

# **Wind Turbine Shaft Market – Global Industry Size, Share, Trends, Opportunity, and Forecast, 2018-2028 Segmented By Application (Offshore and Onshore), By Type (Main Shaft and Generator Shaft), By Material Type (Metal and Synthetic Composites), By Region and Competition**

<https://marketpublishers.com/r/W07E23A5E1D5EN.html>

Date: October 2023

Pages: 173

Price: US\$ 4,900.00 (Single User License)

ID: W07E23A5E1D5EN

## **Abstracts**

Global Wind Turbine Shaft Market is anticipated to grow at a steady pace during the forecast period, due to an increase in the demand for wind towers. The governments of various nations and international organizations are placing more emphasis on alternative fuels, such as wind, to generate an environmentally friendly form of energy that is expected to help achieve an indestructible form of energy and security in the upcoming years due to rising CO2 emissions and carbon footprint. In 2022, the installed capacity of wind energy increased by 7.1% (1 GW), reaching a record high of more than 15 GW. Owing to strong growth in locations like Alberta (almost 605 MW) and Saskatchewan (377 MW), as well as some (24 MW) new wind in Quebec, Western Canada exceeded the rest of the country. Additionally, The U.S. Wind Turbine Database (USWTDB) has more than 70,800 turbines as of January 2022. All these wind turbines have been built since 1980 in over 1,500 wind power plants located in at least 44 states. (Plus, Puerto Rico and Guam).

The blades, controller, brake, gearbox, generator, shafts, and a few other parts form a wind turbine. Low-speed shafts and high-speed shafts are the two categories into which shafts in wind turbines are classified. The gearbox and the generator are connected by a high-speed shaft, while the blades and the gearbox are connected by a low-speed shaft. Both onshore and offshore wind turbines use the shaft. Moreover, in 2018, With the addition of 46.8 GW, the total installed onshore wind power capacity reached 568

gigawatts (GW). Although the segment's installed capacity fell during the year, it still holds the top spot globally. Additionally in Tamil Nadu and Gujarat, India is also contemplating upgrading and renovating its outdated wind turbines. Before 2002, more than 1577 MW of turbines were installed; of these, Tamil Nadu has the greatest potential for repowering and overhauling at 834 MW, followed by Maharashtra at 400 MW.

### Increasing Focus of Governments on Installing Renewable Energy Sources

The installed wind energy capacity worldwide has increased rapidly over recent years. This has resulted in an ever-increasing number of older wind farms globally. Significant turbine components are nearing the end of their warranty period. Global wind turbines built in the early 2000s face the possibility of decommissioning in the coming years. These turbines require servicing to improve performance, which is expected to drive the studied market.

Manufacturers of wind turbine shafts are looking for ways to reduce costs to boost wind turbine production in response to the rising demand. The requirement for energy is also rising due to growing urbanization and a significant rise in population. Governments all around the world are placing an enormous value on installing renewable energy sources like wind and solar energy to meet the demand. These elements are anticipated to encourage the creation of additional demand for wind turbine shaft.

Moreover, The installation of integrated wind combined cycles in the residential and commercial sectors is the factor driving the demand for wind turbine shafts globally. Highly effective and environmentally friendly electricity and power are produced by these technologies. Additionally, a reciprocating engine's shaft thermal efficiency is lower than that of a wind turbine. The high power-to-weight ratio and improved dependability of wind turbine shafts enhance overall demand.

### New Products Launches to Aid Wind Turbine Shaft Market

Market leaders are launching new products with improved capabilities. For instance, Danish engineers has just developed an innovative wind turbine shaft that can generate 10 GW of power. Device manufacturers have made the necessary efforts to enhance the accuracy and functionality of their products. A steam turbine and the exhaust heat emitted after turning the wind turbines are used in the wind turbine shaft combined cycle, a relatively new product on the market, to provide secondary power. Additionally, peak motor speeds are being installed to reduce noise pollution. Leading producers of

wind turbine shafts are attempting to make turbines more aesthetically pleasing by utilizing new technologies.

A wind turbine's shaft can be made of a variety of substances, such as alloy steel, aluminum, and synthetic composites, including fiberglass. The acceptance of fiberglass has increased recently because of its lightweight and high tensile strength. As a result of ongoing developments and advances in the field of material science, novel materials are being generated, and the testing of novel materials for wind turbine shafts is gaining traction.

