

Global Wind Turbine Market: Analysis By Location (Onshore and Offshore), By Axis (Horizontal and Vertical), By Component (Rotator Blade, Generator, Gearbox, Nacelle and Others), By Application (Utility and Non Utility), By Region, Size and Trends with Impact of COVID-19 and Forecast up to 2026

<https://marketpublishers.com/r/G092C5DDF6D2EN.html>

Date: July 2022

Pages: 151

Price: US\$ 2,250.00 (Single User License)

ID: G092C5DDF6D2EN

Abstracts

The global wind turbine market was valued at US\$70.54 billion in 2021, and is expected to be worth US\$94.26 billion in 2026. Wind power is a type of renewable energy. As various governments are adopting initiatives to combat the climate change renewable energy is experiencing great growth. Compared to many other energy sources, producing energy from the wind has lesser impact on the environment. With few exceptions, wind turbines do not emit pollutants that can harm the environment. Additionally, wind turbines may lessen the amount of fossil fuels used to generate energy, which lowers overall air pollution and carbon dioxide emissions.

Wind turbines are mechanical devices used in wind power plants. Wind turbine uses the aerodynamic force of rotor blades, which function similarly to an aero plane wing or a helicopter rotor blade, to transform wind energy into electricity. The wind turbine market is determined to grow at a CAGR of 5.97% over the forecasted period of 2022-2026.

Market Segmentation Analysis:

By Location: The report identifies two segments on the basis of location: Onshore and Offshore. Among the location, it is anticipated that the offshore location would experience a significant growth, rising at a CAGR of 7.76%. Advantages of the offshore wind turbine include increased power output as a result of steady wind flow and speedy

installation of the turbines. As large corporations in the nations turn to adopting renewable and clean energy sources, the installation of offshore wind turbines is anticipated to increase during the forecast period. The global offshore wind turbine market can be divided in two segments, on the basis of installation: Fixed and Floating. In 2021, fixed wind turbine dominated the global offshore wind turbine market with a share of 93.7%.

By Axis: The report identifies two segments on the basis of axis: Horizontal Axis and Vertical Axis. Among the axis, it is anticipated that the vertical wind turbines would experience the highest CAGR of more than 8% during the forecasted period due to their capacity to produce power efficiently in unstable and harsh situations. Some of the essential factors that would propel the demand for the vertical wind turbines across residential applications are low installation and maintenance costs, limited ground requirements, and ease of operation.

By Component: The report provides the bifurcation of wind turbine market into five segments on the basis of components: Rotator Blade, Generator, Gearbox, Nacelle and Others. The rotator blade segment dominated the market in 2021, with a share of around 31%, Wind turbine rotator blades are airfoil-shaped blades that utilize wind energy to move the rotator of the wind turbine. The blades may exert lift in the opposite direction of the wind due to the airfoil-shaped design. The wind turbine is propelled by this force vector, which acts on the rotor. Growing competition among industry participants to enhance production capacity has led to a significant decrease in the price of rotator blades, which has increased its installation.

By Application: The report identifies two segments on the basis of applications: Utility and Non Utility. Among the application, utility segment dominated the market in 2021, captured a share of around 86%. Utility-scale wind turbines are often erected in sizable wind farms with several turbines that are linked to the country's transmission network. Large-scale utility-scale wind generating projects necessitate several land, building, and other permissions in addition to careful relationship management with various process players. Increasing rotator blade size, increasing area of wind farms, increasing efficiency of wind turbines along declining costs are the factors foreseen to drive the growth of utility wind turbine market in coming years.

By Region: In the report, the global wind turbine market is divided into five regions: Asia Pacific, Europe, North America, Latin America and Middle east and Africa. Asia Pacific accounted for the largest share of around 42% in the global wind turbine market in 2021. Asia-installed Pacific's wind capacity climbed from 283 GW in 2019 to 336 GW in

2020. The growth in wind capacity has mostly been driven by China's installed capacity. With roughly 38 GW of installed wind power in 2020, India will hold the fourth-largest position globally. By 2022, the government hopes to have 60 GW of onshore wind and 5 GW of offshore wind installed. To reach this goal, it is anticipated that there will be a significant increase in the number of projects during the next two years.

