

# **Growth Opportunities in Wind Energy Markets 2011-2016: Materials, Market, and Technologies, December 2011**

<https://marketpublishers.com/r/G948BE13086EN.html>

Date: November 2011

Pages: 320

Price: US\$ 4,400.00 (Single User License)

ID: G948BE13086EN

## **Abstracts**

According to Lucintel's report "Growth Opportunities in Chinese Wind Energy Market 2011-2016: Trends, Forecast and Opportunity Analysis" The wind turbine market has experienced significant growth over the last five years and is expected to continue its growth momentum, reaching approximately US \$96 billion by 2016 with a CAGR of 12% over the next five years for annual installations.

The wind turbine market has experienced significant growth over the last five years and is expected to continue its growth momentum, reaching approximately US \$96 billion by 2016 with a CAGR of 12% over the next five years for annual installations.

Concerns over climate change, crude oil prices, and increasing energy demand are generating global interest in renewable resources to meet the world's energy needs. Wind is a clean, abundant, rapidly growing energy source. The business of generating electricity from wind is set to expand as China, the US, and Rest of the World (ROW) seeks cleaner, more sustainable ways to create electricity. Although wind is more expensive than conventional energy sources, wind turbines have evolved rapidly and decades of research and development have resulted in lower wind energy prices making wind energy competitive with fossil-based fuel energy prices.

Lucintel's research indicates that the percentage growth rate in cumulative capacity is expected to decrease every year as global cumulative wind capacity increases. This fluctuating growth rate in cumulative capacity brings the total capacity to 568,310 MW by the end of 2016. Asia is expected to remain the leader in wind energy installations. The Chinese and the USA markets are expected to top the list in new turbine installations, with Portugal, France, Italy, the UK, Ireland, and the Netherlands steadily

adding capacity.

Composites consumption in the wind market is expected to witness a healthy growth over the forecast period and reach US \$5.5 billion in 2016.

Lucintel's research report provides detailed market structure, value chain analysis, and comparative analysis of wind markets, trend scenarios, and forecast statistics for 2011–2016. The report also details the wind market's drivers and challenges, policies affecting the market, competitive analysis between wind energy with other energy sources, composite materials consumption in the wind energy market, and more.

This unique report from Lucintel provides the valuable information, insights, and tools needed to identify new growth opportunities and operate successfully in this market. This report is estimated to save hundreds of hours of your personal research time and it is anticipated to significantly help in expanding your business in this market. In today's unstable economy, you need every advantage to keep you ahead in your business.

To make business, investment, or strategic decisions, you need timely and adequate information. This market report fulfills this core need and is an indispensable reference guide for multi-national material suppliers, product manufacturers, investors, executives, distributors and many more, who are dealing with the Chinese wind market.

Some of the features of "Growth Opportunities in Wind Energy Markets 2011–2016: Materials, Markets, and Technologies" are-

Global wind energy market size in terms of value and volume shipment

Global battery market trend and forecast in terms of value and volume shipment

Regional analysis of global wind market (European market, North America, Asia, Rest of the World, Costa Rica, Brazil)

Competitive analysis: Wind Energy with Other Energy Sources

Flow chart for the value chain in the wind energy market

Major growth drivers and challenges for wind energy

Key materials requirements and suppliers to the wind industry

Trend and forecast of battery market by materials,by market and by technologies

Emerging trend for global wind energy market

A total over 132 valuable figures/charts and 58 tables are provided in this roughly 320 page report.

## Contents

### **1. EXECUTIVE SUMMARY**

### **2. WIND ENERGY: PAST, PRESENT, AND FUTURE**

- 2.1: History of wind energy use
- 2.2: Quick facts about wind energy
  - 2.2.1: What is wind energy?
  - 2.2.2: What causes the wind to blow?
  - 2.2.3: What are major components of a wind turbine?
  - 2.2.4: How big are wind turbines?
  - 2.2.5: How much does a wind system cost?
  - 2.2.6: What is the extent of maintenance required by wind turbines?
  - 2.2.7: Are there good wind resources?
  - 2.2.8: What are the advantages of wind-generated electricity?
  - 2.2.9: What are the economic obstacles to greater wind power usage?
  - 2.2.10: Are there environmental problems faced by wind power?
  - 2.2.11: Are there drawbacks to the use of wind energy?
  - 2.2.12: Is wind energy good for economy?
  - 2.2.13: Is the cost of wind power competitive with conventional power plants?
  - 2.2.14: Can Homeowners sell excess electricity to the utility?
- 2.3: Wind energy present
- 2.4: Wind energy future
- 2.5: Types of wind turbines
  - 2.5.1: Vertical axis wind turbine
  - 2.5.2: Horizontal axis wind turbine

### **3. COMPETITIVE ANALYSIS BETWEEN WIND ENERGY WITH OTHER ENERGY SOURCES**

- 3.1: Total energy market
- 3.2: Types of fossil fuels
  - 3.2.1: Coal
  - 3.2.2: Oil
  - 3.2.3: Natural gas
- 3.3: Role of wind energy in total energy market
- 3.4: Standards for wind energy
- 3.5: Cost comparison