### Growing Demand for Offshore Wind Turbines Supporting Market Growth

During the past five years, onshore wind energy power generation technology has advanced to cover more locations with lower wind speeds to maximize electricity produced per installed megawatt capacity. Additionally, wind turbines have expanded in size in recent years by using larger wind turbine blades and hubs with higher hub heights, broader diameters, etc.

According to the Global Wind Energy Council (GWEC), in 2020, an estimated 86.9 GW of onshore wind installed capacity was added, representing a 59% y-o-y growth taking the cumulative onshore installed wind capacity beyond the 700 GW mark. Capacity additions began to grow after a stagnating period during 2016-2018. The significant edge of onshore wind power generation is its lower cost compared to offshore power generation.

The largest onshore markets with the largest capacity growth in 2018 were still China and the United States. The additions of Chinese onshore wind capacity increased from 18 GW in 2017 to 21 GW in 2018. However, US onshore capacity increased significantly from 7 GW in 2017 to 7.5 GW in 2018. Due to the increasing global demand for offshore, the Global Wind Turbine Shaft Market is expected to register a high CAGR in the forecast period.

The global weighted average lower cost of electricity (LCOE) for onshore wind projects that were put into operation in 2018 is USD 0.056/kWh, which is 35% less costly than the LCOE in 2010 of USD 0.085/kWh. Onshore wind's annual cost of power is falling owing to increases in the average capacity factor and ongoing drops in the overall installation cost. The market for wind turbine shafts is therefore anticipated to grow as a result of the factors mentioned above.

## Market Segmentation

The Global Wind Turbine Shaft Market is divided into application, type, material type, and region. Based on application, the market is segmented into Offshore and Onshore. Based on type, the market is divided into a main shaft and a generator shaft. Based on material type, the market is segmented into metal & synthetic Composites. Based on region, the market is divided into North America, Asia-Pacific, Europe, South America, Middle East & Africa.

## Market Players

Major players in the global wind turbine shaft market are Schaeffler Technologies AG & Co. KG, Jiangyin Zenkung Forging Co., Ltd., Luoyang Yujie Industry & Trade Co. Ltd, Western Machine Works, LLC, Broadwind Energy, Inc, Siemens Gamesa Renewable Energy, S.A., Wuxi Solar Wind Energy Technology Co. Ltd, Liebherr Group, Altra Industrial Motion Corp, and Sany Group.

## Report Scope:

In this report, the Global Wind Turbine Shaft Market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

Wind Turbine Shaft Market, By Application:

Offshore

Onshore

Wind Turbine Shaft Market, By Type:

Main Shaft

Generator Shaft

Wind Turbine Shaft Market, By Material Type:

Metal

Synthetic Composites

Wind Turbine Shaft Market, By Region:

North America

United States

Canada

Mexico

Asia-Pacific

China

India

Japan

South Korea

Australia

Europe

Germany

United Kingdom

France

Russia

Spain

South America

Brazil

Argentina

Colombia

Middle East & Africa

Saudi Arabia

South Africa

Egypt

UAE

Israel

Competitive Landscape

Company Profiles: Detailed analysis of the major companies present in the Global Wind Turbine Shaft Market.

Available Customizations:

Global Wind Turbine Shaft Market report with the given market data, Tech Sci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

Company Information

Detailed analysis and profiling of additional market players (up to five).

## Contents

1. Service Overview
  - 1.1. Market Definition
  - 1.2. Scope of the Market
  - 1.3. Markets Covered
  - 1.4. Years Considered for Study
  - 1.5. Key Market Segmentations

## **2. RESEARCH METHODOLOGY**

- 2.1. Objective of the Study
- 2.2. Baseline Methodology
- 2.3. Key Industry Partners
- 2.4. Major Association and Secondary Sources
- 2.5. Forecasting Methodology
- 2.6. Data Triangulation & Validation
- 2.7. Assumptions and Limitations

## **3. EXECUTIVE SUMMARY**

## **4. VOICE OF CUSTOMERS**

## **5. GLOBAL WIND TURBINE SHAFT MARKET OUTLOOK**

- 5.1. Market Size & Forecast
  - 5.1.1. By Value
- 5.2. Market Share & Forecast
  - 5.2.1. By Application (Offshore and Onshore)
  - 5.2.2. By Type (Main Shaft and Generator Shaft)
  - 5.2.3. By Material Type (Metal & Synthetic Composites)
  - 5.2.4. By Region
- 5.3. By Company (2022)
- 5.4. Market Map

