

Growth Opportunities for Composite Materials in Global Wind Energy Market 2013-2018: Materials, Market, and Technologies

<https://marketpublishers.com/r/G376DA87342EN.html>

Date: August 2013

Pages: 262

Price: US\$ 4,850.00 (Single User License)

ID: G376DA87342EN

Abstracts

Increasing demand of lightweight materials with efficient properties had been driving the growth of composite materials in wind energy market. Composite materials consumption in wind energy market is forecasted to reach US \$4.3 billion by 2018 with a high growth rate over the next five years. Growth in new installation of wind turbine and increasing size of blades will lead to increased demand for composite materials as there is huge demand for lightweight and efficient products. Lucintel, a leading global management consulting and market research firm, has conducted a competitive analysis on this market and presents its findings in “Growth Opportunities for Composite Materials in Global Wind Energy Market 2013-2018: Materials, Market and Technology.” The report includes analysis of the wind energy market in each region, wind blade market, and composite materials consumption in wind energy market. It also gives insights of emerging trends, unmet needs, and growth opportunities in those markets.

The growing wind energy market has been a key driver for the growth of composite materials market. As there is a positive growth prospect in the wind market, it is likely to support the positive growth of composite materials in this market. The future of this market looks promising due to several economic and environmental factors and strong growth of wind energy market. Advantage of corrosion resistance, high strength-to-weight ratio, low maintenance, and a longer lifecycle as compared to other traditional materials such as aluminium and steel is giving composites an edge over other materials. Nevertheless, high cost continues to be a limiting factor for developing new applications. Asia Pacific has been the top continent in terms of total composite consumption followed by North America and Europe. Rest of World (ROW) saw the highest growth rate due to rapidly increasing demand in the region.

This in-depth Lucintel's study is designed and intended for use by new entrants, manufacturers, material suppliers, component or structure fabricators, OEMs, investors, executives and consultants focused on the wind energy industry. The data and analysis found in this report can be utilized for a variety of functional business reasons including business development, strategic planning, business presentations determination of market size and trends, competitive analysis, investment decision, and joint product development.

This unique report from Lucintel will provide you with valuable information, insights, and tools needed to identify new growth opportunities and operate your business successfully in this market. This report will save hundreds of hours of your own personal research time and will significantly benefit you in expanding your business in this market. In today's stringent economy, you need every advantage that you can find.

Features of This Report:

This market report fulfills this core need and is an indispensable reference guide for multi-national composite materials suppliers, product manufacturers, investors, executives, distributors and many more, who are dealing with the wind market.

Growth Opportunities for Composite Materials in Global Wind Energy Market
2013-2018: Materials, Market, and Technologies

Some of the features of "Growth Opportunities for Composite Materials in Global Wind Energy Market 2013-2018: Materials, Market, and Technologies" are:

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

Regional analysis of global wind energy market of North America, Europe, Asia Pacific and Rest of the World in terms of volume with detail analysis of the countries in each region

Global and regional wind blade market trend (2007-2012) and forecast (2013-2018)

Global and regional composite materials market trend (2007-2012) and forecast (2013-2018)

Global composite materials in wind energy market by type of material

Global composite materials in wind blade market by manufacturing process

Market share of wind turbine and blade manufactures

Regional cost structure (%) of composite materials in wind energy market by the key regions of North America, Europe, and Asia Pacific

Global composite materials in wind energy market profit margin (%) 2007-2012

Competitive analysis: Wind energy with other energy sources

Major growth drivers and challenges for global composite materials in wind energy market

Key material requirements and suppliers to the wind energy markets

Innovations and new product launches in the market

Growth opportunity, unmet needs, and emerging trends for composite materials in wind energy market

