

# The High Voltage Direct Current (HVDC) Transmission Market 2013-2023

<https://marketpublishers.com/r/HCABC7A1136EN.html>

Date: June 2013

Pages: 154

Price: US\$ 2,635.00 (Single User License)

ID: HCABC7A1136EN

## Abstracts

High Voltage Direct Current (HVDC) transmission is the method of choice for the subsea transmission of electricity, the connection of disparate AC grids and/or the movement of bulk amounts of electrical power over vast distances. In each of these three respects HVDC transmission is superior to its competitor HVAC (high voltage alternating current).

Composed of the capital expenditure upon HVDC transmission, this market is due for steady, incremental growth over the next 5 years. Visiongain anticipates, nevertheless, that some regions of the world, such as South East Asia and Africa, have the potential to attract significant investment given opportune political and regulatory circumstances.

The majority of HVDC transmission constructed is of the point-to-point variety; with no integrated HVDC circuit breaker proven commercially viable, electricity can only be moved between two points. This limits potential. Subsequently, it is used, for the most part, to connect large power resources, such as a hydroelectric power generation facilities, to load centres. The ABB HVDC circuit breaker, announced in 2012, is a game-changer for the industry that could enable the creation of a HVDC grid.

Asia dominates the HVDC transmission market. In China, the government's ambition to connect hydropower resources in the South-West and coal reserves in the North-West to Eastern and South-Eastern cities is the prime agent of this dominance. In addition, with fewer regulatory or right-of-way obstacles facing development than in Europe or North America, the Asian share of the HVDC transmission market declines relatively little during the next 10 years. Lower barriers to project development, combined with low political instability, also make Asian investment outcomes more certain than any other region.

Overall, the outlook for HVDC transmission is positive. The core drivers for spending on this method of transmission are in place: power balancing, energy efficiency gains, greater affordability for end users and the connection of renewables. However, rigid regulation, right-of-way issues, political instability and political opposition to hydropower conspire to limit growth and amplify investment uncertainty and risk.

Visiongain has determined that the value of the High Voltage Direct Current (HVDC) Transmission market will reach \$16,556.1m in 2013.

### **What makes this report unique?**

Visiongain consulted widely with industry experts and full transcripts from these exclusive interviews are included in the report. As such, the report has a unique blend of primary and secondary sources providing informed opinion. The report provides insight into key the drivers for, and restraints on, HVDC transmission capital expenditure. It also identifies future growth areas, analyses leading companies and provides a unique blend of qualitative analysis combined with extensive quantitative data including global and regional market forecasts from 2013-2023 - all highlighting key business opportunities.

### **Why you should buy The High Voltage Direct Current (HVDC) Transmission Market 2013-2023**

154 pages of comprehensive analysis

2 Exclusive Visiongain interviews with:

Marcello Del Brenna, Chairman of the Utilities Board at Europacable

Ingard Moen, Vice President of Business Development at Statnett

86 tables, charts, and graphs

Global HVDC transmission market forecasts between 2013-2023

Six regional market forecasts between 2013-2023 for:

Asia

Europe

North America

South America

Africa

South East Asia and Oceania

Within these regional markets, HVDC transmission capital expenditure outlooks and analyses for the following countries is provided:

China

India

Sri Lanka

South Korea

US

Canada

A PEST analysis

In-depth analysis of the leading 5 companies active in the supply of HVDC components.

### **You can order this report today**

Gain an understanding of how to tap into the potential of this market by ordering The High Voltage Direct Current (HVDC) Transmission Market 2013-2023

## Contents

### **1. EXECUTIVE SUMMARY**

- 1.1 The Global HVDC Market Overview
- 1.2 Benefits of This Report
- 1.3 Who is This Report For?
- 1.4 Methodology
- 1.5 Global HVDC Transmission Market Forecast 2013-2023
- 1.6 Regional HVDC Transmission Market Forecasts 2013-2023

### **2. INTRODUCTION TO THE HVDC TRANSMISSION MARKET**

- 2.1 HVDC Transmission Market Definition
- 2.2 HVDC Transmission Market Structure Overview
- 2.3 Types of HVDC Transmission Project
- 2.4 Brief History of HVDC Transmission