Market Dynamics:

Growth Drivers: One of the key drivers of the market's expansion is an increase in investments in wind power generation. The market will be driven in the upcoming years by the various wind projects that are currently under construction and will eventually be completed. Other significant growth factors of the market include declining Levelized Cost of Energy (LCOE), federal and state policy support, road to net zero, wind turbine financing, etc.

Challenges: However, some challenges are impeding the growth of the market such as high entry barriers, high maintenance and challenges with turbine blades. The challenges associated with the design, manufacture, and usage of wind assets include corrosion, fatigue, erosion, lightning strikes, and biofouling, to name just a few. Challenges with the foundations and transition piece have negatively affected the wind turbine market.

Trends: The market is projected to grow at a fast pace during the forecast period, due to various latest trends such as increasing average turbine size, power to X and green hydrogen, increasing distance to shore and greater water depths, and technological advancements. Another significant trend is the relocation of offshore wind farms farther from the coast in order to take advantage of improved wind conditions and as a result of the exhaustion of near-shore locations. The offshore wind farms are near to the shore, yet there is often a lengthy distance to the port in markets like Taiwan. Similar trends are being observed in the US, where the offshore wind farm may be located in a different state than where it sells its power. Generally, deeper water is found where there is a larger distance from the shore. Technological advancements have made bottom-fixed offshore wind possible at deeper sea depths.

Impact Analysis of COVID-19 and Way Forward:

Like many sectors, COVID-19 has also impacted the energy sector and threatened to derail efforts implemented to speed up the transition to clean energy. Supply and demand shocks have occurred across the energy sector as a result of widespread

economic activity suspension. The wind turbine market, was also imparted by the pandemic in the initial stage due to investment curbs and supply chain disruptions caused through unavailability of workforce. But in the 2nd half, the impact of the pandemic was alleviated by favorable government policies and robust demand pulled by increased awareness of the people towards clean energy sources.

Energy is a crucial component of economic development and prosperity. The demand for energy always increases as the society advances. Despite the fact that pandemic caused serious issues in the energy sector, the move towards the clean sources of energy has sparked unprecedented interest in the wind power, thus driving the growth of wind turbine market.

Competitive Landscape:

The global wind turbine market is moderately concentrated. Market players have implemented sustainable growth techniques in the market. To strengthen their position in the market, some of the leading competitors are pursuing various growth methods such as mergers, acquisitions, collaborations, and agreements.

The key players in the global Wind turbine market are:

General Electric Company (GE) (GE Renewable Energy)

Vestas Wind Systems A/S

Siemens Gamesa Renewable Energy

Nordex SE

Suzlon Energy Ltd.

XinJiang Goldwind Science & Technology Co., Ltd.

Guodian Technology & Environment Group Corporation Ltd. (Guodian United Power Technology Ltd.)

Shanghai Electric Group Company Ltd.

Ming Yang Smart Energy Group Ltd.

Enercon GmbH

Envision Energy

Zhejiang Windey Co., Ltd.

To achieve competitive advantage, businesses are placing a strong emphasis on research and development (R&D). For instance, Siemens Gamesa took steps in March 2020 to maintain the high level of activity across the business segment for the manufacturing, installation, and service of wind turbines. The companies are working assiduously to ensure continuity and to reduce risk in the sophisticated supply chain that underpins the wind turbine market. Additionally, organizations' installation and service-providing teams oversee the intricate international logistics, keep an eye on all borders, and uphold travel restrictions to ensure safer delivery.

