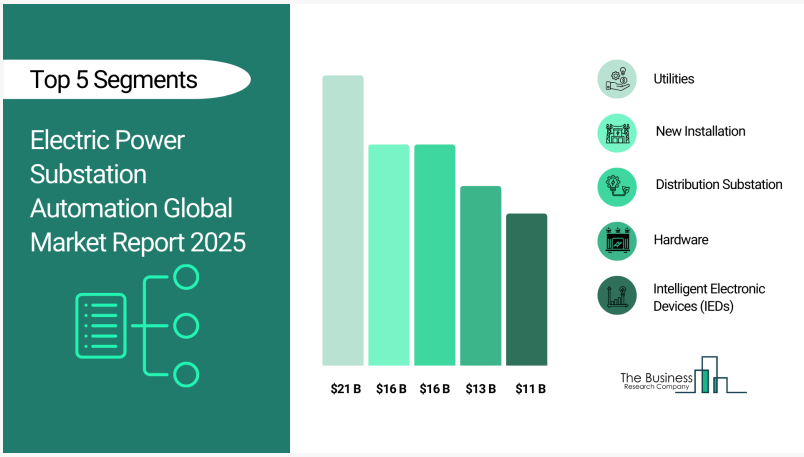
Electric Power Substation Automation Market In 2029

The Business Research Company's Electric Power Substation Automation Global Market Report 2026 – Market Size, Trends, And Global Forecast 2026-2035

LONDON, GREATER LONDON, UNITED KINGDOM, January 9, 2026 /EINPresswire.com/ -- "Electric Power Substation Automation Market to Surpass $34 billion in 2029. In comparison, the Electric Power Transmission, Control, And Distribution which is considered as its parent market, is expected to be approximately $3,968 billion by 2029, with Electric Power Substation Automation market to represent around 0.9% of the parent market. Within the broader Utilities industry, which is expected to be $8,843 billion by 2029, the Electric Power Substation Automation market is estimated to account for nearly 0.4% of the total market value.



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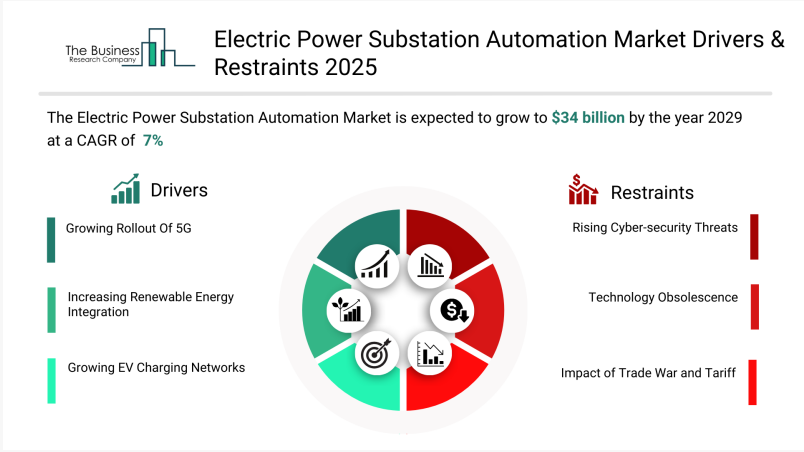

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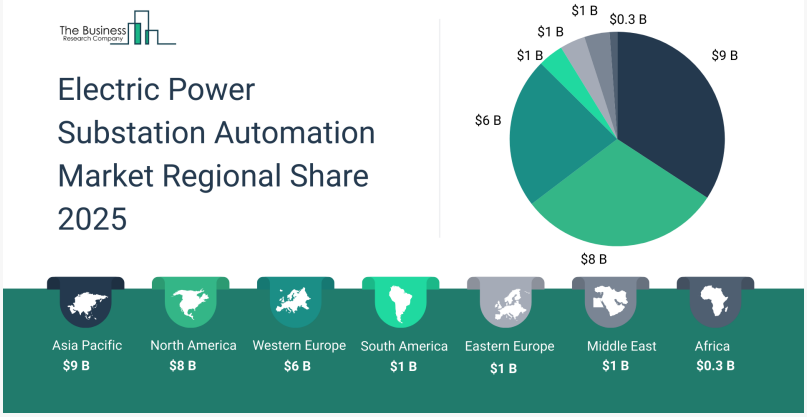
Which Will Be the Biggest Region in the Electric Power Substation Automation Market in 2029

