

Substation Automation Market with COVID-19 impact analysis by Offering (Hardware, Software, Services), Type (Transmission, Distribution), Installation Type, End-use Industry, Component, Communication, and Region - Global Forecast to 2026

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Abstracts

The global substation automation market size is estimated to be USD 39.9 billion in 2021 and is projected to reach 54.2 billion by 2026, at a CAGR of 6.3% during the forecast period. The market has a promising growth potential due to several factors, including the surging requirement to retrofit conventional substations, increasing investments in smart cities and smart grid infrastructure development projects, and increasing focus on upgrading IEC 61850 standard to resolve interoperability issue among intelligent electronic devices deployed in substations.

COVID-19 sent both demand-side and supply-side shocks across the global economy. Leading substation automation product and solution providers, such as Cisco (US) and Schneider Electric (France), have incurred significant losses owing to the pandemic. Both companies have reported a decline of approximately 15% and 13%, respectively, in their 2020 half-year revenue compared to the previous year. The impact of COVID-19 may last until June 2021. The situation is almost similar in both emerging and developed economies. As of January 2021, the US and India became the worst COVID-hit countries. Several renewable energy projects in the above-mentioned regions were delayed because of the reduction in power demand from various end-user industries. With the decrease in power demand, it is estimated that there would be negligible investments from the utilities for building new power plants.

“Services: The fastest growing offering segment of the substation automation market.”

The high growth potential of the market can be attributed to the rapid increase in the number of projects pertaining to renewable energy sources such as solar and wind. For instance, Sun Tech Power Holdings (China), a producer of solar modules, plans to invest more in solar energy projects to meet the growing demand for energy with the rapid urbanization in China. Several power-generating companies in China, such as State Grid Corporation of China, China Three Gorges Corporation, and State Power Investment Corporation, are working on 25 wind turbine contracts worth nearly USD 586 billion to generate power. In September 2018, Siemens Energy received an order to design, supply, and build the grid connection for the Triton Knoll offshore wind farm by Germany-based Innogy SE. In February 2020, Hitachi ABB Power Grids' substation won a contract by Enel Green Power to deliver emission-free solar power to Brazil's 500 kilovolts (kV) transmission network. These projects would bring great prospects for installation, commissioning, and maintenance services.

“Utilities: The largest segment of substation automation market, by end-user industry.”

The utilities industry is one of the booming application areas of substation automation solutions owing to the high demand for modernization of existing grid infrastructure and installation of smart grids. Growing number of utilities have implemented Internet Protocol (IP) wireless communication technology in substations that enhance the operating efficiency of the substation automation system by providing data related to the current status or condition of equipment, fault classification statistics, and information useful for preventive maintenance of the equipment. Government bodies, in coordination with privately owned utility companies, are setting up smart substations in several countries to meet the power demand from consumers, as well as for the security of the power supply. For example, Hitachi ABB Power Grids is supporting Maharashtra State Electricity Transmission Company Limited (MSETCL) by utilizing ABB Ability-enabled technology in smart substations owned by MSETCL. This technology will be a crucial component of next-generation grids in the country.

“North America is leading the substation automation market, globally, by market share, in 2020”

Based on region, North America dominated the substation automation market in 2020. The commanding position of North America can be contributed to several funding programs introduced by the US and Canadian governments for the modernization of power grids. North American governments are also providing funds to deploy modern technologies in the energy & power sector, which would help the region transit to smarter, stronger, and efficient electric grid systems. Aging grid infrastructure, coupled

with stringent government policies regarding the adoption of sustainable power technologies, contributes to the growth of the substation automation market in North America. Several grid modernization projects have been undertaken in the region in the past few years. For instance, in September 2019, Schneider Electric was awarded a contract by BASF (Germany), the largest chemical company in the world, to implement EcoStruxure Asset Advisor in its new electrical substation in Beaumont, Texas. EcoStruxure Asset Advisor evaluates live data from the user's critical connected assets and applies advanced analytics to identify potential threats.

Breakdown of profiles of primary participants:

By Company: Tier 1 = 30%, Tier 2 = 50%, and Tier 3 = 20%

By Designation: C-Level Executives = 35%, Directors = 25%, and Others = 40%

By Region: North America – 40%, Europe– 30%, APAC – 25%, and RoW – 5%

Major players profiled in this report:

The substation automation market is dominated by key global established players such as Hitachi ABB Power Grids (Switzerland), Siemens Energy (Germany), General Electric (US), Cisco (US), Schneider Electric (France), Eaton Corporation (Ireland), Honeywell (US), Schweitzer Engineering Laboratories (US), NovaTech Automation (US), and CG Power and Industrial Solutions (India).

Research coverage

This research report segments the global substation automation market based on Offering (Hardware, Software, Services), Type (Transmission, Distribution), Installation Type (New Installations, Retrofit Installations), End-use Industry (Utilities, Steel, Oil & Gas, Mining, Transportation), Component (IEDs, Communication Networks, SCADA Systems), Communication (Ethernet, Power Line Communication, Copper Wire Communication, Optical Fiber Communication), and Region (North America, Europe, APAC, and RoW).

The report also provides a comprehensive review of market drivers, restraints, challenges, and opportunities pertaining to the substation automation market and also includes value chain. The study also includes an in-depth competitive analysis of the

key players in the market, along with their company profiles, key observations related to product and business offerings, recent developments, and key market strategies.

Key Benefits of Buying the Report

The report will help market leaders/new entrants in this market with information on the closest approximations of the revenue numbers for the overall substation automation market and the sub-segments. This report will help stakeholders understand the competitive landscape and gain more insights to position their businesses better and to plan suitable go-to-market strategies. The report also helps stakeholders understand the pulse of the market and provides them with information on key market drivers, restraints, challenges, and opportunities.

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