

# China EV Charging Station and Charging Pile Market Report, 2018-2025

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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.

## Abstract

China produced 794,000 new energy vehicles in 2017, a substantial rise of 53.8% from a year earlier, including 478,000 battery-electric passenger vehicles, an upsurge of 81.7% year on year, and 114,000 plug-in hybrid passenger vehicles, up 40.3% year on year, 188,000 battery-electric commercial vehicles, rising by 22.2% year on year, and 14,000 plug-in hybrid commercial vehicles, decreasing by 24.9% year on year. In 2017, new energy vehicles made up 2.7% of China's total production and sales of automobiles (output: 29.015 million units, sales: 28.879 million units), an increase of 0.9 percentage points over the previous year. New energy vehicle ownership approximated 1.53 million units in China in 2017, basically attaining the 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 soared from 76 in 2010 to 6,900 in 2017 at a CAGR of 190%. The number of public charging piles skyrocketed from 1,122 to 230,000 at a CAGR of 213.9% during the same period. In addition to public charging piles, private charging pile ownership reached around 245,000 units in 2017, thus bringing the country's total number of charging piles up to nearly 630,000.

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

(1) By the end of 2017, Beijing had built approximately 115,000 charging piles. There were about 80,800 charging piles for private use, around 18,800 charging piles for public use (in 2,070 open sites), and 13,000 charging piles in more than 1,500 charging/battery swap stations built for special purpose and in the public places owned by enterprises and institutions.

(2) By the end of 2017, 129,986 charging/battery swap facilities had been connected to the municipal platform in Shanghai, including 25,707 public charging piles, 21,332 dedicated charging piles, and 82,947 private charging piles. Shanghai had a total of 161,748 new energy vehicles on a car-to-pile ratio of 1:0.81.

(3) By the end of 2017, Guangdong had built 690 charging stations and 60,000 charging piles, including 38 intercity quick-charge stations and 120 intercity quick-charge piles at expressway service areas.

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 (Draft for Comment), 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.

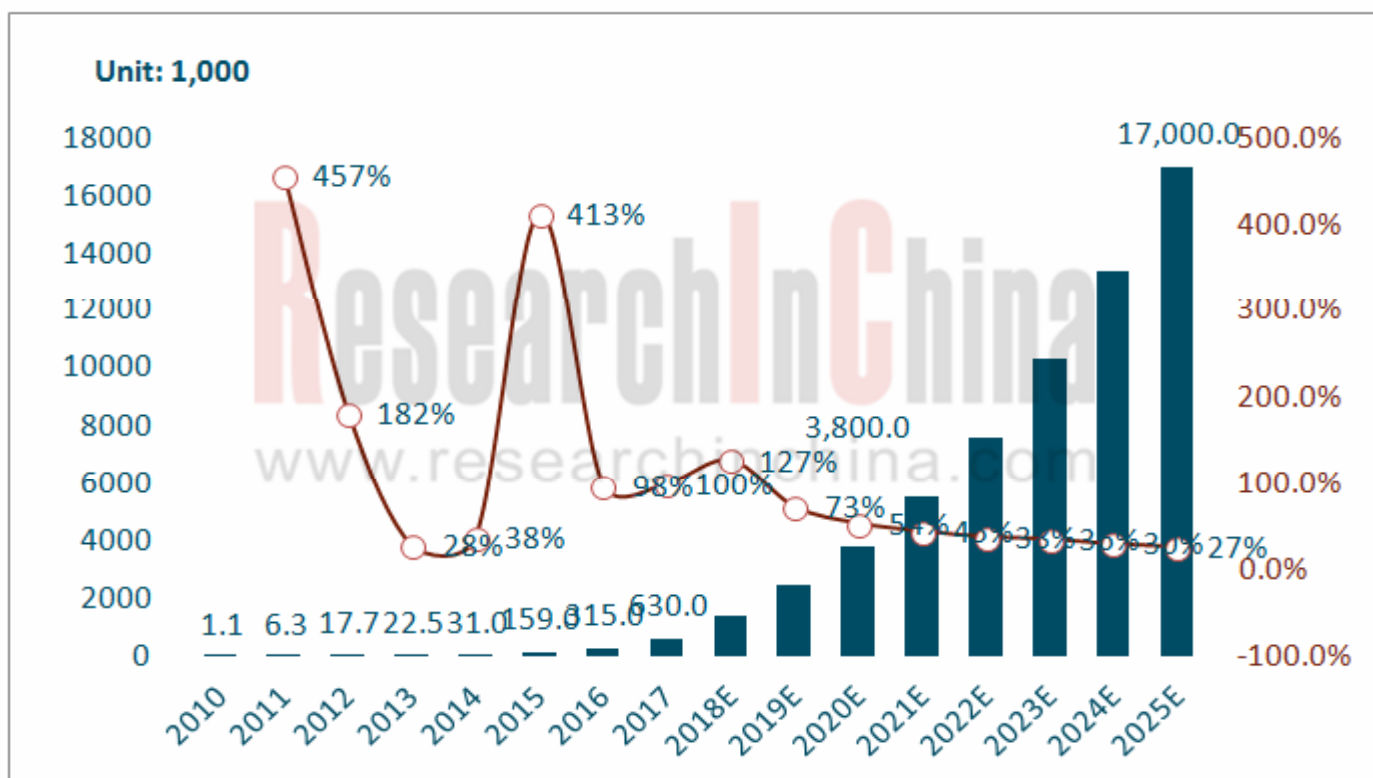
China aims to build 12,000 centralized charging/battery swap stations and 4.8 million distributed charging piles across the country by 2020 to meet charging demand of 5 million EVs in principle of 1 vehicle to 1 charging pile. Regionally, the EV charging stations that have been built are primarily concentrated 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.

