

Global Subsea Power Grid System Market Size Study & Forecast, by Power Source (Renewable Energy, Non-Renewable Energy), System Configuration (Point-to-Point, Multi-Terminal, Hybrid), Application Area (Offshore Wind Farms, Oil and Gas Platforms, Undersea Mining Operations), Technology Type (High Voltage Direct Current (HVDC), Alternating Current (AC), Subsea Transformers), Market Component (Monitoring Systems, Control Systems, Cabling Solutions), and Regional Forecasts 2025–2035

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Abstracts

The Global Subsea Power Grid System Market is currently valued at approximately USD 8.51 billion in 2024 and is poised to grow at a robust compound annual growth rate (CAGR) of 5.15% over the forecast period from 2025 to 2035. The dynamic shift towards sustainable offshore energy harvesting has created an enormous demand for subsea electrical infrastructure that is efficient, reliable, and future-ready. Subsea power grid systems have emerged as a cornerstone of this transition, enabling seamless power transmission from deep-sea renewable and non-renewable installations to onshore utilities. These systems provide critical support for powering subsea operations and integrating remote offshore energy sources into national grids, particularly as offshore wind, undersea mining, and deep-sea oil platforms expand rapidly across the globe.

As global energy strategies pivot toward decarbonization and remote electrification, subsea power grids are being embraced for their ability to enhance subsea automation,

reduce carbon emissions, and optimize production uptime. A key driver fueling this growth includes the rapid proliferation of offshore wind projects, where subsea grids transmit power generated by turbines over hundreds of kilometers to the mainland. Simultaneously, advancements in high-voltage direct current (HVDC) transmission and the development of compact subsea transformers have unlocked new opportunities for underwater electrification. The demand for real-time data monitoring, high-end control systems, and corrosion-resistant cabling solutions is further transforming this sector, making it highly appealing to energy stakeholders looking to maximize lifecycle performance while minimizing maintenance costs.

From a regional lens, North America leads the market due to its large-scale offshore oil and gas projects and significant investments in subsea connectivity infrastructure across the Gulf of Mexico. Meanwhile, Europe remains a close contender, owing to its trailblazing offshore wind sector—especially in countries like the UK, Germany, and Denmark—backed by strong governmental mandates to achieve net-zero emissions. Asia Pacific is emerging as a high-growth region, driven by massive investments in offshore energy infrastructure in China, Japan, and South Korea. The region's rising demand for sustainable power and increasing maritime exploration activities are catalyzing investments in hybrid subsea systems and smart grid technologies. Latin America and the Middle East & Africa are gradually catching up, with Brazil, UAE, and Saudi Arabia investing in subsea infrastructure to support offshore field development and regional interconnectivity.

Major market player included in this report are:

ABB Ltd.

Siemens Energy AG

Baker Hughes Company

TechnipFMC Plc

General Electric Company

Aker Solutions ASA

Schneider Electric SE

Hitachi Energy Ltd.

Prysmian Group

McDermott International, Ltd.

Nexans SA

Subsea 7 S.A.

Oceaneering International, Inc.

Schlumberger Limited

Halliburton Company

Global Subsea Power Grid System Market Report Scope:

Historical Data – 2023, 2024

Base Year for Estimation – 2024

Forecast period – 2025–2035

Report Coverage – Revenue forecast, Company Ranking, Competitive Landscape, Growth factors, and Trends

Regional Scope – North America; Europe; Asia Pacific; Latin America; Middle East & Africa

Customization Scope – Free report customization (equivalent up to 8 analysts' working hours) with purchase. Addition or alteration to country, regional & segment scope*

The objective of the study is to define market sizes of different segments & countries in recent years and to forecast the values for the coming years. The report is designed to incorporate both qualitative and quantitative aspects of the industry within the countries

involved in the study. The report also provides detailed information about crucial aspects, such as driving factors and challenges, which will define the future growth of the market. Additionally, it incorporates potential opportunities in micro-markets for stakeholders to invest, along with a detailed analysis of the competitive landscape and product offerings of key players.

The detailed segments and sub-segments of the market are explained below:

By Power Source:

Renewable Energy

Non-Renewable Energy

By System Configuration:

Point-to-Point

Multi-Terminal

Hybrid

By Application Area:

Offshore Wind Farms

Oil and Gas Platforms

Undersea Mining Operations

By Technology Type:

High Voltage Direct Current (HVDC)

Alternating Current (AC)

Subsea Transformers

By Market Component:

Monitoring Systems

Control Systems

Cabling Solutions

By Region:

North America

U.S.

Canada

Europe

UK

Germany

France

Spain

Italy

Rest of Europe

Asia Pacific

China

India

Japan

Australia

South Korea

Rest of Asia Pacific

Latin America

Brazil

Mexico

Middle East & Africa

UAE

Saudi Arabia

South Africa

Rest of Middle East & Africa

Key Takeaways:

Market Estimates & Forecast for 10 years from 2025 to 2035.

Annualized revenues and regional level analysis for each market segment.

Detailed analysis of geographical landscape with Country level analysis of major regions.

Competitive landscape with information on major players in the market.

Analysis of key business strategies and recommendations on future market approach.

Analysis of competitive structure of the market.

Demand side and supply side analysis of the market.

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