Asia-Pacific will be the largest region in the electric power substation automation market in 2029, valued at $12,624 million. The market is expected to grow from $8.335 million in 2024 at a compound annual growth rate (CAGR) of 9%. The strong growth in the forecast period can be attributed to the growing EV charging networks and increasing renewable energy integration.

Which Will Be The Largest Country In The Electric Power Substation Automation Market In

2029?
The USA will be the largest country in the electric power substation automation market in 2029, valued at $8,279 million. The market is expected to grow from $6,108 million in 2024 at a compound annual growth rate (CAGR) of 6%. The strong growth in the forecast period can be attributed to the growing EV charging networks and rising investments in renewable energy infrastructure.



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What will be Largest Segment in the Electric Power Substation Automation Market in 2029?
The electric power substation automation market is by offering into software, hardware, and services. The hardware market will be the largest segment of the electric power substation automation market segmented by offering, accounting for 51% or $17,461 million of the total in 2029. The hardware market will be supported to the rising deployment of intelligent electronic devices (IEDs), increasing investments in advanced protection and control systems, growing demand for smart sensors and communication equipment, the need to upgrade aging transmission and distribution infrastructure and the expansion of renewable energy integration requiring reliable substation hardware and favourable government initiatives.

The electric power substation automation market is segmented by module into intelligent electronic devices (IEDs), supervisory control and data acquisition (SCADA), communication network, and other modules. The intelligent electronic devices (IEDs) market will be the largest segment of the electric power substation automation market segmented by module, accounting for 43% or $14,581 million of the total in 2029. The intelligent electronic devices (IEDs) market will be supported to the rising need for advanced protection and control, increasing adoption of digital relays and smart meters, growing demand for real-time data acquisition and fault detection and the expanding role of IEDs in enabling interoperability, automation, and reliable integration of renewable energy into the grid and electricity demand.

The electric power substation automation market is segmented by automation stage into retrofit and new installations. The new installations market will be the largest segment of the electric power substation automation market segmented by automation, accounting for 65% or $22,072 million of the total in 2029. The new installations market will be supported to the rising demand for expanding power infrastructure, increasing adoption of advanced automation and smart grid technologies, growing focus on renewable energy integration and the need for reliable, efficient,

and future-ready substations to support the evolving electricity grid.

The electric power substation automation market is segmented by application into transmission substation and distribution substation. The distribution substation market will be the largest segment of the electric power substation automation market segmented by application, accounting for 63% or $21,387 million of the total in 2029. The distribution substation market will be supported to the growing demand for reliable and efficient electricity delivery at the consumer level, increasing adoption of smart grid and automation technologies, rising need for real-time monitoring and fault detection and the critical role of automated distribution substations in enhancing operational efficiency, reducing outages, and supporting renewable energy integration and grid modernization.

The electric power substation automation market is segmented by end use into utilities and industry. The utilities market will be the largest segment of the electric power substation automation market segmented by end-use, accounting for 81% or $27,646 million of the total in 2029. The utilities market will be supported to the increasing need for efficient grid management, rising adoption of advanced automation and monitoring technologies, growing focus on reducing operational costs and downtime and the critical role of utilities in implementing reliable, secure and smart substation solutions to meet expanding energy demand.

What is the expected CAGR for the Electric Power Substation Automation Market leading up to 2029?
The expected CAGR for the electric power substation automation market leading up to 2029 is 7%.

