

Global Smart Grid Market: Analysis By Component (Hardware, Software and Services), By Application (Distribution, Transmission, Consumption and Generation), By Technology (Advanced Metering Infrastructure, Distribution & Network Automation, Grid Optimization, Demand Response and Others), By End User (Utility, Industrial, Residential and Commercial), By Region Size and Trends with Impact Analysis of COVID-19 and Forecast up to 2030

March 2025



Global Smart Grid Market: Coverage

Executive Summary and Scope

Introduction/Market Overview

Global Market Analysis

Regional Market Analysis

Impact Of COVID 19

Dynamics

Competitive Landscape

Company Profiling

Global Smart Grid Market: Coverage

Scope of the Report

Attributes	Details
Title	Global Smart Grid Market: Analysis By Component (Hardware, Software and Services), By Application (Distribution, Transmission, Consumption and Generation), By Technology (Advanced Metering Infrastructure, Distribution & Network Automation, Grid Optimization, Demand Response and Others), By End User (Utility, Industrial, Residential and Commercial), By Region Size and Trends with Impact Analysis of COVID-19 and Forecast up to 2030
Coverage	Global and Regional
Regional Coverage	North America, Europe, Asia Pacific, and Rest of the World
Market Influencing Variables	Growth Drivers, Challenges, Market Trends
Forecast Period of Market	2025-2030
Competition in the Market	Highly Competitive
Key Players	ABB Group, Schneider Electric SE, Siemens AG, Cisco Systems, Inc., GE Vernova Inc. (General Electric Co), International Business Machines Corporation, Itron, Inc., Eaton Corporation PLC, Honeywell International Inc., Hitachi, Ltd., Landis+Gyr Group AG, and Oracle Corporation.

Global Smart Grid Market: Coverage

Executive Summary

A smart grid is an electrical power distribution system that allows for two-way communication between a utility company and its consumers. Power/current sensors, controllers, data centers, and smart meters are all digital technologies that contribute to smart grid technology. The global smart grid market in 2024 was valued at US\$55.54 billion. The market value is expected to reach US\$145.42 billion by 2030, growing at a CAGR of 17.40% during the forecast period of 2025-2030.

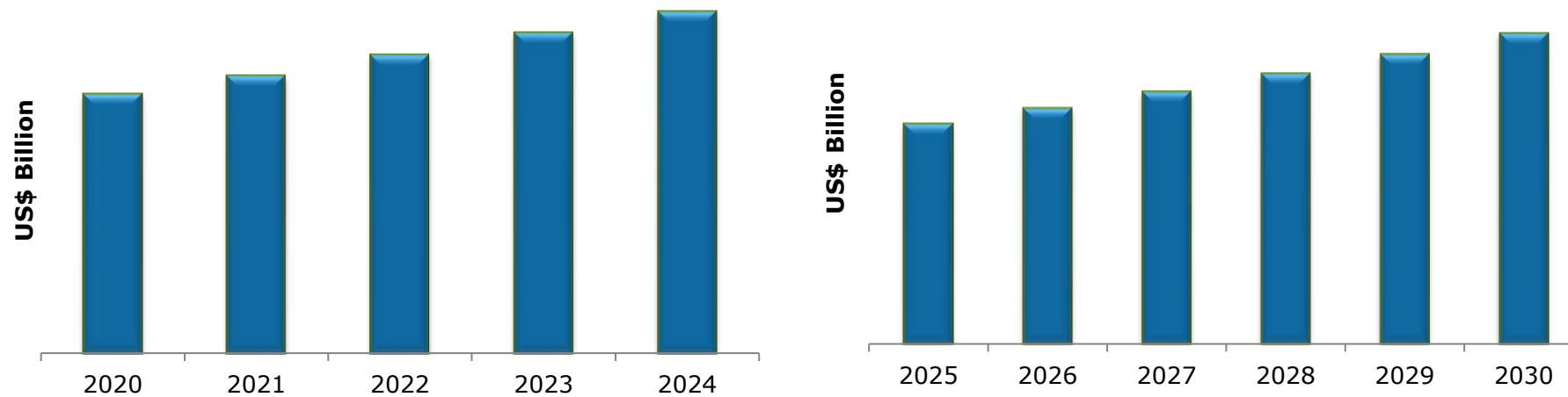
The global smart grid market can be segmented based on based on the component (Hardware, Software and Services); application (Transmission, Distribution, Consumption and Generation); technology (Advanced Metering Infrastructure, Distribution Automation, Grid Optimization, Demand Response and Others), and end user (Utility, Residential, Commercial and Industrial). Software segment held the major share in 2024, due to the growing demand for advanced analytics and grid management tools, essential for real-time monitoring and efficient energy integration. North America is leading global smart grid market by occupying majority of the market share.

