



China EV Charging Station and Charging Pile Market Report, 2017-2020

Mar.2017

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.

Abstract

China produced 517,000 new energy vehicles in 2016, surging by 51.7% from a year earlier, including 263,000 battery-electric passenger vehicles, soaring 73.1% year on year, and 81,000 plug-in hybrid passenger vehicles, up 29.9%, 154,000 battery-electric commercial vehicles, rising by 50.2% year on year, and 18,000 plug-in hybrid commercial vehicles, decreasing by 22.5% year on year. In 2016, new energy vehicles made up 1.8% of China's total production and sales of vehicles (output: 28.119 million units, sales: 28.028 million units), an increase of four percentage points from a year ago. New energy vehicle ownership approximated 1 million units in China in 2016, basically accomplishing phased target of the Planning for the Development of New Energy Vehicle during 2012-2020. It is expected that EV sales will reach 2.11 million units in 2020 with EV ownership exceeding 5 million units.

Driven by rapid development of new energy vehicles, the supporting facilities like charging station and charging pile also flourish. Charging station ownership in China increased from 76 in 2010 to 5,600 in 2016 at a CAGR of 104.8%. The number of public charging piles grew from 1,122 to 150,000 at a CAGR of 126.1% during the same period. In addition to public charging piles, private charging pile ownership reached about 170,000 units in 2016, thus bringing the country's total number of charging piles up to nearly 310,000.

The construction of charging piles in major cities that promote new energy vehicles in China is as follows:

(1) By the end of 2016, Beijing has built 612 charging stations and approximately 60,000 charging piles (public +private). In particular, 23 charging operators are accessed onto public management platform and more than 6,000 charging piles are available; and 5,000 communities or more have installed a total of 26,000 self-use charging piles. Additionally, Beijing Municipal Commission of Housing and Urban-Rural Development collaborated with State Grid to finish altering the charging conditions in 327 communities.

(2) By the end of 2016, Shanghai has built 227 public fast charging stations, 22 fast charging stations on expressways, 12 bus charging stations, 2 public charging stations for energy storage, and a total number of 5,084 charging piles.

As to industrial policies, China introduced a series of documents, such as the Circular on Issues Related to the Policy on Price of Electricity Used by EVs, the Circular on Rewarding the Construction of New Energy Vehicle Charging Facilities, and the Circular on Incentive Policies on New Energy Vehicle Charging Facilities and Strengthening the Popularization and Application of New Energy Vehicles during the 13th Five-year Plan Period (Exposure Draft), encouraging the construction of charging piles and allocating central fiscal funds to subsidize the provinces and enterprises which construct and operate charging piles in a sound way so as to stimulate enthusiasm of the society to participate in the construction of charging piles.

China aims to build 12,000 centralized charging/battery swap stations and 4.8 million scattered charging piles across the country by 2020 to meet charging demand of 5 million EVs in principle of 1 vehicle to 1 charging pile. Regionally, the EV charging stations that have been built are primarily concentrated in eastern provinces in East China, North China, and South China, of which Beijing, Shanghai, and Qingdao are the cities with massive construction of EV charging stations in China.

With introduction of incentive policies on charging facilities, all parts of the countries have ramped up their efforts to build charging piles, and the companies that run charging pile business also announce to build tens of thousands of charging piles in Beijing, Shanghai, and Guangzhou. Operators of charging facilities, manufacturers of equipment, and providers of integrated solutions are three major roles in charging pile industry chain. There are three main business models in charging pile industry: “charging pile + commodity retail + service consumption”, “carmakers + equipment manufacturers + operators + users”, and “charging APP + cloud services + remote intelligent management”.

Number of EV Charging Piles in China, 2010-2020E



China EV Charging Station and Charging Pile Market Report, 2016-2020 by ResearchInChina highlights the following:

- ◆ Industrial policies on car charging station/pile, including policies on subsidies for new energy vehicles, policies on subsidies and rewards for construction of charging piles, the planning for promotion of new energy vehicles, the planning for construction of charging piles, policies on basic electricity tariff of charging and service charges over the next five years;
- ◆ Development status of new energy vehicles around the world and in China, including output and sales data in major markets (global, USA, Europe, Japan, and China), and status quo & trends of new energy vehicles (passenger vehicles, buses, logistic vehicles) in China;
- ◆ Development characteristics of charging pile globally, covering policies on subsidies for charging pile in major countries, in-depth analysis of charging port standards (America's SAE, Europe's ICE, Japan's CHAdeMO, and China's GB/T), and study of mainstream charging equipment and operators;
- ◆ Development of car charging station/pile industry in China, including analysis of 5-year planning for construction of charging pile, particularly profit models and crowdfunding models of charging pile, and driving habits and charging behaviors of new energy vehicle users;
- ◆ Construction of charging piles in more than 30 provinces and cities by the end of 2016 and construction plans;
- ◆ 13 global and Chinese charging operators (operating models, profit models, APP, partners);
- ◆ Operation and development strategies of 8 Chinese suppliers of car charging equipment;
- ◆ Major Chinese carmakers' strategic layout in charging field and cooperation with charging equipment suppliers and charging operators.

