

# *Research on Marketing Strategy and Future Development of New Energy Vehicles*

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**Abstract:** Since the Industrial Revolution, with the rapid development of science, technology and productivity, people's ability to exploit natural resources has increased rapidly, which is not only an unprecedented increase in wealth and economic level, but also a series of environmental pollution problems. Therefore, new energy vehicles let us see new breakthroughs in energy development. As a new industry, it can better reflect the concept of low-carbon environmental protection and green travel, while creating an environment-friendly and conservation-oriented society for us. However, whether it is the road of new energy automobile industrialization abroad or the road of new energy automobile industrialization in China, it is necessary to overcome the difficulties. At present, there are many problems, such as incompatible charging facilities, immature key core technology, inadequate development environment of new industry, and incomplete power battery recycling system. These problems restrict the development speed of new energy automobile industry in China. This paper first analyses the marketing situation of new energy vehicles in China, and then analyses the marketing environment of new energy vehicles. Finally, some feasible suggestions are put forward for the existing problems at this stage.

## **1. Introduction**

Automobile industry is one of the leading industries that support and promote the sustained and rapid economic growth in China. According to the general draft of "Economic Operation of Automobile Industry in 2018" released by China Automobile Industry Association, the production and sales of new energy vehicles have reached 1.27 million and 1.256 million respectively, increasing by 59.9% and 61.7% respectively over the same period of last year. Among them, the production and sales of pure electric vehicles completed 986,000 and 984,000 respectively, up 47.9% and 50.8% respectively. The production and sales of plug-in hybrid electric vehicles were 283,000 and 271,000 respectively, up 122% and 118% respectively. Production and sales of fuel cell vehicles have reached 1527. Sales of new energy vehicles in 2016-2018 are shown in Figure 1. With the rapid growth of China's automobile industry, the status of China's automobile industry in the world has substantially improved, and it has become an important part of the world's automobile industry.

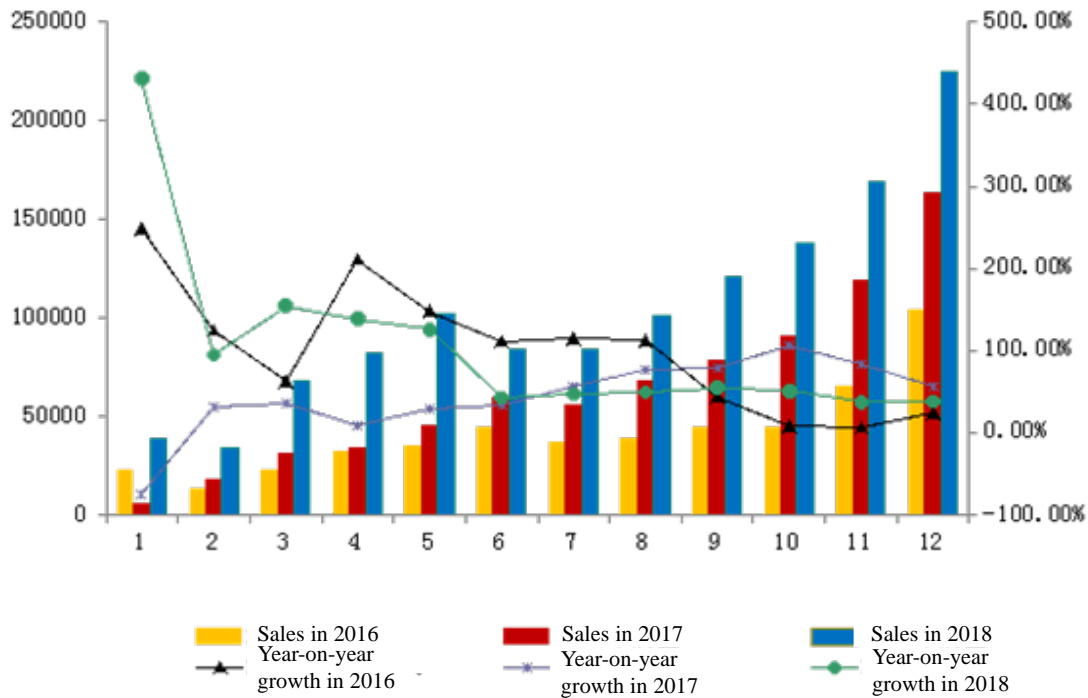


Figure 1: Sales of new energy vehicles in 2016-2018

China New Energy Passenger Vehicle Sales List in 2018 is shown as the table 1.

