



China Energy Storage for Grid System Industry Report, 2014-2017

Nov. 2014

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.

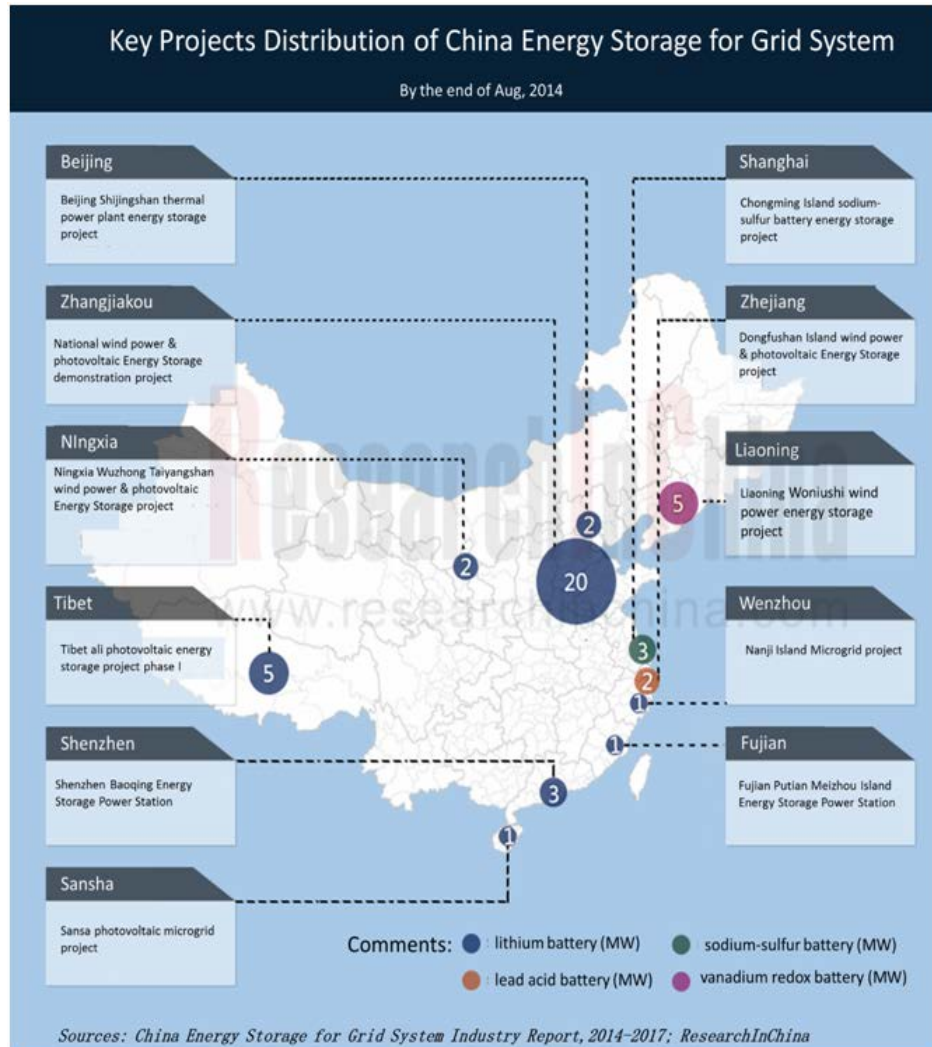
INFORMATION SOURCES

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

Abstract

Energy storage has a wide range of applications in electric power system, involving all aspects of power generation, transmission, distribution and end user. The energy storage technologies for grid system include pumped storage, compressed air, flywheel, chemical battery, super capacitor, etc. Except the relatively mature pumped storage, others are still at the early stage of industrialization or under research. However, all governments have been virtually aware of the importance of energy storage industry, hence a desperate need for development of energy storage.

To create a clean, sustainable future, the Chinese government is shifting its focus in policy to clean energy technology. As of the end of 2013, China's total installed capacity of power generation had reached 1,250GW, which contained 91.4GW of wind power (accounting for 7.3%), the third power source in China following thermal power and hydropower. Meanwhile, China had seen a photovoltaic (PV) power generation installed capacity of 18.1GW (representing 1.5%), overtaking the United States as the world's largest photovoltaic market.



