

under the pretext of importing ten thousand fully electric cars

Is the infrastructure ready for the presence of all-electric vehicles?

Written by Kamran Talebi Fard, PhD in Marketing, Automotive Industry Consultant

Last month, the dedicated system for registering all-electric vehicles began operating, and in the first round of registering imported all-electric vehicles, about 120,000 people applied to buy all-electric vehicles and blocked the amount of 100 million Tomans. Of course, it was later determined that the maximum capacity for importing electric vehicles is ten thousand units this year, and in fact, out of these one hundred and twenty thousand people, only ten thousand will be granted electric vehicles. The electric vehicles offered included several Chinese cars, as well as two Volkswagen and Audi crossover models, which, of course, are also assembled or produced in China, according to the custom of new imported vehicles. However, the subject of this article is whether the necessary infrastructure exists in the country to use these vehicles or not?

In previous articles in the magazine "Mashin" we discussed the importance of electricity generation sources for all-electric vehicles. In those articles, it was pointed out that the development of the use of all-electric vehicles will be beneficial to the environment if the necessary electricity is generated from renewable sources such as hydroelectric, solar, geothermal, or at least nuclear power plants. If fossil fuel power plants are used, the development of electric vehicles

will not be beneficial to the environment in the medium and long term. Currently, more than ninety percent of electricity production in our country is unfortunately carried out by these same fossil resources and in thermal power plants with fossil fuels. Therefore, from an environmental perspective, the development of the use of all-electric vehicles does not have much benefit for preserving the environment, especially global warming and air pollution levels. However, if we assume that the legislator's goal in developing the use of electric vehicles was not environmental goals but rather to reduce gasoline consumption in the country, then in the next stage we will face the question of whether the country's infrastructure has the appropriate capacity for the use of all-electric vehicles? Below, we will briefly discuss the most important variables affecting the use and profitability of all-electric vehicles;

1. Urban charging stations

One of the most important variables affecting all-electric vehicles is the number and distribution of urban charging stations or public charging stations for electric vehicles, which actually play the role of gasoline stations for gasoline vehicles. Currently, the only publicly available charging stations for electric vehicles are in Tehran, and the number of these stations is not even counted on the fingers of one hand, and in terms of capacity and distribution, they cannot attract the attention of electric vehicle consumers in any way. In fact, these few stations have been built in a limited number to implement the pilot plan for the development of the use of electric vehicles, and they will not be able to meet the ten thousand electric vehicles that are going to be offered to the market.

2. Intercity charging stations

While in countries that have put the development of the use of all-electric vehicles on their agenda, we are witnessing the daily development of urban and intercity charging stations, in our country, no intercity charging stations for electric vehicles have yet been built. In this case, the use of electric vehicles will be limited to use in the metropolis of Tehran, and in the best case, electric vehicle buyers, given the maximum range of electric vehicles, can travel to the northern cities of the country (Mazandaran and Gilan) or the southern provinces of Tehran such as Qazvin and Kashan.

3. Problems of electricity supply in the national electricity grid

Despite having the ability to build power plants, due to lack of investment in power plant construction over the past two decades, we have witnessed an increase in imbalances in electricity production and consumption every year, especially in the summer. Also, in winter, gas shortages and gas imbalances cause thermal power plants that produce electricity using natural gas to fail, which in turn leads to a decrease in electricity production in the national grid. In this situation, the entry of thousands of fully electric vehicles into the market and their use of the national electricity grid can increase the pressure on this grid and cause more grid drops and, as a result, blackouts. Have the authorities considered the consequences of the entry of electric vehicles, the necessary measures to increase electricity production, or will the entry of fully electric vehicles be limited to these ten thousand units for now?

4. Weakness in Information

One of the main problems in the development of the use of all-electric vehicles is the lack of information about this type of vehicle. It seems that almost the majority of consumers do not have adequate information about the efficiency and main advantages of electric vehicles, and most people have registered a request to purchase electric vehicles only in the hope of making a profit and due to the low price of imported electric vehicles compared to gasoline vehicles due to the low customs tariff and their general price advantage.

5. After-sales service

The supply of all-electric vehicles requires a separate and trained after-sales service network that has experts and technicians trained to repair and maintain these types of vehicles. Now it remains to be seen whether companies importing electric vehicles have the ability and strength