## **6. NORTH AMERICA WIND TURBINE SHAFT MARKET OUTLOOK**

- 6.1. Market Size & Forecast
  - 6.1.1. By Value
- 6.2. Market Share & Forecast
  - 6.2.1. By Application
  - 6.2.2. By Type
  - 6.2.3. By Material Type
  - 6.2.4. By Country
- 6.3. North America: Country Analysis
  - 6.3.1. United States Wind Turbine Shaft Market Outlook
    - 6.3.1.1. Market Size & Forecast
      - 6.3.1.1.1. By Value
    - 6.3.1.2. Market Share & Forecast
      - 6.3.1.2.1. By Application
      - 6.3.1.2.2. By Type
      - 6.3.1.2.3. By Material Type
  - 6.3.2. Canada Wind Turbine Shaft Market Outlook
    - 6.3.2.1. Market Size & Forecast
      - 6.3.2.1.1. By Value
    - 6.3.2.2. Market Share & Forecast
      - 6.3.2.2.1. By Application
      - 6.3.2.2.2. By Type
      - 6.3.2.2.3. By Material Type
  - 6.3.3. Mexico Wind Turbine Shaft Market Outlook
    - 6.3.3.1. Market Size & Forecast
      - 6.3.3.1.1. By Value
    - 6.3.3.2. Market Share & Forecast
      - 6.3.3.2.1. By Application
      - 6.3.3.2.2. By Type
      - 6.3.3.2.3. By Material Type

## **7. ASIA-PACIFIC WIND TURBINE SHAFT MARKET OUTLOOK**

- 7.1. Market Size & Forecast
  - 7.1.1. By Value
- 7.2. Market Share & Forecast
  - 7.2.1. By Application
  - 7.2.2. By Type
  - 7.2.3. By Material Type
  - 7.2.4. By Country



- 7.3. Asia-Pacific: Country Analysis
  - 7.3.1. China Wind Turbine Shaft Market Outlook
    - 7.3.1.1. Market Size & Forecast
      - 7.3.1.1.1. By Value
    - 7.3.1.2. Market Share & Forecast
      - 7.3.1.2.1. By Application
      - 7.3.1.2.2. By Type
      - 7.3.1.2.3. By Material Type
  - 7.3.2. India Wind Turbine Shaft Market Outlook
    - 7.3.2.1. Market Size & Forecast
      - 7.3.2.1.1. By Value
    - 7.3.2.2. Market Share & Forecast
      - 7.3.2.2.1. By Application
      - 7.3.2.2.2. By Type
      - 7.3.2.2.3. By Material Type
  - 7.3.3. Japan Wind Turbine Shaft Market Outlook
    - 7.3.3.1. Market Size & Forecast
      - 7.3.3.1.1. By Value
    - 7.3.3.2. Market Share & Forecast
      - 7.3.3.2.1. By Application
      - 7.3.3.2.2. By Type
      - 7.3.3.2.3. By Material Type
  - 7.3.4. South Korea Wind Turbine Shaft Market Outlook
    - 7.3.4.1. Market Size & Forecast
      - 7.3.4.1.1. By Value
    - 7.3.4.2. Market Share & Forecast
      - 7.3.4.2.1. By Application
      - 7.3.4.2.2. By Type
      - 7.3.4.2.3. By Material Type
  - 7.3.5. Australia Wind Turbine Shaft Market Outlook
    - 7.3.5.1. Market Size & Forecast
      - 7.3.5.1.1. By Value
    - 7.3.5.2. Market Share & Forecast
      - 7.3.5.2.1. By Application
      - 7.3.5.2.2. By Type
      - 7.3.5.2.3. By Material Type

