Rising Renewable Energy & Smart Grid Projects Drive High Voltage Cable Market Growth

High Voltage Cable Market to Reach $23.4 Billion by 2027, Fueled by Renewable Energy Growth

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According to a recent report by Allied Market Research, the global [high voltage cable market](#) was valued at $14.6 billion in 2019 and is projected to grow to $23.4 billion by 2027, registering a CAGR of 6.0% from 2020 to 2027. The increasing demand for efficient energy transmission, especially in industrial, renewable, and infrastructure applications, is fueling the growth of the high voltage cable market.

> High voltage cable market to hit $23.4B by 2027, driven by renewable energy, smart grids, and urbanization across Asia-Pacific & Europe."
>
> *Allied Market Research*

High voltage cables play a vital role in power systems by enabling the transfer of electricity over long distances—from power plants to substations, grids, or directly to industrial consumers. As electrification rises globally, especially in Asia-Pacific and Europe, these cables are proving essential for maintaining a stable and sustainable energy infrastructure.

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Key Market Drivers

1. Renewable Energy Integration

The accelerating shift toward renewable energy sources—such as wind, solar, and hydroelectric power—is a significant factor driving HVC market expansion. Offshore and remote renewable power facilities require reliable high-capacity cables, particularly submarine and underground types, to transmit electricity efficiently to grid systems.

2. Urbanization and Industrialization

Developing countries like China, India, and Japan are witnessing rapid urban expansion, increasing electricity demands in metropolitan areas and industrial hubs. This growth necessitates robust grid expansion and upgrades, further boosting the demand for high voltage cables.

3. Grid Modernization and Electrification

Aging power infrastructure in regions like North America and Western Europe is being upgraded with smart grid solutions that include high-efficiency transmission lines and advanced HVC systems. The growing adoption of electric vehicles (EVs), smart cities, and industrial automation also calls for modern, high-capacity cabling infrastructure.

4. Offshore Power Projects

Rising investments in offshore wind farms and deep-sea energy installations are increasing the need for submarine high voltage cables, which offer secure and efficient electricity transfer in underwater environments.

Market Segmentation

By Type

The high voltage cable market is categorized into overhead, underground, and submarine cables. In 2019, the underground and submarine segments jointly held a market share of 89.7%, with underground cables alone accounting for 51.5%.

These segments are projected to dominate during the forecast period:

Submarine cables are forecasted to grow at a CAGR of 7.3%

Underground cables are expected to grow at 5.5% CAGR

Their cumulative market share is anticipated to increase to 91.6% by 2027

These types of cables are favored for their aesthetic appeal, safety advantages, and lower maintenance requirements, particularly in urban and environmentally sensitive areas.

By End User

The primary end-user segments for HVCs include:

Industrial

Renewable Energy

Infrastructure

In 2019, industrial and renewable energy applications together accounted for 84.6% of the market share, with the industrial sector contributing approximately 43.4%.

The infrastructure and renewable energy segments are expected to see rapid growth:

Infrastructure: 7.9% CAGR

Renewable Energy: 6.9% CAGR

Together, these two segments are expected to expand their combined market share from 56.6% in 2019 to 61.9% by 2027. This growth is driven by urban development, smart city projects, and increased renewable installations.

Regional Analysis

The Asia-Pacific region dominated the global high voltage cable market in 2019, accounting for nearly 44.8% of the total market share, followed closely by Europe. Together, Asia-Pacific and Europe contributed to around 68.6% of the global HVC market.

Significant growth is also expected in:

LAMEA (Latin America, Middle East, and Africa): CAGR of 7.4%

Asia-Pacific: CAGR of 7.0%

These regions are investing heavily in energy infrastructure, rural electrification, and renewable energy projects, providing ample opportunities for market expansion.

Key Market Players

Prominent players shaping the high voltage cable industry include:

ABB

Prysmian Group

Nexans

NKT Cables

General Cable Technologies Corporation

These companies are focusing on technological advancements, strategic partnerships, and expanding production capacities to meet the increasing global demand for high-performance cables.

Opportunities and Challenges

Opportunities:

Surge in renewable energy projects worldwide

Expansion of offshore wind farms

Government initiatives for smart grid development

Rising adoption of [underground and submarine cables]() in urban and coastal regions

Challenges:

High installation costs, particularly for submarine and underground cables

Regulatory and environmental compliance hurdles

Complexity in grid integration for large-scale renewable projects

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Conclusion

The global high voltage cable market is poised for strong growth through 2027, driven by an urgent need for energy-efficient, high-capacity transmission systems. As countries prioritize sustainable energy transitions and infrastructure modernization, high voltage cables—especially underground and submarine types—will play a crucial role in powering future-ready grids.

With increased investments in smart cities, renewable energy, and power transmission, the HVC market offers abundant opportunities for innovation, expansion, and long-term value.

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