The COVID-19 pandemic initially disrupted the global smart grid market with delays in projects and reduced demand in sectors like energy. However, it accelerated the adoption of smart grid technologies, particularly in renewable energy integration and remote monitoring. Post-pandemic, the market has rebounded with increased investments in grid modernization and digital solutions, driving growth in efficiency, sustainability, and resilient energy infrastructure.

The global smart grid market observed progressive growth in the past few years and anticipations are made that during the forecasted period (2025-2030), the market would further augment at an escalating growth rate. The global market growth is predicted to be supported by numerous growth drivers such as integration of renewable energy sources, increasing investment in smart infrastructure, rising demand for electric vehicles and charging infrastructures, growing energy demand and rapid urbanization, and many other factors. Conversely, the market growth would be negatively impacted by various challenges such as high initial capital investment, cybersecurity risks, etc. Moreover, the market growth would succeed in various market trends like upsurge in investments in energy sector, emergence of virtual power plants, technological advancements in smart grid solutions, incorporation of blockchain technology, enhanced consumer engagement through smart technologies, etc.

Smart Grid Market: Global Analysis

Global Smart Grid Market by Value



CAGR	
2020-2024	xx%
2025-2030	xx%

Global smart grid market was valued at US\$... billion in 2024 and is anticipated to reach up to US\$... billion by 2030 from US\$... billion in 2025, with a CAGR of xx%.

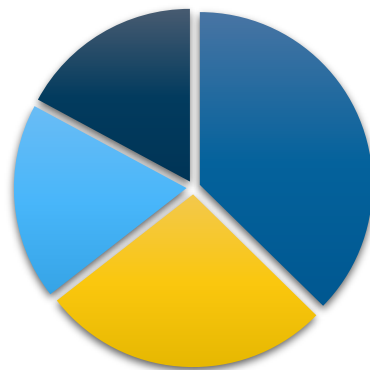
Smart Grid Market: Global Analysis

Global Smart Grid Market by Component; 2024



Component	Share
Software	xx%
Hardware	xx%
Services	xx%

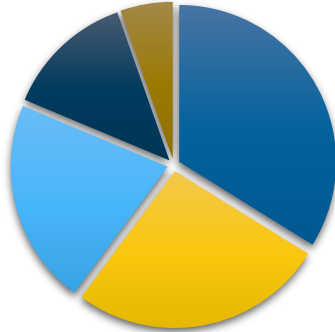
Global Smart Grid Market by Application; 2024



Application	Share
Transmission	xx%
Distribution	xx%
Consumption	xx%
Generation	xx%

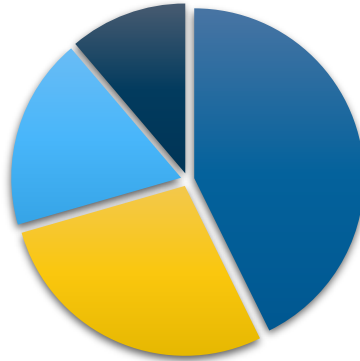
Smart Grid Market: Global Analysis

Global Smart Grid Market by Technology; 2024



Technology	Share
Advanced Metering Infrastructure (AMI)	xx%
Distribution & Network Automation	xx%
Grid Optimization	xx%
Demand Response	xx%
Others	xx%

