Global and China Li-ion Power Battery Industry Report , 2017-2020

Feb.2017

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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

There are three major technology roadmaps for power battery around the world:

(1) Ternary materials-based: NCA and NCM as main cathode materials. Featuring high energy density, NCM batteries have become a mainstream battery technology for electric vehicles along with a sharp cutin procurement costs of the batteries in recent years. Chinese battery enterprises, represented by Tianjin Lishen and Boston Power, have started the production of NCM batteries since 2014. NCA is chiefly used in 18650-type battery (the highest energy density so far), which supports mainly Tesla and Toyota RAV4. However, due to strong chemical activity of aluminum mixed in NCA, advanced BMS is needed to monitor the operating condition of the battery, thus resulting in a low penetration in carmakers.

(2) LFP-based. Canada and the United States were the first countries to develop power battery technology. In China, LFP, the mainstream technology for power lithium battery, is widely used in passenger cars and buses, with the typical enterprises including BYD and Guoxuan High-tech. However, due to the factors like low specific energy and poor low-temperature starting performance, LFP batteries still have not been widely used worldwide.

(3) Manganese series: with LMO as main cathode material. LMO is generally modified and is mixed with a small amount of NCM or LNO to raise battery energy density. Key representative manufacturers are LGC, AESC, LEJ, etc. And in China, they are CITIC Guoan MGL, Do-Fluoride Chemicals, etc.

In the first half of 2016, top enterprises by shipments of power battery included: BYD, Contemporary Amperex Technology Co., Limited (CATL), Guoxuan High-tech, OptimumNano Energy Co., Ltd., Wanxiang, Lishen, Dongguan CHAM Battery Technology, Beijing National Battery Technology, China Aviation Lithium Battery (CALB), Zhuhai Yinlong New Energy Co., Ltd., etc. Ten enterprises shipped a total of 5.37GWh power batteries, making up 80.5%, of which top three ones (BYD, CATL, and Guoxuan High-tech) shipped 3.72Gwh power batteries, a combined 55.8% market share.

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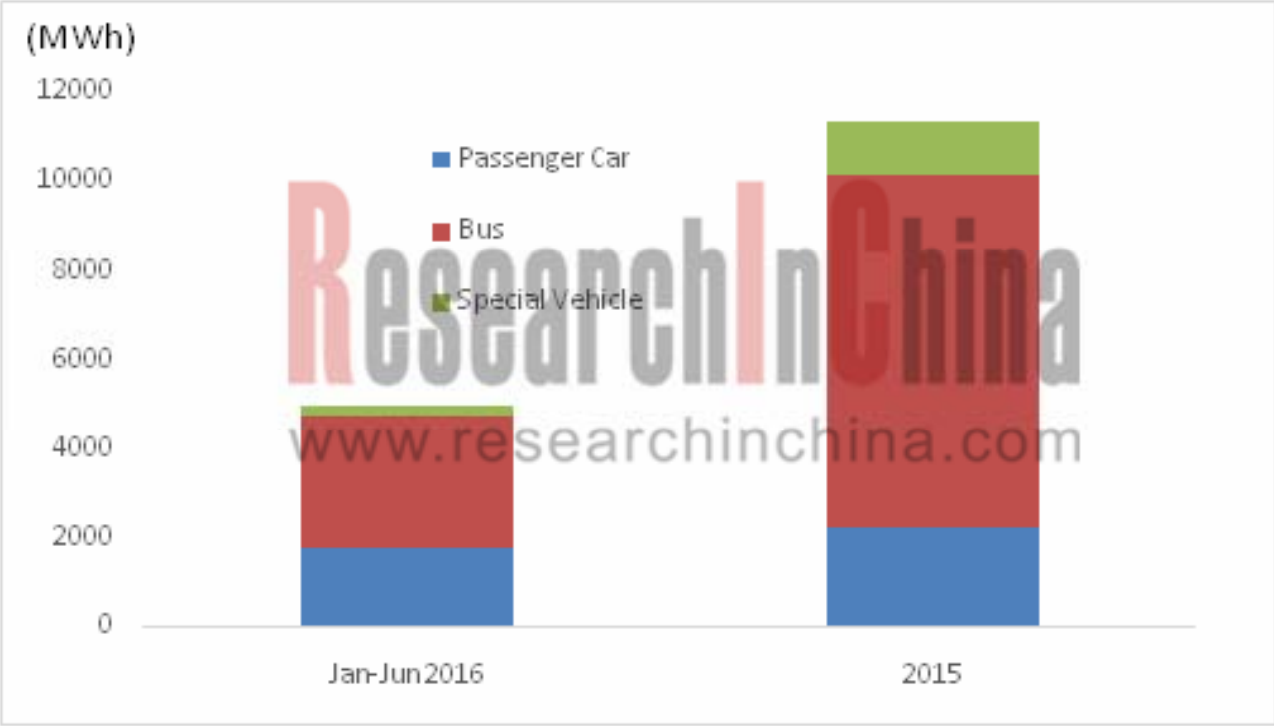
Installations of LiFePO4 Power Battery in China, 2015-2016H1



