

HVDC Transmission Market by Component (Converter Stations, Transmission Cables), Technology (CCC, VSC, LCC, HVDC, UHVDC), Project Type (point-to-point, back-to-back, multi-terminal), Application, Region - Global Forecast to 2028

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Abstracts

The HVDC transmission market is projected to reach USD 14.9 billion by 2028 from USD 11.4 billion in 2023, at a CAGR of 5.4% during the 2023–2028 period. The increasing number of VSC-based HVDC projects, the growing number of renewable energy projects globally, surging demand for reliable power supplies, and supportive government initiatives for power transmission are the major factors driving the market growth globally. Furthermore, an increasing number of technological advancements related to HVDC transmission and the growing need for integration of power grids are expected to provide ample growth opportunities for market players.

“Infeed urban areas application to register the highest CAGR in the HVDC transmission market during the forecast period.”

HVDC transmission is highly suitable for transmitting electricity into densely populated urban areas where overhead transmission lines could cause significant obstructions. Despite being more expensive, underground transmission lines are extensively preferred in urban areas where it is difficult to have overhead transmission cables. Furthermore, in recent areas, underground cables have been used in various urban infrastructure development projects for aesthetic appeal. The growing number of urban development projects globally is expected to provide growth opportunities for market players in the HVDC transmission market.

“Multi-terminal systems to register the highest CAGR during the forecast period.”

Multi-terminal systems are extensively used for connecting non-synchronous power systems and provide superior flexibility in electricity exchange between 2 or 3 converter stations. Multi-terminal systems are cost-effective and are highly suitable for transmitting power over longer distances. VSC-based technology is extensively used in multi-terminal HVDC systems as it consists of 2-level or multilevel converters that enable power reversal. The increasing need for integration of power grids is a major factor driving the market growth for multi-terminal systems.

“Europe is expected to account for the second-largest market share during the forecast period.”

Significantly growing use of renewable energy and the subsequent increase in renewable energy projects in the region are the major factors driving the market growth in Europe. Furthermore, the growing number of HVDC projects being commissioned in countries such as the UK is expected to provide growth opportunities for market players. Moreover, the presence of established market players such as Siemens Energy (Germany) and Prysmian Group (Italy) is also expected to propel the market growth in the region.

The break-up of the profile of primary participants in the HVDC transmission market-

By Company Type: Tier 1 – 30%, Tier 2 – 50%, Tier 3 – 20%

By Designation Type: C Level – 25%, Director Level – 35%, Others – 40%

By Region Type: Americas – 35%, Europe – 30%, Asia Pacific – 25%, Rest of the World (RoW) – 10%

The major players in the HVDC transmission market are Hitachi (Japan), Siemens Energy (Germany), Mitsubishi Electric Corporation (Japan), General Electric (US), and Prysmian Group (Italy), among others. These companies focus on strategies such as collaborations, partnerships, acquisitions, and joint ventures to strengthen their position in the HVDC transmission market.

Research Coverage

The report segments the HVDC transmission market and forecasts its size based on

HVDC Transmission Market by Component (Converter Stations, Transmission Cables), Technology (CCC, VSC, LCC, HV...

component, project type, technology, application, and region. The report also provides a comprehensive review of drivers, restraints, opportunities, and challenges influencing market growth. The report also covers qualitative aspects in addition to the quantitative aspects of the market.

Reasons to buy the report:

The report will help the market leaders/new entrants in this market with information on the closest approximate revenues for the overall HVDC transmission market and related segments. This report will help stakeholders understand the competitive landscape and gain more insights to strengthen their position in the market and plan suitable go-to-market strategies. The report also helps stakeholders understand the pulse of the market and provides them with information on key market drivers, restraints, opportunities, and challenges.

The report provides insights on the following pointers:

Analysis of key drivers (Growing demand for VSC technology, shift towards renewable energy, increasing demand for renewable power supplies, supportive government policies and initiatives for HVDC transmission), restraints (high initial investment, reduced demand due to distributed and off-grid power generation, high cost of circuit breakers), opportunities (technological advancements, electrification of transportation, growing need for integrated networks), and challenges (lack of standardization and interoperability, and stringent regulatory environment) influencing the growth of the HVDC transmission market.

Product Development/Innovation: Detailed insights on upcoming technologies, research & development activities, and deals in the HVDC transmission market.

Market Development: Comprehensive information about lucrative markets – the report analyses the HVDC transmission market across varied regions.

Market Diversification: Exhaustive information about new products, untapped geographies, recent developments, and investments in the HVDC transmission market.

Competitive Assessment: In-depth assessment of market shares, growth strategies, and product offerings of leading players such as Hitachi (Japan),

Siemens Energy (Germany), Mitsubishi Electric Corporation (Japan), General Electric (US), and Prysmian Group (Italy).

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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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