Contents

1. EXECUTIVE SUMMARY

2. INTRODUCTION

2.1 Wind Turbine: An Overview

2.1.1 Wind Turbine and It's Workflow

2.1.2 Types Of Wind Turbines

2.2 Wind Turbine Segmentation: An Overview

2.2.1 Wind Turbine Segmentation By Location and Axis

2.2.2 Wind Turbine Segmentation By Component and Application

3. GLOBAL MARKET ANALYSIS

3.1 Global Wind Turbine Market: An Analysis

3.1.1 Global Wind Turbine Market by Value

3.1.2 Global Wind Turbine Market by Location (Onshore and Offshore)

3.1.3 Global Wind Turbine Market by Axis (Horizontal Axis and Vertical Axis)

3.1.4 Global Wind Turbine Market by Component (Rotator Blade, Generator, Gearbox, Nacelle and Others)

3.1.4 Global Wind Turbine Market by Application (Utility and Non Utility)

3.1.5 Global Wind Turbine Market by Region (Asia Pacific, Europe, North America, Latin America and Middle East and Africa)

3.2 Global Wind Turbine Market: Location Analysis

3.2.1 Global Onshore Wind Turbine Market by Value

3.2.2 Global Offshore Wind Turbine Market by Value

3.2.3 Global Offshore Wind Turbine Market by Installation (Fixed and Floating)

3.2.4 Global Fixed Offshore Wind Turbine Market by Value

3.2.5 Global Floating Offshore Wind Turbine Market by Value

3.3 Global Wind Turbine Market: Axis Analysis

3.3.1 Global Horizontal Wind Turbine Market by Value

3.3.2 Global Vertical Wind Turbine Market by Value

3.4 Global Wind Turbine Market: Component Analysis

3.4.1 Global Wind Turbine Rotator Blade Market by Value

3.4.2 Global Wind Turbine Generator Market by Value

3.4.3 Global Wind Turbine Gearbox Market by Value

3.4.4 Global Wind Turbine Nacelle Market by Value

3.4.5 Global Wind Turbine Other Components Market by Value

3.5 Global Wind Turbine Market: Application Analysis

3.5.1 Global Utility Wind Turbine Market by Value

3.5.2 Global Non Utility Wind Turbine Market by Value

4. REGIONAL MARKET ANALYSIS

4.1 Asia Pacific Wind Turbine Market: An Analysis

4.1.1 Asia Pacific Wind Turbine Market by Value

4.1.2 Asia Pacific Wind Turbine Market by Region (China, India, Australia, Japan and Rest of Asia Pacific)

4.1.3 China Wind Turbine Market by Value

4.1.4 India Wind Turbine Market by Value

4.1.5 Australia Wind Turbine Market by Value

4.1.6 Japan Wind Turbine Market by Value

4.1.7 Rest of Asia Pacific Wind Turbine Market by Value

4.2 Europe Wind Turbine Market: An Analysis

4.2.1 Europe Wind Turbine Market by Value

4.2.2 Europe Wind Turbine Market by Region (Germany, UK, Spain, France, and Rest of Europe)

4.2.3 Germany Wind Turbine Market by Value

4.2.4 UK Wind Turbine Market by Value

4.2.5 Spain Wind Turbine Market by Value

4.2.6 France Wind Turbine Market by Value

4.2.7 Rest of Europe Wind Turbine Market by Value

4.3 North America Wind Turbine Market: An Analysis

4.3.1 North America Wind Turbine Market by Value

4.3.2 North America Wind Turbine Market by Region (The US, Canada and Mexico)

4.3.3 The US Wind Turbine Market by Value

4.3.4 Canada Wind Turbine Market by Value

4.3.5 Mexico Wind Turbine Market by Value

4.4 Latin America Wind Turbine Market: An Analysis

4.4.1 Latin America Wind Turbine Market by Value

4.5 Middle East And Africa Wind Turbine Market: An Analysis

4.5.1 Middle East And Africa Wind Turbine Market by Value

5. IMPACT OF COVID-19

5.1 Impact of COVID-19

5.1.1 Impact of COVID-19 on Wind Turbine Market

- 5.1.2 Impact of COVID 19 on Wind Power Installations
- 5.1.3 Post-COVID Scenario

6. MARKET DYNAMICS

6.1 Growth Drivers

- 6.1.1 Declining Levelized Cost of Energy (LCOE)
- 6.1.2 Increasing Investments
- 6.1.3 Federal and State Policy Support
- 6.1.4 Road To Net Zero
- 6.1.5 Wind Turbine Financing