## **8. EUROPE WIND TURBINE SHAFT MARKET OUTLOOK**

- 8.1. Market Size & Forecast
  - 8.1.1. By Value
- 8.2. Market Share & Forecast
  - 8.2.1. By Application
  - 8.2.2. By Type
  - 8.2.3. By Material Type
  - 8.2.4. By Country
- 8.3. Europe: Country Analysis
  - 8.3.1. Germany Wind Turbine Shaft Market Outlook
    - 8.3.1.1. Market Size & Forecast
      - 8.3.1.1.1. By Value
    - 8.3.1.2. Market Share & Forecast
      - 8.3.1.2.1. By Application
      - 8.3.1.2.2. By Type
      - 8.3.1.2.3. By Material Type
  - 8.3.2. United Kingdom Wind Turbine Shaft Market Outlook
    - 8.3.2.1. Market Size & Forecast
      - 8.3.2.1.1. By Value
    - 8.3.2.2. Market Share & Forecast
      - 8.3.2.2.1. By Application
      - 8.3.2.2.2. By Type
      - 8.3.2.2.3. By Material Type
  - 8.3.3. France Wind Turbine Shaft Market Outlook
    - 8.3.3.1. Market Size & Forecast
      - 8.3.3.1.1. By Value
    - 8.3.3.2. Market Share & Forecast
      - 8.3.3.2.1. By Application
      - 8.3.3.2.2. By Type
      - 8.3.3.2.3. By Material Type
  - 8.3.4. Russia Wind Turbine Shaft Market Outlook
    - 8.3.4.1. Market Size & Forecast
      - 8.3.4.1.1. By Value
    - 8.3.4.2. Market Share & Forecast
      - 8.3.4.2.1. By Application
      - 8.3.4.2.2. By Type
      - 8.3.4.2.3. By Material Type
  - 8.3.5. Spain Wind Turbine Shaft Market Outlook
    - 8.3.5.1. Market Size & Forecast
      - 8.3.5.1.1. By Value

#### 8.3.5.2. Market Share & Forecast

##### 8.3.5.2.1. By Application

##### 8.3.5.2.2. By Type

##### 8.3.5.2.3. By Material Type

## **9. SOUTH AMERICA WIND TURBINE SHAFT MARKET OUTLOOK**

### 9.1. Market Size & Forecast

#### 9.1.1. By Value

### 9.2. Market Share & Forecast

#### 9.2.1. By Application

#### 9.2.2. By Type

#### 9.2.3. By Material Type

#### 9.2.4. By Country

### 9.3. South America: Country Analysis

#### 9.3.1. Brazil Wind Turbine Shaft Market Outlook

##### 9.3.1.1. Market Size & Forecast

###### 9.3.1.1.1. By Value

##### 9.3.1.2. Market Share & Forecast

###### 9.3.1.2.1. By Application

###### 9.3.1.2.2. By Type

###### 9.3.1.2.3. By Material Type

#### 9.3.2. Argentina Wind Turbine Shaft Market Outlook

##### 9.3.2.1. Market Size & Forecast

###### 9.3.2.1.1. By Value

##### 9.3.2.2. Market Share & Forecast

###### 9.3.2.2.1. By Application

###### 9.3.2.2.2. By Type

###### 9.3.2.2.3. By Material Type

#### 9.3.3. Colombia Wind Turbine Shaft Market Outlook

##### 9.3.3.1. Market Size & Forecast

###### 9.3.3.1.1. By Value

##### 9.3.3.2. Market Share & Forecast

###### 9.3.3.2.1. By Application

###### 9.3.3.2.2. By Type

###### 9.3.3.2.3. By Material Type

## **10. MIDDLE EAST & AFRICA WIND TURBINE SHAFT MARKET OUTLOOK**

- 10.1. Market Size & Forecast
  - 10.1.1. By Value
- 10.2. Market Share & Forecast
  - 10.2.1. By Application
  - 10.2.2. By Type
  - 10.2.3. By Material Type
  - 10.2.4. By Country
- 10.3. Middle East & Africa: Country Analysis
  - 10.3.1. Saudi Arabia Wind Turbine Shaft Market Outlook
    - 10.3.1.1. Market Size & Forecast
      - 10.3.1.1.1. By Value
    - 10.3.1.2. Market Share & Forecast
      - 10.3.1.2.1. By Application
      - 10.3.1.2.2. By Type
      - 10.3.1.2.3. By Material Type
  - 10.3.2. South Africa Wind Turbine Shaft Market Outlook
    - 10.3.2.1. Market Size & Forecast
      - 10.3.2.1.1. By Value
    - 10.3.2.2. Market Share & Forecast
      - 10.3.2.2.1. By Application
      - 10.3.2.2.2. By Type
      - 10.3.2.2.3. By Material Type
  - 10.3.3. UAE Wind Turbine Shaft Market Outlook
    - 10.3.3.1. Market Size & Forecast
      - 10.3.3.1.1. By Value
    - 10.3.3.2. Market Share & Forecast
      - 10.3.3.2.1. By Application
      - 10.3.3.2.2. By Type
      - 10.3.3.2.3. By Material Type
  - 10.3.4. Israel Wind Turbine Shaft Market Outlook
    - 10.3.4.1. Market Size & Forecast
      - 10.3.4.1.1. By Value
    - 10.3.4.2. Market Share & Forecast
      - 10.3.4.2.1. By Application
      - 10.3.4.2.2. By Type
      - 10.3.4.2.3. By Material Type
  - 10.3.5. Egypt Wind Turbine Shaft Market Outlook
    - 10.3.5.1. Market Size & Forecast
      - 10.3.5.1.1. By Value