As the installed power generation capacity grows rapidly, the demand for energy storage in China is increasingly expanding. In 2013, the installed capacity of pumped storage in China totaled 21.5GW, in contrast to 65MW for other technologies; while the demand for energy storage for peak-load regulation of power grid was 95GW and expected to rise to 110GW in 2014, reflecting a great development potential. In addition, an integrated grid of wind power and PV power will generate a considerable demand for energy storage, at 5.6GW and 3.8GW, respectively, in 2014.

There are various kinds of energy storage technologies for grid system, with China, for example, primarily adopting lithium batteries, lead-acid batteries and flow technology (excluding pumped storage), which held respective proportions of 60%, 20% and 14% in 2013.

As of the end of August 2014, there had been scores of energy storage enterprises in China. Among them, China Aviation Lithium Battery Co., Ltd. and SUNWODA Electronics Co., Ltd. employ lithium battery energy storage technology; Narada Power Source Co., Ltd. and Shandong Sacred Sun Power Sources Co., Ltd. adopt lead-acid battery technology; Dalian Rongke Power Co. Ltd and Prudent Energy Inc. depend on flow technology; Shanghai Electric Group Co., Ltd. and Sieyuan Electric Co., Ltd. resort to sodium-sulfur energy storage technology.

China Energy Storage for Grid System Industry Report, 2014-2017 compiled by ResearchInChina is mainly concerned with the followings:

- Development environment, trends, etc. of energy storage for grid system in China;
- Current situation and prediction of energy storage for grid system in China by market size, competitive landscape, and applications;
- Operation and technical route of 21 major energy storage manufacturers in China and worldwide, including Alstom, Narada, Shanghai Electric, and Rongke Power, etc.

1 Overview of Energy Storage for Grid System

- 1.1 Definition and Classification
- 1.2 Application
- 1.3 Industry Chain
- 1.4 Problems

2 Status Quo of Energy Storage for Grid System in China

- 2.1 Policy Environment
- 2.2 Technical Environment
- 2.3 Scale of Energy Storage
- 2.4 Competitive Landscape
 - 2.4.1 Enterprise
 - 2.4.2 Pumped Storage
 - 2.4.3 Lithium Battery
 - 2.4.4 Flywheel Energy Storage
 - 2.4.5 Flow Battery Energy Storage
 - 2.4.6 Compressed Air Energy Storage
 - 2.4.7 Sodium-sulfur Battery
 - 2.4.8 Superconducting Magnetic Energy Storage (SMES)

3 Applications of Energy Storage for Grid System in China

- 3.1 Wind Power Generation
- 3.2 PV Power Generation
- 3.3 Distributed Generation and Micro-grid
- 3.4 Peak-load Regulation of Power Grid

4 Major Energy Storage Enterprises in the World


- 4.1 Alstom Power
 - 4.1.1 Profile
 - 4.1.2 Operation
 - 4.1.3 Energy Storage Business
- 4.2 Axion Power
 - 4.2.1 Profile
 - 4.2.2 Operation
 - 4.2.3 Energy Storage Business
- 4.3 Beacon power
 - 4.3.1 Profile
 - 4.3.2 Energy Storage Business
- 4.4 GE Energy
 - 4.4.1 Profile
 - 4.4.2 Operation
 - 4.4.3 Energy Storage Business
- 4.5 Maxwell Technologies
 - 4.5.1 Profile
 - 4.5.2 Operation
 - 4.5.3 Energy Storage Business
- 4.6 Altair Nanotechnologies
 - 4.6.1 Profile
 - 4.6.2 Energy Storage Business
- 4.7 Summary