Global Smart Grid Market by End User; 2024



End User	Share
Utility	xx%
Industrial	xx%
Residential	xx%
Commercial	xx%

Smart Grid Market: Global Analysis

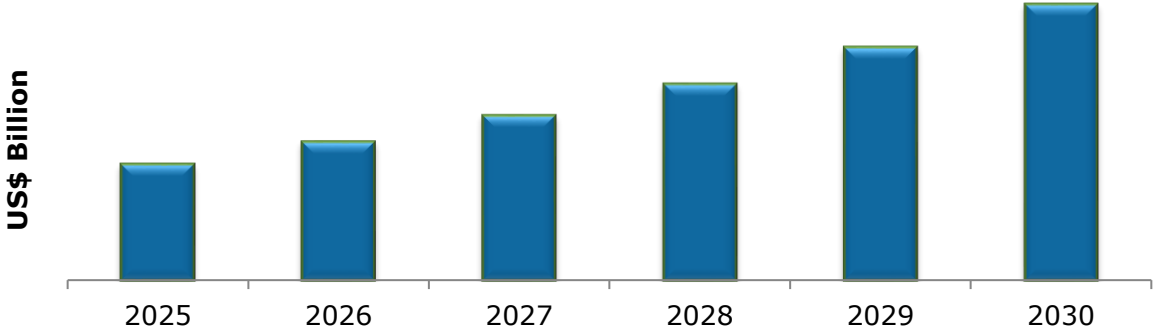
Global Smart Grid Market by Region; 2024



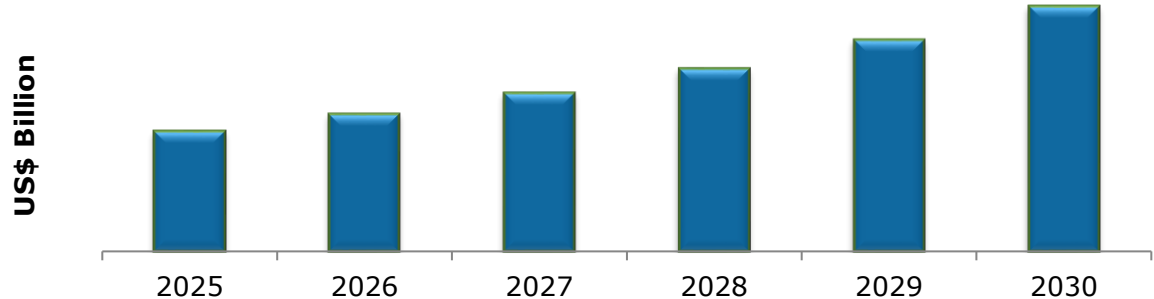
Region	Share
North America	xx%
Europe	xx%
Asia Pacific	xx%
Rest of the World	xx%

Smart Grid Market: Component Analysis

Global Smart Grid Software Market by Value



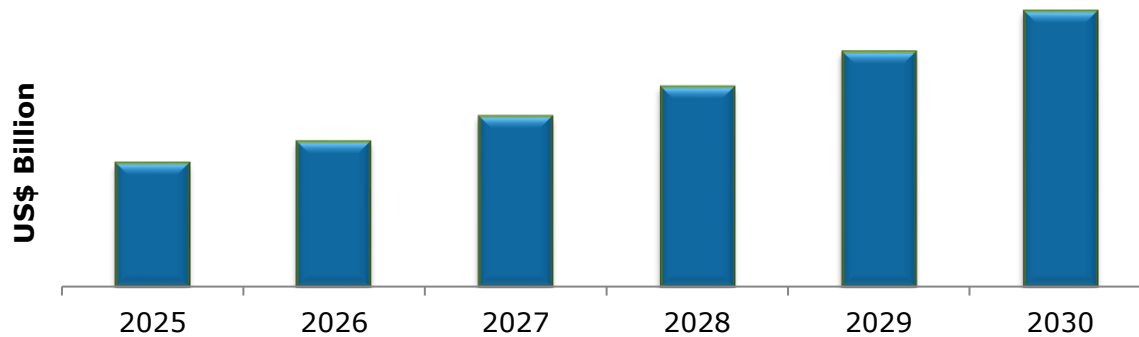
Global Smart Grid Hardware Market by Value