Copyright 2012ResearchInChina

<p>1 Overview of EV Charging Station/Pile Industry</p> <p>1.1 Electric Vehicle</p> <p>1.1.1 Definition</p> <p>1.1.2 Classification</p> <p>1.2 EV Charging Station</p> <p>1.2.1 Definition and Classification</p> <p>1.2.2 Charging Modes</p> <p>1.2.3 Composition and Cost Structure</p> <p>1.2.4 Configuration</p> <p>1.2.5 Industry Chain</p> <p>1.3 Charging Port</p> <p>2 Policies on Charging Infrastructure Industry in China</p> <p>2.1 Electric Vehicle</p> <p>2.1.1 Purchase Tax Breaks</p> <p>2.1.2 Fiscal Subsidies for Purchase</p> <p>2.1.3 Fiscal Subsidies for Use</p> <p>2.1.4 Policies on Promotion</p> <p>2.2 EV Charging Station</p> <p>2.2.1 Subsidies for Charging Facilities (by Country)</p> <p>2.2.2 Planning for Charging Facilities Industry (by Country)</p> <p>2.2.3 Policies on Promotion of Charging Facilities (by City)</p> <p>2.3 Other Policies</p> <p>2.3.1 Basic Electricity Price for EV Charging</p> <p>2.3.2 Service Charge for EV Charging</p>	<p>2.3.3 Charging Port Standards</p> <p>2.3.4 Regulations on New Energy Vehicle Makers and Product Access</p> <p>2.3.5 EV Charging/Battery Swap Service Information Exchange</p> <p>3 Development of EV around the World and in China</p> <p>3.1 Global EV Market</p> <p>3.1.1 Overall</p> <p>3.1.2 United States</p> <p>3.1.3 Europe</p> <p>3.1.4 Japan</p> <p>3.2 Chinese EV Market</p> <p>3.2.1 Overall</p> <p>3.2.2 Passenger Vehicle</p> <p>3.2.3 Commercial Vehicle</p> <p>3.3 EV Charging Solutions in China</p> <p>4 Development Status of EV Charging Facilities in Foreign Countries</p> <p>4.1 Policies and Characteristics</p> <p>4.2 Global Layout of Charging Equipment Market</p> <p>4.3 Global Objective of Charging Equipment Market</p> <p>4.4 Major Foreign Charging Port Standards</p> <p>4.4.1 AC Charging Port</p> <p>4.4.2 DC Charging Port</p> <p>4.4.3 Combined Charging Port</p> <p>4.4.4 Charging Port Standards for Main Auto Models</p>	<p>4.5 Typical Company-Tesla</p> <p>4.5.1 Profile</p> <p>4.5.2 Operation</p> <p>4.5.3 R&D and Capacity</p> <p>4.5.4 Development of EV</p> <p>4.5.5 Suppliers</p> <p>4.5.6 Distribution of Tesla's Charging Stations</p> <p>4.6 Typical Organization- CHAdeMO Association</p> <p>4.6.1 Profile</p> <p>4.6.2 Constitution</p> <p>4.6.3 Technical Structure</p> <p>4.6.4 Main Auto Models</p> <p>4.6.5 Development of Charging Station</p> <p>4.7 "Internet Plus" Service Mode- ChargePoint</p> <p>4.7.1 Profile</p> <p>4.7.2 Intelligent Charging System of ChargePoint</p> <p>4.7.3 Development Status of ChargePoint</p> <p>4.7.4 Profit Model of ChargePoint</p> <p>4.8 Wireless Charging</p> <p>4.8.1 Policies</p> <p>4.8.2 Tesla -- Model S Wireless Charging System PluglessPower</p> <p>4.8.3 Volvo -- Utilizes Roads for Wireless Charging</p> <p>4.8.4 Qualcomm -- Halo EV Wireless Charging Technology</p> <p>4.8.5 Japanese Wireless Charging Bus</p> <p>4.8.6 ZTE -- Contactless Electromagnetic Induction Mode</p>
--	--	---

- 4.8.7 BYD -- WAVE Wireless Charging Cushion
- 4.8.8 Audi -- Lifiable Wireless Charging System
- 4.9 Technical Trends -- V2V/V2H

5 Development of Charging Station/Pile in China

- 5.1 Construction of Charging Station/Pile in China
- 5.2 Business Model for Charging Facilities in China
 - 5.2.1 Crowdfunding Model for Charging Pile in China
- 5.3 Operation of Charging Facilities in China
 - 5.3.1 Profit Model of Charging Facilities in China
- 5.4 Driving and Charging Habits of Chinese EV Users
- 5.5 Challenges to EV and Charging Facilities
 - 5.5.1 Long Charging Time
 - 5.5.2 Immature Technologies, Costly
 - 5.5.3 Market Enclosure, Different Standards
 - 5.5.4 Strong Local Protectionism
 - 5.5.5 Irrational Distribution of Charging Facilities

