

Solid Oxide Fuel Cell Market: By Type (Planar and Tabular), By End-Use (Combined Heat & Power, Military, Power Generation and Others), By Application (Portable, Stationery and Transport) And Region – Global Analysis of Market Size, Share & Trends for 2019–2020 And Forecasts To 2031

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Abstracts

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PRODUCT OVERVIEW

SOFC (Solid oxide fuel cell) is a device which converts electrical energy that uses electrochemical reactions to generate power. Biogas, fossil fuel, propane hydrogen, and other oxidized hydrocarbons are among the energy sources used. SOFCs come in a variety of shapes and sizes, including planar and tubular models that are somewhat stationary or portable. They are made up of a ceramic membrane which conducts ions & flows current flow at high temperatures, as well as non-porous & metal oxide electrolytes that transform chemical energy into electrical and thermal energy without the use of combustion. In comparison to other sources of energy, SOFCs are both cost-effective and environmentally friendly.

MARKET HIGHLIGHTS

Global Solid Oxide Fuel Cell market is expected to project a notable CAGR of 28.7% in

2031.

Global Solid Oxide Fuel Cell was valued at 0.7 billion in 2021 at a CAGR of 28.7%. Solid oxide fuel cells have a high operating effectiveness, which can be further improved by harnessing the heat created by these SOFC while they are operating. Government subsidies and expanded R&D on fuel cell programs, fuel flexibility, and increasing need for energy-efficient power generation, as well as rigorous pollution requirements, are all significant drivers for the SOFC cell market.

GLOBAL SOLID OXIDE FUEL CELL MARKET: SEGMENTS

Power Generation segment to grow with the highest CAGR during 2021-31

The market is divided into three segments based on end-use: Combined Heat and Power, Military, & Power Generation. By end-user market share, the power generation category dominated the oxides fuel cell market. The SOFC cell industry is likely to benefit from increased demand from renewable energy generation. Distributed power generation methods for remote & backup power for residential, commercial, and industrial usage such as housing developments, data centers, retail outlets, business offices, and telecom towers are referred to as power generation. Furthermore, companies like blue melody as well as its successors have been collaborating to build utility-scale SOFC power facilities.

Planar segment to grow with the highest CAGR during 2021-31

The market is divided into two segments based on the type: planar and tubular. Due to its basic geometry and considerably easier fabrication process, the planar-segment is anticipated to lead the industry during the forecast period. Ceramic fuel cell components are often placed one over another in a sandwich configuration with electrolytes injected between electrodes in planar type solid oxide fuel cells. The planar segment has grown in popularity due to its basic shape and relatively straightforward fabrication method.

MARKET DYNAMICS

Drivers

Increasing installation of green energy technologies

Rising objectives by governments to minimize dependencies

Restraint

Operating limits, and the availability of rival fuel cell technologies

GLOBAL SOLID OXIDE FUEL CELL MARKET:

Key Players

Bloom Energy

Company Overview, Business Strategy, Key Product Offerings, Financial Performance, Key Performance Indicators, Risk Analysis, Recent Development, Regional Presence, SWOT Analysis

Mitsubishi Power Ltd.

Cummins Inc.

Ceres

General Electric

FuelCell Energy, Inc.

Ningbo SOFCMAN Energy

Kyocera Corp.

AVL

NGK Spark Plug Co., Ltd.

Other Prominent Players

GLOBAL SOLID OXIDE FUEL CELL REPORT ALSO CONTAINS ANALYSIS ON:

Solid Oxide Fuel Cell Market Segments:

By Type

Planar

Tabular

By End-Use

Combined Heat & Power

Military

Power Generation

Others

By Application

Portable

Stationary

Transport

Solid Oxide Fuel Cell Market Dynamics

Solid Oxide Fuel Cell Market Size

Supply & Demand

Current Trends/Issues/Challenges

Competition & Companies Involved in the Market

Value Chain of the Market

Market Drivers and Restraints

Reasons to Purchase this Report

Qualitative and quantitative analysis of the market based on segmentation involving both economic as well as non-economic factors

Provision of market value (USD Billion) data for each segment and sub-segment

Indicates the region and segment that is expected to witness the fastest growth as well as to dominate the market

Analysis by geography highlighting the consumption of the product/service in the region as well as indicating the factors that are affecting the market within each region

Competitive landscape which incorporates the market ranking of the major players, along with new service/product launches, partnerships, business expansions, and acquisitions in the past five years of companies profiled

Extensive company profiles comprising of company overview, company insights, product benchmarking, and SWOT analysis for the major market players

The current as well as the future market outlook of the industry with respect to recent developments which involve growth opportunities and drivers as well as challenges and restraints of both emerging as well as developed regions

Includes in-depth analysis of the market of various perspectives through Porter's five forces analysis

Provides insight into the market through Value Chain

Market dynamics scenario, along with growth opportunities of the market in the years to come

3-month post-sales analyst support.

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The above-given segmentations and companies could be subjected to further modification based on in-depth feasibility studies conducted for the final deliverable.

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