### **3. GLOBAL HVDC TRANSMISSION MARKET FORECAST 2013-2023**

- 3.1 Environmental Considerations
- 3.2 Reducing Greenhouse Gas Emissions
- 3.3 HVDC Circuit Breakers - A HVDC Transmission Game Changer
- 3.4 HVDC versus Gas Transport Solutions
- 3.5 Large Scale Solar Integration Possibilities
- 3.6 Grid Management and Renewables Integration
- 3.7 Vast Distance Transfers
- 3.8 Energy Security
- 3.9 Power Balancing and Investment Decision Vulnerability
- 3.10 Underground versus Overground
- 3.11 Global HVDC Transmission Market Drivers & Restraints
- 3.12 Advantages and Disadvantages of HVDC Transmission
  - 3.12.1 Advantages
  - 3.12.2 Disadvantages
- 3.13 HVDC Back-to-Back (B2B) Station

### **4. REGIONAL HVDC TRANSMISSION MARKETS 2013-2023**

- 4.1 Regional HVDC Transmission Markets Share Forecast 2013-2023

- 4.2 Barriers to Entry Analysis for Regional HVDC Transmission Markets
- 4.3 The Asian HVDC Transmission Market 2013-2023
  - 4.3.1 Asian HVDC Transmission Market Drivers & Restraints
  - 4.3.2 Chinese HVDC Outlook
  - 4.3.3 Indian HVDC Outlook
  - 4.3.4 Sri Lankan HVDC Outlook
  - 4.3.5 South Korean HVDC Outlook
  - 4.3.6 Asian HVDC Transmission Projects & Upgrades Planned or Under Construction
- 4.4 European HVDC Transmission Market Forecast 2013-2023
  - 4.4.1 European HVDC Transmission Market Drivers & Restraints
  - 4.4.2 Southern European Outlook
  - 4.4.3 UK and Ireland Outlook
  - 4.4.4 Western and Central European and Scandinavian Outlook
  - 4.4.5 Desertec and Other HVDC Grid Propositions
  - 4.4.6 European HVDC Transmission Projects & Upgrades Planned or Under Construction
- 4.5 North American HVDC Transmission Market Forecast 2013-2023
  - 4.5.1 North American HVDC Transmission Drivers & Restraints
  - 4.5.2 Canadian HVDC Outlook
  - 4.5.3 US HVDC Transmission Outlook
  - 4.5.4 North American HVDC Transmission Projects & Upgrades Planned or Under Construction
- 4.6 South American HVDC Transmission Market 2013-2023
  - 4.6.1 South American HVDC Transmission Drivers & Restraints
  - 4.6.2 South American HVDC Transmission Projects & Upgrades Planned or Under Construction
- 4.7 African HVDC Transmission Market 2013-2023
  - 4.7.1 African HVDC Transmission Market Drivers & Restraints
  - 4.7.2 Renewables Potential
  - 4.7.3 North African HVDC Outlook
  - 4.7.4 DRC Hydropower and African Power Demands
  - 4.7.5 Development Finance
  - 4.7.6 African HVDC Transmission Projects & Upgrades Planned or Under Construction
- 4.8 South East Asian and Oceanian HVDC Transmission Market 2013-2023
  - 4.8.1 South East Asian and Oceanian HVDC Transmission Drivers & Restraints
  - 4.8.2 South East Asian and Oceanian HVDC Transmission Projects & Upgrades Planned or Under Construction

## **5. PEST ANALYSIS OF THE HVDC TRANSMISSION MARKET 2013-2023**

## **6. EXPERT OPINION**

### **6.1 Europacable**

- 6.1.1 Europacable Objectives
- 6.1.2 Common Points of Contention for the European HVDC Market
- 6.1.3 Undergrounding
- 6.1.4 Permitting for HV Cables in Europe
- 6.1.5 Exciting European HVDC Projects
- 6.1.6 HVDC Circuit Breaker
- 6.1.7 Cable Supply Capabilities
- 6.1.8 Cable Specification Capabilities
- 6.1.9 Limitation of Investment in Europe
- 6.1.10 HVDC Market Outside of Europe

### **6.2 Statnett**

- 6.2.1 Statnett and HVDC
- 6.2.2 Nordic and Northern European HVDC Outlook
- 6.2.3 Statnett HVDC Capital Expenditure Commitment
- 6.2.4 Sydvestlinken Project Update
- 6.2.5 Nordic HVDC Transmission Drivers
- 6.2.6 Constraints on HVDC Transmission Capital Expenditure

## **7. LEADING COMPANIES IN THE HVDC TRANSMISSION MARKET**

### **7.1 Leading HVDC Transmission Component Suppliers**

- 7.1.1 ABB Overview
  - 7.1.1.1 Analysis and Future Outlook
  - 7.1.1.2 M&A Activity 2013
  - 7.1.1.3 Regional Focus
- 7.1.2 Siemens Overview
  - 7.1.2.1 Analysis and Future Outlook
  - 7.1.2.2 M&A Activity
  - 7.1.2.3 Regional Focus
- 7.1.3 Alstom Overview
  - 7.1.3.1 Analysis and Future Outlook
  - 7.1.3.2 Regional Focus

