

Power Grid System Market In 2029

The Business Research Company's Power Grid System Global Market Report 2025 – Market Size, Trends, And Global Forecast 2025-2034

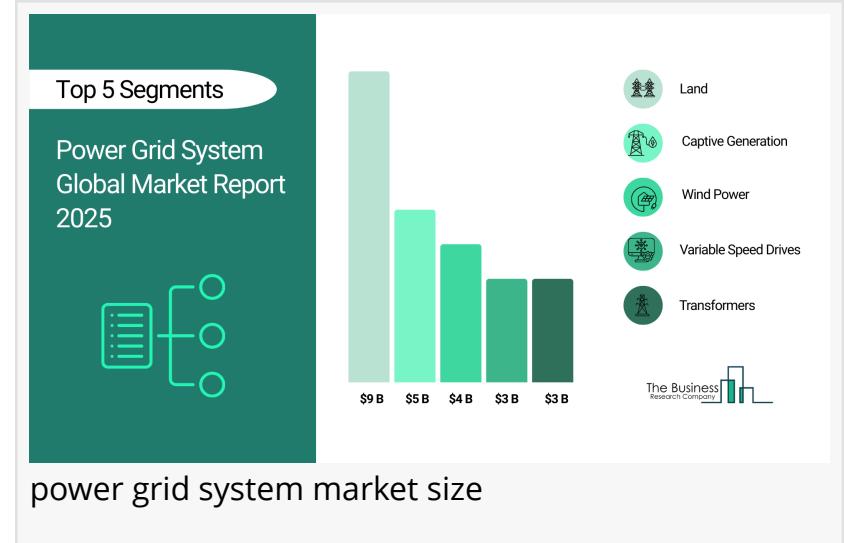
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/EINPresswire.com/ -- [Power Grid System Market](#) to Surpass \$19 billion in 2029. In comparison, the Specialty Electricals market, which is considered as its parent market, is expected to be approximately \$580 billion by 2029, with Power Grid System to represent around 3% of the parent market. Within the broader Electrical And Electronics industry, which is expected to be \$5,239 billion by 2029, the Power Grid System market is estimated to account for nearly 0.4% of the total market value.

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It will grow from \$10.81 billion in 2024 to \$11.82 billion in 2025 at a compound annual growth rate (CAGR) of 9.4%”

The Business Research Company



Which Will Be the Biggest Region in the Power Grid System Market in 2029

Asia Pacific will be the largest region in the power grid system market in 2029, valued at \$6,983 million. The market is expected to grow from \$3,689 million in 2024 at a compound annual growth rate (CAGR) of 14%. The rapid growth can be attributed to the increasing deployment of advanced metering infrastructure (AMI) and rising deployment of smart grids and microgrids.

Which Will Be The Largest Country In The Global Power Grid System Market In 2029?

