



# **Global and China Wind Turbine Industry Report, 2016-2020**

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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

In 2015, global new installed wind power capacity reached 63.01GW, up 22.41% YoY, refreshing new installed wind power capacity records again. China continues to lead the global wind power market with new installed capacity of 30.75GW in 2015 and the first worldwide ranking for six consecutive years.

The wind power market will continue to be buoyant during the 13th Five-Year Plan period (2016-2020). The global total installed wind power capacity is expected to surpass 700GW by 2020, of which, China will reach around 250GW.

Large-scale wind power is the development trend of wind power technology in recent years. China's new per-unit power of wind turbine has been on the rise since 2000, hitting 1,837kW in 2015, more than three times as much as that in 2000. Concerning China's new installed wind power capacity in 2015, 1.5MW and 2MW wind turbines were predominant with a combined 84% share, of which, 2MW wind turbine outperformed 1.5MW wind turbine for the first time and accounted for 50%.

Development of offshore wind power growing at a steady pace is expected to accelerate in the future. In 2015, China's new grid-connected capacity of offshore wind power was recorded at 360.5MW, occupying 10.7% of the global total. China's total installed grid-connected capacity of offshore wind power is planned to hit 30GW by 2020, while the cumulative actual installed capacity was merely 1GW in 2015. Given this, the offshore wind power construction will be greatly sped up.

To solve the wind turbine suspension problem, distributed wind power generation will be the first choice in the future. There has been a phased saturation for large-scale wind power development in Northwest, Northeast and North China, where the wind turbine suspension problem is increasingly severe. In 2015, wind turbine suspension volume reached a peak i.e. 33.9 billion kWh in five years, registering an average suspension rate of 15%. To improve the situation, the government has proposed the priority development of distributed wind power during the 13th Five-Year Plan period. According to the plan, the installed distributed wind power capacity will be 25GW by 2020 and 70GW by 2050.

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The report covers the followings:

- Global wind energy resources, installed wind power capacity and structure, wind power development in major countries, corporate competition, etc.;
- China's installed wind power capacity and structure, offshore wind power, exports, corporate competition, etc.;
- Market status of wind turbine parts (e.g. blade, gearbox, tower, converter, generator, bearing) as well as operation of key players;
- Wind energy resources, wind power development mode, construction achievements, main developers, etc.;
- Operation, R&D, etc. of 5 global and 10 Chinese wind turbine companies.

With global new installed capacity of 7.8GW, Goldwind Science & Technology Co., Ltd. became the world's largest wind turbine manufacturer in 2015, followed successively by Vestas, GE, Siemens and Gamesa. In June 2016, Siemens announced the signing of a binding agreement with Gamesa on merging wind power business of both sides (including Siemens Wind Power Services). Affected by this, the global wind turbine market structure will be changed in 2016.

In addition to Goldwind Science & Technology, there were 8 Chinese players reporting new installed wind power capacity of over 1MW in 2015, namely United Power, Envision Energy, Mingyang Wind Power, CSIC (Chongqing) Haizhuang Wind power Equipment, Shanghai Electric, XEMC Windpower, DongfangElectric Corporation and Zhejiang Windey, in succession.

Furthermore, wind-turbine parts companies in China have good supply capability.

In terms of wind power blade, China has possessed the 1.5MW wind blade R&D and production capacity, which will increase gradually to 3MW, 5MW and even more; representative firms include AVIC HuitengWindpower Equipment Co., Ltd., Shanghai FRP Research Institute Co., Ltd., Lianyungang ZhongfuLianzhong Composites Group Co., Ltd. and Sinoma Science & Technology Co.,Ltd. With respect to wind power gearbox, Nanjing High Accurate Drive Equipment Manufacturing Group Co., Ltd. (NGC) as a leader in China and even in the world registers a share of 60% domestically and 23% globally. In the aspect of wind power converter, foreign brands like ABB, Convertteam and Emerson take the leading position; however, Sungrow Power Supply, Hopewind Electric, Shanghai Hi-tech Control System Co., Ltd. (HITE) and other local firms are rising.

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