There are 12 fuel distributors and retailers and more than 100 niche operators in transport, asphalt, storage, aviation and shipping fuel and LPG trading. So, the Greek economy relies considerably on this sector, which is off course a part of the huge and powerful global market for fossil fuels.

What's the big deal about electric cars?

Driving a pure electric car can produce substantially lower CO_2 emissions than a petrol or diesel car, improving this way air quality and reducing climate change. It contributes to decreasing the risks to public health, like health problems, among which are asthma, lung cancer, heart disease, emphysema, and even death. In fact, in Greece, 18,000 premature deaths a year are attributed to poor air quality, according to data retrieved from the European Environment Agency. Despite the benefits, which a swift to electric vehicles could provide for environmental protection, electromobility is still considered a "luxury for the few" and while the rest of the world is changing, Greece is falling behind.

Recommendations

In order to combat negative effects of climate change, environmentally upgrade urban centers and protect public health, Greece should immediately act to help spur electric vehicle market growth. A set of possible measures to promote the introduction of electric vehicles in the Greek market could include:

Investment in Development of Required Infrastructure

It appears to be a correlation between charging infrastructure availability and deployment of electric vehicles. For example, observing the French market, in 2015, the installation

of publicly accessible charging stations was related to the development of electric cars in the country, which proves this said correlation. By proceeding with the establishment of the legal framework and the investment in creating the necessary infrastructure for electric power generation and distribution, such as publicly accessible charging stations, Greece will be able to reduce consumers' "range anxiety", which is a key barrier in the development of electric cars, and consequently increase the interest towards electric mobility.

Fiscal Incentives and Favorable Regulations

Greece should set a series of incentives, which could include, for example, purchase grants, tax benefits for consumers of electric vehicles, subsidies on home chargers or even free electricity for public charging. Specifically, the Greek authorities could proceed to a change in the taxation structure by taxing negative externalities, such as greenhouse gas emissions, creating this way positive incentives through excise relief and subsidies. The Netherlands and Norway both have a great number of tax incentives, which make it very attractive for both consumers and businesses to buy or lease electric vehicles.

Except from tax incentives, Greece could also provide specific local benefits for owners of electric vehicles, for example, free or preferential parking, access to restricted traffic areas, access to toll lanes, free charging or free access to ferries. Direct or indirect fiscal incentives, like more tax reliefs for electric vehicles and other "low carbon" vehicles, as well as the adoption of favorable regulations for electric vehicles' users, would boost the value proposition of electric vehicles in Greece as is the case in other European economies.

Familiarization of Users with Electric Vehicles

A key to promoting e-mobility in Greece would also be the communication of arguments and persuasion, comprising information and education in order to increase consumers' awareness. On average, consumers in several regions are unfamiliar with electric vehicle technology and uninformed about the range of benefits, which electric vehicles provide. Consumers, who have some level of understanding of and experience with this technology, are more likely to consider an electric car in their future purchasing or leasing decisions. Greece should move to an adoption of a new socio-technological regime through education programs and awareness campaigns, which could involve, for example, radio and television commercials, celebrity ambassadors, test drive and experience sharing, social network posts and messaging, competitions and challenges and more, in order to familiarize users with the characteristics and specification of electric vehicles and the potential of this technology to cover consumers' needs.

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