6 Construction of Charging Station/Pile in Major Cities

- 6.1 Charging Stations on Expressways
 - 6.1.1 Configuration Standards
 - 6.1.2 Charging Cards for Charging Stations on Expressways
 - 6.1.3 Charging Fees
 - 6.1.4 Development Planning
 - 6.1.5 G2 Beijing–Shanghai Expressway
 - 6.1.6 G4 Beijing–Hong Kong–Macau Expressway
 - 6.1.7 G15 Shenyang–Haikou Expressway

- 6.1.8 G25 Changchun–Shenzhen Expressway
- 6.1.9 G3 Beijing–Taipei Expressway
- 6.2 Northeast China
 - 6.2.1 Heilongjiang
 - 6.2.2 Jilin
 - 6.2.3 Liaoning
- 6.3 North China
 - 6.3.1 Beijing
 - 6.3.2 Tianjin
 - 6.3.3 Hebei
 - 6.3.4 Shanxi
 - 6.3.5 Inner Mongolia
- 6.4 East China
 - 6.4.1 Shanghai
 - 6.4.2 Shandong
 - 6.4.3 Jiangsu
 - 6.4.4 Anhui
 - 6.4.5 Jiangxi
 - 6.4.6 Zhejiang
 - 6.4.7 Fujian
- 6.5 Central China
 - 6.5.1 Henan
 - 6.5.2 Hubei
 - 6.5.3 Hunan
- 6.6 South China
 - 6.6.1 Guangdong
 - 6.6.2 Hainan
 - 6.6.3 Guangxi

- 6.7 Southwest China
 - 6.7.1 Chongqing
 - 6.7.2 Sichuan
 - 6.7.3 Guizhou
 - 6.7.4 Yunnan
 - 6.7.5 Tibet
- 6.8 Northwest China
 - 6.8.1 Shaanxi
 - 6.8.2 Gansu
 - 6.8.3 Qinghai
 - 6.8.4 Ningxia
 - 6.8.5 Xinjiang

7 Major Charging Operators in China

- 7.1 State Grid Corporation of China
 - 7.1.1 Planning for Construction of Charging Stations
 - 7.1.2 Construction of Charging Stations
 - 7.1.3 EV Charging Equipment Bidding in 2014
 - 7.1.4 EV Charging Equipment Bidding in 2015
 - 7.1.5 EV Charging Equipment Bidding in 2016
- 7.2 China Southern Power Grid
 - 7.2.1 Planning for Construction of Charging Stations
 - 7.2.2 Construction of Charging Stations
 - 7.2.3 EV Charging Equipment Bidding in 2016
- 7.3 Potevio New Energy
 - 7.3.1 Profile
 - 7.3.2 Charging/Battery Swap Equipment
 - 7.3.3 R&D Capability and Developments

7.3.4 Distribution of Charging Stations	7.8 Dianzhuang	8.6 Hangzhou Zhongheng Electric Co., Ltd.
7.3.5 Cooperative Enterprises	7.8.1 Profile	8.6.1 Profile
7.3.6 Charging Business and Revenue	7.8.2 Charging/Battery Swap Equipment	8.6.2 Charging/Battery Swap Equipment
7.4 Beijing Huashang Sanyou New Energy Technology	7.8.3 Charging Business and Revenue	8.6.3 Charging Business and Revenue
7.4.1 Profile	7.9 Other Potential Charging Service Providers	8.7 Zhejiang Tofine Technology Co., Ltd.
7.4.2 Charging/Battery Swap Equipment	7.10 Conclusion	8.7.1 Profile
7.4.3 eVehicle (evehicle.cn)		8.7.2 Major Customers
7.4.4 Charging Business and Revenue	8 Major Charging Equipment Suppliers in China	8.8 UTEK New Energy Technology Co., Ltd.
7.5 Zhejiang Wanma New Energy	8.1 NARI Technology Co., Ltd.	8.8.1 Profile
7.5.1 Profile	8.1.1 Profile	8.8.2 Charging/Battery Swap Equipment
7.5.2 Affiliated Company	8.1.2 Charging/Battery Swap Equipment	8.8.3 Major Customers
7.5.3 Charging/Battery Swap Equipment	8.1.3 Charging Business and Revenue	8.8.4 Charging Business and Revenue
7.5.4 iCharge (eichong.com)	8.2 Shenzhen Auto Electric Power Plant Co., Ltd.	
7.5.5 Cooperative Enterprises	8.2.1 Profile	9 Strategic Moves of Major Chinese Carmakers
7.5.6 Supply System	8.2.2 Charging/Battery Swap Equipment	in Charging Field
7.5.6 Charging Business and Revenue	8.2.3 R&D	9.1 BYD
7.6 Star Charge	8.2.4 Charging Business and Revenue	9.2 BAIC BJEV
7.6.1 Profile	8.3 XJ Electric Co., Ltd.	9.3 ZOTYE
7.6.2 Charging/Battery Swap Equipment	8.3.1 Profile	9.4 Geely
7.6.3 Distribution of Charging Piles	8.3.2 Charging/Battery Swap Equipment	9.5 SAIC Motor
7.6.4 Charging Business and Revenue	8.3.3 Charging Business and Revenue	9.6 Conclusion
7.7 Qingdao TGOOD Electric	8.4 Sieyuan Electric Co., Ltd.	
7.7.1 Profile	8.4.1 Profile	
7.7.2 Charging/Battery Swap Equipment	8.4.2 Charging/Battery Swap Equipment	
7.7.3 R&D Capability and Developments	8.5 Shenzhen Golden Highway Technology Co., Ltd.	
7.7.4 Distribution of Charging Stations	8.5.1 Profile	
7.7.5 Cooperative Enterprises	8.5.2 Charging/Battery Swap Equipment	
7.7.6 Charging Business and Revenue	8.5.3 Charging Business and Revenue	