6.2 Challenges

- 6.2.1 High Entry Barriers
- 6.2.2 High Maintenance
- 6.2.3 Challenges With Turbine Blades

6.3 Market Trends

- 6.3.1 Increasing Average Turbine Size
- 6.3.2 Power To X and Green Hydrogen
- 6.3.3 Increasing distance to Shore and Greater Water Depths
- 6.3.4 Technological Advancements

7. COMPETITIVE LANDSCAPE

7.1 Global Wind Turbine Players by Market Share

8. COMPANY PROFILES

8.1 General Electric Company (GE) (GE Renewable Energy)

- 8.1.1 Business Overview
- 8.1.2 Operating Segments
- 8.1.3 Business Strategy

8.2 Vestas Wind Systems A/S

- 8.2.1 Business Overview
- 8.2.2 Operating Segments
- 8.2.3 Business Strategy

8.3 Siemens Gamesa Renewable Energy

- 8.3.1 Business Overview
- 8.3.2 Operating Business Units
- 8.3.3 Business Strategy

8.4 Nordex SE

- 8.4.1 Business Overview
- 8.4.2 Operating Segments
- 8.4.3 Business Strategy

8.5 Suzlon Energy Ltd.

- 8.5.1 Business Overview
- 8.5.2 Operating Segments
- 8.5.3 Business Strategy

8.6 XinJiang Goldwind Science & Technology Co., Ltd.

- 8.6.1 Business Overview
- 8.6.2 Operating Segments
- 8.6.3 Business Strategy

8.7 Guodian Technology & Environment Group Corporation Ltd. (Guodian United Power Technology Ltd.)

- 8.7.1 Business Overview
- 8.7.2 Operating Segments
- 8.7.3 Business Strategy

8.8 Shanghai Electric Group Company Ltd.

- 8.8.1 Business Overview
- 8.8.2 Operating Business Segments
- 8.8.3 Business Strategy

8.9 Ming Yang Smart Energy Group Ltd.

- 8.9.1 Business Overview
- 8.9.2 Business Strategy

8.10 Enercon GmbH

- 8.10.1 Business Overview
- 8.10.2 Business Strategy

8.11 Envision Energy

- 8.11.1 Business Overview
- 8.11.2 Business Strategy

8.12 Zhejiang Windey Co., Ltd.

- 8.12.1 Business Overview
- 8.12.2 Business Strategy

List Of Figures

LIST OF FIGURES

Figure 1: Wind Turbine and It's Workflow

Figure 2: Tpes Of Wind Turbines

Figure 3: Wind Turbine Segmentation By Location and Axis

Figure 4: Wind Turbine Segmentation By Component and Application

Figure 5: Global Wind Turbine Market by Value; 2017-2021 (US\$ Billion)

Figure 6: Global Wind Turbine Market by Value; 2022-2026 (US\$ Billion)

Figure 7: Global Wind Turbine Market by Location; 2021 (Percentage, %)

Figure 8: Global Wind Turbine Market by Axis; 2021 (Percentage, %)

Figure 9: Global Wind Turbine Market by Component; 2021 (Percentage, %)

Figure 10: Global Wind Turbine Market by Application; 2021 (Percentage, %)

Figure 11: Global Wind Turbine Market by Region; 2021 (Percentage, %)

Figure 12: Global Onshore Wind Turbine Market by Value; 2017-2021 (US\$ Billion)

Figure 13: Global Onshore Wind Turbine Market by Value; 2022-2026 (US\$ Billion)

Figure 14: Global Offshore Wind Turbine Market by Value; 2017-2021 (US\$ Billion)

Figure 15: Global Offshore Wind Turbine Market by Value; 2022-2026 (US\$ Billion)

Figure 16: Global Offshore Wind Turbine Market by Installation; 2021 (Percentage, %)

Figure 17: Global Fixed Offshore Wind Turbine Market by Value; 2017-2021 (US\$ Billion)

Figure 18: Global Fixed Offshore Wind Turbine Market by Value; 2022-2026 (US\$ Billion)

Figure 19: Global Floating Offshore Wind Turbine Market by Value; 2017-2021 (US\$ Million)