### **7.2 HVDC Cable Manufacturers**

- 7.2.1 Prysmian Overview
  - 7.2.1.1 Analysis and Future Outlook

### 7.2.2 Nexans Overview

#### 7.2.2.1 Analysis and Future Outlook

### 7.3 Other Leading Companies in the HVDC Transmission Market

## **8. CONCLUSIONS**

### 8.1 Global HVDC Transmission Market Outlook

### 8.2 Global HVDC Transmission Drivers & Restraints

### 8.3 Regional HVDC Transmission Market Forecasts 2013-2023

## **9. GLOSSARY**

## List Of Tables

### LIST OF TABLES

Table 1.1 Regional HVDC Transmission Market Forecasts Summary 2013, 2018, 2023 (CAPEX (\$m), CAGR %)

Table 3.1 Global HVDC Transmission Market Forecast 2013-2023 (\$m, AGR %, CAGR%, Cumulative)

Table 3.2 Global HVDC Transmission Market Drivers & Restraints

Table 3.3 Back-to-Back HVDC Stations Planned or Under Construction (Name, Location, MW, Commission Date, Component Supplier)

Table 4.1 Regional HVDC Transmission Markets Forecast 2013-2023 (\$m, AGR %)

Table 4.2 Asian HVDC Transmission Market Forecast 2013-2023 (\$m, AGR %, CAGR%, Cumulative)

Table 4.3 Asian HVDC Transmission Market Drivers & Restraints

Table 4.4 Chinese Electricity Demand (Population, Population Growth Rate, Y-O-Y Electricity Demand Growth, Economic Growth)

Table 4.5 Indian Electricity Demand (Population, Population Growth Rate, Y-O-Y Electricity Demand Growth, Economic Growth)

Table 4.6 Asian HVDC Transmission Projects & Upgrades Planned or Under Construction (Project, Type, HVDC Lead, Location, Sponsor, Status)

Table 4.7 Asian HVDC Transmission Projects & Upgrades Planned or Under Construction (Project, Est. Cost (\$m), Voltage (kV), Power Rating (MW), Length (km))

Table 4.8 European HVDC Transmission Market Forecast 2013-2023 (\$m, AGR %, CAGR%, Cumulative)

Table 4.9 European HVDC Market Drivers & Restraints

Table 4.10 European HVDC Transmission Projects & Upgrades Planned or Under Construction (Project, Type, HVDC Lead, Location, Sponsor, Status)

Table 4.11 European HVDC Transmission Projects & Upgrades Planned or Under Construction (Project, Est. Cost (\$m), Voltage (kV), Power Rating (MW), Length (km))

Table 4.12 North American HVDC Transmission Market Forecast 2013-2023 (\$m, AGR %, CAGR%, Cumulative)

Table 4.13 North American HVDC Transmission Market Drivers & Restraints

Table 4.14 North American HVDC Transmission Projects & Upgrades Planned or Under Construction (Project, Type, HVDC Lead, Location, Sponsor, Status)

Table 4.15 North American HVDC Transmission Projects & Upgrades Planned or Under Construction (Project, Cost (\$m), Voltage (kV), Power Rating (MW), Length (km))

Table 4.16 South American HVDC Transmission Market Forecast 2013-2023 (\$m, AGR %, CAGR%, Cumulative)