- Electric Vehicle Technology Roadmap
- Structure of EV Charging Station
- Four Major Systems of EV Charging Station
- Construction Costs of EV Centralized Charging Stations
- Typical Configuration of Bus Charging Station and Public Charging Station
- Industry Chain of EV Charging Stations
- EV Charging Interface
- MIIT's Catalogue for the First Nine Batches of Models Exempt from Purchase Tax
- Subsidy Standards for 10m+ Urban Public Bus Demonstration Promotion, 2009-2012
- Subsidy Standards for Demonstration Promotion of Passenger Vehicles for Public Services and Lightweight Commercial Vehicles, 2009-2012
- Subsidy Standards for Electric Passenger Vehicles in China, 2013-2015
- Subsidy Standards for Electric Buses in China, 2013-2015
- Subsidy Standards for Battery Electric and Plug-in Hybrid Electric Passenger Vehicles (including Extended Range), 2016
- Subsidy Standards for Battery Electric and Plug-in Hybrid Electric Buses, 2016
- Subsidy Standards for Promotion and Application of Fuel Cell Electric Vehicles in China, 2016
- Requirements for Battery Electric Driving Mileage of New Energy Vehicles in China
- Subsidy Standards for New Energy Buses in China, 2017
- Subsidy Standards for New Energy Passenger Vehicle in China, 2017
- Subsidy Standards for New Energy Truck and Special Vehicle in China, 2017
- Subsidy Standards for Promotion and Application of Fuel Battery Vehicle in China, 2017
- Central Subsidies for New Energy Passenger Vehicles, 2013-2019
- Central Subsidies for New Energy Buses and Trucks, 2013-2019
- Subsidy Standards for Energy-saving and New Energy Buses under Operation, 2015-2019
- Promotion Plan and Progress for Electric Vehicles in Chinese Cities/Urban Agglomerations, 2013-2015

- China's EV Promotion Plan (Public Transport and Private Use), 2014-2015
- Number of Electric Vehicles Promoted in Chinese Cities/Urban Agglomerations, 2014
- Driving Restriction and New Energy Vehicle Exemption Policies in China
- Incentive Standards for New Energy Vehicle Charging Facilities, 2013-2015
- Conversion Relationship for Different Kinds of New Energy Vehicles
- Major Regions and Provinces that Promote New Energy Vehicles, 2016-2020
- Number of New Energy Vehicles Promoted in Key Regions and Their Promotion Percentage, 2016-2020
- Central Chinese Provinces/Regions Where New Energy Vehicles are Promoted, 2016-2020
- Number of New Energy Vehicles Promoted in Central Chinese Provinces and Their Promotion Percentage, 2016-2020
- Number of New Energy Vehicles Promoted in Other Provinces and Their Promotion Percentage, 2016-2020
- Conversion Relationship for Standard New Energy Vehicles
- Incentive Standards for New Energy Vehicle Charging Facilities by Province, 2016-2020
- Number of EV Charging and Battery-swapping Stations (Piles) in China, 2014-2020E
- Ownership of EV in China by Type, 2020E
- Number of Added EV Charging and Battery-swapping Stations in China, 2015-2020E
- Goals for Constructing Charging Infrastructure by Region, 2015-2020
- Overall Goals for Adding Centralized EV Charging and Battery-swapping Stations, 2015-2020
- Goals for Constructing Charging Infrastructure by Place, 2020
- Plan for Nationwide Intercity Fast Charging Network
- Plan for Constructing Charging Facilities in 30 Major Cities Nationwide
- Shanghai's Planning for NEVs and Charging Infrastructure in Terms of Quantity (2017-2020)
- Shanghai's Subsidy Standards for Charging/Battery-swap Infrastructure and Limit on Quantity of Subsidized Electricity (2016-2020)
- Percentage of Operating Costs of Charging/Battery-swap Infrastructure Paid with Subsidies in Shanghai (2016-2020)
- Tianjin's Plans for Construction of Charging Infrastructure (2016-2020)