What Will Be The Growth Driving Factors In The Electric Power Substation Automation Market In The Forecast Period?
The rapid growth of the global electric power substation automation market leading up to 2029 will be driven by the following key factors that are expected to reshape grid reliability, protection systems, and utility operations worldwide.

Growing Rollout Of 5G- The growing rollout of 5g will become a key driver of growth in the electric power substation automation market by 2029. Electric power substation automation plays a critical role in supporting the growing rollout of 5G by ensuring reliable and stable power supply to telecom infrastructure, which is essential for uninterrupted high-speed connectivity. Automated substations enable real-time monitoring, fault detection, and rapid response, minimizing downtime that could disrupt 5G network performance. Additionally, their ability to integrate distributed energy resources helps meet the increased energy demands of dense 5G networks efficiently. As a result, the growing rollout of 5g is anticipated to contributing to a 1.5% annual growth in the market.

Increasing Renewable Energy Integration -The increasing renewable energy integration will

emerge as a major factor driving the expansion of the electric power substation automation market by 2029. Electric power substation automation enables real-time monitoring, control, and coordination of renewable energy sources such as solar and wind within the grid. It facilitates efficient voltage and frequency regulation, smooth integration of variable energy output and rapid fault detection to maintain grid stability. By automating these processes, substations help maximize the utilization of renewable energy while ensuring reliable and resilient power delivery. Consequently, the increasing renewable energy integration is projected to contributing to a 1.0% annual growth in the market.

Growing EV Charging Networks-The growing ev charging networks as a major factor driving the expansion of the electric power substation automation market by 2029. Electric power substation automation enhances the efficiency, reliability, and real-time monitoring of electricity distribution, which is critical for supporting large-scale EV charging networks. By enabling faster fault detection, load management and integration of distributed energy resources, automated substations ensure stable power supply even as EV demand grows. This allows utilities to expand charging infrastructure without overloading the grid, supporting the rapid adoption of electric vehicles. Consequently, growing ev charging networks is projected to contributing to a 0.7% annual growth in the market.

Growing Deployment Of Energy Storage Systems- The growing deployment of energy storage systems will emerge as a major factor driving the expansion of the electric power substation automation market by 2029. Electric power substation automation facilitates the efficient integration and management of energy storage systems (ESS) by enabling real-time monitoring, control and coordination between the grid and storage units. It helps optimize charge and discharge cycles, maintain grid stability, and enhance reliability by automatically responding to fluctuations in supply and demand. Additionally, automation supports predictive maintenance and data analytics, ensuring ESS operate safely and efficiently within the broader power network. Therefore, the growing deployment of energy storage systems will drive the growth of the electric power substation automation market. Consequently, the growing deployment of energy storage systems are projected to contributing to a 0.5% annual growth in the market.

Access the detailed Electric Power Substation Automation Market report here: https://www.thebusinessresearchcompany.com/report/electric-power-substation-automation-global-market-report

What Are The Key Growth Opportunities In The Electric Power Substation Automation Market in 2029?
The most significant growth opportunities are anticipated in the electric power substation automation utilities market, the electric power substation automation new installation market, the electric power distribution and substation automation market, the electric power substation automation hardware market, and the intelligent electronic devices and substation automation market. Collectively, these segments are projected to contribute over $32 billion in market value by 2029, driven by accelerating grid modernization initiatives, rising deployment of digital and

automated substations, and an increasing emphasis on real-time monitoring, advanced protection, and predictive maintenance across utility networks. This surge reflects the growing adoption of intelligent automation technologies that enhance operational reliability, reduce outage durations, and support seamless integration of renewable and distributed energy resources fuelling transformative growth across the broader substation automation industry.

The electric power substation automation utilities market is projected to grow by $8,190 million, the electric power substation automation new installation market by $7,253 million, the electric power distribution and substation automation market by $6,136 million, the electric power substation automation hardware market by $5,525 million, and the intelligent electronic devices and substation automation market by $4,438 million over the next five years from 2024 to 2029.

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