#### 10.3.5.2. Market Share & Forecast

##### 10.3.5.2.1. By Application

##### 10.3.5.2.2. By Type

##### 10.3.5.2.3. By Material Type

## 11. MARKET DYNAMICS

### 11.1. Drivers

### 11.2. Challenges

## 12. MARKET TRENDS & DEVELOPMENTS

## 13. COMPANY PROFILES

### 13.1. Schaeffler Technologies AG & Co. KG

#### 13.1.1. Business Overview

#### 13.1.2. Key Revenue and Financials (If Available)

#### 13.1.3. Recent Developments

#### 13.1.4. Key Personnel

#### 13.1.5. Key Product/Services

### 13.2. Jiangyin Zenkung Forging Co., Ltd.

#### 13.2.1. Business Overview

#### 13.2.2. Key Revenue and Financials

#### 13.2.3. Recent Developments

#### 13.2.4. Key Personnel

#### 13.2.5. Key Product/Services

### 13.3. Luoyang Yujie Industry & Trade Co. Ltd

#### 13.3.1. Business Overview

#### 13.3.2. Key Revenue and Financials (If Available)

#### 13.3.3. Recent Developments

#### 13.3.4. Key Personnel

#### 13.3.5. Key Product/Services

### 13.4. Western Machine Works, LLC

#### 13.4.1. Business Overview

#### 13.4.2. Key Revenue and Financials (If Available)

#### 13.4.3. Recent Developments

#### 13.4.4. Key Personnel

#### 13.4.5. Key Product/Services

- 13.5. Broadwind Energy, Inc.
  - 13.5.1. Business Overview
  - 13.5.2. Key Revenue and Financials (If Available)
  - 13.5.3. Recent Developments
  - 13.5.4. Key Personnel
  - 13.5.5. Key Product/Services
- 13.6. Siemens Gamesa Renewable Energy, S.A.
  - 13.6.1. Business Overview
  - 13.6.2. Key Revenue and Financials (If Available)
  - 13.6.3. Recent Developments
  - 13.6.4. Key Personnel
  - 13.6.5. Key Product/Services
- 13.7. Wuxi Solar Wind Energy Technology Co. Ltd.
  - 13.7.1. Business Overview
  - 13.7.2. Key Revenue and Financials (If Available)
  - 13.7.3. Recent Developments
  - 13.7.4. Key Personnel
  - 13.7.5. Key Product/Services
- 13.8. Liebherr Group
  - 13.8.1. Business Overview
  - 13.8.2. Key Revenue and Financials (If Available)
  - 13.8.3. Recent Developments
  - 13.8.4. Key Personnel
  - 13.8.5. Key Product/Services
- 13.9. Altra Industrial Motion Corp.
  - 13.9.1. Business Overview
  - 13.9.2. Key Revenue and Financials (If Available)
  - 13.9.3. Recent Developments
  - 13.9.4. Key Personnel
  - 13.9.5. Key Product/Services
- 13.10. Sany Group
  - 13.10.1. Business Overview
  - 13.10.2. Key Revenue and Financials (If Available)
  - 13.10.3. Recent Developments
  - 13.10.4. Key Personnel
  - 13.10.5. Key Product/Services

## **14. STRATEGIC RECOMMENDATIONS**

## About Us & Disclaimer

## I would like to order

Product name: Wind Turbine Shaft Market – Global Industry Size, Share, Trends, Opportunity, and Forecast, 2018-2028 Segmented By Application (Offshore and Onshore), By Type (Main Shaft and Generator Shaft), By Material Type (Metal and Synthetic Composites), By Region and Competition

Product link: <https://marketpublishers.com/r/W07E23A5E1D5EN.html>

Price: US\$ 4,900.00 (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/W07E23A5E1D5EN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:  
Last name:  
Email:  
Company:  
Address:  
City:  
Zip code:  
Country:  
Tel:  
Fax:  
Your message:

**\*\*All fields are required**

Customer signature \_\_\_\_\_

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>



To place an order via fax simply print this form, fill in the information below  
and fax the completed form to +44 20 7900 3970