Table 1: China New Energy Passenger Vehicle Sales List in 2018

Ranking	Vehicle type	Sales (Vehicles)	Ranking	Vehicle type	Sales (Vehicles)
1	Beiqi New Energy EC Series	90637	6	Jiangling E200S	39883
2	Chery eQ Electric Vehicle	46967	7	Song DM 1.5T	37352
3	Qin Pro DM	45054	8	Tang mixing	35289
4	BYD E5	43902	9	Yuan EV	33915
5	Jianghuai IEV	42024	10	Rongwei I6 1.0T EDU	33347

## 2. Analysis on Marketing Environment of New Energy Vehicle

### 2.1 Speed-up Process of Global New Energy Vehicles

At present, all countries are speeding up the formulation of plans to ban the sale of fuel vehicles. As shown in Table 2. This proves that countries around the world are beginning to realize the importance of new energy vehicles. The traditional automobile industry is gradually transforming into new energy vehicles. At the same time, it also shows that new energy vehicles have great potential and good development prospects.

Table 2: Planning Table for Prohibited Fuel Vehicles

Countries	Planned ban time	Countries	Planned ban time
Netherlands	2025	Germany	2030
Norway	2025	california	2030
Belgium	2030	France	2040
Sweden	2030	Britain	2040
India	2030		

Source: Aijian Securities Wealth Management Institute

## 2.2 Infrastructure policy

So far, new energy vehicles are still a highly policy-dependent industry, and national policy is the decisive force to promote industrial development. The new energy automobile industry has been transformed from a "single policy-driven" to a "policy-market-driven" stage. The role of the government should gradually retreat from the "front line" to the "behind the scenes". As shown in Table 3, the state subsidy will decline year by year, and various automobile enterprises will gradually enter the market competition stage of new energy vehicles.

Table 3: National Subsidy Plan for New Energy Vehicles from 2015 to 2020

Vehicle type	Driving range R	Amount of State Subsidies (RMB)						
		2015	2016	2017	2018	2019	2020	
Blade Vehicles	Electric	100≤R≤150	31,500	25,000	20,000	20,000	15,000	15,000
		150≤R≤250	45,000	45,000	36,000	36,000	27,000	27,000
		R≥250	54,000	55,000	44,000	44,000	33,000	33,000
Plug-in Electric Vehicle	Hybrid	R≥50	31,500	30,000	24,000	24,000	18,000	18,000

## 3. Analysis of Consumer Demand for New Energy Vehicles

### 3.1 Survey of Research Projects

In this paper, a questionnaire survey was conducted in six cities: Beijing, Shanghai, Guangzhou, Shenzhen, Hangzhou and Xi'an. A total of 3000 questionnaires were issued, 2961 of which were valid, with an effective rate of 98.7%.

### 3.2 The larger audience of micro and small BEV

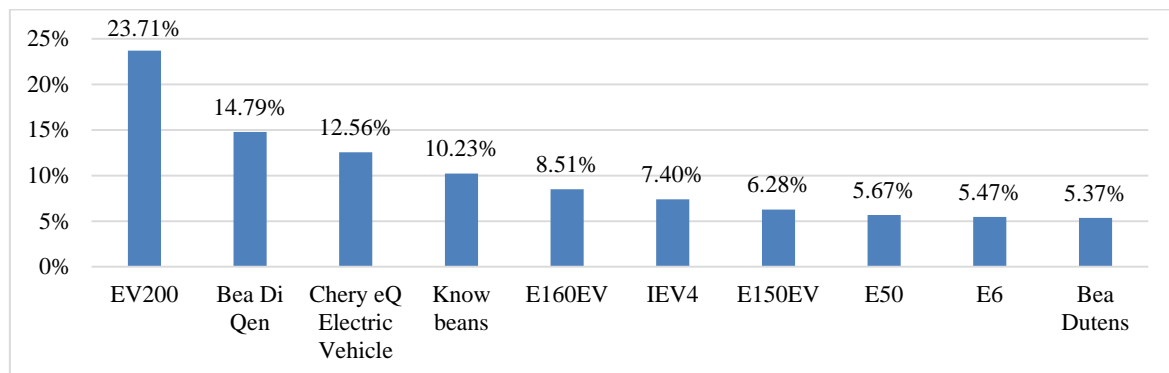


Figure 2: Ranking of Consumer Intention to Buy New Energy Vehicles

The target audience is the post-80s group as the main purchasing force of new energy vehicles. The first car with a purchase budget of 10-200,000 is the main consumption structure. Consumers' willingness to buy new energy vehicles ranks as shown in Figure 2. As shown in Figure 2, micro BEV and small BEV are more popular in the market.

### 3.3 Important Reasons for Consumers Not Purchasing

Through quantitative questionnaires, the reasons why consumers did not implement the purchase were examined. There are several main reasons why customers who do not need to buy new energy automobiles. First, most of them are concerned about the mileage. The existing mileage can only meet the short-distance commuting and short-distance travel. Second, the charging facilities are not perfect, and the cost of installing charging piles in families is high. The important reasons for not purchasing is shown as the figure 3.