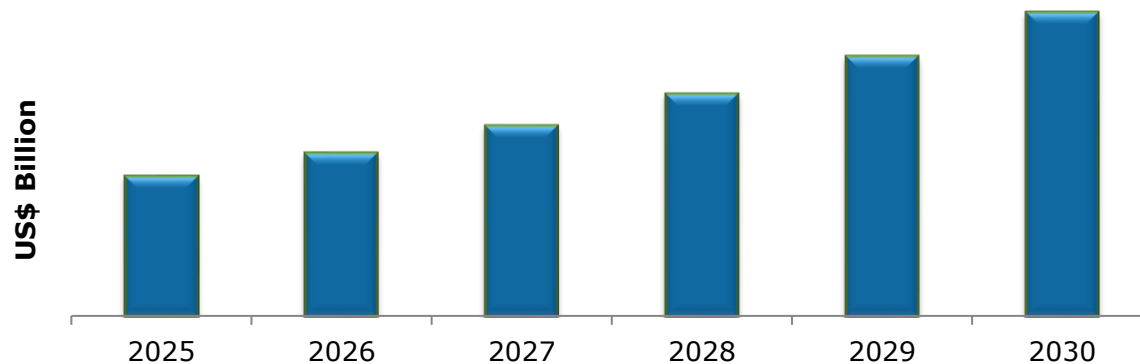
Component	CAGR (2025-2030)
Software	xx%
Hardware	xx%
Services	xx%

Smart Grid Market: Application Analysis

Global Smart Grid Distribution Market by Value



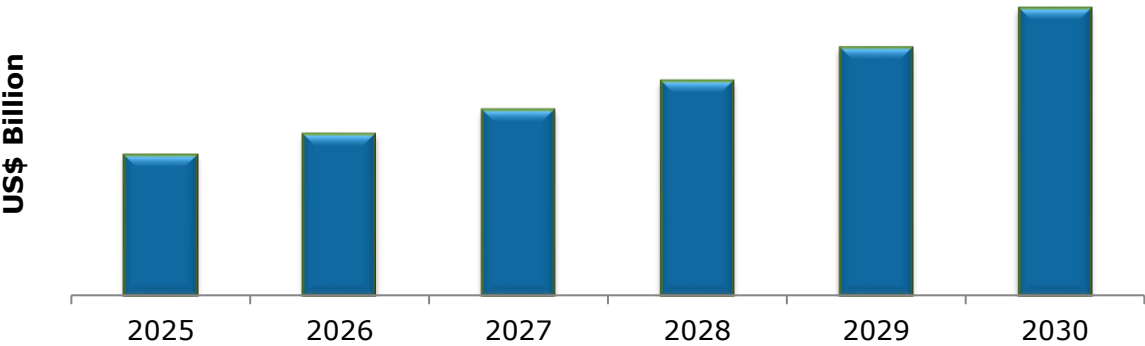
Global Smart Grid Transmission Market by Value



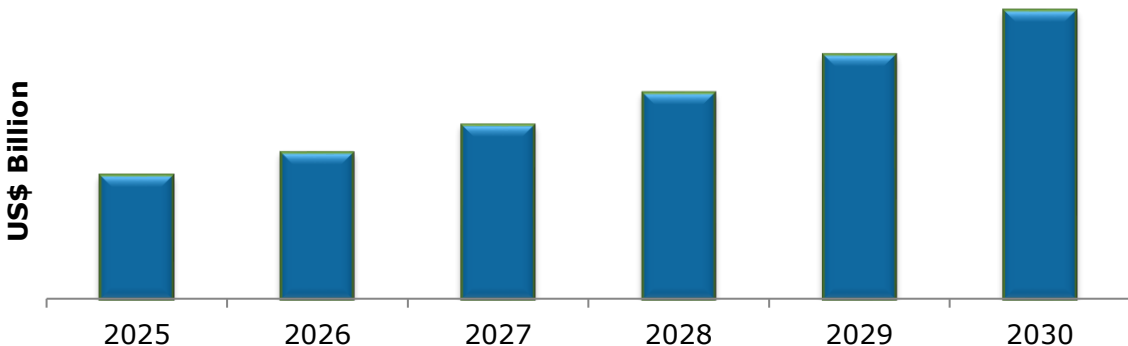
Application	CAGR (2025-2030)
Transmission	xx%
Distribution	xx%
Consumption	xx%
Generation	xx%