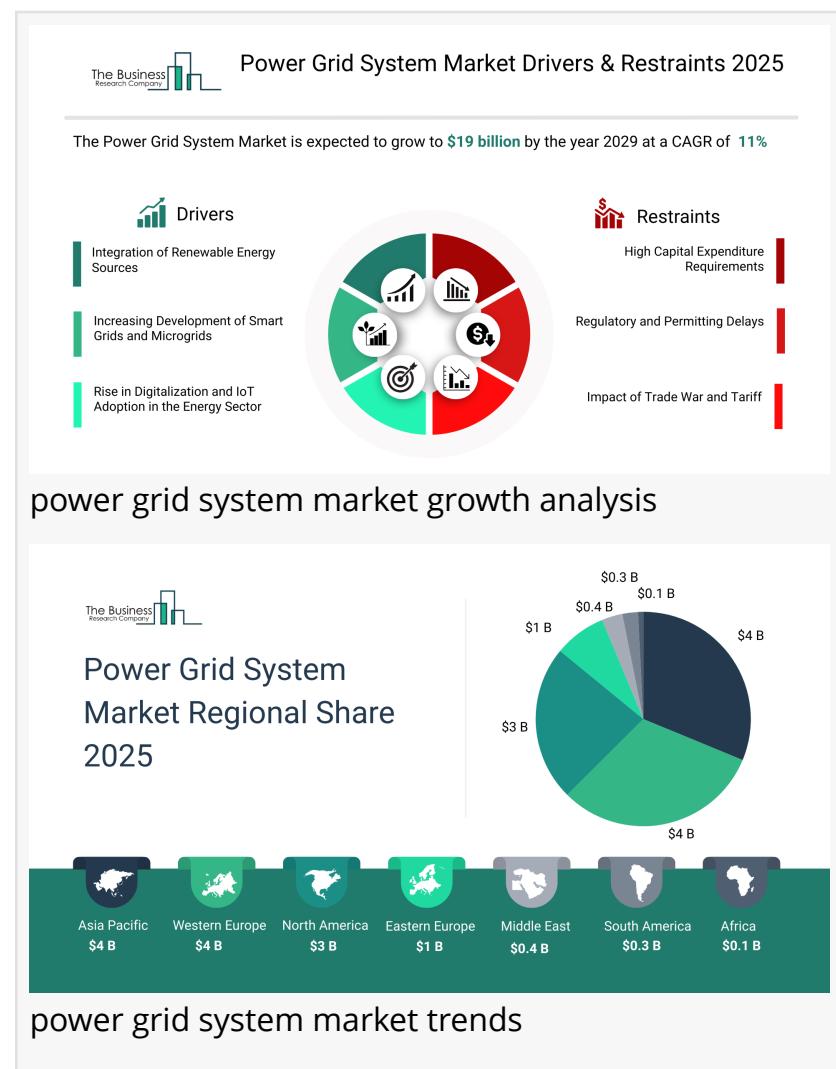
China will be the largest country in the power grid system market in 2029, valued at \$3,871 million. The market is expected to grow from \$2,148 million in 2024 at a compound annual growth rate (CAGR) of 13%. The rapid growth can be attributed to the increasing deployment of advanced metering infrastructure (AMI) and rising development of smart grids and microgrids.

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https://www.thebusinessresearchcompany.com/sample_request?id=6892&type=smp

What will be Largest Segment in the Power Grid System Market in 2029?

The [power grid system market growth](#) is segmented by power supply into captive generation, wind power and other power supplies. The wind power market will be the largest segment of the power grid system market segmented by power supply, accounting for 40% or \$7,512 million of the total in 2029. The wind power market will be supported by wind power by rapidly falling levelized costs of electricity from wind, strong policy and subsidy frameworks in many regions, large-scale deployment of offshore and onshore wind farms increasing grid connection needs, advances in turbine size and capacity requiring upgraded transmission, growing corporate power purchase agreements (PPAs) and green procurement and the need for grid flexibility solutions (storage, V2G, forecasting) to integrate variable generation.



power grid system market trends

The power grid system market is segmented by components into cables, variable speed drives, transformers, switchgears and other components. The variable speed drives market will be the largest segment of the power grid system market segmented by components, accounting for 28% or \$5,333 million of the total in 2029. The variable speed drives market will be supported by variable speed drives by strong demand for energy efficiency in industrial motors and HVAC systems, retrofit opportunities across water, mining and manufacturing sectors, tighter efficiency regulations and standards, capability to reduce peak loads and improve process control, integration with digital monitoring and predictive maintenance and compatibility with renewable-paired motor loads that require flexible speed control.

The power grid system market is segmented by application into seabed and land. The land market will be the largest segment of the power grid system market segmented by application, accounting for 75% or \$14,276 million of the total in 2029. The land market will be supported by land by sustained urbanization and industrial expansion driving new transmission and distribution, large-scale onshore renewable farms and storage sited on land, rural electrification and government infrastructure programmes, expansion of EV charging networks and distributed

energy resources, land-based rights-of-way and modular construction enabling faster buildouts and high replacement demand to modernize aging terrestrial grid assets.

What is the expected CAGR for the Power Grid System Market leading up to 2029?
The expected CAGR for the power grid system market leading up to 2029 is 11%.

What Will Be The Growth Driving Factors In The Global Power Grid System Market In The Forecast Period?

The rapid growth of the global power grid system market leading up to 2029 will be driven by the following key factors that are expected to reshape energy transmission, grid modernization, and large-scale power distribution infrastructure worldwide.

