

Microgrid Market by Connectivity (Grid Connected, Off-grid), Offering (Hardware (Controllers, Energy Storage), Software, Services), End User, Type, Power Source, Power Rating (Below 1 MW, 1-5 MW, 5-10 MW) and Region - Global Forecast to 2028

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Report description:

The global microgrid market is estimated to grow from USD 31.5 billion in 2023 to USD 79.0 billion in 2028; it is expected to grow at a CAGR of 20.1% during the forecast period. The market has a promising growth potential due to several factors, including decarbonization, rural electrification, resilience needs, and cybersecurity concerns. It presents opportunities through government initiatives, technological advancements, electric vehicle integration, distributed energy resources management, and expansion in the industrial and commercial sectors.

"Grid Connected microgrids expected to witness highest CAGR during the forecast period."

The grid-connected segment is poised to capture the largest market share and exhibit significant growth throughout the forecast period. Grid-connected microgrids establish a physical connection with the utility switching mechanism at the point of common coupling (PCC), offering the flexibility to disconnect and reconnect with the main grid as needed. These microgrids incorporate multiple distribution systems and advanced control mechanisms, which enhance power quality, mitigate environmental impact, and improve grid reliability. As a result, the demand for grid-connected microgrids is expected to rise due to their enhanced functionality and benefits.

"Microgrid software market likely to witness higher CAGR between 2023 and 2028."

The microgrid software market is projected to record the highest growth rate during the forecast period. Microgrid systems have become more complex, incorporating diverse energy sources, energy storage systems, and intelligent controls; advanced

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software solutions are needed to manage and optimize their operations effectively. Microgrid software provides comprehensive management capabilities such as energy flow control, load balancing, real-time monitoring, and predictive analytics, enabling microgrids' efficient and reliable performance.

"Healthcare to witness second highest growth rate for the end-user segment during the forecast period."

The healthcare sector offers significant growth opportunities in the microgrid market due to critical power requirements, the potential for energy cost savings, environmental sustainability focus, resilience and emergency preparedness needs, and a supportive regulatory environment. Healthcare facilities, such as hospitals and clinics, have critical power needs essential for patient care and safety. A Reliable and uninterrupted power supply is vital for operating medical equipment, life support systems, refrigeration for vaccines and medications, and maintaining lighting and HVAC systems. Microgrids provide a resilient power solution, ensuring continuous electricity supply even during grid outages or disruptions, thus addressing the critical power requirements of healthcare facilities.

"America is likely to hold the largest market share in 2022."

The microgrid market in the Americas is categorized further under North America and South America. North America held nearly 70% share of the market for microgrids in the Americas in 2022. The Americas dominates the microgrid market due to its technological leadership, supportive government policies, emphasis on energy security, diverse market opportunities, and active research and development. These factors have propelled the region's strong market presence in microgrids.

Breakdown of primaries

A variety of executives from key organizations operating in the microgrid market were interviewed in-depth, including CEOs, marketing directors, and innovation and technology directors.□

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

-□By Designation: C-level Executives = 35%, Directors = 30%, and Others (sales, marketing, and product managers, as well as members of various organizations) = 35%

-□By Region: Americas = 40%, Europe = 25%, Asia Pacific =20%, and Rest of the World = 15%

Key players profiled in this report

Schneider Electric (France), General Electric (US), Siemens (Germany), Eaton (US), ABB (Switzerland), Hitachi Energy Ltd. (Switzerland), Honeywell International Inc. (US), HOMER Energy (US), S&C Electric (US), Power Analytics (US) are the key players in the microgrid market. These leading companies possess a robust portfolio of products and services, establishing a strong presence in established and emerging markets. The study provides a comprehensive competitive analysis of these key players in the microgrid market, presenting their company profiles, recent developments, and key market strategies.

Research Coverage

This report offers detailed insights into the microgrid market based on Connectivity (Grid Connected, Off-grid connected), Offering (Hardware, Software, Services), Type (AC Microgrids, DC Microgrids, Hybrid), Pattern (Urban/Metropolitan, Semiurban, Rural Areas/ Islands), Power Source (Natural Gas, Solar PV, Combined Heat and Power, Diesel, Fuel Cell, and Others), Power Rating (Less Than 1 MW, 1 MW To 5 MW, 5 MW To 10 MW, and Above 10 MW), End User (Commercial & Industrial, Remote, Institutes & Campuses, Government, Utilities, Military, and Healthcare), and region (Americas, Europe, Asia Pacific, and Rest of the World which includes the Middle East and Africa (MEA)) and Africa.

The report also comprehensively reviews the microgrid market drivers, restraints, opportunities, and challenges. The report also covers qualitative aspects in addition to the quantitative aspects of these markets.

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

The report provides insights on the following pointers:

-□Analysis of key drivers (Increasing emphasis on decarbonization by end users and governments

Growing need for reliable, uninterrupted power supply; Surging use of microgrids for rural electrification, Rising instances of cyberattacks on energy infrastructure; Rising demand for EV charging infrastructure; Increasing need for demand response and load management capabilities), restraints (Huge installation and maintenance costs of microgrids; Complexities in grid interconnections), opportunities (Increasing number of microgrid projects across different industries; Surging energy demand and adoption of renewable energy in the Asia Pacific; Growing interest of investors in EaaS business model to minimize costs; Rising encouragement from governments for developing microgrid projects; Digitalization and smart grid integration) and challenges (Lack of standardization and regulatory frameworks related to microgrid operations; Technical challenges of microgrids operating in island mode; Complexities in standardizing the scalability of microgrids).

-□Product Development/Innovation: Detailed insights on upcoming technologies, research & development activities, and new product launches in the microgrid market

-□Market Development: Comprehensive information about lucrative markets - the report analyses the microgrid market across varied regions

-□Market Diversification: Exhaustive information about new products, untapped geographies, recent developments, and investments in the microgrid market

-□Competitive Assessment: In-depth assessment of market shares, growth strategies, and product offerings of leading players like Schneider Electric (France), General Electric (US), Siemens (Germany), Eaton (US), ABB (Switzerland), Hitachi Energy Ltd. (Switzerland), Honeywell International Inc. (US), HOMER Energy (US), S&C Electric (US), Power Analytics (US) among others.

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