Specifically, BYD, which produces batteries for its own use, shipped 1.62GWh batteries (almost all LiFePO4 batteries), half of 2015's total; the second-placed CATL shipped 1.56GWh batteries, primarily LiFePO4 and ternary batteries, with the former accounting for nearly 80% and mainly used in new energy buses manufactured by Yutong Bus, Zhongtong Bus, Nanjing Golden Dragon, Xiamen King Long, Beiqi Foton Motor, etc., and the latter chiefly in passenger cars produced by Geely, etc. The third-ranking Hefei Guoxuan High-tech shipped 0.55GWh batteries, almost all LiFePO4 batteries and very few multi-composite batteries which are used in passenger cars, buses, and special vehicles largely produced by JAC Motors, Zotye Auto, Zhongtong Bus, Nanjing Golden Dragon, Higer Bus, SAIC Motor Commercial Vehicle, etc.

Globally, the support from big carmakers is vital to power battery manufacturers. On one hand, traditional consumer electronics enterprises are aggressively conducting transformation; on the other hand, battery materials manufacturers and vehicle manufacturers have also begun to enter this field through various ways. Thus, the first echelon, represented by BYD, Guoxuan High-tech, Tianjin Lishen, and ATL and the second echelon including OptimumNano, Boston Power, Pride Power, Beijing Electronics Holding & SK Technology Co., Ltd (BESK), Do-Fluoride Chemicals, CALB, and Shenzhen BAK have taken shape.

Global and China Li-ion Power Battery Industry Report, 2017-2020 focuses on the following:
◆Li-ion power battery industry chain (four key materials, cell, Pack + BMS, etc.);
◆Li-ion power battery technology roadmap (costs, performance, development direction, etc.);
◆Global and China EV industry (overall, by country, and production & sales and performance parameters of specific auto models, etc.);
◆Global and China li-ion power battery industry (shipments, prices, market size, batteries for auto models and carmakers, etc.);
◆Six Japanese and South Korean lithium battery enterprises (operation, technology, development planning, production & sales, etc.);
◆Ten Chinese li-ion power battery enterprises (operation, technology, development planning, production & sales, etc.)

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Table of contents

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Table of contents

Selected Charts

- Classification of New Energy Vehicles
- Classification of Power Batteries
- Operating Principle of Lithium Battery
- Classification of Li-ion Power Batteries
- Statistics of Auto Models on the MIIT's Catalogue of NEV Models Exempt from Vehicle Purchase Tax (9th Batch)
- Analysis of the Catalogue of Recommended Models for NEVs Promotion and Application (4th Batch)
- Well-established EV Standard System in China
- Newly-issued National Standards for Power Battery in 2015
- GB/T 31467 Power Battery System Standard
- Li-ion Power Battery Value Chain
- Cost Structure of Li-ion Power Battery Module
- Production Procedures of Li-ion Power Battery
- Cost Structure of Automotive Power Battery Cell in China, 2016
- China's Demand for Four Core Materials for Power Battery, 2015-2020E
- Categories of Cathode Materials
- Batteries Used in Electric Buses, 2016
- Batteries Used in Electric Passenger Cars, 2016
- Chart of Global Cathode Materials Output
- Chart of China's Cathode Materials Output
- Cathode Materials Capacity (Global vs. China), 2010-2020E
- Market Share of Global Cathode Materials Manufacturers, 2015
- Capacity of Major Cathode Materials Manufacturers in China
- Ranking of Major Cathode Materials Manufacturers in China, 2016H1
- Price Trend of Battery-grade Lithium Carbonate, 2009-2016
- Categories of Anode Materials