- Zhuhai's Subsidy Standards for NEV Charging/Battery-swap Infrastructure
- EV Ownership in Shandong Province, 2015-2020E
- EV Ownership in Shandong Province by Type, 2017-2020E
- Shandong's Planning for Highway Charging Stations by 2020
- Breakdown of Lianyungang's Planning for NEV Promotion & Application and Charging Infrastructure Construction, 2016
- Conversion between NEVs and Standard Vehicles in Lianyungang, 2016
- Zhejiang's Goals of Charging/Battery-swap Stations and Charging Piles by 2020
- EVs Ownership Forecast in Shaanxi (10k Units)
- Charging Infrastructure Demand Forecast in Shaanxi during the 13th Five-Year Plan Period (Station, 10K Piles)
- Shaanxi's Development Planning for EV Charging Infrastructure (2016-2020)
- Shaanxi's Development Planning for Charging Infrastructure by Region (2016-2020)
- Number of Charging Piles in Wuhan, 2015E
- Nanjing's Planning for Public Charging Pile Layout
- Principles of Charging Infrastructure Configuration (Pile-to-Vehicle Ratio) in Fuzhou, 2020E
- EV Scale in Key Districts/Counties of Fuzhou, 2020E
- New EVs and Charging Stations in Kunming, 2016-2020E
- Basic Electricity Price for Private and Public Charging in Major Cities Nationwide
- Prices for New Energy Vehicle Charging and Battery-swapping in 33 Provinces
- Cost Ceiling for EV Charging and Battery-swapping Service by Province, 2015
- New Standards for AC Charging Interface of Electric Vehicles, 2016
- New Standards for DC Charging Interface of Electric Vehicles, 2016
- Sketch Map of Public Information Exchange
- Sketch Map of Business Information Exchange
- Global EV Ownership, 2010-2015
- Global EV Ownership Goal (by Country) for 2020

- Sales Volume of Global Electric Passenger Vehicles by Major Countries, 2014-2016
- Sales Volume of Global Top 20 Electric Passenger Vehicles, 2014-2016
- Sales Volume of Global Electric Passenger Vehicles (EV & PHEV), 2011-2020E
- Sales Volume of Electric Vehicles in the US by Model, 2014-2016
- Sales Volume of Electric Vehicles in Europe by Model, 2014-2016
- Sales Volume of Electric Vehicles in Japan by Model, 2014-2016
- Output and Sales Volume of Electric Vehicles in China, 2010-2016
- Output of New Energy Vehicles (EV & PHEV) in China, 2011-2016
- Sales Volume of Electric Vehicles (EV & PHEV) in China, 2011-2020E
- Sales Volume of Electric Passenger Vehicles (EV & PHEV) in China, 2011-2020E
- Sales Volume of New Energy Passenger Vehicles (EV & PHEV) in China, Jan.-Dec.2016
- Sales Volume of New Energy Passenger Vehicle (EV & PHEV) by Model in China, 2015-2016
- Output of New Energy Commercial Vehicles in China, 2015-2016
- China's EV Promotion Plan, 2014-2015
- Output of New Energy Buses in China, 2015-2016
- Output of Battery Electric Trucks in China, 2015-2016
- Sales Volume of Electric Commercial Vehicles (EV & PHEV) in China, 2011-2020E
- Performance Parameters for Major BEV Models of 5 Major Companies
- Performance Parameters for Major PHEV Models of 5 Major Companies
- Development Planning and Characteristics of EV Charging Facilities Worldwide by Country
- Fiscal Subsidies for EV and Charging Facilities Worldwide by Country
- Global EV Charging Facilities, 2010-2015
- Major Standards for EV Charging Interface
- Classification of EV Charging Interfaces by International Standards
- Comparison of AC Charging Voltage and Current by Standards

- Comparison of Three AC Charging Vehicle Socket Interfaces
- Charging Cables that Conform to Both European-standard Charging Equipment and US-standard Vehicle Connection
- Structure Chart for Japan's CHAdeMO
- Four Internationally Standard DC Charging Interfaces Recognized by IEC
- Combined Charging Interface
- Major Global EV Charging Socket Types and Standards
- Revenue and Net Income of Tesla, 2009-2016
- Tesla's R&D Costs and % of Total Revenue, 2011-2016
- Capacity Distribution of Tesla's Production Bases
- Specification Classification of Tesla Model S
- Specification Classification of Tesla Model X
- Specification Classification of Tesla Model 3
- Sales of Tesla EV, 2015-2016
- Pan for Tesla EV Models, 2008-2020
- Sales Volume of Tesla EV Worldwide, 2013-2020E
- Suppliers of Core Parts for Tesla
- Suppliers of Tesla Model S
- Main Suppliers of Non-core Components for Tesla
- Distribution of Tesla Superchargers in China, 2015
- Distribution of Tesla Superchargers in China, 2016
- Distribution of Tesla Superchargers in China, 2017
- Number of Tesla Superchargers and Charging Piles in China
- Distribution of Destination Charging Stations in China by Quantity
- Distribution of Tesla Superchargers in North America, 2015-2016
- Distribution of Tesla Superchargers in North America, 2017

