

### China Electric Vehicle Drive Motor Industry

Report, 2015-2020

Sep. 2015



The Vertical Portal for China Business Intelligence

#### STUDY GOAL AND OBJECTIVES

This report provides the industry executives with strategically significant competitor information, analysis, insight and projection on the competitive pattern and key companies in the industry, crucial to the development and implementation of effective business, marketing and R&D programs.

#### **REPORT OBJECTIVES**

- To establish a comprehensive, factual, annually updated and costeffective information base on market size, competition patterns, market segments, goals and strategies of the leading players in the market, reviews and forecasts.
- To assist potential market entrants in evaluating prospective acquisition and joint venture candidates.
- To complement the organizations' internal competitor information gathering efforts with strategic analysis, data interpretation and insight.
- To suggest for concerned investors in line with the current development of this industry as well as the development tendency.
- To help company to succeed in a competitive market, and

#### **METHODOLOGY**

Both primary and secondary research methodologies were used in preparing this study. Initially, a comprehensive and exhaustive search of the literature on this industry was conducted. These sources included related books and journals, trade literature, marketing literature, other product/promotional literature, annual reports, security analyst reports, and other publications. Subsequently, telephone interviews or email correspondence was conducted with marketing executives etc. Other sources included related magazines, academics, and consulting companies.

#### **INFORMATION SOURCES**

The primary information sources include Company Reports, and National Bureau of Statistics of China etc.

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### Abstract

### China Electric Vehicle Drive Motor Industry Report, 2015-2020 by ResearchInChina highlights the followings:

X Overview of new energy vehicle drive motor, including definition, classification and industry chain of automotive drive motor;

Operating environment of China new energy vehicle drive motor industry, containing policy environment, development of new energy vehicle market and its impact on automotive drive motor industry;

Development of China new energy vehicle drive motor industry, covering industry chain, costs, business model, competitive landscape, and competition among mainstream manufacturers; elaboration on competitive landscape in passenger vehicle and commercial vehicle drive motor markets; detailed analysis of status quo and trends of drive motor technology;

22 Chinese companies and 6 global players, covering operation, development strategy, supply chain, new energy vehicle drive motor business, etc.

In 2014, electric vehicle (bus + passenger vehicle) drive motor system output value in China was worth up to RMB3.02 billion, a year-on-year surge of 125%.

(1) Bus drive motor output value was RMB2.35 billion, accounting for 76%, a focus of market competition, with the largest number of supporting companies;

(2) Due to lower price of single-vehicle drive motor system, passenger vehicle drive motor system output value was RMB600 million and will keep increasing with rapid rise in the number.
(3) Output value of the drive motor for special vehicles, primarily logistics vehicle, city sanitation vehicle and sprinkler, was relatively small but has grown rapidly, especially driven by strong growth momentum of city battery-electric logistics vehicle since 2015.

Passenger vehicle mostly adopts permanent-magnet synchronous motor; the power of single unit of drive motor is often around 30KW-50KW and priced at RMB10,000-20,000. As the power of drive motor for mini electric vehicle is generally 20KW, the price falls to RMB7,000/unit accordingly. Passenger vehicle drive motor system now usually adopts the model of in-house, which prevails in companies like BYD, ZOTYE, Xin Dayang, SAIC Motor, and JAC Motors. And Zhongshan Broad-ocean Motor (serving BAIC Motor), Shanghai Edrive (serving Chery), Hangzhou Dewos Electric Technology (serving ZOTYE and acquired by Zhejiang Founder Motor) are few independent motor producers that enter the supply chain of mainstream passenger vehicle makers.

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#### Electric Vehicle Drive Motor System Market Size in China, 2012-2020E

Bus drive motor system is the field that is highly competitive and with a large number of manufacturers. The biggest companies, in terms of market share, were Shanghai Edrive, Jing-Jin Electric and Zhuzhou CSR Times Electric in 2014. 100KW AC asynchronous drive motor is priced at around RMB10,000/unit, and dual-motor system is quoted at RMB300,000/unit.

Over the next five to ten years, drive motor technology will develop towards permanent magnetization, integration, and digitalization. Motor control and integration technology will be the focus of competition among enterprises. China lags far behind the advanced world levels in the aspects of key IGBT chip packaging technology and 3rd-generation SiC IGBT research and development, which will be prioritized in the future.

With regard to driving technology, there now two main modes: centralized driving and hub driving.

(1) Centralized motor driving is transformed from structure of traditional diesel locomotive, is suitable for mass production, and has easily controllable cost, enabling it the current mainstream motor driving mode.

(2) "Next-generation motor and electric control system" is likely to be hub motor and control system. Enjoying certain advantages in weight and efficiency, hub driving technology has started to be adopted in some hybrids by GM, Toyota and Benz and to be developed by some domestic makers with own brands. The technology now is still immature and has not been applied massively, but it may be the development direction of electric vehicle driving mode in the future. Japan and U.S. are way ahead in hub motor development, with industry leaders including Japanese Fuji Electric and Yasukawa Electric, and American Protean Electric.

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