Selected Charts

- China's Demand for Anode Materials for Li-ion Power Battery, 2016-2020E
- Global Anode Materials Market, 2015
- Market Share of Global Anode Materials Manufacturers, 2015
- Ranking of Major Anode Materials Manufacturers in China, 2016H1
- Separator Consumption of Common Electronic Products and Car Lithium Battery
- Global Output Value of Lithium Battery Separators, 2009-2017
- Separator Supply & Demand in China
- Market Share of Global Lithium Battery Separator Manufacturers, 2016
- Market Share of Separator Manufacturers in China, 2015
- Profile of Major Separator Manufacturers in China, 2015
- Categories of Electrolytes
- Cost Structure of Lithium Battery Electrolyte
- Global Shipments of Lithium Battery Electrolytes, 2011-2016
- Market Share of Electrolyte Manufacturers in China, 2015
- Global LiPF6 Prices, 2009-2016
- Ranking of Major Electrolyte Manufacturers in China, 2016H1
- Cost Structure of Lithium Battery Cell in China
- Downtrend in Cost of Li-ion Power Battery Cell in China
- Global Manufacturers of Mass-produced Batteries for EVs and Their Customers, 2016
- Battery Structure of Global Mainstream EVs
- Composition of Li-ion Power Battery PACK
- Advantages and Disadvantages of PACK Enterprises
- Market Share of Power Battery PACK Enterprises, 2015
- List of BMS and PACK-related Enterprises
- Major Global Suppliers of EV BMS

Selected Charts

- Electric Passenger Car Sales in Main Countries/Regions, 2013-2016H1
- Marketization of Battery Electric Passenger Cars Worldwide
- Monthly Sales of NEVs (EV&PHEV) Worldwide, 2014-2016
- Ranking of Global NEV Enterprises by Sales, Jan-Sept 2016
- Sales of Electric Passenger Cars (EV&PHEV), 2011-2020E
- Production and Sales of EVs in China, 2010-2016H1
- Monthly Sales of Electric Passenger Cars in China, 2015-2016
- Monthly Sales of EVs (Special Vehicles & Commercial Vehicles) in China, 2015-2016
- China's Production of Electric Buses, 2015-2016
- China's Production of Battery Electric Trucks, 2015-2016
- Production of Battery Electric Passenger Car Enterprises in China, 2016
- Sales of Electric Passenger Cars (EV&PHEV) in China, 2015-Oct 2016
- Ranking of New Energy Passenger Car Sales in China by Auto Model, Jan-Oct 2016
- Electric Passenger Car Sales in Main Countries/Regions, 2013-2016H1
- Marketization of Battery Electric Passenger Cars Worldwide
- Monthly Sales of NEVs (EV&PHEV) Worldwide, 2014-2016
- Ranking of Global NEV Enterprises by Sales, Jan-Sept 2016
- Sales of Electric Passenger Cars (EV&PHEV), 2011-2020E
- Production and Sales of EVs in China, 2010-2016H1
- Monthly Sales of Electric Passenger Cars in China, 2015-2016
- Monthly Sales of EVs (Special Vehicles & Commercial Vehicles) in China, 2015-2016
- China's Production of Electric Buses, 2015-2016
- China's Production of Battery Electric Trucks, 2015-2016
- Production of Battery Electric Passenger Car Enterprises in China, 2016
- Sales of Electric Passenger Cars (EV&PHEV) in China, 2015-Oct 2016

