

# **Hybrid Power Solutions Market by System Type (Solar-Fossil, Wind-Fossil, Solar-Wind-Fossil, Solar-Wind, Others), Grid Connectivity (On-Grid, Off-Grid), Capacity (Upto 100kW, 100kW-1MW, Above 1MW), End User & Region - Global Forecast to 2028**

<https://marketpublishers.com/r/H38D706619FEN.html>

Date: July 2023

Pages: 188

Price: US\$ 4,950.00 (Single User License)

ID: H38D706619FEN

## **Abstracts**

The hybrid power solutions market is estimated to grow from USD 2.4 Billion in 2023 to USD 4.0 Billion by 2028; it is expected to record a CAGR of 10.4% during the forecast period. The hybrid power solutions market is witnessing rapid growth owing to the increasing demand for sustainable and reliable energy solutions in diverse sectors, such as residential, commercial and industrial.

“Commercial: The second-fastest segment of the hybrid power solutions market, by end user”

Based on end user, the hybrid power solutions market has been split into three types: residential, commercial, and industrial. The commercial end user is growing in the hybrid power solutions market due to increasing focus on sustainability and energy efficiency by businesses as well as rapid urbanization. Hybrid systems enable companies to reduce operational costs and carbon footprints while ensuring reliable power supply, making them an attractive choice for environmentally conscious and cost-conscious businesses.

“Above 1 MW segment is expected to emerge as the largest segment based on capacity”

Based on capacity, the hybrid power solutions market has been segmented into upto 100kW, 100kW-1MW, and above 1 MW. The above 1 MW segment is expected to be

the largest segment owing to surge in demand from large-scale industrial and commercial applications. They require higher power capacities to meet energy needs efficiently and sustainably. Additionally, advancements in technology and cost-effectiveness of larger installations contributes to the growth.

“Middle East and Africa is expected to emerge as the second-largest region based on hybrid power solutions market”

By region, the hybrid power solutions market has been segmented into Asia Pacific, North America, South America, Europe, and Middle East & Africa. In the region, the hybrid power solutions market is driven by the need to expand energy access, especially in rural and remote areas with limited or no grid connectivity. International partnerships and collaborations have further accelerated the adoption of hybrid power solutions in the Middle East & Africa region. Investments from international organizations and development agencies have facilitated the implementation of projects and the transfer of knowledge and technology.

Off-Grid is expected to be the second-largest segment based on the grid connectivity

Off-Grid is expected to be the second-largest segment in the hybrid power solutions market between 2023–2028 due to the need for reliable power supply, continuous operations, and reduced dependency on fossil fuels while achieving sustainability goals. Integrating renewable energy with grid connectivity offers a cost-effective and sustainable solution, reducing reliance on fossil fuels.

Breakdown of Primaries:

In-depth interviews have been conducted with various key industry participants, subject-matter experts, C-level executives of key market players, and industry consultants, among other experts, to obtain and verify critical qualitative and quantitative information, as well as to assess future market prospects. The distribution of primary interviews is as follows:

By Company Type: Tier 1- 45%, Tier 2- 30%, and Tier 3- 25%

By Designation: C-Level- 35%, Director Levels- 25%, and Others- 40%

By Region: North America- 10%, Europe- 15%, Asia Pacific- 60%, the Middle East & Africa- 10%, and South America- 5%

Note: Others include product engineers, product specialists, and engineering leads.

Note: The tiers of the companies are defined on the basis of their total revenues as of 2021. Tier 1: > USD 1 billion, Tier 2: From USD 500 million to USD 1 billion, and Tier 3: The hybrid power solutions market is dominated by a few major players that have a wide regional presence. The leading players in the high voltage cables and accessories market are General Electric (US), Vertiv Group Corp. (US), Vestas (Denmark), Wartsila (Finland), and SMA Solar Technology AG (Germany).

#### Research Coverage:

The report defines, describes, and forecasts the hybrid power solutions market, by system type, power rating, grid connectivity, end user, and region. It also offers a detailed qualitative and quantitative analysis of the market. The report provides a comprehensive review of the major market drivers, restraints, opportunities, and challenges. It also covers various important aspects of the market. These include an analysis of the competitive landscape, market dynamics, market estimates, in terms of value, and future trends in the hybrid power solutions market.

#### Key Benefits of Buying the Report

Increased power generation from hybrid power plants in off-grid locations and cost efficiency due to adoption of hybrid power solutions drive the demand. Factors such as high initial investment costs and longer payback periods hinder market growth. The growing need for uninterrupted power supply in telecom infrastructure, coupled with a focus on reducing carbon emissions offer lucrative opportunities in this market. Complex system integration and the occurrence of solar panel failures are major challenges faced by countries in this market.

**Product Development/ Innovation:** The trends such as solar-wind, solar-wind-fossil, solar-fossil have led to more efficient, reliable, durable, and high power generation. The focus on hybrid power solutions has also led to the expectation that it would minimize the operating costs and will contribute more sustainable environment.

**Market Development:** The global scenario of hybrid power solution in power generation is evolving rapidly, with trends towards hybrid plants as they offer a balanced and reliable energy supply, utilizing the strengths of both systems i.e.,

renewable and conventionals.

**Market Diversification:** Huawei Technologies Co. Ltd. product Power-S offers a seamless solar hybrid power and backup solution designed generally for commercial and industrial environments, delivering reliable and high-quality power supply.

**Competitive Assessment:** In-depth assessment of market shares, growth strategies, and service offerings of leading players like General Electric (US), Vertiv Group Corp. (US), Vestas (Denmark), Wärtsilä (Finland), and SMA Solar Technology AG (Germany) among others in the hybrid power solution market.

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\*Details on Business Overview, Products/Solutions/Services Offered, Recent Developments, and MnM View (Key strengths/Right to Win, Strategic Choices Made, and Weaknesses and Competitive Threats) might not be captured in case of unlisted companies.

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