Company profiles for leading players in the market

Contents

1. EXECUTIVE SUMMARY

2. INDUSTRY BACKGROUND AND CLASSIFICATIONS

2.1: Introduction to wind energy market

2.1.1: Quick facts about wind energy

2.1.2: Wind energy present

2.1.3: Wind energy future

2.1.4: Types of wind turbines

2.2: Total energy market

2.2.1: Role of wind energy in total energy market

2.2.2: Standards for wind energy

2.3: Cost comparison of different conventional and renewable sources of energy

2.3.1: Different costs of producing electricity from the wind

2.3.2: Reasons for declining costs

2.3.3: Cost of pollution

2.4: Improving wind turbine efficiency

2.4.1: Improved turbine efficiencies through design innovations

2.5: Benefits and drawbacks of wind energy

2.5.1: Benefits of wind energy

2.5.2: Drawbacks of wind energy

2.6: Structural components in a wind turbine

2.6.1: Tower

2.6.1.1: Tower manufacturing

2.6.1.2: Cost of a tower

2.6.2: Nacelle cover

2.6.3: Hub

2.6.4: Rotor blades

2.6.4.1: Design aspects of rotor blades

2.6.4.1.1: Blade length and blade weight

2.6.4.1.2: Design of airfoils for wind turbine

2.6.4.1.3: Design aspects of rotor blade root end

2.7: Composite materials in wind energy market

2.7.1: Reinforcement materials

2.7.2: Carbon fiber use in wind blade manufacturing

2.7.3: Resin types

2.7.4: Prepreg materials

- 2.7.5: Adhesives for wind blade
- 2.7.6: Core materials in wind blades
 - 2.7.6.1: Balsa-end grain wood
 - 2.7.6.2: Polyvinylchloride Foam (PVC Foam)
 - 2.7.6.3: Styrene-Acrylonitrile Foam (SAN Foam)
 - 2.7.6.4: Poly-Ethylene-Terephthalate (PET Foam)
- 2.8: Key materials requirements to the wind industry
 - 2.8.1: Resin requirements/issues
 - 2.8.2: Prepreg requirements/issues
 - 2.8.3: Gel coat requirements/issues
- 2.9: Wind blade manufacturing process: materials and technology
 - 2.9.1: Hand Lay-up/Wet Lay-up Process
 - 2.9.2: VARTM Process
 - 2.9.3: SCRIMP Process
 - 2.9.4: Prepreg Lay-up Process
 - 2.9.5: SPRINT Technology
 - 2.9.6: Technology trends in wind blade manufacturing
- 2.10: Supply chain
- 2.11: Porter's Five Forces Analysis
 - 2.11.1: Porter's Five Forces Analysis for wind energy market
 - 2.11.2: Porter's Five Forces Analysis for composite materials in wind energy market
- 3. Market Analysis 2012
- 3.1: Market analysis 2012
 - 3.1.1: Global wind energy market by value and by volume
 - 3.1.1.1: Regional wind energy market by volume
 - 3.1.1.1.1: North American wind energy market by volume in 2012
 - 3.1.1.1.2: European wind energy market by volume in 2012
 - 3.1.1.1.3: Asia Pacific wind energy market by volume in 2012
 - 3.1.1.1.4: ROW wind energy market by volume in 2012
 - 3.1.2: Global wind turbine and wind blade market by volume
 - 3.1.3: Global composite materials in wind energy market by value
 - 3.1.3.1: Composite materials in wind energy market by type of material
 - 3.1.3.2: Composite materials in wind blade market by manufacturing Process
- 3.2: Market trend 2007-2012
 - 3.2.1: Macroeconomic trends
 - 3.2.2: Global wind energy market trend by value and by volume
 - 3.2.2.1: North American wind energy market trend
 - 3.2.2.1.1: The US wind energy market trend
 - 3.2.2.1.2: Canada wind energy market trend

- 3.2.2.2: European wind energy market trend
 - 3.2.2.2.1: Germany wind energy market
 - 3.2.2.2.2: Spain wind energy market trend
 - 3.2.2.2.3: The United Kingdom (UK) wind energy market trend
 - 3.2.2.2.4: Italy wind energy market trend
- 3.2.2.3: Asia Pacific wind energy market trend
 - 3.2.2.3.1: India wind energy market trend
 - 3.2.2.3.2: China wind energy market trend
- 3.2.2.4: ROW wind energy market trend
- 3.2.3: Global wind turbine and blade market trend by volume
 - 3.2.3.1: North America wind blade market trend by volume
 - 3.2.3.2: Europe wind blade market trend by volume
 - 3.2.3.3: Asia Pacific wind blade market trend by volume
 - 3.2.3.4: ROW wind blade market trend by volume
- 3.2.4: Global composite materials trend in wind energy market by value and by volume
 - 3.2.4.1: North America composite materials consumption trend in wind energy market by value and by volume
 - 3.2.4.2: Europe composite materials consumption trend in wind energy Market by value and by volume
 - 3.2.2.3: Asia Pacific composite materials consumption trend in wind energy market by value and by volume
 - 3.2.2.4: ROW Composite materials in wind energy market trend by value and by volume
- 3.2.5: Global wind blade market trend by manufacturing process
- 3.3: Market drivers and challenges
- 3.4: Market forecast 2013–2018
 - 3.4.1: Macroeconomic forecasts
 - 3.4.2: Global wind energy market forecast by value and by volume
 - 3.4.2.1: North America wind energy market forecast
 - 3.4.2.2: Europe wind energy market forecast
 - 3.4.2.3: Asia Pacific wind energy market forecast
 - 3.4.2.4: ROW wind energy market forecast
 - 3.4.3: Global wind turbine and blade market forecast by volume
 - 3.4.3.1: North America wind blade market forecast by volume
 - 3.4.3.2: Europe wind blade market forecast by volume
 - 3.4.3.3: Asia Pacific wind blade market forecast by volume
 - 3.4.3.4: ROW wind blade market forecast by volume
 - 3.4.4: Global composite materials in wind energy market forecast by value and by volume

