

## **Hvdc Transmission Systems Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)**

Market Report | 2023-01-23 | 125 pages | Mordor Intelligence

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### **Report description:**

The HVDC transmission systems market had a market size of around USD 8.85 billion in 2020 and is expected to reach USD 17.23 billion by 2027, registering a CAGR of more than 8.68% during 2022-2027. Due to the COVID-19 pandemic, the HVDC transmission systems market was affected adversely due to the postponement and delays of several projects around the world. For instance, in March 2020, the SOO Green HVDC link transmission line project in Iowa, United States, was postponed due to the pandemic. Further, the growth of utility-scale renewable energy plants and the shift away from fossil fuels will drive the market. It helps to transmit electricity from remote renewable plants over a long distance without much energy loss than the HVAC system. In addition, rural electrification will play a significant role in increasing the demand for HVDC transmission systems in developing regions such as Asia-Pacific. However, with the increasing share of distributed and off-grid power generation, the need and, in turn, the demand for HVDC transmission systems is expected to be reduced, which is expected to restrain the market during the forecast period.

### **Key Highlights**

The submarine HVDC transmission system market is expected to hold the largest share of the market on account of the development of submarine power transmission systems across the world. The submarine transmission of electricity is gaining importance on account of the increasing focus on power trading between countries.

The growing energy demand, as well as the growth of the renewable energy sector in the Middle-East, is expected to create significant opportunities for the HVDC transmission systems market in the near future.

The European market is the largest, and it is incredibly competitive and dominated by tier-1 players. The Asia-Pacific region, driven by Chinese and Indian HVDC investments, has gained huge momentum over the last two years.

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## HVDC Transmission Systems Market Trends

### Increasing Demand for Submarine HVDC Transmission Systems

The submarine HVDC transmission system market is likely to grow significantly on account of the development of submarine power transmission systems across the world. The submarine transmission of electricity is gaining importance on account of the increasing focus on power trading between countries.

The HVDC submarine power transmission system is a key technology for the development of future power transmission networks. HVDC transmission is the only solution available for the transfer of high power across long subsea distances. The major purposes served by HVDC submarine transmission are to interconnect countries or islands separated by sea and to connect remote offshore platforms to main transmission grids

Moreover, the HVDC submarine power transmission system helps countries separated by water bodies to trade electricity from each other, which is a major driver for the segment as countries are interested in generating revenue from excess electricity generated through renewable energy sources. For instance, as of September 2021, Greece and Egypt are in talks with each other to lay 2 gigawatts of HVDC submarine interconnectors on the bottom of the Mediterranean Sea and link their electricity systems. Furthermore, the development of offshore projects, such as wind power plants and offshore oil and gas upstream projects, offers increasing business opportunities for HVDC technology across the world.

### Europe to Dominate the Market

The European power generation mix is expected to change considerably in favor of renewables over the next few years, with countries, such as Germany, Spain, Belgium, and France, increasingly moving toward a low-carbon economy. The region also has several policies in place, such as the EU's renewable energy directive and national renewable energy action plans that support the transition to a low-carbon energy system.

The energy transition continues to be an integral part of Germany's energy landscape with ambitious goals to cut CO2 emissions by 80%, as well as increase the share of renewable energy in the total energy consumption to 60% and 80% of electricity generated from renewable sources by 2050.

With the increasing integration of renewable energy sources and the growing need to enhance the security of supply, HVDC grid technology is expected to evolve in the country. Moreover, investments in the offshore wind industry, solar photovoltaic, grid expansion, and energy storage projects require smart energy infrastructure to balance the fluctuating supply of renewable sources.

For instance, TenneT started the tender for the platform and HVDC system for the offshore Dutch IJmuiden Ver projects and will start the project by the end of 2022 for the offshore IJmuiden Ver wind area. In addition, the project is expected to be commissioned by 2028.

Excess renewable energy generation capacity in France and Spain is expected to be more easily transmitted between the two countries following the granting of EUR 578 million by the European Union to build an undersea power cable across the Bay of Biscay. This, in turn, is likely to require HVDC transmission lines to transmit with low transmission losses, to improve supply security and resource diversification, as well as pave the way for power market integration in southwestern Europe.

### HVDC Transmission Systems Market Competitor Analysis

The HVDC transmission systems market is consolidated. The major companies include ABB Ltd, Siemens AG, Toshiba Corporation, General Electric Co., and Mitsubishi Electric Corporation, among others.

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