

# **Solid State (Smart) Transformer Market by Application (Electric Vehicle Charging Stations, Traction Locomotives, Power Grid, Alternative Power Generation) and Product (Power Solid State, Distribution Solid State, Traction Solid State Transformers) - Global Opportunity Analysis and Industry Forecast, 2014 - 2020**

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## **Abstracts**

Solid state transformer (SST), alternately known as “smart transformer,” is an amalgamation of high-powered semiconductor components, control circuitry and conventional high frequency transformers. The smart transformers are used to provide additional flexibility to control power distribution networks, thereby facilitating the smooth conversion of AC to DC and DC to AC, as per requirement.

Solid state transformers cater to a wide variety of applications, ranging from alternative power generation to traction locomotives, power grid and electric industries, and others. Solid state transformers are used in a wide range of applications, which would facilitate the smooth transition from AC to DC and DC to AC, besides voltage conversion.

Alternative power generation is the most dominant application of solid state transformers driving the market growth. Increasing adoption of renewable power sources, such as wind & solar energy, traction locomotives, are major factors boosting the adoption of solid state transformers globally.

The world solid state transformers market is driven by, increasing preference for renewable energy source, growing use of traction locomotives & electric vehicles and heavy investments in smart grids & energy systems. In addition, new renewable energy sources such as tidal energy for power generations have boosted research and development activities in the field of electric distribution network, further driving the market growth. However, high cost associated with solid state transformers and

inadequate SST testing infrastructure, are expected to affect the market growth. The report is analysed on the basis of potential as well as actual market for solid state transformers. Both the markets have been taken into consideration on the basis of increasing demand of renewable energy sources and SST in traction locomotives sector. The smart transformers technology is still evolving while the market is estimated to generate revenue from 2018. The report also highlights information pertaining to the past and existing opportunity revenues in the market. The rate of adoption of smart transformers would depend entirely upon the growing awareness and accessibility of this technology in future.

The world solid state transformers market is segmented into application, product and geography. The application segment includes alternative power generation, power grid, traction locomotives and electric vehicle charging stations. Alternative power generation is the highest revenue-generating segment on account of efficient electric generation technology through renewable energy sources. In addition, traction locomotives and power grids are other major applications boosting the growth of solid state transformers market. Associated benefits of solid state transformers, such as bidirectional power flow, input/output AC or DC power, enhanced power quality and reduced size & weight of transformers among others, would drive the growth of solid state transformers market globally.

The world solid state transformers market by products is categorized into distribution, power and traction transformers. Power transformers, is poised to generate the highest revenue throughout the analysis period. However, traction transformer would emerge as the fastest growing segment during the analysis period, owing to the growing demand of solid state transformers in traction locomotives sector. The solid state transformers market is segmented into North America, Europe, Asia-Pacific, and LAMEA. Europe would continue to dominate the market until 2020, on account of installed capacity of renewable energy sources for power generation, high awareness among the consumers for the adoption of solid state transformers and heavy investment in the field of research. However, North America is expected to be the fastest growing market, with a CAGR of 49.3%.

The key companies operating in the world solid state transformers market include, ABB Ltd., Schneider Electric SE, General Electric Co., Siemens AG, Alstom SA, Mitsubishi Electric Corporation, Eaton Corporation plc (Cooper Power Systems), Gridbridge, Inc., Varentec, Inc. and Maschinenfabrik Reinhausen (MR), and others.

## **KEY BENEFITS:**

This report provides an extensive analysis of the current and emerging trends and dynamics in the world solid state transformers market.

The solid state transformers market scenario is comprehensively analyzed on the basis of key geographical regions.

The report provides a detailed analysis of the current market and estimations between 2014 to 2020, which would enable the stakeholders to capitalize on the prevailing market opportunities in terms of value.

The report includes the player positioning frameworks to help in understanding the competitive environment of the solid state transformers market.

A comprehensive analysis of the market scenario in terms of applications, products and geography, identifies the prevailing opportunities in the world solid state transformers market.

The key market players operating in the market are profiled in the report and their strategies are thoroughly analyzed to understand the competitive outlook.

#### SOLID STATE TRANSFORMERS MARKET KEY SEGMENTS:

World solid state transformers market is segmented into application, product and geography.

##### World Solid State Transformers Market - By Application

Electric Vehicle Charging Stations

Traction Locomotives

Power Grid

Alternative Power Generation

##### World Solid State Transformers Market - By Product

Power Solid State Transformers

Distribution Solid State Transformers

## Traction Solid State Transformers

### World Solid State Transformers Market - By Geography

North America

Europe

Asia-Pacific

LAMEA

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