3.4.4.1: North America composite materials in wind energy market forecast by value and by volume

3.4.4.2: European composite materials consumption forecast in wind energy market by value and by volume

3.4.4.3: Asia Pacific composite materials forecast in wind energy market by value and by volume

3.4.4.4 ROW composite materials forecast in wind energy market by value and by volume

4. FINANCIAL (COST STRUCTURE AND PROFITABILITY) ANALYSIS

4.1: Global composite materials in wind energy market profitability analysis

4.2: Cost structure trend of global composite materials in wind energy market 2007-2012

4.2.1: Regional cost structure trend 2007-2012

5. COMPETITIVE LANDSCAPE AND GROWTH OPPORTUNITIES ANALYSIS

5.1: Market share analysis

5.1.1: Market share analysis of wind turbine manufacturers 2012

5.1.2: Market share analysis of wind blade manufacturers 2012

5.2: Growth opportunities analysis

5.2.1: Growth opportunities in global wind energy market by region

5.2.2: Growth opportunities for composite materials consumption in wind energy Market by region

6. MARKET STRATEGIC ASSESSMENT

6.1: Emerging trends in global composite materials in wind energy market

6.2: Unmet needs in composite materials in wind energy market

6.3: Innovations and new product launches

6.4: Mergers and acquisitions in composite materials in wind energy market

7. EXPERT OPINIONS

8. COMPANY PROFILES FOR LEADING PLAYERS

8.1: LM Wind Power

8.2: Vestas

- 8.3: Gamesa
- 8.4: Chongqing Polycomp International Corp. (CPIC)
- 8.5: Owens Corning
- 8.6: PPG Industries
- 8.7: Jushi Group Co. Ltd.
- 8.8: Hexcel Corporation
- 8.8: DIAB International
- 8.9: Huntsman
- 8.10: Momeni

List Of Figures

LIST OF FIGURES

CHAPTER 2. INDUSTRY BACKGROUND AND CLASSIFICATIONS

- Figure 2.1: Vertical axis wind turbine
- Figure 2.2: Downwind machine
- Figure 2.3: Increase in size of power plants (1911-1980)
- Figure 2.4: Cost competitiveness of different conventional and renewable energy sources
- Figure 2.5: Evolution of wind turbine technology to meet evolving demands
- Figure 2.6: Major structural components of a wind turbine
- Figure 2.7: Turbine components in a wind turbine
- Figure 2.8: Tower manufacturing
- Figure 2.9: Standard blade lengths for various turbine capacities
- Figure 2.10: Effect of blade length on the weight of a blade
- Figure 2.11: Blade design with rectangular spar
- Figure 2.12: Blade design where blade surfaces work as structural shells
- Figure 2.13: Summary of composite materials used in the wind market
- Figure 2.14: Key players of composite materials in wind energy market
- Figure 2.15: Strength comparison of unidirectional e-glass system
- Figure 2.16: Strength comparison of unidirectional carbon fiber system
- Figure 2.17: Comparing density and young's modulus for reinforcement materials
- Figure 2.18: Tensile elongation (% change) for polyester, vinyl ester, and epoxy resins
- Figure 2.19: Comparing tensile strength of resins at different cure temperatures and times
- Figure 2.20: Price/performance comparison for resins
- Figure 2.21: Ranking of performance characteristics that requires most improvement
- Figure 2.22: Use of core materials in wind blades
- Figure 2.23: Compression property comparison for various types of core materials (6 pound/ft³ density)
- Figure 2.24: Shear strength comparison of various types of core materials (6 pound/ft³)
- Figure 2.25: Process flow in making of wind blades
- Figure 2.26: Material flow chart for wet hand lay-up process
- Figure 2.27: Material flow chart for VARTM process
- Figure 2.28: Material flow chart for prepreg lay-up process
- Figure 2.29: Wind turbine—Vestas 2.0 MW turbine V90 (Source: Vestas)