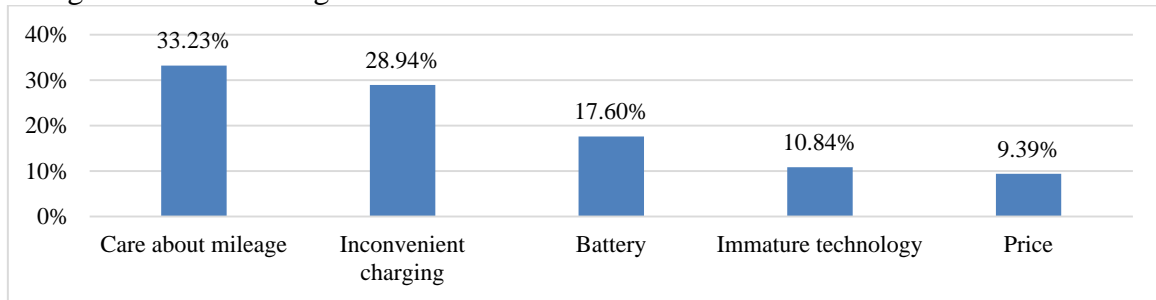


Figure 3: The important reasons for consumers not purchasing

### 3.4 Security concerns

According to the research results, battery safety is the most concerned and worried aspect of consumers, followed by charging safety, as shown in Figure 4.

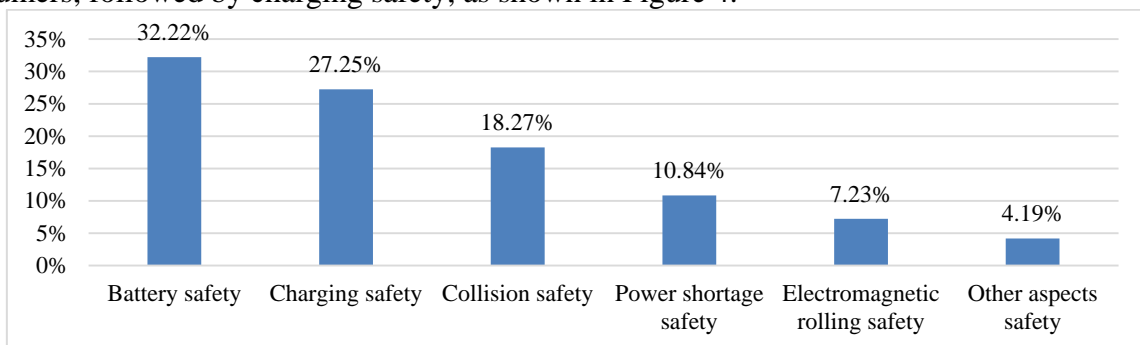


Fig.4 research results of charging safety

## 4. Promotion Strategy of New Energy Automobile Industry

### 4.1 Accelerate the development of new technologies for power batteries

The development of power batteries has gone through lead-acid batteries, nickel-hydrogen batteries and Li-ion batteries. Nowadays, battery management has rapidly become the mainstream of electric vehicles with its high energy density and good cycle performance. At present, whether in China or abroad, the research and development technology of batteries still has great shortcomings. In terms of energy density, iron phosphate batteries can reach 80-120 Wh/Kg, while ternary batteries can reach 120-180 Wh/Kg. Therefore, the evolution history of power batteries is also the history of increasing battery energy density. The renewal of batteries is more conducive to promoting the rapid development of new energy vehicles.

The future power battery will be the world of soft-pack batteries. At present, Li-ion batteries are divided into three technical routes: cylinder, square and soft package. Soft-packed batteries are made of aluminium-plastic film, which has the following advantages. First, it has high safety and

can avoid battery explosion when expansion occurs. Secondly, it is light in weight, small in volume and long in length. Thirdly, the improvement of cycle life guides the research and development of soft package technology.

## 4.2 Unified Specification for Charging Caliber

At present, there are only five popular charging interfaces and standards in the world, which are Combo, CHAdeMO, Tesla, CCS and GB/T 20234. Therefore, most of the AC charging pile interfaces of new energy vehicles in China are designed according to GB/T 20234. However, our country has not only independent new energy vehicles, but also international new energy vehicles. So it is likely that there will be a mismatch when charging. China must speed up its integration with the international standards and negotiate the unified charging caliber of electric vehicles. Once the uniform caliber is determined, the new energy vehicles produced by automobile enterprises must be manufactured according to the standard, and the charging piles should be installed in place according to the standard.

## 5. Conclusions

The development of new energy vehicles is more suited to China's national conditions. It meets the current energy structure of our country, as well as the needs of an environment-friendly and resource-saving society. The research on energy vehicles is of great practical significance to the sustainable development of our country. On the one hand, the development of new energy vehicles is conducive to the construction of ecological and environmental protection cities. Electric vehicles can basically achieve zero emission, which is of great significance to reduce environmental pollution and establish an eco-environmental protection city. On the other hand, the development of new energy vehicles is conducive to optimizing the energy consumption structure. Compared with traditional fuel vehicles, electric vehicles can basically achieve "zero emission" and do not need to use fossil energy. New energy vehicles are conducive to the requirements of building a resource-saving society and an environment-friendly society, and to achieving sustainable economic development in China.

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