Smart Grid Market: Technology Analysis

Global Smart Grid Advanced Metering Infrastructure Market by Value



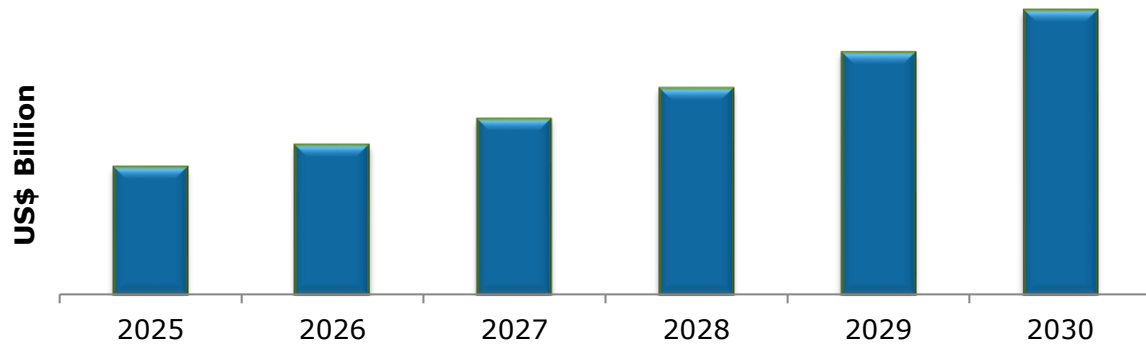
Global Smart Grid Distribution & Network Automation Market by Value



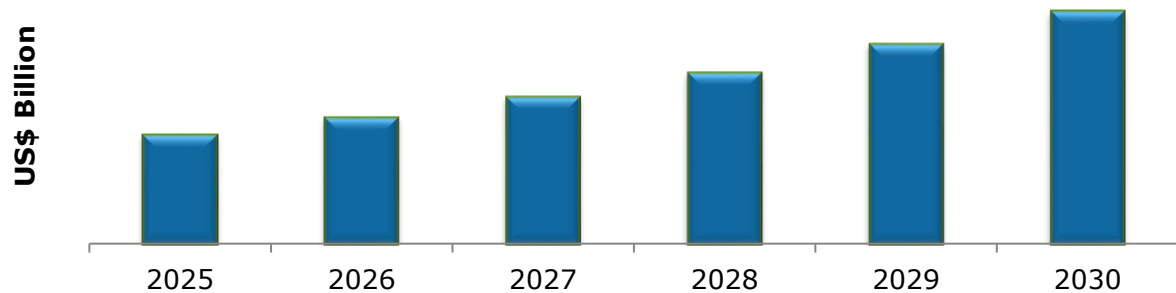
Technology	CAGR (2025-2030)
Advanced Metering Infrastructure (AMI)	xx%
Distribution & Network Automation	xx%
Grid Optimization	xx%
Demand Response	xx%
Others	xx%

Smart Grid Market: End User Analysis

Global Automotive Smart Grid Market By Value



Global Electronics & Semiconductors Smart Grid Market By Value



End User	CAGR (2025-2030)
Utility	xx%
Industrial	xx%
Residential	xx%
Commercial	xx%

North America Smart Grid Market: An Analysis

North America Smart Grid Market by Region; 2024



Region	Share (2024)	CAGR (2025-2030)
The US	xx%	xx%
Canada	xx%	xx%
Mexico	xx%	xx%

Europe Smart Grid Market: An Analysis

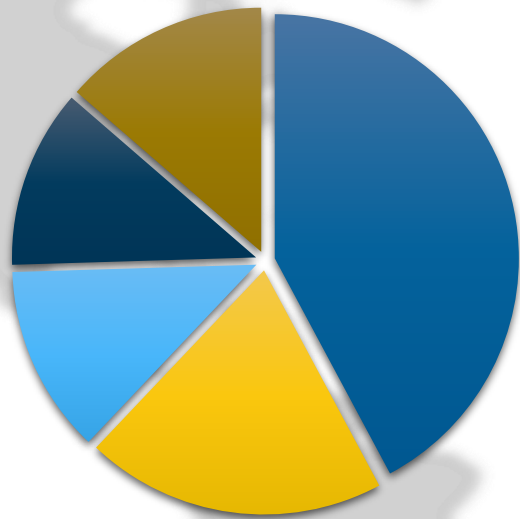
Europe Smart Grid Market by Region; 2024



Region	Share (2024)	CAGR (2025-2030)
Germany	xx%	xx%
UK	xx%	xx%
France	xx%	xx%
Italy	xx%	xx%
Rest of Europe	xx%	xx%