Figure 2.30: Supply chain-composite materials in global wind energy market

Figure 2.31: Porter's Five Forces market analysis for wind energy market

Figure 2.32: Porter's Five Forces market analysis for composite materials in wind energy market

CHAPTER 3. Market Analysis 2012

Figure 3.1: Global wind energy equipment market (\$ M) by region in 2012

Figure 3.2: Global wind energy market cumulative installation (GW) by region in 2012

Figure 3.3: Global wind energy market annual installation (GW) by region in 2012

Figure 3.5: Annual wind power installation by top countries in 2012

Figure 3.4: Cumulative wind power installation by top countries in 2012

Figure 3.6: Cumulative wind energy market in North America by country in 2012

Figure 3.7: Cumulative energy market in Europe by country in 2012

Figure 3.8: Cumulative wind energy market in APAC by country in 2012

Figure 3.9: Wind energy market in ROW by country in 2012

Figure 3.10: Number of new turbines installed by region in 2012

Figure 3.11: Number of new blades by region in 2012

Figure 3.12: Composite materials in wind energy market (\$ M) distribution (%) by region in 2012

Figure 3.13: Composite materials in wind energy market (\$ M) by region in 2012

Figure 3.14: Composite materials consumption in global wind energy market distribution (%) by material type (\$ M) in 2012

Figure 3.15: Composite materials consumption in global wind energy market by material type (\$ M) in 2012

Figure 3.16: Composite material consumption in global wind energy by weight by material type (M lbs) in 2012

Figure 3.17: Composite material consumption in global wind energy market by material type (M lbs) in 2012

Figure 3.18: Wind blade market (M lbs) distribution (%) by manufacturing process in 2012

Figure 3.19: Composite consumption (M lbs) by wind blade market manufacturing process in 2012

Figure 3.20: Global GDP growth rate trend

Figure 3.21: Global population growth rate trend

Figure 3.22: Global inflation rate trend

Figure 3.23: Global unemployment rate trend

Figure 3.24: Regional GDP growth rate trend at constant price

Figure 3.25: Regional population growth rate trend

Figure 3.26: Regional inflation rate trend

Figure 3.27: Regional unemployment rate trend

Figure 3.28: Global wind energy equipment market trend 2007-2012

Figure 3.29: Global wind energy market annual installation (GW) trend 2007-2012

Figure 3.30: Global wind energy market cumulative installation (GW) trend 2007-2012

Figure 3.31: North American wind energy market trend 2007-2012

Figure 3.32: North American wind energy market cumulative installation (GW) trend 2007-2012

Figure 3.33: US wind energy market cumulative installation (GW) trend 2007-2012

Figure 3.34: Canadian wind energy market cumulative installation (GW) trend 2007-2012

Figure 3.35: European wind energy market annual installation (GW) trend 2007-2012

Figure 3.36: European wind energy market cumulative installation (GW) trend 2007-2012

Figure 3.37: Germany wind energy market cumulative installation (GW) trend 2007-2012

Figure 3.38: Spain wind energy market cumulative installation (GW) trend 2007-2012

Figure 3.39: UK wind energy market cumulative installation (GW) trend 2007-2012

Figure 3.40: Italy wind energy market cumulative installation (GW) trend 2007-2012

Figure 3.41: Asia Pacific wind energy market annual installation (GW) trend 2007-2012

Figure 3.42: Asia Pacific wind energy market cumulative installation (GW) trend 2007-2012

Figure 3.43: Indian wind energy market cumulative installation (GW) trend 2007-2012

Figure 3.44: China wind energy market cumulative installation (GW) trend 2007-2012