5 Major Energy Storage Enterprises in China

- 5.1 Narada

- 5.1.1 Profile
- 5.1.2 Operation
- 5.1.3 Revenue Structure
- 5.1.4 Gross Margin
- 5.1.5 Energy Storage Business
- 5.1.6 Outlook and Forecast
- 5.2 Sacred Sun
 - 5.2.1 Profile
 - 5.2.2 Operation
 - 5.2.3 Revenue Structure
 - 5.2.4 Gross Margin
 - 5.2.5 Energy Storage Business
 - 5.2.6 Outlook and Forecast
- 5.3 Inovance
 - 5.3.1 Profile
 - 5.3.2 Operation
 - 5.3.3 Revenue Structure
 - 5.3.4 Gross Margin
 - 5.3.5 Energy Storage Business
 - 5.3.6 Outlook and Forecast
- 5.4 ZTT
 - 5.4.1 Profile
 - 5.4.2 Operation
 - 5.4.3 Revenue Structure
 - 5.4.4 Gross Margin
 - 5.4.5 Energy Storage Business
 - 5.4.6 Outlook and Forecast

5.5 Fengfan	5.8.6 Outlook and Forecast	5.15 China Aviation Lithium Battery
5.5.1 Profile	5.9 Sunwoda	5.15.1 Profile
5.5.2 Operation	5.9.1 Profile	5.15.2 Energy Storage Business
5.5.3 Revenue Structure	5.9.2 Revenue	5.16 Summary
5.5.4 Gross Margin	5.9.3 Revenue Structure	
5.5.5 Energy Storage Business	5.9.4 Gross Margin	6 Summary and Forecast
5.5.6 Outlook and Forecast	5.9.5 Energy Storage Business	6.1 Summary
5.6 BYD	5.9.6 Outlook and Forecast	6.2 Forecast
5.6.1 Profile	5.10 Clou Electronics	
5.6.2 Operation	5.10.1 Profile	
5.6.3 Revenue Structure	5.10.2 Operation	
5.6.4 Gross Margin	5.10.3 Revenue Structure	
5.6.5 Energy Storage Business	5.10.4 Gross Margin	
5.6.6 Outlook and Forecast	5.10.5 Energy Storage Business	
5.7 Sungrow	5.10.6 Outlook and Forecast	
5.7.1 Profile	5.11 Prudent Energy	
5.7.2 Operation	5.11.1 Profile	
5.7.3 Revenue Structure	5.11.2 Energy Storage Business	
5.7.4 Gross Margin	5.12 Raynen	
5.7.5 Energy Storage Business	5.12.1 Profile	
5.7.6 Outlook and Forecast	5.12.2 Energy Storage Business	
5.8 Shanghai Electric	5.13 Rongke Power	
5.8.1 Profile	5.13.1 Profile	
5.8.2 Revenue	5.13.2 Energy Storage Business	
5.8.3 Revenue Structure	5.14 Shandong RealForce Enterprises	
5.8.4 Gross Margin	5.14.1 Profile	
5.8.5 Energy Storage Business	5.14.2 Energy Storage Business	

- 
- Classification of Energy Storage Technology
 - Application of Energy Storage Technology for Electrical Power System
 - Energy Storage Applications
 - Energy Storage Applications in Smart Power Grids
 - Energy Storage Applications in Electrical Power System
 - Energy Storage Industry Chain
 - Policies on Energy Storage Industry in China
 - Stage of Energy Storage Technology Development
 - Cost Assessment of Some Energy Storage Technologies, 2013-2014
 - Total Installed Capacity of Global Energy Storage, 2008-2013
 - Shares of Energy Storage Technologies Worldwide, 2013
 - Demand for Power Generation and Energy Storage in China, 2009-2014
 - Distribution of Energy Storage Project Applications in China, 2013
 - Technical Route of Major Energy Storage Enterprises in China
 - Installed Capacity of Pumped Storage in China, 2010-2020E
 - Consumption of Lithium Batteries for Wind-Solar Hybrid Power Generation in China, 2010-2014
 - Business Scope of Vanadium Battery Companies in China
 - Installed Capacity of Wind Power in China, 2009-2020E
 - Demand for Wind Power Storage, 2009-2020E
 - PV Installed Capacity in China, 2009-2020E
 - Demand for PV Power Generation and Energy Storage in China, 2009-2020E
 - Revenue and Net Income of Alstom, 2010-2014
 - Revenue Breakdown of Alstom by Product, 2011-2013
 - Revenue and Net Income of Axion, 2011-2014
 - Revenue and Net Income of GE, 2009-2014