- 3.5.1: Different costs of producing electricity from the wind
- 3.5.2: Parameters affecting the cost of electricity
- 3.5.3: Reasons for costs coming down
- 3.5.4: Cost of pollution
- 3.6: Benefits of wind energy
- 3.7: Disadvantages of wind energy

## **4. GLOBAL WIND ENERGY MARKET**

- 4.1: Wind energy— the future's energy
- 4.2: Global market size for wind energy
- 4.3: Global market analysis
- 4.4: Regional analysis
  - 4.4.1: The European market
  - 4.4.2: North America
  - 4.4.3: Asia
  - 4.4.4: Rest of the World
  - 4.4.5: Costa Rica
  - 4.4.6: Brazil
- 4.5: Market size for blades and towers

## **5. MARKET OUTLOOK, FORECAST, AND GROWTH RATES**

- 5.1: Driving forces
  - 5.1.1: Greater fuel diversity and less dependence on fossil fuels
  - 5.1.2: Reduced cost of electricity generation
  - 5.1.3: Reduced environmental impacts
  - 5.1.4: More jobs per unit of energy produced than other forms of energy
  - 5.1.5: Electricity demand
  - 5.1.6: Incentives
- 5.2: Challenges
  - 5.2.1: Cost of energy generation
  - 5.2.2: Design of efficient rotor blade
  - 5.2.3: Development of generators that work at low rotational speeds
  - 5.2.4: Wind - intermittent source of power
  - 5.2.5: Plant location
  - 5.2.6: Logistics
  - 5.2.7: Transmission issues
  - 5.2.8: Permitting challenges

5.3: Market growth rates and trends

5.4: Forecast (2011 - 2016)

5.5: Improving turbine efficiencies

5.5.1: Improved turbine efficiencies through design innovations

## **6. TURBINE MANUFACTURERS AND INDUSTRY LEADERS**

6.1: Industry leaders and market analysis

6.2: Leading manufacturers for large turbine systems

6.2.1: Vestas

6.2.2: Sinovel

6.2.3: Goldwind

6.2.4: Gamesa Eolica

6.2.5: ENERCON GmbH

6.2.6: GE Wind

6.2.7: Suzlon Energy Limited, India

6.2.8: Dongfang

6.2.9: Siemens

6.3: Leading manufacturers for small turbine systems

6.3.1: Southwest Wind Power Inc.

6.3.2: Bergey Windpower Co.

6.3.3: Synergy Power Corporation

6.3.4: Wind Turbine Industries Corp.

6.4: Leading blade manufacturers

6.4.1: LM Wind Power A/S

6.4.2: TPI Composites Inc.

6.4.3: Molded Fiber Glass

6.4.4: Vestas

6.4.5: VienTek

6.4.6: HT Blade

6.4.7: Gamesa

6.4.8: CNBM

6.5: Tower manufacturers

6.5.1: Aerisyn

6.5.2: American Tower Company

6.5.3: Ameron International Corporation - WTG

6.5.4: Beaird Industries, Inc.

6.5.5: COMEQ, Inc.

6.5.6: Composite Technology Corporation

- 6.5.7: CWMF, Inc.
- 6.5.8: DMI Industries, Inc
- 6.5.9: Hailo LLC Professional
- 6.5.10: Hitachi America Ltd.
- 6.5.11: Innovative Metal Products
- 6.5.12: Johnson Plate and Tower Fabrication
- 6.5.13: MBI
- 6.5.14: Tower Tech Systems, Inc.
- 6.5.15: Trinity Structural Towers, Inc.

## **7. COMPOSITE MATERIALS CONSUMPTION IN THE WIND ENERGY MARKET**

- 7.1: Driving forces for the use of composite materials
- 7.2: Raw materials
  - 7.2.1: Reinforcement types
  - 7.2.2: Resin types
- 7.3: Prepreg types
- 7.4: Total composites consumption
  - 7.4.1: Composites consumption by components
  - 7.4.2: Composites consumption by blade/Turbine manufacturers
  - 7.4.3: Composites consumption by type of raw Materials
  - 7.4.4: Composites consumption by manufacturing technique
  - 7.4.5: Composites consumption by region
- 7.5: Forecast (2011 - 2016) for composites consumption

## **8. TRENDS IN WIND BLADE MANUFACTURING TECHNIQUES**

- 8.1: The blade manufacturing process
  - 8.1.1: Hand Lay-Up/Wet Lay-up process
  - 8.1.2: VARTM process
  - 8.1.3: SCRIMP process
  - 8.1.4: Prepreg Lay-Up process
  - 8.1.5: SPRINT technology
- 8.2: Process adoption by the main blade Manufacturers
  - 8.2.1: Vestas
  - 8.2.2: Gamesa
  - 8.2.3: LM Wind Power
- 8.3: Technology Trends in Blade Manufacturing

## **9. RAW MATERIALS USED IN BLADE MANUFACTURING**

### 9.1: Raw materials used in the wind industry

#### 9.1.1: Reinforcement types



## I would like to order

Product name: Growth Opportunities in Wind Energy Markets 2011-2016: Materials, Market, and Technologies, December 2011

Product link: <https://marketpublishers.com/r/G948BE13086EN.html>

Price: US\$ 4,400.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

[info@marketpublishers.com](mailto:info@marketpublishers.com)

## Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/G948BE13086EN.html>