Figure 3.45: ROW wind energy market annual installation (GW) trend 2007-2012

Figure 3.46: ROW wind energy market cumulative installation (GW) trend 2007-2012

Figure 3.47: Global wind turbine market installation trend 2007-2012

Figure 3.48: Trend in average turbine capacity installed

Figure 3.49: Global wind blade market installation trend 2007-2012

Figure 3.50: Trend in average turbine blade weight (lbs) 2007-2012

Figure 3.51: North America wind blade market trend 2007-2012

Figure 3.52: European wind blade market trend 2007-2012

Figure 3.53: Asia Pacific wind blade market trend 2007-2012

Figure 3.54: ROW wind blade market trend 2007-2012

Figure 3.55: Global composite materials consumption in wind energy market trend 2007- 2012

Figure 3.56: North America composite materials consumption in wind energy market trend 2007-2012

Figure 3.57: Europe European composite materials consumption in wind energy

market trend 2007-2012

Figure 3.58: Asia Pacific composite materials consumption in wind energy market trend 2007-2012

Figure 3.59: ROW composite materials consumption in wind energy market trend 2007- 2012

Figure 3.60: Global wind blade manufacturing process breakdown (%) trend (M lbs) 2007-2012

Figure 3.61: Drivers and challenges of global composite materials in wind energy market

Figure 3.62: Global GDP growth rate forecast

Figure 3.63: Global population growth rate forecast

Figure 3.64: Global inflation rate forecast

Figure 3.65: Global unemployment rate forecast

Figure 3.66: Regional GDP growth rate forecast at constant price

Figure 3.67: Regional population growth rate forecast

Figure 3.68: Regional inflation rate forecast

Figure 3.69: Regional unemployment rate forecast

Figure 3.70: Global wind energy equipment market (\$B) forecast 2013-2018

Figure 3.71: Global wind energy market annual installation (GW) forecast 2013-2018

Figure 3.72: Global wind energy market cumulative installation (GW) forecast 2013-2018

Figure 3.73: North America wind energy equipment market annual installation (GW) Forecast 2013-2018

Figure 3.74: North American wind energy market cumulative installation (GW) forecast 2013-2018

Figure 3.75: European wind energy equipment market annual installation (GW) forecast 2013-2018

Figure 3.76: European wind energy market cumulative installation (GW) forecast 2013-2018

Figure 3.77: Asia Pacific wind energy market annual installation forecast 2013-2018

Figure 3.78: Asia Pacific wind energy market cumulative installation (GW) forecast 2013- 2018

Figure 3.79: ROW wind energy market annual installation (GW) forecast 2013-2018

Figure 3.80: ROW wind energy market cumulative installation (GW) forecast 2013-2018

Figure 3.81: Global wind turbine market installation forecast 2013-2018

Figure 3.82: Forecast of average turbine capacity

Figure 3.83: Global wind blade market growth forecast 2013-2018

Figure 3.84: Forecast of average turbine blade weight (lbs) 2013-2018

Figure 3.85: North America wind blade market growth forecast 2013-2018

Figure 3.86: European wind blade market growth forecast 2013-2018

Figure 3.87: Asia Pacific wind blade market growth forecast 2013-2018

Figure 3.88: ROW wind blade market growth forecast 2013-2018

Figure 3.89: Global composite materials consumption in wind energy market forecast 2013-2018

Figure 3.90: North America composite materials consumption in wind energy market forecast 2013-2018

Figure 3.91: European composite materials consumption in wind energy market forecast 2013-2018

Figure 3.92: Asia Pacific composite materials consumption in wind energy market forecast 2013-2018

Figure 3.93: ROW composite materials consumption in wind energy market forecast 2013-2018

CHAPTER 4. FINANCIAL (COST STRUCTURE AND PROFITABILITY) ANALYSIS

Figure 4.1: Global composite materials in wind energy market profitability analysis (%) 2007-2012

Figure 4.2: Cost structure trend of global composite materials in wind energy market 2007-2012

Figure 4.3: Cost structure trend of North American composite materials in wind energy Market 2007-2012

Figure 4.4: Cost structure trend in European composite materials in wind energy market 2007-2012

Figure 4.5: Cost structure trend in Asia Pacific composite materials in wind energy market 2007-2012