Figure 20: Global Floating Offshore Wind Turbine Market by Value; 2022-2026 (US\$ Billion)

Figure 21: Global Horizontal Wind Turbine Market by Value; 2017-2021 (US\$ Billion)

Figure 22: Global Horizontal Wind Turbine Market by Value; 2022-2026 (US\$ Billion)

Figure 23: Global Vertical Wind Turbine Market by Value; 2017-2021 (US\$ Billion)

Figure 24: Global Vertical Wind Turbine Market by Value; 2022-2026 (US\$ Billion)

Figure 25: Global Wind Turbine Rotator Blade Market by Value; 2017-2021 (US\$ Billion)

Figure 26: Global Wind Turbine Rotator Blade Market by Value; 2022-2026 (US\$ Billion)

Figure 27: Global Wind Turbine Generator Market by Value; 2017-2021 (US\$ Billion)

Figure 28: Global Wind Turbine Generator Market by Value; 2022-2026 (US\$ Billion)

Figure 29: Global Wind Turbine Gearbox Market by Value; 2017-2021 (US\$ Billion)

Figure 30: Global Wind Turbine Gearbox Market by Value; 2022-2026 (US\$ Billion)

Figure 31: Global Wind Turbine Nacelle Market by Value; 2017-2021 (US\$ Billion)

- Figure 32: Global Wind Turbine Nacelle Market by Value; 2022-2026 (US\$ Billion)
- Figure 33: Global Wind Turbine Other Components Market by Value; 2017-2021 (US\$ Billion)
- Figure 34: Global Wind Turbine Other Components Market by Value; 2022-2026 (US\$ Billion)
- Figure 35: Global Utility Wind Turbine Market by Value; 2017-2021 (US\$ Billion)
- Figure 36: Global Utility Wind Turbine Market by Value; 2022-2026 (US\$ Billion)
- Figure 37: Global Non Utility Wind Turbine Market by Value; 2017-2021 (US\$ Billion)
- Figure 38: Global Non Utility Wind Turbine Market by Value; 2022-2026 (US\$ Billion)
- Figure 39: Asia Pacific Wind Turbine Market by Value; 2017-2021 (US\$ Billion)
- Figure 40: Asia Pacific Wind Turbine Market by Value; 2022-2026 (US\$ Billion)
- Figure 41: Asia Pacific Wind Turbine Market by Region; 2021 (Percentage, %)
- Figure 42: China Wind Turbine Market by Value; 2017-2021 (US\$ Billion)
- Figure 43: China Wind Turbine Market by Value; 2022-2026 (US\$ Billion)
- Figure 44: India Wind Turbine Market by Value; 2017-2021 (US\$ Billion)
- Figure 45: India Wind Turbine Market by Value; 2022-2026 (US\$ Billion)
- Figure 46: Australia Wind Turbine Market by Value; 2017-2021 (US\$ Billion)
- Figure 47: Australia Wind Turbine Market by Value; 2022-2026 (US\$ Billion)
- Figure 48: Japan Wind Turbine Market by Value; 2017-2021 (US\$ Million)
- Figure 49: Japan Wind Turbine Market by Value; 2022-2026 (US\$ Billion)
- Figure 50: Rest of Asia Pacific Wind Turbine Market by Value; 2017-2021 (US\$ Billion)
- Figure 51: Rest of Asia Pacific Wind Turbine Market by Value; 2022-2026 (US\$ Billion)
- Figure 52: Europe Wind Turbine Market by Value; 2017-2021 (US\$ Billion)
- Figure 53: Europe Wind Turbine Market by Value; 2022-2026 (US\$ Billion)
- Figure 54: Europe Wind Turbine Market by Region; 2021 (Percentage, %)
- Figure 55: Germany Wind Turbine Market by Value; 2017-2021 (US\$ Billion)
- Figure 56: Germany Wind Turbine Market by Value; 2022-2026 (US\$ Billion)
- Figure 57: UK Wind Turbine Market by Value; 2017-2021 (US\$ Billion)
- Figure 58: UK Wind Turbine Market by Value; 2022-2026 (US\$ Billion)
- Figure 59: Spain Wind Turbine Market by Value; 2017-2021 (US\$ Billion)
- Figure 60: Spain Wind Turbine Market by Value; 2022-2026 (US\$ Billion)
- Figure 61: France Wind Turbine Market by Value; 2017-2021 (US\$ Billion)
- Figure 62: France Wind Turbine Market by Value; 2022-2026 (US\$ Billion)
- Figure 63: Rest of Europe Wind Turbine Market by Value; 2017-2021 (US\$ Billion)
- Figure 64: Rest of Europe Wind Turbine Market by Value; 2022-2026 (US\$ Billion)
- Figure 65: North America Wind Turbine Market by Value; 2017-2021 (US\$ Billion)
- Figure 66: North America Wind Turbine Market by Value; 2022-2026 (US\$ Billion)
- Figure 67: North America Wind Turbine Market by Region; 2021 (Percentage, %)
- Figure 68: The US Wind Turbine Market by Value; 2017-2021 (US\$ Billion)

