

# Analyzing the Global Market for Wind Turbine Rotor Blades

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## Abstracts

A wind turbine rotor blade is a fundamental constituent of a wind turbine. The rotor forms the central base of the turbine and harbors multiple rotor blades attached to a hub. The rotor blades serve as a motor in the turbine and extract energy by capturing wind energy and transforming it into the rotation of the hub. The most popular rotor consists of a horizontal axis with three blades with a diameter ranging from 37-128 meters.

The wind turbine rotor blade market is developing in sync with the growing demand for turbines used to produce wind energy. The global wind energy market has been developing gradually due to a rise in energy demand, raising concerns over environmental impact of power generation through fossil fuel as a result of the Production Tax Credit (PTC) policy expiring in the United States and low investments in Europe respectively.

China leads the wind energy market primarily due to government impetus on wind power generation. Other Asia-Pacific countries like India, Japan and Australia are also portraying significant growth trends in wind power generation powered by government initiatives. The Middle East and Africa remain at a very nascent phase of the wind energy market and presently bear the lowest market share among the regions.

The key market players in the wind turbine rotor blade market are Siemens AG (Germany), Vestas Wind System AS (Denmark), Suzlon Energy Limited (India), Acciona S.A. (Spain), and Gamesa Corporacion Tecnologica (Spain).

In 2014, the market for wind turbine rotor blades was ruled by Asia-Pacific, which accounted for nearly 55% of the total installed blades in the world. The region is

expected to remain the most attractive market across 2020, even as South America along with the Middle East and Africa are geared up to witness promising growth rates.

Despite the costs for generating wind power declining over the years, the capital costs required in establishing a functional wind power project still remain high. Apart from construction and installation of wind turbines, costs may also rise, depending on the load factor and capacity factor of the turbines, which differ according to the location of the project and the quality of wind resource.

Aruvian Research analyzes the global market for wind turbine rotor blades in this research offering, *Analyzing the Global Market for Wind Turbine Rotor Blades*. Divided into 5 sections, this report is a comprehensive insight into the market for wind turbine rotor blades.

Section 1 of the report is an overview of wind energy and an overview of the global wind energy industry. We look at how wind turbines work, wind power technology, power generation from wind, types of turbines, airborne wind turbine, wind turbine's power output and many other factors are analyzed.

The global wind energy industry is analyzed through a market profile, market statistics, market analysis by regions, wind power in the European Union and a look at the global offshore wind market.

Section 2 of the report analyzes the global wind turbine industry. Introduction to wind turbines looks at components of wind turbines, global installations of wind turbines, market size, cost of turbines, average turbine size and market share.

Section 3 analyzes the global market for wind turbine rotor blades and provides an overview of rotor blades and the manufacturing process.

The global market for wind turbine rotor blades is analyzed through an industry overview, industry size, production of roller blades by overall yearly production, independent production of rotor blades and in-house production of rotor blades by manufacturers. Cost of wind turbine rotor blades is also analyzed.

Industry trends and industry competition are also analyzed.

Major manufacturers of wind turbine rotor blades are analyzed through a corporate

profile, business segment analysis, financial analysis and a SWOT analysis. The report analyzes 16 major manufacturers of wind turbine rotor blades.

## Contents

### EXECUTIVE SUMMARY

### SECTION 1: OVERVIEW OF WIND ENERGY

#### A. INTRODUCTION TO WIND POWER

- A.1 How do Wind Turbines Work?
- A.2 Wind Power Technology
- A.3 Power Generation from Wind

#### B. WIND POWER TECHNOLOGY

- B.1 Introduction
- B.2 Types of Turbines
- B.3 Airborne Wind Turbine
- B.4 Wind Turbine's Power Output
- B.5 Cost of a Wind Turbine
- B.6 Turbine Size
- B.7 Efficiency Factors
- B.8 Offshore Wind Turbines
- B.9 Lifetime of a Turbine
- B.10 Globalization Impacting the Wind Turbine Market

#### C. ANALYZING THE GLOBAL WIND ENERGY INDUSTRY

- C.1 Market Profile
- C.2 Market Statistics
- C.3 Market Analysis by Region
  - C.3.1 Africa & the Middle East
  - C.3.2 Asia
  - C.3.3 Europe
  - C.3.4 North America
  - C.3.5 South & Latin America
  - C.3.6 Pacific Region
- C.4 Wind Power in the European Union (EU)
  - C.4.1 Overview
  - C.4.2 Offshore Wind Market