CHAPTER 5. COMPETITIVE LANDSCAPE AND GROWTH OPPORTUNITIES ANALYSIS

Figure 5.1: Market share analysis of wind turbine manufactures in 2012

Figure 5.2: Market share analysis of wind blade manufacturers in 2012

Figure 5.3: Growth opportunity in global wind energy market by region

Figure 5.4: Growth opportunity in global composite materials consumption in wind energy Market by region

CHAPTER 6. MARKET STRATEGIC ASSESSMENT

Figure 6.1: Emerging trends in global composite materials in wind energy market

Figure 6.2: Unmet needs in global composite materials in wind energy market

List Of Tables

LIST OF TABLES

CHAPTER 1. EXECUTIVE SUMMARY

Table 1.1: Composite materials in wind energy market parameters and attributes

CHAPTER 2. INDUSTRY BACKGROUND AND CLASSIFICATIONS

Table 2.1: Typical turbine parameters

Table 2.2: Current trends, future technology, and future materials for turbine components

Table 2.3: Weights of turbine components for various Vestas turbines

Table 2.4: Properties of fibers and conventional bulk materials

Table 2.5: Comparison of mechanical properties for Polyester, Vinyl Ester, and epoxy resins

Table 2.6: Typical epoxy resin properties for rotor blades

Table 2.7: Future needs from resin systems for wind blades

Table 2.8: Comparison of properties of adhesives

Table 2.9: Comparison of core material properties and prices

Table 2.10: Material properties of Corecell T-Foam series

Table 2.11: Material properties for the Airex T90 and Airex T92 PET Foam

CHAPTER 3. MARKET ANALYSIS 2012

Table 3.1: Market trends (2007-2012) in global wind energy market by volume and by value

Table 3.2: Average growth rates for one, three, and five years in the global wind energy equipment market in terms of annual installation

Table 3.3: Worldwide wind energy capacities cumulative installation (MW) from 1980 to 1990

Table 3.4: Worldwide wind energy capacities cumulative installation (MW) from 1990 to 2012

Table 3.5: Wind energy capacities by Top 20 countries at the end of 2011 and 2012

Table 3.6: Ranking of countries in terms of cumulative wind capacity (2011 and 2012)

Table 3.7: Market trends (2007-2012) in North American wind energy market

Table 3.8: Average growth rates for one, three, and five years in the North America wind energy equipment market in terms of annual installation

Table 3.9: The US wind energy market growth trend
Table 3.10: Canadian wind energy market growth trend
Table 3.11: Market trends (2007-2012) in European wind energy equipment market
Table 3.12: Average growth rates for one, three, and five years in the European wind energy equipment market in terms of annual installation
Table 3.13: Ranking of countries in Europe in terms of cumulative wind capacity
Table 3.14: German wind energy market growth trend
Table 3.15: Spain wind energy market growth trend
Table 3.16: The UK wind energy market growth trend
Table 3.17: Italy wind energy market growth trend
Table 3.18: Market trends (2007-2012) in Asia Pacific wind energy equipment market
Table 3.19: Average growth rates for one, three, and five years in the Asia Pacific wind energy equipment market in terms of annual installation
Table 3.20: Indian wind energy market growth trend
Table 3.21: Chinese wind energy market growth trend
Table 3.22: Market trends (2007-2012) in ROW wind energy equipment market
Table 3.23: Average growth rates for one, three, and five years in the ROW wind energy equipment market in terms of annual installation
Table 3.24: Market trends (2007-2012) in global wind turbine market
Table 3.25: Market trends (2007-2012) in global wind blade market
Table 3.26: Average growth rates for one, three, and five years in the global wind blade Market in terms of number of blade installation
Table 3.27: Market trends (2007-2012) in North American wind blade market
Table 3.28: Average growth rates for one, three, and five years in the North America wind blade market in terms of number of blade installation
Table 3.29: Market trends (2007-2012) in European wind blade market
Table 3.30: Average growth rates for one, three, and five years in the European wind blade market in terms of number of blade installation
Table 3.31: Market trends (2007-2012) in Asian wind blade market
Table 3.32: Average growth rates for one, three, and five years in the Asian wind blade Market in terms of number of blade installation
Table 3.33: Market trends (2007-2012) in ROW wind blade market
Table 3.34: Average growth rates for one, three, and five years in the row wind blade Market in terms of number of blade installation
Table 3.35: Market Trends (2007-2012) in global composite materials consumption in wind energy
Table 3.36: Average growth rates for one, three, and five years in the global composite materials in wind energy market in terms of \$ consumption
Table 3.37: Market trends (2007-2012) North American composite materials

consumption in wind energy

Table 3.38: North American composite materials consumption average growth rates for one, three and five years in terms of \$