- Figure 69: The US Wind Turbine Market by Value; 2022-2026 (US\$ Billion)
- Figure 70: Canada Wind Turbine Market by Value; 2017-2021 (US\$ Billion)
- Figure 71: Canada Wind Turbine Market by Value; 2022-2026 (US\$ Billion)
- Figure 72: Mexico Wind Turbine Market by Value; 2017-2021 (US\$ Million)
- Figure 73: Mexico Wind Turbine Market by Value; 2022-2026 (US\$ Billion)
- Figure 74: Latin America Wind Turbine Market by Value; 2017-2021 (US\$ Billion)
- Figure 75: Latin America Wind Turbine Market by Value; 2022-2026 (US\$ Billion)
- Figure 76: Middle East And Africa Wind Turbine Market by Value; 2017-2021 (US\$ Billion)
- Figure 77: Middle East And Africa Wind Turbine Market by Value; 2017-2021 (US\$ Billion)
- Figure 78: Global Total Wind Power Installations; 2016-2020 (Giga Watt)
- Figure 79: European Bottom-fixed Offshore Wind Farms LCOE, 2017-2021 (US\$/MWh)
- Figure 80: Europe New Asset Financing for Wind Energy ; 2017-2020 (US\$ Billion)
- Figure 81: Key Offshore Wind Markets Stated Capacity Targets; 2030 (Giga Watt)
- Figure 82: Average Turbine Size for Wind Farms, 2023-2028 (Mega Watt)
- Figure 83: Average Distance to Shore by Year of Commissioning, 2021-2029 (Kilometer)
- Figure 84: Global Wind Turbine Players by Market Share; 2021 (Percentage, %)
- Figure 85: General Electric Company (GE) Revenue by Segments; 2021 (Percentage, %)
- Figure 86: Vestas Wind Systems A/S Revenue by Segment; 2021 (Percentage, %)
- Figure 87: Siemens Gamesa Renewable Energy Backlog by Business Units; 2020 (Percentage, %)
- Figure 88: Nordex SE Sales by Segments; 2021 (Percentage, %)
- Figure 89: Suzlon Energy Ltd. Total External Sales by Segments; 2021 (Percentage, %)
- Figure 90: XinJiang Goldwind Science & Technology Co., Ltd. Revenue by Segment; 2021 (Percentage, %)
- Figure 91: Guodian Technology & Environment Group Corporation Ltd. Revenue by Segment; 2021 (Percentage, %)
- Figure 92: Shanghai Electric Group Revenue by Business Segment; 2020 (Percentage, %)
- Table 1: Wind-to-Hydrogen Projects Under Development

I would like to order

Product name: Global Wind Turbine Market: Analysis By Location (Onshore and Offshore), By Axis (Horizontal and Vertical), By Component (Rotator Blade, Generator, Gearbox, Nacelle and Others), By Application (Utility and Non Utility), By Region, Size and Trends with Impact of COVID-19 and Forecast up to 2026

Product link: <https://marketpublishers.com/r/G092C5DDF6D2EN.html>

Price: US\$ 2,250.00 (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/G092C5DDF6D2EN.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