

Australia High Voltage Direct Current (HVDC) Transmission Systems - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

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Report description:

The Australia High Voltage Direct Current Transmission Systems Market is expected to register a CAGR of greater than 6.99% during the forecast period.

The market was negatively impacted by COVID-19 in 2020. Currently. The market has reached pre-pandemic levels.

Key Highlights

- Over the long term, increasing deployment of offshore wind farms, low cost for long-distance transmission, controllability, and low short circuit current are some significant factors driving the Australian HVDC transmission system market over the forecast period.

- On the other hand, high installation costs and high losses for smaller transmission distances are likely to hinder the market growth.

- Nevertheless, the growth of offshore wind power technology and the offshore oil and gas sector is likely to create immense opportunities for the market studied.

Australia High Voltage Direct Current Transmission System Market Trends

Increasing Demand for Submarine HVDC Transmission System

- Submarine electricity transmission is gaining importance because of the increasing focus on power trading between countries.

The HVDC submarine power transmission system is crucial for developing future power transmission networks.

- It is the only solution for transferring high power across long subsea distances. For these reasons, HVDC lines are preferred for interconnecting offshore wind plants worldwide.

- In the HVDC transmission system, the submarine power cables can be less costly, especially on a long link where the capacitance of the cable requires too much additional charging current.

- As of 2021, wind energy holds the largest market share of renewable energy capacity at 9,126 MW, increasing from 1,841 MW in 2010.

- Therefore, the increasing number of offshore wind farms and interconnections between countries through submarine cables are expected to increase the demand for submarine transmission systems over the forecast period.

Increased Penetration of Renewable Energy Driving HVDC Transmission System

- Given the increase in renewable generation in recent years, it has become increasingly important to deploy direct high-voltage current (HVDC) transmission lines. The HVDC transmission lines have a significant role to play when additional renewable generation sources become integrated into electrical grids.

- Australia is a vast country with a low population density. It is also an energy-self-sufficient country that is rich in energy resources, from fossil-based to renewable energy. Although coal and natural gas account for a significant share of electricity generation in Australia, the country plans to retire approximately 63% of the existing coal generation fleet by 2036. As of 2021, coal accounted for the largest share of electricity generation, with an installed capacity of 137.4 terawatt-hours, followed by renewable energy, with an installed capacity of 61.3 Terawatt-hours.

- In 2021, Australia exceeded 23% of total electricity production from renewables for the first time. There has been a large-scale implementation of renewable energy projects in the country located in far-off places, and they need to be grid-connected. These can be connected through the HVDC transmission system to reduce the losses.

- The growing share of renewables in the country is expected to significantly supplement the demand for HVDC transmission systems in Australia, as most renewables projects are far-off from the demand centers.

- The government plans to utilize its surplus energy resources by integrating more renewables. Super-grid interconnection, linking Australia to Asian grids, like the Australian-Asian (Power) Grid (AAG) Project. Therefore, this is expected to create higher demand for HVDC transmission systems in the next few years.

Australia High Voltage Direct Current Transmission System Industry Overview

The market for high voltage direct current (HVDC) transmission systems in Australia is consolidated. Some of the majors in the market include (in no particular order) ABB Ltd., Siemens AG, Toshiba Corporation, General Electric Company, and Mitsubishi Electric Corporation.

Additional Benefits:

- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

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