- C.4.3 Market Trends
- C.4.4 Regulatory Framework
- C.5 Global Offshore Wind Market
  - C.5.1 Overview
  - C.5.2 Asia
  - C.5.3 Europe
  - C.5.4 United States

## **SECTION 2: GLOBAL WIND TURBINE INDUSTRY**

### **A. INTRODUCTION TO WIND TURBINES**

- A.1 Components of Wind Turbines
- A.2 Global Installations of Wind Turbines
- A.3 Market Size
- A.4 Cost of Turbines
- A.5 Average Turbine Size
- A.6 Market Share

## **SECTION 3: ANALYZING THE GLOBAL MARKET FOR WIND TURBINE ROTOR BLADES**

### **A. INTRODUCTION**

- A.1 Overview of Rotor Blades
- A.2 Manufacturing of Rotor Blades

### **B. MARKET FOR WIND TURBINE ROTOR BLADES**

- B.1 Industry Overview
- B.2 Industry Size
- B.3 Production of Rotor Blades
  - B.3.1 Overall Yearly Production
  - B.3.2 Independent Production of Rotor Blades by Manufacturers
  - B.3.3 In-house Production of Rotor Blades by Manufacturers
- B.4 Cost of Wind Turbine Rotor Blades

### **C. INDUSTRY TRENDS**

## **D. COMPETITION IN THE INDUSTRY**

### **SECTION 4: ANALYSIS OF MAJOR MANUFACTURERS OF WIND TURBINE ROTOR BLADES**

#### **A. ACCIONA SA**

- A.1 Corporate Profile
- A.2 Business Segment Analysis
- A.3 Financial Analysis
- A.4 SWOT Analysis

#### **B. CHINA MING YANG WIND POWER GROUP LTD**

- B.1 Corporate Profile
- B.2 Business Segment Analysis
- B.3 Financial Analysis
- B.4 SWOT Analysis

#### **C. DONGFANG ELECTRIC CORPORATION LIMITED**

- C.1 Corporate Profile
- C.2 Business Segment Analysis
- C.3 Financial Analysis
- C.4 SWOT Analysis

#### **D. ENERCON**

- D.1 Corporate Profile
- D.2 Business Segment Analysis
- D.3 Financial Analysis
- D.4 SWOT Analysis

#### **E. GAMESA CORPORACION TECNOLOGICA SA**

- E.1 Corporate Profile
- E.2 Business Segment Analysis
- E.3 Financial Analysis
- E.4 SWOT Analysis

**F. LM WIND POWER**

- F.1 Corporate Profile
- F.2 Business Segment Analysis
- F.3 Financial Analysis
- F.4 SWOT Analysis

**G. NORDEX SE**

- G.1 Corporate Profile
- G.2 Business Segment Analysis
- G.3 Financial Analysis
- G.4 SWOT Analysis

**H. SENVION SE**

- H.1 Corporate Profile
- H.2 Business Segment Analysis
- H.3 Financial Analysis
- H.4 SWOT Analysis

**I. SIEMENS AG**

- I.1 Corporate Profile
- I.2 Business Segment Analysis
- I.3 Financial Analysis
- I.4 SWOT Analysis

**J. SUZLON ENERGY LIMITED**

- J.1 Corporate Profile
- J.2 Business Segment Analysis
- J.3 Financial Analysis
- J.4 SWOT Analysis

**K. VESTAS WIND SYSTEMS A/S**

- K.1 Corporate Profile

K.2 Business Segment Analysis

K.3 Financial Analysis

K.4 SWOT Analysis

**L. CSIC (CHONGQING) HAIZHUANG WINDPOWER EQUIPMENT CO., LTD. (CSIC)**

**M. EUROS GMBH**

**N. GUODIAN UNITED POWER TECHNOLOGY CO., LTD.**

**O. INOX WIND**

**P. LIANYUNGANG ZHONGFU LIANZHONG COMPOSITES GROUP CO., LTD.**

**SECTION 5: CONCLUSION**

**A. APPENDIX**

**B. GLOSSARY OF TERMS**



## List Of Figures

### LIST OF FIGURES

Figure 1: Power Curve for Wind Turbine

Figure 2: Energy Produced at Various Wind Speeds at Typical Wind Farm Site

Figure 3: Energy Produced at Various Wind Speeds at Typical Site

Figure 4: Capacity Factor in % of Rated Power

Figure 5: Aerodynamics of Wind Power

Figure 6: Components in a Simplified Wind Turbine

Figure 7: Airborne Wind Generator

Figure 8: Main Components of a Wind Turbine and their Share of the Overall Turbine Cost for a 5 MW Wind Turbine

