

Air Insulated Switchgear - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

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Report description:

Air Insulated Switchgear Market Analysis

The Air Insulated Switchgear Market size is estimated at USD 89.24 billion in 2025, and is expected to reach USD 115.86 billion by 2030, at a CAGR of 5.36% during the forecast period (2025-2030).

Momentum stems from renewable integration mandates, national grid resilience programs, rising data-center load, and the phased restriction of SF₆-based equipment in Europe and North America. Utilities are shifting substation investment toward medium-voltage AIS because its upfront cost is lower than comparable GIS at voltage classes ≥38 kV. Supply-chain bottlenecks have lengthened typical delivery cycles beyond 90 weeks, prompting higher inventory buffers and dual-sourcing. The market also benefits from steady modernization of post-war transmission assets in the United States and Europe and electrification pushes in manufacturing hubs across Asia-Pacific and the Middle East.

Global Air Insulated Switchgear Market Trends and Insights

Renewable-Energy Build-Out Needs New AIS Substations

Grid operators expanding wind and solar capacity deploy AIS collector substations to manage bidirectional power flow and voltage variability. The U.S. National Transmission Planning Study projects a need to double transmission transfer capability by mid-century, suggesting large volumes of new medium-voltage bays that favor AIS for cost and modularity. Saudi Arabia plans

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USD 126 billion for transmission upgrades, where the bulk of medium-voltage renewable interties adopt AIS to manage cost envelopes. Manufacturers are enhancing protection algorithms to stabilize networks with high intermittent feed-in, further strengthening AIS value propositions. Land availability in onshore renewables corridors eases footprint concerns, allowing utilities to prioritize total ownership cost. As clean-energy auctions tighten commissioning timelines, faster AIS manufacturing cycles give project developers a scheduling hedge.

Replacement of Ageing T&D Infrastructure

Over half of North American substation assets date to the 1960s-1980s build-out. Entergy Texas alone earmarked USD 335 million for distribution and substation upgrades in 2025. European utilities show parallel urgency; National Grid's Wimbledon rebuild underscores the scale of legacy replacement. Condition-monitoring retrofits drive predictive maintenance, letting asset managers phase out obsolete gear with minimal service loss. AIS vendors are capitalizing by bundling digital sensors and arc-flash containment as standard features. The replacement wave spreads investment over a 10-year horizon, delivering consistent demand for the air-insulated switchgear market even in mature economies.

Urban-Space Constraints Favour Compact GIS

High land prices in megacities such as Jakarta and Mumbai compel utilities to move primary substations underground. An AIP study shows underground GIS stations use 60-75% less surface area than air-insulated yards. Municipal authorities often waive permit fees for compact footprints, offsetting GIS hardware premiums. European urban planners push similar policies to preserve streetscapes, nudging transmission owners toward indoor GIS even at traditional AIS voltage levels. Distribution companies also deploy compact ring-main units in mixed-use buildings, limiting the addressable share for outdoor AIS within dense cores.

Other drivers and restraints analyzed in the detailed report include:

Rapid Urbanisation & Electrification in Emerging Economies / AIS Cost Advantage Over GIS at 38 kV / Shift to SF₆-Free GIS / Solid-Insulated Alternatives /

For complete list of drivers and restraints, kindly check the Table Of Contents.

Segment Analysis

The Low-Voltage segment held 46% of the air-insulated switchgear market 2024, primarily serving residential and light-commercial circuits. Medium-Voltage demand is projected to advance at a 6.2% CAGR, anchored in renewable collector stations, data-center campuses, and process-industry electrification. High-Voltage units occupy a smaller yet stable niche that benefits from grid rebuilds and emerging HVDC back-to-back stations.

Growth reflects divergent application profiles. Low-Voltage boards rely on mass-produced designs where price and footprint dictate selection. Medium-Voltage buyers increasingly specify digital current transformers and IEC 61850 gateway modules that enable predictive analytics. As a result, the air-insulated switchgear market size for medium-voltage applications is forecast to contribute USD 12 billion incremental value by 2030. High-Voltage projects, though fewer, demand engineered-to-order panels that integrate phase-shifting transformers and complex protection logic. Suppliers leverage these projects to showcase advanced arc-resistant metal-clad designs and to test SF₆-free interrupters.

The Air Insulated Switchgear Market Report is Segmented by Voltage Level (Low Voltage, Medium Voltage, and High Voltage), End-User (Power Utilities, Industrial, Commercial, and Residential), Installation (Indoor and Outdoor), and Geography (North America, Europe, Asia-Pacific, South America, and Middle East and Africa). The Market Sizes and Forecasts are Provided in Terms

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of Value (USD).

Geography Analysis

Asia-Pacific dominated the air-insulated switchgear market with a 46% revenue share in 2024, powered by China's state-led grid upgrades and India's ongoing village electrification. Chinese utilities continue to pilot 35 kV digital AIS bays that dovetail with rooftop solar aggregation, while India ramps up procurement under its Revamped Distribution Sector Scheme. Japan, South Korea, and Australia add a steady backlog through data-center and offshore wind expansions. Southeast Asia contributes rising volume as industrial estates proliferate across Vietnam, Thailand, and Indonesia.

The Middle East and Africa region is one of the fastest-growing, underpinned by Saudi Arabia's USD 126 billion transmission blueprint and the UAE's renewable portfolio targets. GCC utilities favor AIS for medium-voltage collector nodes because desert siting mitigates land-use pressure. African electrification projects, notably in Kenya and Egypt, depend on concessional financing that aligns with AIS's lower capex relative to GIS. Local fabrication partnerships emerge as governments push content requirements, broadening supply footprints for international vendors.

