

Solid Oxide Fuel Cell Market: Global Industry Trends, Share, Size, Growth, Opportunity and Forecast 2022-2027

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Abstracts

The global solid oxide fuel cell market reached a value of US\$ 953.8 Million in 2021. Looking forward, IMARC Group expects the market to reach US\$ 2,287.7 Million by 2027, exhibiting a CAGR of 15.4% during 2022-2027. Keeping in mind the uncertainties of COVID-19, we are continuously tracking and evaluating the direct as well as the indirect influence of the pandemic on different end use sectors. These insights are included in the report as a major market contributor.

A solid oxide fuel cell (SOFC) is an energy converter device that produces electricity through electrochemical conversions. It operates using various energy sources, such as biogas, natural gas, propane hydrogen and other oxidized hydrocarbons. SOFCs are commonly available in planar and tubular variants, which are either stationary or portable. They consist of a ceramic membrane that conducts ions and flows currents at high temperatures, along with non-porous and metal oxide electrolytes to convert chemical energy into thermal energy and electricity without combustion. In comparison to the traditionally used energy sources, SOFCs are highly cost-effective and sustainable in nature.

Significant growth in the power and energy industries across the globe is one of the key factors creating a positive outlook for the market. Moreover, rising clean energy requirements, especially in the developing economies, are providing a thrust to the market growth. SOFCs are embedded into power systems to generate continuous energy for various commercial and industrial applications. They are also widely used for operating energy-intensive data centers to improve operational performance and facilitate real-time backup of the data. Additionally, various product innovations, such as the development of noiseless and portable SOFCs for military applications, are acting

as other growth-inducing factors. These innovative variants are being extensively used for operating unmanned aerial vehicles (UAVs), military robots and communications devices. Other factors, including extensive research and development (R&D) activities in fuel cell programs, along with the implementation of favorable government policies, are anticipated to drive the market toward growth.

Key Market Segmentation:

IMARC Group provides an analysis of the key trends in each sub-segment of the global solid oxide fuel cell market, along with forecasts at the global, regional and country level from 2022-2027. Our report has categorized the market based on application and end user.

Breakup by Application:

- Portable
- Stationary

Breakup by End User:

- Commercial
- Data Centers
- Military and Defense
- Others

Breakup by Region:

- North America
 - United States
 - Canada
- Asia-Pacific
 - China
 - Japan
 - India
 - South Korea
 - Australia
 - Indonesia
 - Others
- Europe
 - Germany

France
United Kingdom
Italy
Spain
Russia
Others
Latin America
Brazil
Mexico
Others
Middle East and Africa

Competitive Landscape:

The competitive landscape of the industry has also been examined along with the profiles of the key players being Adaptive Energy LLC, Aisin Seiki Co. Ltd., Bloom Energy, Convion Ltd., Elcogen AS, Fuji Electric Co. Ltd., Mitsubishi Heavy Industries Ltd., POSCO Energy, SOLIDpower Group, Sunfire GmbH and Watt Fuel Cell Corporation.

Key Questions Answered in This Report:

How has the global solid oxide fuel cell market performed so far and how will it perform in the coming years?
What has been the impact of COVID-19 on the global solid oxide fuel cell market?
What are the key regional markets?
What is the breakup of the market based on the application?
What is the breakup of the market based on the end user?
What are the various stages in the value chain of the industry?
What are the key driving factors and challenges in the industry?
What is the structure of the global solid oxide fuel cell market and who are the key players?
What is the degree of competition in the industry?

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