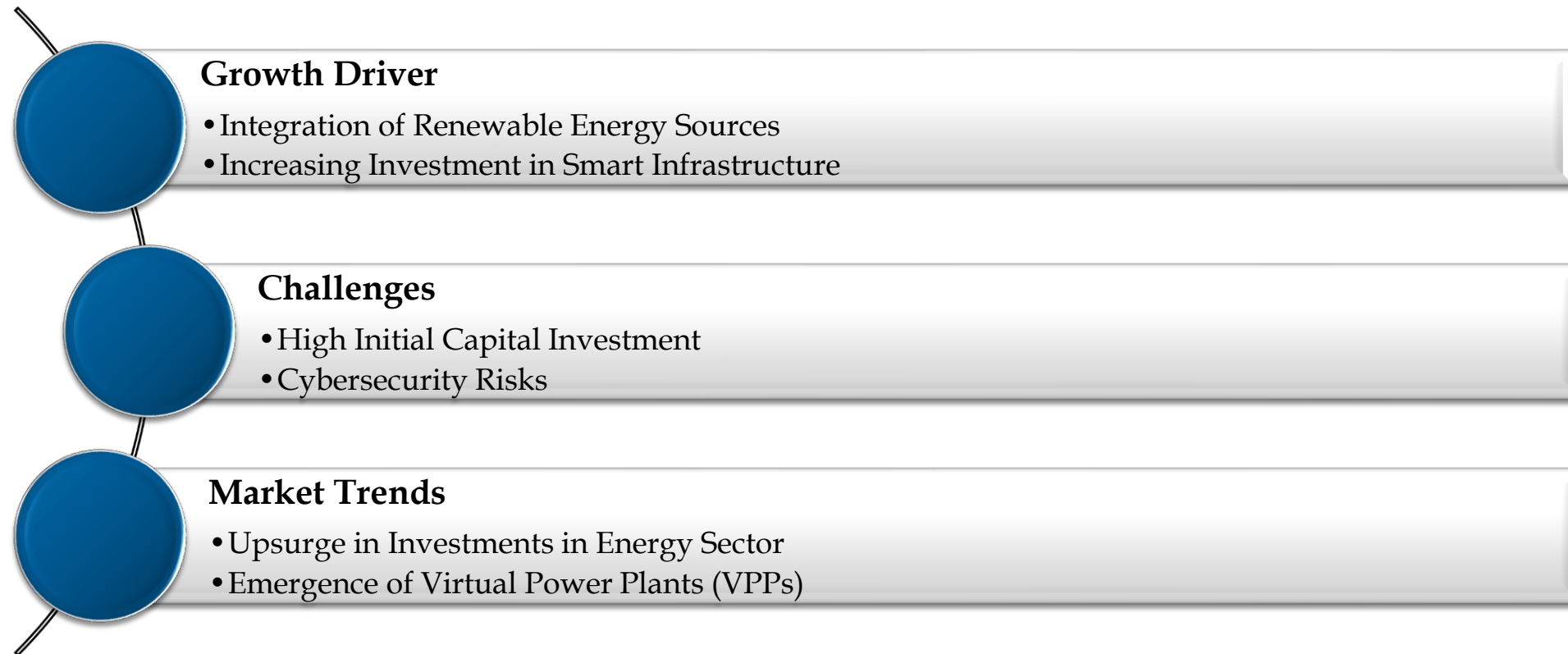
Asia Pacific Smart Grid Market: An Analysis

Asia Pacific Smart Grid Market by Region; 2024



Region	Share (2024)	CAGR (2025-2030)
China	xx%	xx%
Japan	xx%	xx%
India	xx%	xx%
South Korea	xx%	xx%
Rest of Asia Pacific	xx%	xx%

Global Smart Grid Market: Dynamics



Global Smart Grid Market: Competitive Landscape

Players Profiled

- ❑ ABB Group
- ❑ Schneider Electric SE
- ❑ Siemens AG
- ❑ Cisco Systems, Inc.
- ❑ GE Vernova Inc. (General Electric Co)
- ❑ International Business Machines Corporation
- ❑ Itron, Inc.
- ❑ Eaton Corporation PLC
- ❑ Honeywell International Inc.
- ❑ Hitachi, Ltd.
- ❑ Landis+Gyr Group AG
- ❑ Oracle Corporation.