North America and Europe display mature yet opportunity-rich profiles. Despite rate shocks, the U.S. government's USD 2.2 billion grid-resilience grants maintain public utility spending. Canadian provinces pursue the life extension of hydro-linked substations, blending refurbishment and selective replacement. Europe's SF₆ phase-out has a dual effect: high-voltage buyers pivot toward clean-air GIS, while low- and medium-voltage owners revisit AIS for cost-effective compliance. Domestic manufacturing expansions from GE Vernova and Hitachi Energy illustrate reshoring policy traction and offer lead-time relief for regional buyers.

List of Companies Covered in this Report:

ABB Ltd / Siemens AG / Schneider Electric SE / Eaton Corp plc / Mitsubishi Electric Corp / General Electric (Vernova) / Hitachi Energy Ltd / Larsen & Toubro Ltd / Alfanar Group / Tavrida Electric / Wenzhou Unisun Electric / Elatec Power Distribution / Fuji Electric Co Ltd / Chint Group / Lucy Electric / Ormazabal / S&C Electric Co / Powell Industries / Rockwill Electric / C&S Electric /

Additional Benefits:

The market estimate (ME) sheet in Excel format /
3 months of analyst support /

Table of Contents:

- 1 Introduction
 - 1.1 Study Assumptions & Market Definition
 - 1.2 Scope of the Study
- 2 Research Methodology
- 3 Executive Summary
- 4 Market Landscape
 - 4.1 Market Overview
 - 4.2 Market Drivers
 - 4.2.1 Renewable-energy build-out needs new AIS substations
 - 4.2.2 Replacement of ageing T&D infrastructure

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- 4.2.3 Rapid urbanisation & electrification in emerging economies
- 4.2.4 AIS cost-advantage over GIS at 38 kV
- 4.2.5 Data-centre boom driving campus MV-AIS demand
- 4.2.6 Microgrid uptake needing modular indoor AIS
- 4.3 Market Restraints
 - 4.3.1 Urban-space constraints favour compact GIS
 - 4.3.2 Shift to SF6-free GIS / solid-insulated alternatives
 - 4.3.3 Commodity-supply shocks stretch AIS lead-times
 - 4.3.4 Rising digital-safety codes push arc-resistant switchgear
- 4.4 Supply-Chain Analysis
- 4.5 Regulatory Landscape
- 4.6 Technological Outlook
- 4.7 Porter's Five Forces
 - 4.7.1 Bargaining Power of Suppliers
 - 4.7.2 Bargaining Power of Consumers
 - 4.7.3 Threat of New Entrants
 - 4.7.4 Threat of Substitute Products
 - 4.7.5 Intensity of Competitive Rivalry

5 Market Size & Growth Forecasts

- 5.1 By Voltage Level
 - 5.1.1 Low Voltage (Up to 1 kV)
 - 5.1.2 Medium Voltage (1 to 38 kV)
 - 5.1.3 High Voltage (Above 38 kV)
- 5.2 By End-User
 - 5.2.1 Power Utilities (T&D)
 - 5.2.2 Industrial
 - 5.2.3 Commercial
 - 5.2.4 Residential
- 5.3 By Installation
 - 5.3.1 Indoor
 - 5.3.2 Outdoor
- 5.4 By Geography
 - 5.4.1 North America
 - 5.4.1.1 United States
 - 5.4.1.2 Canada
 - 5.4.1.3 Rest of North America
 - 5.4.2 Europe
 - 5.4.2.1 Germany
 - 5.4.2.2 United Kingdom
 - 5.4.2.3 France
 - 5.4.2.4 Italy
 - 5.4.2.5 Spain
 - 5.4.2.6 Russia
 - 5.4.2.7 Rest of Europe
 - 5.4.3 Asia-Pacific
 - 5.4.3.1 China

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- 5.4.3.2 India
- 5.4.3.3 Japan
- 5.4.3.4 South Korea
- 5.4.3.5 ASEAN Countries
- 5.4.3.6 Australia
- 5.4.3.7 Rest of Asia-Pacific
- 5.4.4 South America
 - 5.4.4.1 Brazil
 - 5.4.4.2 Argentina
 - 5.4.4.3 Chile
 - 5.4.4.4 Rest of South America
- 5.4.5 Middle East and Africa
 - 5.4.5.1 Saudi Arabia
 - 5.4.5.2 United Arab Emirates
 - 5.4.5.3 South Africa
 - 5.4.5.4 Egypt
 - 5.4.5.5 Rest of Middle East and Africa

6 Competitive Landscape

6.1 Market Concentration

6.2 Strategic Moves (M&A, Partnerships, PPAs)

6.3 Market Share Analysis (Market Rank/Share for key companies)

6.4 Company Profiles (includes Global level Overview, Market level overview, Core Segments, Financials as available, Strategic Information, Products & Services, and Recent Developments)

6.4.1 ABB Ltd

6.4.2 Siemens AG

6.4.3 Schneider Electric SE

6.4.4 Eaton Corp plc

6.4.5 Mitsubishi Electric Corp

6.4.6 General Electric (Vernova)

6.4.7 Hitachi Energy Ltd

6.4.8 Larsen & Toubro Ltd

6.4.9 Alfanar Group

6.4.10 Tavrida Electric

6.4.11 Wenzhou Unisun Electric

6.4.12 Elatec Power Distribution

6.4.13 Fuji Electric Co Ltd

6.4.14 Chint Group

6.4.15 Lucy Electric

6.4.16 Ormazabal

6.4.17 S&C Electric Co

6.4.18 Powell Industries

6.4.19 Rockwill Electric

6.4.20 C&S Electric

7 Market Opportunities & Future Outlook

7.1 White-space & Unmet-Need Assessment

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