Selected Charts

- Ranking of New Energy Passenger Car Sales in China by Auto Model, Jan-Oct 2016
- Sales and Market Share of New Energy Passenger Car (EV&PHEV) Enterprises in China, Jan-Oct 2016
- Mileage of Major Electric Passenger Cars Worldwide, 2016
- Single-vehicle Battery Capacity of Electric Passenger Cars Worldwide, 2011-2020E
- Global Lithium Battery Demand, 2010-2020E
- Cost Structure of Li-ion Power Battery
- Li-ion Power Battery Technology Roadmap
- Cost Trend of Major Vehicle and Battery Enterprises
- Li-ion Power Battery Cost in China, 2015-2016
- Production of Global EV Battery Manufacturers, 2016H1
- Production of Major Global Power Battery Enterprises, 2015-2016H1
- Global Lithium Battery Industry Scale, 2010-2020E
- Suppliers of Power Batteries for 54 Foreign Mainstream NEV (EV&PHEV) Models Worldwide
- European and American Li-ion Power Battery Enterprises and Auto Models Supported
- South Korean Li-ion Power Battery Enterprises and Auto Models Supported
- Japanese Li-ion Power Battery Enterprises and Auto Models Supported
- Production of Auto Models and Batteries, 2015
- Installations of LiFePO4 Battery, 2015-2016H1 (Unit: MWh)
- Installations of Ternary Lithium Battery, 2015-2016H1 (Unit: MWh)
- Market Share of Major Manufactures of Power Batteries for New Energy Buses
- Statistics of Power Batteries for NEVs in China, 2015 (GWh)
- Application Share of Various Materials-based Batteries, 2016
- Quarterly Production of Pouch Cells in China, 2014-2016Q3 (MWh)
- Power Battery Supply and Demand in China (GWh)
- Cost Structure of Automotive Power Battery Cell in China, 2015 (LiFePO4 as an Example)

Selected Charts

- Power Battery Price Trend, 2011-2020E
- Chinese Li-ion Power Battery Enterprises and Auto Models Supported
- Shareholding Structure of LG Chem, 2016
- BusinessPerformance of LG Chem, 2007-2015
- Revenue Breakdown of LG Chem by Region, 2015
- Types of LG Chem's Batteries
- LG Chem's Research into Battery
- Material Cost Structure of LG Chem PHEV Cell
- LG Chem's Roadmap for HEV LIB Technology
- LG Chem's Roadmap for PHEV LIB Technology
- LG Chem's Roadmap for EV LIB Technology
- Design of LG Chem's Power Battery
- Lithium Business Development History and Outlook of LG Chem
- Business Performance of LG Chem Power Inc (LGCPI), 2010-2016
- Business Performance of HL GreenPower, 2010-2016
- Battery Business Performance of LG Chem, 2013Q1-2015Q2
- LG Chem's Presence in Battery Market, 2020E
- EVs Using LG Chem's Li-ion Power Battery
- LG Chem's Management Institutions in China
- LG Chem's Production & Sales Network in China
- LG Chem's Shipments of Power and Energy Storage Batteries, 2012-2016
- Shareholding Structure of SDI, 2015
- Business Performance of SDI, 2008-2015
- Revenue Breakdown of SDI by Region, 2015
- SDI's Roadmap for xEV LIB Technology

Selected Charts

- Technical Performance of SDI's Li-ion Power Battery Cell
- Shipments and Average Selling Prices of SDI's Batteries, 2007-2014
- SDI's Revenue from Power and Energy Storage Batteries, 2013Q1-2015Q4
- EVs Using SDI's Li-ion Power Batteries
- SDI's Shipments of Power and Energy Storage Batteries, 2012-2016
- Major Subsidiaries of SKI
- EVs Using SKI's Li-ion Power Batteries
- Shareholding Structure of SKI's China-based JV BESK
- Profile of SKI's China-based JV BESK
- Technical Parameters of BESK's Li-ion Power Batteries
- Business Performance of Panasonic, 2008-2015
- R&D Expenditure of Panasonic, 2008-2015
- Revenue Structure of Panasonic by Segment, 2012-2015
- Operating Profit Structure of Panasonic by Segment, 2012-2015
- Revenue Structure of Panasonic by Region, 2011-2015
- Technical Parameters of Panasonic NCA 18650 Battery Cell for Tesla
- Material Cost Structure of Panasonic PHEV Cell
- Panasonic's Development Planning for Automotive Battery Business Division, 2013-2019
- Panasonic's Development Planning for Automotive Unit, 2013-2019
- Panasonic's Development Planning for Business Units, 2013-2019
- EVs Using Panasonic's Li-ion Power Batteries
- Global Sales of Tesla EVs, 2013-2020E
- Panasonic's Shipments of Power and Energy Storage Batteries, 2011-2016
- Shareholding Structure of AESC, 2015
- Material Cost Structure of AESC BEV Cell

