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

Market Report | 2025-04-28 | 100 pages | Mordor Intelligence

AVAILABLE LICENSES:

- Single User License $4750.00
- Team License (1-7 Users) $5250.00
- Site License $6500.00
- Corporate License $8750.00

Report description:

The South and Central America High-Voltage Direct Current Transmission Systems Market is expected to register a CAGR of greater than 25% during the forecast period.

COVID-19 negatively impacted the market in 2020. Presently the market is likely to reach pre-pandemic levels.

Key Highlights
- Over the long term, factors such as low cost for long-distance transmission, controllability, and lower short circuit current are expected to drive the HVDC transmission systems in the South and Central America region.
- On the other hand, 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.
- Nevertheless, the growing energy demand, as well as the growth of the renewable energy sector in the South America region, is expected to create significant opportunities for the HVDC transmission systems market soon.
- Brazil is expected to dominate the South and Central America market, owing to the increased electricity demand in hydroelectric generation.

South Central America HVDC Transmission Systems Market Trends

HVDC Overhead Transmission System Segment to Dominate the Market

- High-voltage overhead transmission is a popular means of power transmission in most of the world. DC decreases the cost of long-distance power transmission with overhead lines and cables.
- The high-voltage overhead transmission is much less expensive to build and much quicker to repair than the underground transmission. However, it has seen decreasing application in densely-populated urban and commercial areas. Though the cost of an overhead HVDC transmission line is significantly less than its HVAC counterpart, the converter stations at each end of the transmission line are higher, increasing the total cost of the HVDC transmission systems.
- HVDC overhead transmission systems have a simpler requirement for line tower construction. The overhead HVDC transmission infrastructure can transport more power than the HVAC system. The number of conductors required for a bipolar overhead line for a direct current system needs two insulated conductors instead of three, as in the case of the alternating current system.
- In 2021, Brazil was the leading South American country in electricity generation, producing 656 terawatt-hours. The growing electricity generation will support the growth of the HVDC overhead transmission system across the region.
- In December 2022, the government of Colombia announced that it plans to connect up to 3,000 MW of renewable energy capacity to the national grid via an overhead high-voltage direct current (HVDC) transmission line in the country's north. The government will provide USD 1 million to finance a studdefiningne the project's technical specifications.
- Owing to the above points, HVDC overhead transmission system is expected to dominate the market during the forecast period.

Brazil to Dominate the Market

- The market for HVDC in Brazil is likely to grow at a significant rate during the forecast period. Brazil has the largest electricity market in South America. Hydroelectricity provides more than 70% of Brazil's generation. Its total power generation installed capacity is comparable to that of Italy and the United Kingdom, with a much more extensive transmission network.
- Electricity generation in Brazil amounted to over 656 terawatt-hours in 2021, an increase of some 5.6 percent compared to the previous year. Brazil generates the third-highest amount of electricity in the Americas. Chile and the rest of the central and Southern American regions follow the region. Hydroelectricity is the major form of electricity, and the remaining electricity gets generated by fossil fuel and biomass.
- According to the Brazilian Ministry of Mines and Energy, Brazil's energy sector received almost USD 85 billion in investments between 2019 and 2021, including electricity generation, power transmission, and new energy sources. Considering the previous year's investments, renewable energy generation is going to gain even more attention in the coming years and attract investments because of Brazil's powerful environmental agenda. To transmit the output of these upcoming power plants, there is a need to develop a new public HVDC electric power transmission system, which includes the construction, operation, and maintenance of facilities.
- Going forward, according to the electricity clearing house (CCEE), Brazil's energy consumption in 2021 increased by 4.1% from the previous year to an average of 64,736 MW. A growth of 14% in 2021, at an average of 22,244 MW, was recorded in Brazil's free energy market, which is made up of the country's industry and large companies. In the regulated sector, composed of smaller consumers during the year, demand increased by 0.8%.
- Due to the spatial mismatch between the additional consumption and generation potential and the expected future electricity demand, long-distance transmission capacity investments are required. Since HVDC technology incurs little loss, it is particularly suitable for different expansion scenarios in the coming years based mainly on hydropower or alternative renewable energy sources (mostly wind and solar).
- In May 2022, GE Renewable Energy's Hydro and Grid Solutions jointly signed a contract for the technological upgrade of the 14GW Itaipu hydropower plant on the Parana River between Brazil and Paraguay. Under this contract, GE supplies the medium voltage cubicles, energy management systems, and automation technology, as well as the delivery of protection, control, and supervision systems for the generating units, GIS substation, and the existing 500 kV transmission lines.

- Therefore, based on the above-mentioned factors, Brazil is expected to positively impact the HVDC transmission systems market in the South & Central America region during the forecast period.

South Central America HVDC Transmission Systems Industry Overview

The South and Central America HVDC transmission systems market needs to be more cohesive. Some major players (in particular order) include Siemens AG, Toshiba Corporation, General Electric Company, ABB Ltd, and Prysmian Group.

Additional Benefits:

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

Table of Contents:

SCOTTS INTERNATIONAL

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

Market Report | 2025-04-28 | 100 pages | Mordor Intelligence

To place an Order with Scotts International:

- - Print this form
- - Complete the relevant blank fields and sign
- - Send as a scanned email to support@scotts-international.com

ORDER FORM:

Select license	License	Price
	Single User License	$4750.00
	Team License (1-7 Users)	$5250.00
	Site License	$6500.00
	Corporate License	$8750.00
	VAT	
	Total	

*Please circle the relevant license option. For any questions please contact support@scotts-international.com or 0048 603 394 346.

** VAT will be added at 23% for Polish based companies, individuals and EU based companies who are unable to provide a valid EU Vat Numbers.

Email*		Phone*	
First Name*		Last Name*	
Job title*			
Company Name*		EU Vat / Tax ID / NIP number*	
Address*		City*	
Zip Code*		Country*	

Date	2025-06-23
Signature	