Being incentivized by national policies on charging facilities, localities throughout the country 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”.

China EV Charging Station and Charging Pile Market Report, 2018-2025 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 7-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 31 provinces and cities by the end of 2017 and construction plans;
- ◆ 15 global and Chinese charging operators (business 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.

## Number of EV Charging Piles in China, 2010-2025E



Source: ResearchInChina

**1 Overview of EV Charging Station/Pile Industry**

## 1.1 Electric Vehicle

## 1.1.1 Definition

## 1.1.2 Classification

## 1.2 EV Charging Station

## 1.2.1 Definition and Classification

## 1.2.2 Charging Modes

## 1.2.3 Composition and Cost Structure

## 1.2.4 Configuration

## 1.2.5 Industry Chain

## 1.3 Charging Port

## 1.3.1 Definition

## 1.3.2 Classification

**2 Policies on Charging Infrastructure Industry in China**

## 2.1 Electric Vehicle

## 2.1.1 Purchase Tax Cuts

## 2.1.2 Fiscal Subsidies for Purchase

## 2.1.3 Fiscal Subsidies for Use

## 2.1.4 Policies on Promotion

## 2.2 EV Charging Station

## 2.2.1 Subsidies for Charging Facilities (by Country)

## 2.2.2 Planning for Charging Facilities Industry (by Country)

## 2.2.3 Policies on Promotion of Charging Facilities (by City)

## 2.3 Other Policies

## 2.3.1 Basic Electricity Price for EV Charging

## 2.3.2 Service Charge for EV Charging

## 2.3.3 Charging Port Standards

## 2.3.4 Regulations on New Energy Vehicle Makers and Product Access

## 2.3.5 EV Charging/Battery Swap Service Information Exchange

**3 Development of EV around the World and in China**

## 3.1 Global EV Market

## 3.1.1 Overall

## 3.1.2 United States

## 3.1.3 Europe

## 3.1.4 Japan

## 3.2 Chinese EV Market

## 3.2.1 Overall

## 3.2.2 Passenger Vehicle

## 3.2.3 Commercial Vehicle

## 3.3 EV Charging Solutions in China

**4 Development of EV Charging Facilities in Foreign Countries**

## 4.1 Policies and Characteristics

## 4.2 Global Layout of Charging Equipment Market

## 4.2.1 Charging Infrastructure Market in the United States

## 4.3 Global Objective of Charging Equipment Market

## 4.4 Major Foreign Charging Port Standards

## 4.4.1 AC Charging Port

## 4.4.2 DC Charging Port

## 4.4.3 Combined Charging Port

## 4.4.4 Charging Port Standards for Main Auto Models

## 4.5 Typical Company-Tesla

## 4.5.1 Profile

## 4.5.2 Operation

- 4.5.3 R&D and Capacity
- 4.5.4 Development of EV
- 4.5.5 Suppliers
- 4.5.6 Distribution of Tesla's Charging Stations
- 4.6 Typical Organization- CHAdeMO Association
- 4.6.1 Profile
- 4.6.2 Constitution
- 4.6.3 Technical Structure
- 4.6.4 Main Auto Models
- 4.6.5 Development of Charging Station