- Distribution of Tesla Superchargers in Europe, 2016
- Distribution of Tesla Superchargers in Europe, 2017
- Organizational Structure of CHAdeMO Association
- Distribution of Regular Members of CHAdeMO Association
- CHAdeMO Charging Connection Certification
- Classification of CHAdeMO Charging Modes
- Incidence Relation between CHAdeMO Fast Charger and EV Quantity
- Models Adopting CHAdeMO DC Charging Interface, Driving Mileage, and Battery Capacity
- Distribution of CHAdeMO Charging Stations Worldwide by Quantity, 2009-2015
- Development of CHAdeMO Charging Stations Worldwide, 2015
- Development of CHAdeMO Charging Stations Worldwide, 2016
- Development Plan for EV and Fast-charging Stations Worldwide, 2012-2020
- Distribution of CHAdeMO Charging Stations in Japan, 2015
- Distribution of CHAdeMO Charging Stations in Japan, 2016
- Distribution of CHAdeMO Charging Stations in the US, 2015
- Distribution of CHAdeMO Charging Stations in the US, 2016
- Distribution of CHAdeMO Charging Stations in Europe, 2016
- Charging Mode and Procedure of ChargePoint
- ChargePoint's Intelligent Charging System
- ChargePoint's Charging Piles
- ChargePoint's Charging Service Ecosystem
- ChargePoint's Offline Layout in San Francisco
- ChargePoint's Charging Payment Card
- Distribution of ChargePoint Charging Piles in the United States, 2016
- Diagram for Wireless Charging Technology

- Merits and Demerits of Three Wireless Charging Technologies
- Technical Parameters for Wireless Charging of 11 Global Companies
- Policies on Wireless Charging
- Whole Operational Process for Mobile Wireless Charging
- Technical Principle for G2V and Grid to Vehicle
- Technical Principle for G2V and Vehicle to Grid
- Technical Principle for V2H and Vehicle to Home
- Number of Charging Piles, Ownership of New Energy Vehicles and their Proportion in China, 2010-2016
- Ownership of EV Charging Stations in China, 2010-2020E
- Ownership of EV Charging Piles in China, 2010-2020E
- Construction Plan for EV Charging Piles in China, 2015-2020
- Number of Charging Piles in China by Application as of 2016
- Five Business Models for Charging Piles in China
- Business Model and Value Calculation of New Energy Vehicle Charging
- Profits of Charging and Electricity Sales Market, 2014-2020E
- Electricity Service Market Profits, 2014-2020E
- Charging Pile Fund Precipitation, 2014-2020E
- Market Space of Charging Pile Advertising Revenue, 2014-2020E
- Market Space of Charging Pile Insurance Revenue, 2014-2020E
- Market Space of Charging Pile 4S Value-added Services, 2014-2020E
- Market Space of New Energy Vehicles Sales Commissions, 2014-2020E
- Value of Big Data on Charging Pile Operation, 2014-2020E
- Profit Margin of Charging Network
- Driving Habit of Chinese Auto Users
- Daily Mileage of Chinese EV Users

- Daily Use Frequencies of Chinese EV Users
- Daily Charging Time Distribution of Chinese EV Users
- Driving and Charging Time Distribution of Chinese EV Users
- Charging Duration Distribution of Chinese EV Users
- State of Charge (SOC) of Chinese EV Users after a Driving Journey
- Initial SOC Comparison between Chinese and American EV Users
- Chinese EV Users' Selection of Charging Sites
- Mainstream EV Charging Mode and Time in China
- Prices and Subsidies for Some New Energy Vehicles
- Number of Charging Piles in Key Chinese Cities, 2014-2016 (by the end of 2016)
- Charging Standards for Expressway Fast-charging Network Service
- Expressways Covered by Charging Piles, 2016
- State Grid Fast Charging Network on Expressways (2017 Version)
- Distribution of State Grid Fast Charging Stations on Expressways (by Province)
- Distribution of State Grid Fast Charging Stations on Expressways (by Expressway)
- Distribution of State Grid Fast Charging Stations on Expressways (by Expressway/Province)
- Charging Mode of Charging Stations along Beijing–Shanghai Expressway
- Introduction to Charge Cards of Charging Stations along Beijing–Shanghai Expressway
- Number of Charging Stations Available along Beijing–Shanghai Expressway and Interface Standards
- Distribution of Fast-charging Stations along Beijing–Shanghai Expressway
- Charging Stations and Their Separation Distance along Beijing–Shanghai Expressway
- Distribution of Fast Charging Stations on G4 Beijing-Hong Kong-Macau Expressway
- Distribution of Fast Charging Stations on G15 Shenyang-Haikou Expressway
- Distribution of Fast Charging Stations on G25 Changchun-Shenzhen Expressway
- Distribution of Fast Charging Stations on G3 Beijing-Taipei Expressway

