

Obstacles and opportunities for the growth of Taiwan's new energy vehicles

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The world is still dominated by the new crown pneumonia epidemic in 2021, but it is also a continually year of electric vehicle sales. The global sales growth rate exceeds 90%, and it is expected to continue to grow strongly in the future. The electric car leader Tesla (Tesla) has a growth rate of 87% in 2021 which is 50% exceeding the original forecast. As many as 70% of Tesla's supplier list are Taiwanese companies. Other Taiwanese companies such as Hon Hai, Yulon, and Delta are more aware of the electric vehicle business opportunities and list electric vehicles as a key target market in the future.

However, according to the latest statistics, of the more than 8 million vehicles in Taiwan, only more than 12,000 are electric vehicles, and of the 14 million locomotives, only more than 450,000 are electric vehicles, accounting for 0.15% and 3% respectively. Compared with other countries, Taiwan's new energy vehicle market still has a lot of room for growth.

According to many survey results, it seems that "driving mileage anxiety" and "slow construction of public charging facilities" are the main reasons why most consumers still hold a wait-and-see attitude toward electric vehicles. However, if you compare actual car use behavior, you will find that these or many are excessive worries with a very low probability of occurrence.

First of all, from the perspective of vehicle usage, the Ministry of Transportation investigated the usage of self-driving passenger cars. The average driving distance per time does not exceed 50 kilometers regardless of various purposes, not to mention the most frequent commuting is only 30 kilometers. The best-selling Tesla in Taiwan The Model 3 has a cruising range of about 600 kilometers with a 20% discount. A single charge of electricity is enough for commuting to work five days a week. Ipsos' survey of existing owners of electric vehicles of various brands also shows that nearly 90% of them have never experienced electricity exhaustion.

Secondly, from the perspective of charging, more than 80% of current electric car owners mainly charge at home or workplace; and surveys on the use of small passenger cars also show that general car owners also have paid/free parking spaces (non-street parking) at homes and workplaces. Close to 80%, which means that if you really want to buy an electric car, most people will not use public charging stations regularly. The actual obstacle is that the installation of charging piles in residential buildings is restricted by the type of construction, and the current laws have no clear supporting facilities for the establishment of charging stations in private parking lots. Therefore, the degree of understanding and subjective intentions of individual community building management committees on electric vehicle charging facilities has become the construction. The key to the decision of success is also to constrain the willingness to purchase electric vehicles.

An interesting statistic found that the fastest-growing city in Taiwan for the share of electric vehicles is not Taipei, the best capital, or Hsinchu, where upstarts in science and technology gather, but Tainan, the ancient cultural capital with a long history. Cross-comparison of the six types of real estate transactions also found that only Tainan City has a high proportion of land and open transactions

(both over 30%). As for the other five capitals, the transaction volume of residential buildings accounted for the most (internal population migrated to residential buildings in the Hsinchu area). (It accounts for nearly 60% of Huaxia); Tainan residents are more accustomed to living in the sky, so the proportion of electric vehicles that can choose freely is also relatively high.

However, it is interesting to see what Taiwanese people expect for new energy vehicles/electric vehicles?

Although many people mentioned environmental protection and energy saving, intelligent assisted driving... and other sustainability and safety demands when interviewed. However, according to survey data, it is found that more practical expectations are still related to saving money. More than 50% of the car owners surveyed on the use of passenger cars expressed their willingness to purchase pure electric vehicles, and up to 78.3% of them were willing to give priority to electric vehicles. A similar money-saving mentality also appeared in Ipsos' survey of electric car owners of Taiwan's luxury brands. These luxury brand owners have an average annual fuel cost of more than NT\$90,000 when driving a petrol vehicle, but half of them are only willing to pay an annual fee of less than NT\$20,000. Use electric vehicle fast charging service.

In addition, the uncertainty of whether the government will adjust the current fuel tax exemption policy for electric vehicles in the future has also caused many consumers to continue to wait and see due to the potential risk of a potential surge in the cost of owning vehicles. It seems that the conviction of the budget-conscious Taiwanese in the pursuit of high CP values has not been discounted for the time being because of the convenience and environmental protection that electric vehicles can bring.

The pursuit of maximizing benefits has always been human nature. In fact, electric vehicles were a smash hit as early as the beginning of 1900, when 30% of the total number of vehicles in the United States were electric vehicles. But the good times didn't last long. In 1935, Ford Motor realized mass production of fuel vehicles. The reduction in production costs was directly reflected in the selling price. At that time, an electric convertible was priced at \$1750, and a petrol car was only \$650, plus The performance and safety of the new fuel vehicles have been greatly improved, and the powerful price advantage has sent electric vehicles into history.

Today, a similar reverse trend seems to be taking shape. Before the policies, regulations, and infrastructure are ready, major automakers have tried their best to invite department stores by launching affordable electric models, enhancing user experience, and forming alliances in different industries. , Constructors build charging parking spaces in new construction projects and public/private parking lots... to increase incentives for consumers to purchase electric vehicles. In the past, due to the high cost of construction, only high-priced luxury houses would be equipped with charging piles as standard; however, according to statistics, the number of communities with charging parking spaces in the six cities in early 2021 has increased by 63% compared with six months ago. In addition, the government has made it clear that charging pile pipelines must be reserved for new projects, and it is believed that charging obstacles will gradually be eliminated.

Finally, although there are no clear provisions on the legal aspects, the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) that Taiwan is actively seeking to join has

perfected and regulated many projects that were not even included in the World Trade Organization (WTO). The "environmental regulations" are one of the main links. Under the government's goal that carbon emissions need to be aligned with world standards within a time limit, the existing "equal rights of petrol & electric vehicles" policy is bound to be revised in the direction of increasing the encouragement of the use of new energy vehicles. The Energy Administration has implemented the new "General New Vehicle Fuel Consumption Control Standards", and it's already clear that the overall new vehicle fuel consumption control targets for passenger cars and commercial vehicles will be increased by 38% and 20% respectively.

Taking the exemption of the 10% purchase tax on new energy vehicles and the absence of a total amount of special licenses in China as an example, the sales of electric vehicles have increased significantly after the announcement. Once the policy is in place, the era of electric vehicles in Taiwan is bound to be better than expected. Coming sooner.

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