- 4.7 "Internet Plus" Service Mode- ChargePoint
- 4.7.1 Profile
- 4.7.2 Intelligent Charging System of ChargePoint
- 4.7.3 Development Status of ChargePoint
- 4.7.4 Profit Model of ChargePoint
- 4.8 Wireless Charging
- 4.8.1 Policies
- 4.8.2 Tesla -- Model S Wireless Charging System PluglessPower
- 4.8.3 Volvo -- Utilizes Roads for Wireless Charging
- 4.8.4 Qualcomm -- Halo EV Wireless Charging Technology
- 4.8.5 Japanese Wireless Charging Bus
- 4.8.6 ZTE -- Contactless Electromagnetic Induction Mode
- 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 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
- 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
  - 7.3.5 Cooperative Enterprises
  - 7.3.6 Charging Business and Revenue
- 7.4 Beijing Huashang Sanyou New Energy Technology
  - 7.4.1 Profile
  - 7.4.2 Charging/Battery Swap Equipment
  - 7.4.3 eVehicle (evehicle.cn)
  - 7.4.4 Charging Business and Revenue
- 7.5 Zhejiang Wanma New Energy
  - 7.5.1 Profile

- 7.5.2 Affiliated Company
- 7.5.3 Charging/Battery Swap Equipment
- 7.5.4 iCharge (eichong.com)
- 7.5.5 Cooperative Enterprises
- 7.5.6 Supply System
- 7.5.7 Charging Business and Revenue
- 7.6 Star Charge
  - 7.6.1 Profile
  - 7.6.2 Charging/Battery Swap Equipment
  - 7.6.3 Distribution of Charging Piles
  - 7.6.4 Charging Business and Revenue
- 7.7 Qingdao TGOOD Electric
  - 7.7.1 Profile
  - 7.7.2 Charging/Battery Swap Equipment
  - 7.7.3 R&D Capability and Developments
  - 7.7.4 Distribution of Charging Stations
  - 7.7.5 Cooperative Enterprises
  - 7.7.6 Charging Business and Revenue
- 7.8 Dianzhuang
  - 7.8.1 Profile
  - 7.8.2 Charging/Battery Swap Equipment
  - 7.8.3 Charging Business and Revenue
- 7.9 Carenergynet.com (Shenzhen CLOU Electronics)
  - 7.9.1 Profile
  - 7.9.2 Charging/Battery Swap Equipment
  - 7.9.3 R&D
  - 7.9.4 Charging Business and Revenue
- 7.10 Other Potential Charging Service Providers

**8 Major Charging Equipment Suppliers in China**

- 8.1 NARI Technology Co., Ltd.
  - 8.1.1 Profile
  - 8.1.2 Charging/Battery Swap Equipment
  - 8.1.3 Charging Business and Revenue
- 8.2 Shenzhen Auto Electric Power Plant Co., Ltd.
  - 8.2.1 Profile
  - 8.2.2 Charging/Battery Swap Equipment
  - 8.2.3 R&D
  - 8.2.4 Charging Business and Revenue
- 8.3 XJ Electric Co., Ltd.
- 8.4 Sieyuan Electric Co., Ltd.
- 8.5 Suzhou Industrial Park Heshun Electric Co., Ltd.
- 8.6 Shenzhen Golden Highway Technology Co., Ltd.
- 8.7 Hangzhou Zhongheng Electric Co., Ltd.
- 8.8 UTEK New Energy Technology Co., Ltd.
  - 8.8.1 Profile
  - 8.8.2 Charging/Battery Swap Equipment
  - 8.8.3 Major Customers
  - 8.8.4 Charging Business and Revenue

**9 Strategic Moves of Major Chinese Carmakers in Charging Field**

- 9.1 BYD
- 9.2 BAIC BJEV
- 9.3 ZOTYE
- 9.4 Geely
- 9.5 SAIC Motor
- 9.6 Conclusion