Table 4.17 South American HVDC Transmission Market Drivers & Restraints
Table 4.18 South American HVDC Transmission Projects & Upgrades Planned or Under Construction (Project, Type, HVDC Lead, Location, Cost, Sponsor, Status)
Table 4.19 South American HVDC Transmission Projects & Upgrades Planned or Under Construction (Project, Cost (\$m), Voltage (kV), Power Rating (MW), Length (km))
Table 4.20 African HVDC Transmission Market Forecast 2013-2023 (\$m, AGR %, CAGR%, Cumulative)
Table 4.21 African HVDC Transmission Market Drivers & Restraints
Table 4.22 African HVDC Transmission Projects & Upgrades Planned or Under Construction (Project, Type, HVDC Lead, Location, Cost, Sponsor, Status)
Table 4.23 African HVDC Transmission Projects & Upgrades Planned or Under Construction (Project, Cost (\$m), Voltage (kV), Power Rating (MW), Length (km))
Table 4.24 South East Asian and Oceanian HVDC Transmission Market Forecast 2013-2023 (\$m, AGR %, CAGR%, Cumulative)
Table 4.25 South East Asian and Oceanian HVDC Transmission Market Drivers & Restraints
Table 4.26 South East Asian and Oceanian HVDC Transmission Projects & Upgrades Planned or Under Construction (Project, Type, HVDC Lead, Location, Cost, Sponsor, Status)
Table 4.27 South East Asian and Oceanian HVDC Transmission Projects & Upgrades Planned or Under Construction (Project, Cost (\$m), Voltage (kV), Power Rating (MW), Length (km))
Table 5.1 PEST Analysis of the HVDC Transmission Market 2013-2023
Table 7.1 Leading HVDC Transmission Component Suppliers (Rank, Company, Total Revenue, Revenue from HVDC Transmission (\$m), Share of HVDC Projects)
Table 7.2 ABB Overview (Total Revenue 2012, Revenue from Confirmed HVDC Transmission Projects, Share of HVDC Transmission Projects, HQ, Ticker, IR Contact, Website)
Table 7.3 ABB Confirmed HVDC Transmission Projects (Project, Type, Location, Lead Sponsor, Status)
Table 7.4 ABB Confirmed HVDC Transmission Projects (Project, Estimated Cost (\$m), Voltage, Power Rating, Length)
Table 7.5 Siemens Overview (Total Revenue FY2012, Revenue from Confirmed HVDC Transmission Projects, Share of HVDC Transmission Projects, HQ, Ticker, IR Contact, Website)
Table 7.6 Siemens Confirmed HVDC Transmission Projects (Project, Type, Location, Lead Sponsor, Status)
Table 7.7 Siemens Confirmed HVDC Transmission Projects (Project, Estimated Cost (\$m), Voltage, Power Rating, Length)

Table 7.8 Alstom Overview 2012 (Total Sales 2012-2013 FY, Revenue from Confirmed HVDC Transmission Projects, Share of HVDC Transmission Projects, HQ, Ticker, IR Contact, Website)

Table 7.9 Alstom Confirmed HVDC Transmission Projects (Project, Type, Location, Lead Sponsor, Status)

Table 7.10 Alstom Confirmed HVDC Transmission Projects (Project, Estimated Cost (\$m), Voltage, Power Rating, Length)

Table 7.11 Prysmian Overview 2012 (Total Company Sales 2012, HQ, Ticker, IR Contact, Website)

Table 7.12 Nexans Overview 2012 (Total Revenue, HQ, Ticker, IR Contact, Website)

Table 7.13 Other Leading Cable and Equipment Manufacturers in the HVDC Transmission Market (Company, Product/Service)

Table 7.14 Other Leading Stakeholders in the HVDC Transmission Market (Company, Involvement in HVDC Transmission Market)

Table 8.1 Global HVDC Transmission Market Drivers & Restraints

Table 8.2 Regional Market Forecasts Summary 2013, 2018, 2023, CAPEX (\$m), 2013-2023 CAGR (%)

## About

### Europacable

Marcello Del Brenna is the CEO of Prysmian PowerLink Srl with specific responsibility for HV and Submarine businesses in the Prysmian Group. He is also a Member of the Europacable Executive Board and a Chairman of its Utilities Board. He holds a degree in nuclear engineering from the Politecnico di Milano and has been working at Prysmian since 1993. His positions within the company ensure that he has developed vast R&D, commercial and international expertise in the global electrical cabling industry. He is interviewed here in his role as the Chairman of the Utilities Board of Europacable ([www.europacable.com](http://www.europacable.com)). The interview took place in June of 2013 and visiongain would like to thank Mr. Del Brenna for his astute and invaluable remarks. Europacable is the association that represents and advocates on behalf of approximately 85% of the European wire and cable industry at the European level. Formed in 1991, the membership companies provide cables and wiring for an extremely broad range of applications, from energy to automotive to telecommunications and beyond. It is a champion of its member's collective interest, representing them and their products at the European level.

### HVDC Cable Manufacturers

HVDC component suppliers discussed in the above section have the capability to supply the cable systems needed for HVDC transmission. However, there are a number of companies, from which two stand out, that have developed as a core business segment the supply of HV cabling. These two companies, which are also the two largest suppliers of copper and optical fibre cable (speciality cable) worldwide, are Nexans and Prysmian. Analysis and comparison of these two companies is an important sub-segment of the HVDC transmission market. They are analysed below by their total company sales in 2012 (highest first).

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