Table 3.39: Market trends (2007-2012) in European composite materials consumption in wind energy market

Table 3.40: European composite materials consumption average growth rates for one, three and five years in terms of \$

Table 3.41: Market trends (2007-2012) in Asia Pacific composite materials consumption in wind energy

Table 3.42: Asia Pacific composite materials consumption average growth rates for one, three, and five years in terms of \$

Table 3.43: Market trends (2007-2012) in ROW composite materials consumption in wind energy

Table 3.44: ROW composite materials consumption average growth rates for one, three, and five years in terms of \$

Table 3.45: Market forecast (2013-2018) in global wind energy market

Table 3.46: Average growth rates for one, three, and five years in the global wind energy Market in terms of annual installation

Table 3.47: Wind energy market forecast by region 2013–2018

Table 3.48: Market forecast (2013-2018) in North America wind energy market

Table 3.49: Average growth rates for one, three, and five years in the North America wind energy market in terms of annual installation

Table 3.50: Market forecast (2013-2018) in European wind energy market

Table 3.51: Average growth rates for one, three, and five years in the European wind energy market in terms of annual installation

Table 3.52: Market forecast (2013-2018) in Asia Pacific wind energy market

Table 3.53: Average growth rates for one, three, and five years in the Asia Pacific wind energy market in terms of annual installation

Table 3.54: Market forecast (2013-2018) in ROW wind energy equipment market

Table 3.55: Average growth rates for one, three, and five years in the ROW wind energy equipment market in terms of installation

Table 3.56: Market trends (2007-2012) in global wind turbine market

Table 3.57: Market forecast (2013-2018) in global wind blade market

Table 3.58: Average growth rates for one, three, and five years in the global wind blade Market in terms of number of blade installation

Table 3.59: Market forecast (2013-2018) in North America wind blade market

Table 3.60: Average growth rates for one, three, and five years in the North America wind blade market in terms of number of blade installation

Table 3.61: Market forecast (2013-2018) in European wind blade market

Table 3.62: Average growth rates for one, three, and five years in the European wind blade market in terms of number of blade installation

Table 3.63: Market forecast (2013-2018) in Asia Pacific wind blade market

Table 3.64: Average growth rates for one, three, and five years in the Asia Pacific wind blade market in terms of number of blade installation

Table 3.65: Market forecast (2013-2018) in global wind blade market

Table 3.66: Average growth rates for one, three, and five years in the row wind blade Market in terms of number of blade installation

Table 3.67: Market forecast (2013-2018) in global composite materials consumption in wind energy

Table 3.68: Average growth rates for one, three, and five years in the global composite materials consumption in wind energy market in terms of \$

Table 3.69: Market forecast (2013-2018) for North America composite materials consumption in wind energy

Table 3.70: Average growth rates for one, three, and five years in the North America composite materials in wind energy market in terms of \$ consumption

Table 3.71: Market forecast (2013-2018) for composite materials consumption in Europe

Table 3.72: Average growth rates for one, three, and five years in the European composite materials consumption in wind energy market in terms of \$

Table 3.73: Market forecast (2013-2018) in Asia Pacific composite materials consumption in wind energy

Table 3.74: Average growth rates for one, three, and five years in the Asia Pacific composite materials consumption in wind energy market in terms of \$

Table 3.75: Market forecast (2013-2018) in ROW composite materials consumption in wind energy

Table 3.76: Average growth rates for one, three, and five years in the row composite materials consumption in wind energy market in terms of \$

CHAPTER 5. COMPETITIVE LANDSCAPE AND GROWTH OPPORTUNITIES ANALYSIS

Table 5.1: Market share of wind turbine manufacturers in 2012

Table 5.2: Market share of wind blade manufacturers in 2012

I would like to order

Product name: Growth Opportunities for Composite Materials in Global Wind Energy Market 2013-2018: Materials, Market, and Technologies

Product link: <https://marketpublishers.com/r/G376DA87342EN.html>

Price: US\$ 4,850.00 (Single User License / Electronic Delivery)

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

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/G376DA87342EN.html>