- 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 Seventeen Batches of Models Exempt from Purchase Tax
- Subsidy Standards for 10m+ Urban Public Bus Demonstration Promotion, 2009-2012 (Unit: RMB10,000/unit)
- Subsidy Standards for Demonstration Promotion of Passenger Cars for Public Services and Lightweight Commercial Vehicles, 2009-2012
- Subsidy Standards for Electric Passenger Cars in China, 2013-2015
- Subsidy Standards for Electric Buses in China, 2013-2015
- Subsidy Standards for Battery Electric and Plug-in Hybrid Electric Passenger Cars (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 Bus in China, 2017
- Subsidy Standards for New Energy Passenger Car in China, 2017
- Subsidy Standards for New Energy Truck and Special Vehicle in China, 2017
- Subsidy Standards for Promotion and Application of Fuel Cell Vehicle in China, 2017
- Subsidy Standards for New Energy Passenger Car in China, 2018
- Subsidy Standards for New Energy Truck and Special Vehicle in China, 2018
- Subsidy Standards for New Energy Bus in China, 2018
- Subsidy Standards for Promotion and Application of Fuel Cell Vehicle in China, 2018

- Central Subsidies for New Energy Passenger Cars, 2013-2020
- Central Subsidies for New Energy Buses and Trucks, 2013-2020
- Subsidy Standards for Energy-saving and New Energy Buses under Operation, 2015-2019
- Subsidies for New Energy Vehicle Models for Promotion and Application, 2016-2017
- 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)
- Guangdong's Plans for Construction of Highway Charging Stations, 2018-2020
- Allocation of Provincial Subsidies for Charging/Battery-swap Infrastructure, 2016-2018
- Zhuhai's Provincial 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
- Number of New EVs in Weifang City, 2017-2020E (unit: units)
- EV Charging Station/Pile Demand in Weifang City, 2016-2020E
- Anhui's Goals for Constructing EV Charging Infrastructure in Pilot Cities, 2020
- Nanjing's Plans for Construction of EV Charging Infrastructure, 2020
- Breakdown of Lianyungang's Planning for NEV Promotion & Application and Charging Infrastructure Construction, 2016
- Conversion Relationship between NEVs and Standard Vehicles in Lianyungang, 2016
- Zhejiang's Goals of Charging/Battery-swap Stations and Charging Piles by 2020
- Configuration Standards of EV Charging Facilities for Civil Buildings in Wenzhou City
- EV Ownership in Shaanxi Province by Type (10k Units)
- Charging Infrastructure Demand Forecast in Shaanxi Province during 2016-2020 (Station, 10K Piles)
- Shaanxi's Development Planning for EV Charging Infrastructure (2016-2020)
- Shaanxi's Development Planning for EV Charging Infrastructure by Region (2016-2020)
- EV Ownership in Changsha City by Type, 2016-2020E
- Comparison of EV Charging Facility Configuration between National Level, Hunan Province and Changsha City
- Changsha's EV Charging Pile Demand by Type, 2016-2020E

- Changsha's Plans for EV Charging Pile, 2016-2020E
- Nanchong City's Planning for Public Charging Pile Layout
- Fujian's Goals for Construction of EV Charging Infrastructure by Year/Region, 2016-2020
- Fujian's Goals for Construction of Public Charging Infrastructure by City/Type, 2016-2020
- Principles of Charging Infrastructure Configuration (Pile-to-Vehicle Ratio) in Fuzhou City, 2020E
- EV Scale in Key Districts/Counties of Fuzhou City, 2020E
- Fuzhou City's Goals for Construction of Public Charging Infrastructure by Year/Region, 2016-2020
- New EVs and Charging Stations in Kunming City, 2016-2020E
- EV Charging Facility Demand in Changchun City by Type, 2020E
- Basic Electricity Price for Private and Public Charging in Major Cities Nationwide
- Prices for New Energy Vehicle Charging and Battery-swapping in 44 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 by Region, 2013-2017
- Global EV Ownership Goal (by Country) for 2020
- Announced Country Targets and Objectives for EV Deployment, 2020-2030
- Global EV and Power Battery Forecast, 2015-2040E
- Global Electric Passenger Car Sales by Major Countries, 2014-2017
- Sales of Global Top 20 Electric Passenger Cars, 2015-2017
- Global Electric Passenger Car Sales (EV & PHEV), 2011-2025E
- EV Sales in the US by Model, 2014-2017
- EV Sales in Europe by Model, 2014-2017