- Revenue Breakdown of GE by Product, 2009-2014
- Revenue and Net Income of Maxwell, 2011-2014
- Revenue Breakdown of Maxwell by Product, 2011-2014
- Major Energy Storage Enterprises in the World
- Revenue and Net Income of Narada, 2008-2014
- Revenue Breakdown of Narada by Sector, 2011-2014
- Revenue Breakdown of Narada by Region, 2010-2014
- Gross Margin of Narada by Sector, 2011-2014
- Revenue and Net Income of Narada, 2012-2017E
- Revenue and Net Income of Sacred Sun, 2008-2014
- Revenue Breakdown of Sacred Sun by Product, 2009-2014
- Revenue Breakdown of Sacred Sun by Region, 2009-2014
- Gross Margin of Sacred Sun by Product, 2009-2014
- Key Energy Storage Projects of Sacred Sun, 2013-2014
- Revenue and Net Income of Sacred Sun, 2012-2017E
- Revenue and Net Income of Inovance, 2008-2014
- Revenue Breakdown of Inovance by Product, 2010-2014
- Revenue Structure of Inovance by Region, 2014H1
- Gross Margin of Inovance by Product, 2010-2014
- Revenue and Net Income of Inovance, 2012-2017E
- Revenue and Net Income of ZTT, 2008-2014
- Revenue and Net Income of ZTT, 2009-2014
- Revenue Breakdown of ZTT by Region, 2014H1
- Revenue and Net Income of ZTT, 2012-2017E
- Revenue and Net Income of Fengfan, 2008-2014

- Revenue Breakdown of Fengfan by Product, 2008-2014
- Revenue Breakdown of Fengfan by Region, 2014H1
- Gross Margin of Fengfan by Product, 2008-2014
- Revenue and Net Income of Fengfan, 2012-2017E
- Revenue and Net Income of BYD, 2009-2014
- Revenue Breakdown of BYD by Product, 2009-2014
- Revenue Breakdown of BYD by Region, 2009-2014
- Gross Margin of BYD by Product, 2009-2014
- Revenue and Net Income of BYD, 2012-2017E
- Revenue and Net Income of Sungrow 2009-2014
- Revenue Breakdown of Sungrow by Product, 2009-2014
- Revenue Structure of Sungrow by Region, 2014H1
- Gross Margin of Sungrow by Product, 2009-2014
- Revenue and Net Income of Sungrow, 2012-2017E
- Revenue and Net Income of Shanghai Electric, 2009-2014
- Revenue Breakdown of Shanghai Electric by Product, 2010-2014
- Revenue Breakdown of Shanghai Electric by Region, 2010-2014
- Gross Margin of Shanghai Electric by Product, 2010-2014
- Revenue and Net Income of Shanghai Electric, 2012-2017E
- Revenue and Net Income of Sunwoda, 2009-2014
- Revenue and Net Income of Sunwoda by Product, 2009-2014
- Revenue Breakdown of Sunwoda by Region, 2014H1
- Revenue and Net Income of Sunwoda, 2012-2017E
- Revenue and Net Income of Clou Electronics, 2009-2014
- Revenue Breakdown of Clou Electronics by Product, 2009-2014

- 
- Revenue Breakdown of Clou Electronics by Region, 2011-2014
 - Gross Margin of Clou Electronics by Product, 2009-2014
 - Revenue and Net Income of Clou Electronics, 2012-2017E
 - KW Class VRB Energy Storage System Application Project of Prudent Energy
 - MW Class VRB Energy Storage System Application Project of Prudent Energy
 - Key Energy Storage Projects of Rongke Power
 - Major Energy Storage Enterprises in China
 - Power & Energy Storage Size in China, 2009-2014
 - Power & Energy Storage Size in China, 2012-2017E

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