Selected Charts

- Composition of AESC's Li-ion Power Battery Module
- Specification and Series-Parallel Connection of AESC's High-capacity Power Batteries
- Performance Parameters of AESC's High-capacity Power Batteries
- Specifications and Series-Parallel Connection of AESC's High-power Power Batteries
- Performance Parameters of AESC's High-power Power Batteries
- AESC Power Battery System Solutions
- EVs Using AESC's Li-ion Power Batteries
- AESC's Shipments of Power and Energy Storage Batteries, 2011-2016
- Shareholding Structure of LEJ, 2016
- Specifications of LEJ's Li-ion Power Batteries
- EVs Using LEJ's Li-ion Power Batteries
- LEJ's Shipments of Power and Energy Storage Batteries, 2011-2016
- Business Performance of BYD, 2008-2016Q3
- Revenue Structure of BYD by Business, 2012-2016H1
- Gross Margin of BYD by Business, 2009-2016H1
- Main Performance of BYD LiFePO4 Battery
- Capacity, Weight, and Cost of BYD's Power Batteries
- Capacity and Weight of BYD's Lithium Batteries for Forklifts
- Capacity of BYD's ESS Lithium Batteries
- BYD Distributed Energy Storage System (DESS)
- Capacity of BYD EPS Lithium Batteries
- Monthly Sales of BYD e5&e6
- Monthly Sales of BYD Qin and Tang
- BYD's EV Sales, 2015-2018E
- Parameters of BYD's Major Battery Packs for NEVs

Selected Charts

- Power Battery Business Scale of BYD, 2011-2017E
- ATL's Revenue, 2008-2015
- Milestones of ATL
- Customers for ATL's Power and Small Batteries
- Suppliers of ATL Power Batteries
- ATL's Revenue from Power and Energy Storage Battery Business and Product Prices, 2012-2016
- Power Battery Output and Capacity Utilization, 2012-2015
- Power and Small Battery Capacity of ATL
- Major Shareholders of Tianjin Lishen
- Shares Held by Major Shareholders of Tianjin Lishen, 2016
- Business Performance of Tianjin Lishen, 2011-2015
- Performance Parameters of Tianjin Lishen's Power Cell
- Technical Parameters of Tianjin Lishen's Power Battery Module
- Performance Parameters of Tianjin Lishen's Spiral-wound Power Cell
- Performance Parameters of Tianjin Lishen's Laminated Power Cell
- Performance Parameters of Tianjin Lishen's Polymer Power Cell
- Technical Parameters of Tianjin Lishen's Power Cell
- Parameters of Tianjin Lishen's Power Batteries
- Customers for Tianjin Lishen's Power Batteries
- Performance Parameters of Tianjin Lishen's Power Battery Modules
- Lithium Battery Capacity of Tianjin Lishen, 2000-2016
- Tianjin Lishen's Power Battery Investment Plans, 2012-2015
- Shareholding Structure of Pride Power
- Business Performance of Pride Power, 2011-2015
- Major Customers of Pride Power and Cooperation Fields

Selected Charts

- Performance Parameters of Pride Power's Power Battery Modules
- Shareholding Structure of CALB, 2016
- Business Performance of CALB, 2010-2015
- BEV BMS of CALB
- Battery Certification of CALB
- Global Sales Network of CALB
- Major Customers of CALB
- Business Performance of Guoxuan High-tech, 2009-2016
- Specifications of Guoxuan High-tech's LiFePO4 Power Battery
- Parameters of Auto Models Using Guoxuan High-tech's Power Batteries
- Prices of Guoxuan High-tech's Power Battery Modules, 2009-2015
- LiFePO4 Cathode Material and Power Battery Capacity of Guoxuan High-tech, 2009-2015
- Guoxuan High-tech's Power Battery Shipments, 2009-2015
- Guoxuan High-tech's Capacity Planning, 2015-2017
- Li-ion Battery Power Energy Storage Systems for EVs
- Specifications of Harbin Coslight Power's Li-ion Power Battery Systems for Auto Models
- Specifications of Harbin Coslight Power's Li-ion Power Batteries

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