- EV Sales in in Japan by Model, 2014-2017
- EV Output and Sales in China, 2010-2017
- Output of New Energy Vehicles (EV & PHEV) in China, 2011-2017
- EV Sales (EV & PHEV) in China, 2011-2025E
- Electric Passenger Car Sales (EV & PHEV) in China, 2011-2025E
- New Energy Passenger Car Sales (EV & PHEV) in China, Jan.-Dec.2017
- New Energy Passenger Car Sales (EV & PHEV) by Model in China, 2015-2018
- Monthly Output of New Energy Commercial Vehicles in China, 2016-2017
- Monthly Output of New Energy Buses in China, 2016-2017
- Monthly Output of Battery Electric Trucks in China, 2015-2017
- Electric Commercial Vehicle Sales (EV & PHEV) in China, 2011-2025E
- Integrated Solutions for EV Charging Station
- 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 by Country
- Fiscal Subsidies for EV and Charging Facilities by Country
- Global EV Charging Facilities, 2010-2017
- Distribution of Global EVs and Public Charging Piles by Country, 2017
- Publicly Accessible Chargers (Slow and Fast) by Country, 2005-2017
- Publicly Accessible Slow Chargers by Country, 2005-2017
- Publicly Accessible Fast Chargers by Country, 2005-2017
- Highway Charging Pile Construction in Major Countries and Regions, 2017
- Subsidy Standards for Charging Piles in Each State of the US
- Number of Charging Stations and Classification of EV Charging Ports in the US, 2017
- Distribution of Fast Charging Piles by Type in the US



- Investments in Charging Pile Construction in Major Countries and Regions, 2017-2027
- Major Standards for EV Charging Interface
- Classification of EV Charging Interfaces by International Standards
- Overview of the EVSE Characteristics in the Main Regions
- 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, 2009-2017
- Tesla's R&D Costs and % of Total Revenue, 2011-2017
- 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, 2015-2017
- Pan for Tesla EV Models, 2008-2020
- Tesla EV Sales 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, 2017-2018
- Distribution of Tesla Superchargers in North America, 2017-2018



- Distribution of Tesla Superchargers in Europe, 2017-2018
- Organizational Structure of CHAdeMO Association
- Distribution of Regular Members of CHAdeMO Association
- Standard Enterprise Members of CHAdeMO Association
- CHAdeMO Charging Connection Certification
- Classification of CHAdeMO Charging Modes
- Incidence Relation between CHAdeMO Fast Charger and EV Quantity
- Main Charging Pile Products Subject to CHAdeMO's Standards
- Models Adopting CHAdeMO DC Charging Interface, Driving Mileage, and Battery Capacity
- Main Equipment for Charging Stations/Piles in Japan by Type
- Development of CHAdeMO Charging Stations Worldwide, 2009-2018
- Development Plan for EV and Fast-charging Stations Worldwide, 2012-2020
- CHAdeMO's Development Plan, 2014-2025
- Distribution of CHAdeMO Charging Stations in Japan, 2018
- Distribution of CHAdeMO Charging Stations in the US, 2018
- Distribution of CHAdeMO Charging Stations in Europe, 2018
- Charging Mode and Procedure of ChargePoint
- ChargePoint's Intelligent Charging System
- ChargePoint's Charging Piles
- Classification of ChargePoint's Charging Piles
- ChargePoint's Charging Service Ecosystem
- ChargePoint's Offline Layout in San Francisco
- ChargePoint's Charging Payment Card
- Distribution of ChargePoint's Charging Piles in the United States, 2018
- Distribution of ChargePoint's Charging Piles by Region

- 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 Grid to Vehicle (G2V)
- Technical Principle for Vehicle to Grid (V2G)
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- Number of Charging Piles, Ownership of New Energy Vehicles and their Proportion in China, 2010-2017
- Ownership of EV Charging Stations in China, 2010-2020E
- Ownership of EV Charging Piles in China, 2010-2025E
- Construction Plan for EV Charging Piles in China, 2015-2020
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- 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
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- 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
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- Daily Mileage of Chinese EV Users
- Daily Use Frequencies of Chinese EV Users
- Daily Charging Time Distribution of Chinese EV Users
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- 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
- Comparison of Charging Habits between DC Fast Charging and 220V Trickle Charging (L2 Charging) in the US
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