Integration Of Renewable Energy Sources - The integration of renewable energy sources will become a key driver of growth in the power grid system market by 2029. The increasing adoption of wind, solar, and other renewable energy technologies requires advanced grid infrastructure capable of managing variable and decentralized power generation. This transition necessitates enhancements in grid flexibility, reliability, and operational efficiency, as well as the implementation of advanced monitoring, control, and energy management systems. Consequently, utilities and grid operators are investing in modernized power systems that can seamlessly integrate renewable sources, support energy storage solutions, and ensure stable electricity supply, thereby propelling the expansion of the power grid systems market. As a result, the integration of renewable energy sources is anticipated to contributing to a 2.0% annual growth in the market.

Increasing Development Of Smart Grids And Microgrids - The increasing development of smart grids and microgrids will emerge as a major factor driving the expansion of the power grid system market by 2029. Smart grids leverage advanced technologies such as digital sensors, automation, and real-time data analytics to enhance the efficiency, reliability, and resilience of electricity distribution networks. Microgrids, which are localized energy systems capable of operating independently or in conjunction with the main grid, offer enhanced energy security and support the integration of renewable energy sources. The adoption of these technologies enables utilities to better manage demand, reduce outages, and optimize energy use, thereby contributing to a more sustainable and efficient power infrastructure. As the need for reliable and flexible energy systems grows, investments in smart grid and microgrid development are anticipated to accelerate, further propelling the expansion of the power grid systems market. Consequently, the increasing development of smart grids and microgrids capabilities is projected to contributing to a 1.5% annual growth in the market.

Rise In Digitalization And IoT Adoption In Energy Sector - The rise in digitalization and IoT adoption in energy sector within digital manufacturing processes will serve as a key growth catalyst for the power grid system market by 2029. Innovations in stem cell research and tissue engineering are creating new opportunities for developing organoids and spheroids that closely mimic human tissues, enabling more effective disease modelling, drug testing, and personalized

therapies. These models are increasingly adopted by pharmaceutical and biotech companies to accelerate R&D, reduce development costs, and improve clinical success rates. As regenerative medicine continues to evolve, the demand for reliable, human-relevant models is set to rise, positioning organoids and spheroids as essential tools in next-generation healthcare solutions. Therefore, this rise in digitalization and IoT adoption in energy sector operations is projected to support a 1.3% annual growth in the market.

Increasing Deployment of Advanced Metering Infrastructure (AMI) - The increasing deployment of advanced metering infrastructure (AMI) will become a significant driver contributing to the growth of the power grid system market by 2029. AMI systems, which integrate smart meters with communication networks and data management platforms, enable utilities to monitor and manage energy consumption in real-time, enhancing operational efficiency and service reliability. The adoption of AMI facilitates improved billing accuracy, reduced operational costs, and better demand-side management, contributing to a more resilient and responsive power grid. As utilities and governments continue to invest in smart grid technologies, the implementation of AMI is anticipated to play a pivotal role in modernizing power infrastructure and supporting the integration of renewable energy sources. Consequently, the increasing deployment of advanced metering infrastructure (AMI) strategies is projected to contribute to a 0.8% annual growth in the market.

Access the detailed Power Grid System Market report here:

<https://www.thebusinessresearchcompany.com/report/power-grid-system-global-market-report>

What Are The Key Growth Opportunities In The Power Grid System Market in 2029?

The most significant growth opportunities are anticipated in the integrated power grid system land infrastructure market, the wind power grid system market, and the smart power grid system market. Collectively, these segments are projected to contribute over \$12 billion in market value by 2029, driven by rapid modernization of power transmission networks, increasing integration of renewable energy sources, and rising demand for intelligent grid control systems to ensure stability and efficiency. This surge reflects the accelerating shift toward digitally connected and resilient energy infrastructures that enable real-time power balancing, optimized energy distribution, and enhanced grid reliability, fuelling transformative growth within the broader smart grid ecosystem.

The integrated power grid system land infrastructure market is projected to grow by \$5,679 million, the wind power grid system market by \$3,831 million, and the smart power grid system market by \$2,501 million over the next five years from 2024 to 2029.

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