Figure 9: Turbine Diameter Growth with Time

Figure 10: Growth in Size of Commercial Wind Turbine Designs

Figure 11: Development of the Average Wind Turbine Size Sold in Different Countries (in KW)

Figure 12: Increase in Turbine Prices from 2012 to 2014

Figure 13: Top 10 Cumulative Capacity as of Dec 2014

Figure 14: Top 10 New Installed Capacity Jan-Dec 2014

Figure 15: Global Annual Installed Wind Capacity 1997-2014

Figure 16: Global Cumulative Installed Wind Capacity 1997-2014

Figure 17: Annual Installed Capacity by Region 2006-2014

Figure 18: Share of New Wind Power Installations in the EU (in MW), 2014

Figure 19: Total Installed Capacity in the European Union (in MW), 2001-2014

Figure 20: Electricity Generating Installations in the EU (in GW), 2000-2014

Figure 21: Annual Offshore Wind Capacity Installations in Europe in 2014 (in MW)

Figure 22: Share of Wind Turbine Manufacturers' at end of 2014 (in MW)

Figure 23: Components of a Wind Turbine

Figure 24: Global Annual Wind Power Installations (in GW), 2006-2015

Figure 25: Global Turbine Market Size (in USD Billion) & Average Turbine Cost (in USD per kW), 2006-2015

Figure 26: Average Capacity of a Wind Turbine, Offshore and Onshore Turbines (in MW), 2006-2020

Figure 27: Major Players in the Global Turbine Industry & their Market Share (%), 2014

Figure 28: Yearly Variation of Market Shares of Major Wind Turbine Suppliers (%), 2007-2014

Figure 29: Size of the Wind Turbine Rotor Blade Market (in USD Billion), 2006-2020

Figure 30: Yearly Production of Wind Turbine Rotor Blades (in MW), 2006-2014

Figure 31: Independent Production Statistics of Wind Turbine Rotor Blades by Manufacturers (in MW), 2007-2014

Figure 32: In-house Production Statistics of Wind Turbine Rotor Blades by Manufacturers (in MW), 2007-2014

Figure 33: Cost Breakup of Wind Turbine Rotor Blades (%), 2014

Figure 34: Price Range of Wind Turbine Rotor Blades (in USD per kW), 2006-2020

Figure 35: Major Independent Manufacturers of Wind Turbine Rotor Blades & their Market Share (%), 2014

Figure 36: Production Sites of Independent Manufacturers of Wind Turbine Rotor Blades

Figure 37: Major In-house Manufacturers of Wind Turbine Rotor Blades & their Market Share (%), 2014

Figure 38: Revenues & Profitability of Suzlon Energy Limited (in USD Million), 2010-2014

Figure 39: General Layout for a Wind Turbine System

Figure 40: An Offshore Wind Farm

Figure 41: Overall Wind Farm Costs

Figure 42: Total Renewables Cost Envelope vs. Coal, Gas & Nuclear Cost

Figure 43: Combustion Emissions from Electricity Generation 2005-2050

Figure 44: Low Emission Generation Requirements

## List Of Tables

### LIST OF TABLES

Table 1: Four Optional Installation Systems for Offshore Wind Power

Table 2: Global Installed Wind Power Capacity (MW) by Regions, 2013-2014

Table 3: Upcoming Offshore Wind Power Projects in Japan

Table 4: Wind Farms and Turbines Connected to the Grid at end of 2014 in Europe

Table 5: Global Annual Wind Power Installations (in GW), 2006-2015

Table 6: Global Turbine Market Size (in USD Billion) & Average Turbine Cost (in USD per kW), 2006-2015

Table 7: Average Capacity of a Wind Turbine, Offshore and Onshore Turbines (in MW), 2006-2020

Table 8: Yearly Variation of Market Shares of Major Wind Turbine Suppliers (%), 2007-2014

Table 9: Size of the Wind Turbine Rotor Blade Market (in USD Billion), 2006-2020

Table 10: Yearly Production of Wind Turbine Rotor Blades (in MW), 2006-2014

Table 11: Independent Production Statistics of Wind Turbine Rotor Blades by Manufacturers (in MW), 2007-2014

Table 12: In-house Production Statistics of Wind Turbine Rotor Blades by Manufacturers (in MW), 2007-2014

Table 13: Price Range of Wind Turbine Rotor Blades (in USD per kW), 2006-2020

Table 14: Comparing Wind Turbine Rotor Blade Products of Independent Manufacturers, 2014

Table 15: Major Turbines Developed by Enercon

Table 16: Key Financials of Suzlon Energy Limited (in USD Million), 2010-2014

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