- Distribution of Public Charging Stations in Beijing, 2016
- Distribution of Community Charging Stations in Beijing, 2016
- Matching Relationship between Various Types of Vehicles and Charging Infrastructure in Tianjin
- Charging Infrastructure Phased Construction Plan in Tianjin
- Development of New Energy Vehicles and Charging Piles in Hebei, 2014-2015
- Major EV Charging Stations in Shanghai
- Charging Infrastructure Construction in Shandong, 2020E
- Distribution of Charging Piles in Nanjing
- Plan for Constructing Taxi Charging Stations in Hefei
- Plan for Constructing Bus Charging Stations in Hefei
- Proportion of Existing Built Charging Pile Operators in Wuhan, by the end of 2016
- New Energy Vehicle Charging Facility Operators Registered in Shenzhen
- Major EV Charging Stations in Shenzhen
- Charging Infrastructure Investment in Hainan till 2020
- Charging/Swap Station Distribution in Ningxia by Number, 2015
- Charging/Swap Station Plan in Ningxia, 2020E
- Charging Pile Quantity Plan in Xinjiang, 2020E
- State Grid's Plan to Construct Electric Vehicle Charging Stations, 2009-2020
- Partners of State Grid
- Number of Charging and Swap Facilities Tenders Invited by State Grid, 2014
- Number of Projects Winning Charging and Swap Facilities Tenders Invited by State Grid, 2014
- Bid-winning Distribution of DC and AC Charging Pile Tenders Invited by State Grid, 2014
- Ranking of Winners of Charging Pile Tenders Invited by State Grid, 2014
- Winners and Number of Charging Pile Tenders Invited by State Grid, 2014
- Regions Winning Charging Pile Tenders (Invited by State Grid) and Number of Obtained Tenders, 2014

- Results of Charging Equipment Bidding Invitation by State Grid, 2015
- Charging Equipment Voltage and Current in Tenders Invited by State Grid, 2016
- Charging Equipment Tenders Invited by State Grid by Region, 2016
- Winners and Quantity of Charging Equipment Tenders Invited by State Grid, 2016
- Charging Equipment Tenders Invited by State Grid by Voltage and Current, 2016
- Winners of Charging Equipment Tenders Invited by State Grid and Subdivision by Quantity, 2016
- Charging Piles of China Southern Power Grid
- Charging Infrastructure Partners of China Southern Power Grid
- Winners of Charging Equipment Tenders Invited by China Southern Power Grid, 2016
- Charging Equipment Tender Companies and Quantity of China Southern Power Grid, 2016
- Charging Equipment (DC / AC) and Quantity of China Southern Power Grid, 2016
- Winners and Quantity of Charging Equipment Tenders Invited by China Southern Power Grid, 2016
- Charging Facilities of Potevio New Energy
- Vehicle Charging Monitoring System of Potevio New Energy
- 332.8V 66AH Battery Pack (Including Battery Management System) Power Supply System for Sanitation Vehicles
- 537.6V 247.5AH Battery Pack (Including Battery Management System) Power Supply System for Sanitation Vehicles
- Intelligent Management and Battery Charging Technology
- Mobile Phone APP (Potevio Mobile Assistant) of Potevio New Energy
- Charge Station Distribution of Potevio New Energy
- Distribution of Potevio New Energy's Charging Stations in Beijing
- Cooperative Partners of Potevio New Energy
- Charging Equipment Product Classification of HuashangSanyou
- Two Access Modes Provided by evehicle.cn
- Charging Equipment Quantity in State Grid's Tenders Won by Beijing Huashang Sanyou New Energy Technology, 2016
- New Energy Enterprises of Wanma Group

- Charging Pile Types of Wanma New Energy
- Parameters of Wanma New Energy's AC Charging Piles
- Parameters of Wanma New Energy's Billboard Charging Piles
- Parameters of Wanma New Energy's DC Charging Piles
- Parameters of Wanma New Energy's Automotive Charger
- WM Master Station Operation and Management System Solutions of Wanma New Energy
- WM Charging Station Solutions of Wanma New Energy
- Brands Cooperated with iCharge (Eichong.com)
- Cooperative Schemes of iCharge (Eichong.com)
- New Energy Enterprises Cooperated with Wanma Group, 2015
- Power Battery Suppliers of Wanma New Energy
- Procedure for Accessing Eichong Network
- Charging Pile Distribution of iCharge (Eichong.com)
- TGOOD EV Group Charging System
- TeldCharging Plug
- Future Group Charging System of TGOOD
- Distribution of Charging Terminals of Teld
- Major Cooperative Enterprises of TGOOD
- Revenue, Net Income and Profit YoY Growth Rate of TGOOD, 2010-2016
- Seven Functions of Dianzhuang's Mobile Phone App
- Charging Facility Mobile Phone App of Dianzhuang
- Intelligent Charging Piles of Dianzhuang
- Cooperative Enterprises of Dianzhuang
- Cooperative Enterprises of Dianzhuang in Charging Facilities
- Business Model and Charging Standards of 12 Major Charging Operators in China

