

## **Turbine Control System Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)**

Market Report | 2023-01-23 | 125 pages | Mordor Intelligence

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### **Report description:**

The turbine control system market is expected to record a CAGR of around 2.5% during the forecast period. The COVID-19 pandemic outbreak severely affected the market due to delays in power plant construction projects. As an example, in the United States, in the months of March and April 2020, 21% and 29% of projects, respectively, experienced delays due to the COVID-19 spread mitigation efforts. The demand for turbine monitoring and control systems went down as there was a delay at every stage of power plant completion, including the generating units' up-gradation stage. Two factors largely drive the global turbine control systems market; first, the reduced downtime and operational efficiency offered by the control systems, and secondly, the increase in turbine deployment, particularly in wind and hydropower generation. However, the market is hampered by the growth in gas engine installations in the power industry, which has many benefits over gas turbines.

### **Key Highlights**

The wind turbine control systems are expected to grow at the fastest rate during the forecast period due to the high rate of wind turbine deployments across the globe.

The technological advancements introduced by the OEMs of turbine monitoring and control systems create tremendous opportunities for the growth of the market. For instance, PROEON has developed an array of control algorithms and software programs that can run on Rockwell ControlLogix and Siemens S7 PLC controllers. These systems provide interchangeable hardware and software, thus providing greater standardization too.

Asia-Pacific is expected to dominate the market during the forecast period due to the numerous upcoming power generation projects in the region.

### **Turbine Control Systems Market Trends**

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## Wind Turbine Control Systems Expected to Witness Significant Growth

The increase in wind turbine deployments in many parts of the world is currently the key driver of the turbine control systems market in the power sector. Furthermore, the penetration of highly advanced IoT-based turbine control systems to control the various parameters of wind turbines can pamper the segment in the near future.

According to International Renewable Energy Agency, the global wind energy installed capacity was around 732 GW in 2020, an uptrend from the 2019 figures, which was about 621 GW. The acceleration was the conclusion of the remarkable wind turbine project growth in many countries. Almost every country has set targets to increase the share of renewables in the power generation sector. Thus, many projects are queued up for the coming years.

As an example, the new German government aims to boost renewables to 80% by 2030, with a focus on onshore wind capacity. The country has plans to speed up in 2022 with new wind turbines to be deployed across the country, in the range of 2.3 GW to 2.7 GW.

Furthermore, in December 2021, in the United States, Siemens Gamesa entered an agreement with Dominion Energy Virginia to supply offshore wind turbines for the upcoming Coastal Virginia Offshore Wind commercial project. The company will provide around 176 units of turbines for the 2.6 GW project. The service contract is signed for ten years.

Owing to such developments, the wind turbine control segment is expected to grow at the fastest rate during the forecast period.

## Asia-Pacific to Dominate Market Growth

Asia-Pacific is one of the fastest-growing regions globally because of the increasing population, urbanization, and industrialization. Thus, the country has a consistently growing power demand.

China has the highest wind energy potential in the world. It was recorded that it added 29GW of onshore wind energy capacity(net addition) in 2020. The increase in capacity was also witnessed in Japan and India. Apart from wind turbine installations, the region also has a high rate of deployment of gas-based turbines.

In December 2021, the Mitsubishi Corporation-led consortium won the contract for the development of 1.7GW of an offshore wind farm in Japan. The partnership groups were selected for three projects in Japan's first auction round held by the Ministry of Economy, Trade, and Industry (METI). They involve the deployment of 65, 38, and 31 turbines, respectively, and the wind farm has to be completed by 2030.

In December 2021, Siemens Gamesa bagged a contract to supply and install 3.X wind turbines for Ayana Renewable Power in Karnataka, India. Under the contract, it will deliver and install 84 units of the SG 3.6-145 wind turbines for the upcoming power project in Karnataka's Gadag district.

Such developments are expected to give a thrust to the turbine control market during the study period due to increased turbine deployment.

## Turbine Control Systems Market Competitor Analysis

The turbine control system market is moderately fragmented. The key players in this market include ABB Ltd, Emerson Electric Co. Ltd, General Electric Company, Rockwell Automation, and Siemens Energy AG.

Additional Benefits:

The market estimate (ME) sheet in Excel format

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