Global and China Li-ion Power Battery Industry Report, 2014-2016

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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 cost-effective 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

In 2013, the sales volume of global electric vehicles reached 228,000 vehicles, including 95,000 PHEVs and 133,000 BEVs. With the further promotion of electric vehicles globally, the sales volume will rise to 700,000 vehicles by 2016.

The global demand for electric vehicle power batteries came to 5,662MWh in 2013; however, following the rising electric vehicle sales and battery capacity per vehicle, the figure is expected to climb to 31,100MWh by 2016.

Currently, the global power batteries develop mainly in the following three technology roadmaps:
(1) Manganese-based. This type of batteries uses LMO as cathode materials. Typically, however, after modification treatment, they are mixed with a small amount of NCM or LNO to increase their energy density. This is mainly represented by the foreign companies—including LGC, AESC, and LEJ, as well as the Chinese company CITIC GUOAN MGL. Now, this has become the mainstream technology roadmap in the field of global electric vehicles

(2) Ternary materials-based. This mainly takes NCA and NCM as cathode materials. NCM-based batteries have high energy density, but with higher costs than that of LMO batteries. The typical companies consist of SDI and SKI from abroad and the Chinese Lishen and Wangxiang Group, etc. NCA adopts 18650-type battery, which is mainly used in Tesla, with the highest energy density for now. But because of poor safety performance, the advanced BMS is needed to monitor the operating condition of the battery. Thus, the battery has not been widely used.

(3) LFP-based. Canada and the United States were the first to develop power battery technology, with main patent owners including the U.S. Valence, A123 and University of Texas, and the Canadian Phostech and Hydro-Quebec. On the other hand, there are numerous power battery companies in China such as BYD and Hefei Guoxuan High-Tech Power Energy Co.,Ltd that adopt the LFP technology, but the LFP battery has many problems and was not made available around the world.

At present, manganese-series power battery consisting of NCM and LMO occupies the mainstream status on a global scale, with the cost of battery pack generally higher than USD600/kWh; the lower-cost NCA 18650 batteries fail to be popular with automakers due to safety issues; the similarly lower-cost LFP batteries, because of the poor comprehensive performance, are only popularized and used in China and the United States, while the U.S. automakers have gradually abandoned LFP batteries and turned on purchasing Mn-series batteries from Japanese and S. Korean companies.

There is no major technological breakthrough yet in power battery. The main driving factors for power battery price collapses are expected to come from the material cost reduction and scale effect, with relatively limited downslide potential.

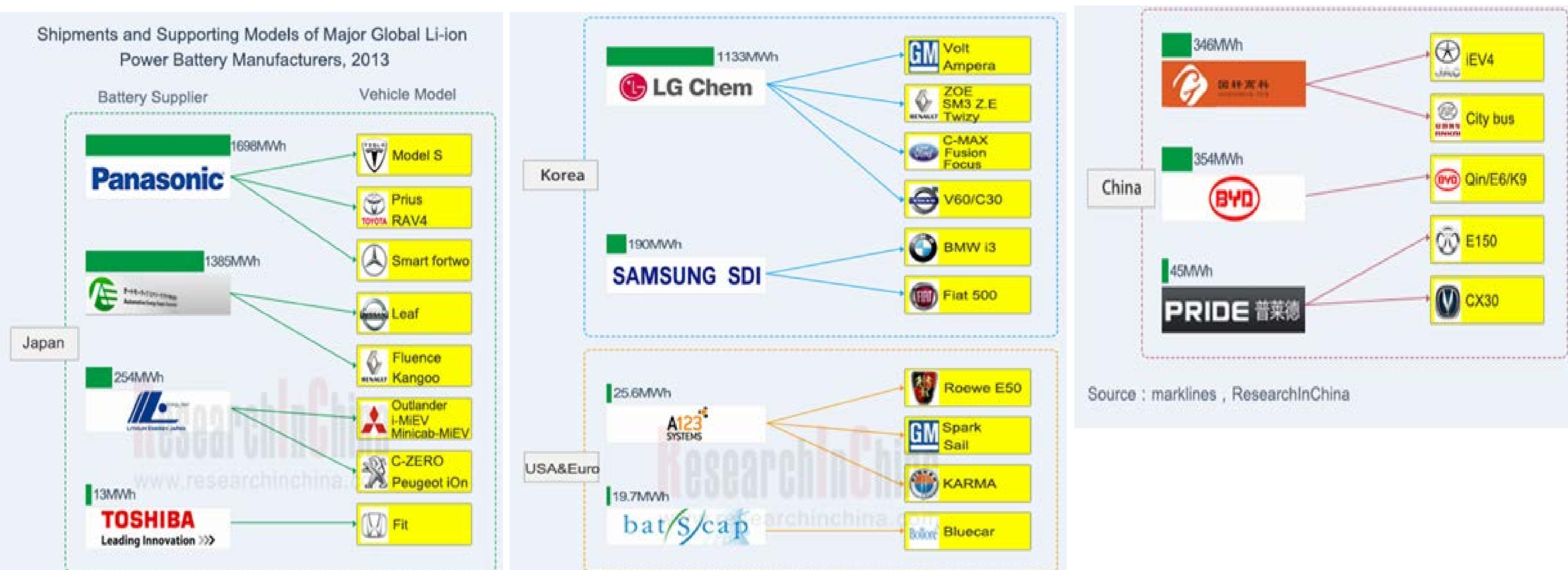
China's power battery shipments reached 533MWh in 2013, which increased by 61% year on year and accounted for less than 10% of the world's total. At present the main demand comes from electric city bus. As the charging facilities are not perfect in China, the private electric passenger cars are rarely sold.

In terms of power battery companies, BYD and Guoxuan High-Tech have the shipments that have far exceeded those of their rivals. And BYD batteries are mainly used to support its own electric passenger cars and buses while Guoxuan High-Tech supplies batteries to JAC, Ankai Bus and other auto makers.

For power battery companies, winning the support of big carmakers is of the utmost importance from a global perspective. It is projected that electric buses will still be the main driving forces behind the development of China's power battery market for some time to come. How to penetrate the electric bus supply chain seems crucial.

Global and China Li-ion Power Battery Industry Report , 2014-2016 by ResearchInChina mainly covers the followings:

- Analysis of industry chain, including the key materials, Cells, Pack & BMS, etc.;
- Analysis of technology roadmap, including battery cost, performance, and development directions, etc.;
- Market size, sales volume ,supply relationship, etc. of global and Chinese electrical vehicle industry;
- Shipment, market size, price, supply relationship, etc. of global and Chinese Li-ion Power Battery industry.
- Operation, technology, development plan, production & marketing of nine lithium battery separator companies in the world, mainly of Korea, Japan and USA
- Operation, technology, development plan, production & marketing of ten lithium battery separator companies in China.



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