- Product Solutions of 41 Major Charging Equipment Suppliers in China
- Product Type of Charging and Battery-swapping Stations of NARI-TECH
- Equipment Quantity in State Grid's Tenders Won by NARI-TECH, 2016
- Equipment Quantity in State Grid's Tenders Won by Shenzhen Auto Electric Power Plant, 2016
- R&D Costs and % of Total Revenue of Shenzhen Auto Electric Power Plant, 2011-2015
- Charging and Battery-swapping Equipment Capacity Layout of XJ Electric
- Charging Equipment Quantity in State Grid's Tenders Won by XJ Electric, 2016
- Product Categories of Golden Highway's Electric Vehicle Charging Systems
- Charging and Battery Swap Bid-winning Projects of Golden Highway, 2014
- Integrated Solutions for EV Charging and Battery-swapping Stations
- Models of Hangzhou Zhongheng Electric's Charging Modules
- Models and Parameters of Hangzhou Zhongheng Electric's DC Charging Piles
- Models of Hangzhou Zhongheng Electric's AC Charging Piles
- Charging Equipment Quantity in State Grid's Tenders Won by Hangzhou Zhongheng Electric, 2016
- Charging and Swap Facilities Clients of Tofine Technology
- Suppliers of Tofine Technology
- Charging/Swap Equipment of UTEK New Energy Technology
- Charging and Swap Facilities Clients of UTEK New Energy Technology
- BYD's Main Charging Business Layout and Partners
- Main Charging Business Layout and Partners of BAIC BJEV
- Zotye's Main Charging Business Layout and Partners
- Geely's Main Charging Business Layout and Partners
- SAIC's Main Charging Business Layout and Partners
- List of Charging Pile Operators and Auto Makers in China
- EV Charging Modes and Charging Piles of Major Auto Makers in China by Mode1/2/3

You can place your order in the following alternative ways:

1. Order online at www.researchinchina.com
2. Fax order sheet to us at fax number: +86 10 82601570
3. Email your order to: report@researchinchina.com
4. Phone us at +86 10 82600828/ 82601561

Party A:			
Name:			
Address:			
Contact Person:		Tel	
E-mail:		Fax	

Party B:			
Name:	Beijing Waterwood Technologies Co., Ltd (ResearchInChina)		
Address:	Room 502, Block 3, Tower C, Changyuan Tiandi Building, No. 18, Suzhou Street, Haidian District, Beijing, China 100080		
Contact Person:	Liao Yan	Phone:	86-10-82600828
E-mail:	report@researchinchina.com	Fax:	86-10-82601570
Bank details:	Beneficial Name: Beijing Waterwood Technologies Co., Ltd Bank Name: Bank of Communications, Beijing Branch Bank Address: NO.1 jinxiyuan shijicheng, Landianchang, Haidian District, Beijing Bank Account No #: 110060668012015061217 Routing No #: 332906 Bank SWIFT Code: COMMCNSHBJG		

Title	Format	Cost
<i>Total</i>		

Choose type of format

- PDF (Single user license)2,500 USD
- Hard copy 2,700 USD
- PDF (Enterprisewide license)..... 3,900 USD

※ Reports will be dispatched immediately once full payment has been received.
Payment may be made by wire transfer or credit card via PayPal.

About ResearchInChina

ResearchInChina (www.researchinchina.com) is a leading independent provider of China business intelligence. Our research is designed to meet the diverse planning and information needs of businesses, institutions, and professional investors worldwide. Our services are used in a variety of ways, including strategic planning, product and sales forecasting, risk and sensitivity management, and as investment research.

Our Major Activities

- *Multi-users market reports*
- *Database-RICDB*
- *Custom Research*
- *Company Search*

RICDB (<http://www.researchinchina.com/data/database.html>), is a visible financial data base presented by map and graph covering global and China macroeconomic data, industry data, and company data. It has included nearly 500,000 indices (based on time series), and is continuing to update and increase. The most significant feature of this base is that the vast majority of indices (about 400,000) can be displayed in map.

After purchase of our report, you will be automatically granted to enjoy 2 weeks trial service of RICDB for free.

After trial, you can decide to become our formal member or not. We will try our best to meet your demand. For more information, please find at www.researchinchina.com

For any problems, please contact our service team at: