

Onshore Wind Turbine Pitch and Yaw Drive Market Opportunity, Growth Drivers, Industry Trend Analysis, and Forecast 2024 to 2032

<https://marketpublishers.com/r/OA8B1F436A58EN.html>

Date: September 2024

Pages: 80

Price: US\$ 4,365.00 (Single User License)

ID: OA8B1F436A58EN

Abstracts

The Global Onshore Wind Turbine Pitch and Yaw Drive Market was valued at USD 4.8 billion in 2023 and is expected to grow at 5.9% CAGR between 2024 and 2032. In wind turbines, the pitch drive system is crucial for adjusting blade angles to optimize energy capture, protect against extreme wind loads, and manage braking and shutdown procedures during maintenance or emergencies. Meanwhile, the yaw drive system ensures the rotor is properly aligned with the wind direction to maximize efficiency. The integration of IoT, sensors, and AI into pitch and yaw systems has enhanced their real-time feedback and predictive maintenance capabilities, further driving market growth. Turbine manufacturers are increasingly standardizing these systems across different turbine models, leading to cost reductions and easier maintenance.

As onshore wind projects expand, economies of scale are making pitch and yaw drive systems more affordable, particularly benefiting smaller operators. In terms of pitch systems, the electric segment is expected to exceed USD 1.6 billion by 2032. This growth is backed by advancements in turbine machinery, the need for improved efficiency, and a focus on reliability. Electric pitch systems are becoming the preferred choice over traditional hydraulic systems due to their greater efficiency, lower maintenance needs, and superior control. These systems consume less power, boosting overall turbine efficiency, which is specifically favorable in vast onshore wind farms where energy savings are substantial across multiple turbines.

The market for large blade lengths is projected to grow at a 5% CAGR through 2032. Longer blades are increasingly popular due to their ability to capture more wind and generate higher energy output, particularly at lower wind speeds. Technological advancements, including the use of lightweight composite materials and carbon fiber, have allowed the making of large blades without considerably increasing their weight. This trend is particularly advantageous in regions with lower wind speeds, where larger

blades enhance turbine efficiency. APAC onshore wind turbine pitch and yaw drive industry is forecast to reach USD 3.7 billion by 2032. This growth is fueled by regulatory incentives, ambitious renewable energy targets, and advancements in wind technology. Countries in the region, including China, India, and Australia, are accelerating the adoption of onshore wind projects, driven by supportive policies aimed at reducing carbon emissions. The trend toward larger turbines with higher power output also contributes to increased efficiency and widespread adoption of these systems in the region.

Contents

Report Content

CHAPTER 1 METHODOLOGY & SCOPE

- 1.1 Research design
- 1.2 Base estimates & calculations
- 1.3 Forecast model
- 1.4 Primary research & validation
 - 1.4.1 Primary sources
 - 1.4.2 Data mining sources
- 1.5 Market definitions

CHAPTER 2 EXECUTIVE SUMMARY

- 2.1 Industry 360° synopsis, 2021 – 2032

CHAPTER 3 INDUSTRY INSIGHTS

- 3.1 Industry ecosystem
- 3.2 Regulatory landscape
- 3.3 Industry impact forces
 - 3.3.1 Growth drivers
 - 3.3.2 Industry pitfalls & challenges
- 3.4 Growth potential analysis
- 3.5 Price trend analysis
- 3.6 Porter's analysis
 - 3.6.1 Bargaining power of suppliers
 - 3.6.2 Bargaining power of buyers
 - 3.6.3 Threat of new entrants
 - 3.6.4 Threat of substitutes
- 3.7 PESTEL analysis

CHAPTER 4 COMPETITIVE LANDSCAPE, 2024

- 4.1 Introduction
- 4.2 Strategic dashboard
- 4.3 Innovation & technology landscape

CHAPTER 5 MARKET SIZE AND FORECAST, BY TYPE, 2021 – 2032 (USD MILLION & MW)

5.1 Key trends

5.2 5.3 1000 W - 3000 W

5.4 >3000 W

CHAPTER 6 MARKET SIZE AND FORECAST, BY PITCH SYSTEM, 2021 – 2032 (USD MILLION & MW)

6.1 Key trends

6.2 Electric

6.3 Mechanical

6.4 Hydraulic

CHAPTER 7 MARKET SIZE AND FORECAST, BY BLADE LENGTH, 2021 – 2032 (USD MILLION & MW)

7.1 Key trends

7.2 Small

7.3 Medium

7.4 Large

CHAPTER 8 MARKET SIZE AND FORECAST, BY REGION, 2021 – 2032 (USD MILLION & MW)

8.1 Key trends

8.2 North America

8.2.1 U.S.

8.2.2 Canada

8.2.3 Mexico

8.3 Europe

8.3.1 Germany

8.3.2 Spain

8.3.3 UK

8.3.4 France

8.3.5 Italy

8.3.6 Sweden

- 8.3.7 Poland
- 8.3.8 Denmark
- 8.3.9 Portugal
- 8.3.10 Netherlands
- 8.3.11 Ireland
- 8.3.12 Belgium
- 8.4 Asia Pacific
 - 8.4.1 China
 - 8.4.2 India
 - 8.4.3 Australia
 - 8.4.4 Japan
 - 8.4.5 South Korea
 - 8.4.6 Vietnam
 - 8.4.7 Thailand
 - 8.4.8 Philippines
 - 8.4.9 Taiwan
- 8.5 Middle East & Africa
 - 8.5.1 South Africa
 - 8.5.2 Egypt
- 8.6 Latin America
 - 8.6.1 Brazil
 - 8.6.2 Chile
 - 8.6.3 Argentina

CHAPTER 9 COMPANY PROFILES

- 9.1 ABM Greiffenberger
- 9.2 Bosch Rexroth AG
- 9.3 Bonfiglioli S.p.A
- 9.4 Dana SAC UK
- 9.5 Comer Industries
- 9.6 KEBA
- 9.7 Liebherr
- 9.8 Nabtesco Corporation
- 9.9 Nanjing High Speed Gear Manufacturing Co., Ltd
- 9.10 Nidec Conversion
- 9.11 SIPCO–MLS
- 9.12 Schaeffler Group
- 9.13 ZOLLERN GmbH & Co.

I would like to order

Product name: Onshore Wind Turbine Pitch and Yaw Drive Market Opportunity, Growth Drivers, Industry Trend Analysis, and Forecast 2024 to 2032

Product link: <https://marketpublishers.com/r/OA8B1F436A58EN.html>

Price: US\$ 4,365.00 (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/OA8B1F436A58EN.html>