

2020 Market Analysis of Renewable Energy and Resources Conference

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The global fuel cells market size is projected to reach USD 1,059 million by 2024 from an estimated value of USD 342 million in 2019, growing at a CAGR of 25.4% during the forecast period. The growth is attributed to the rising demand for clean energy generation in developed regions, increased use of fuel cell-based vehicles, booming power sector, and augmented power generation capacities globally.



Proton Exchange Membrane Fuel Cell (PEMFC) is expected to be the largest contributor to the advances in fuel cell technology market, by type, during the forecast period

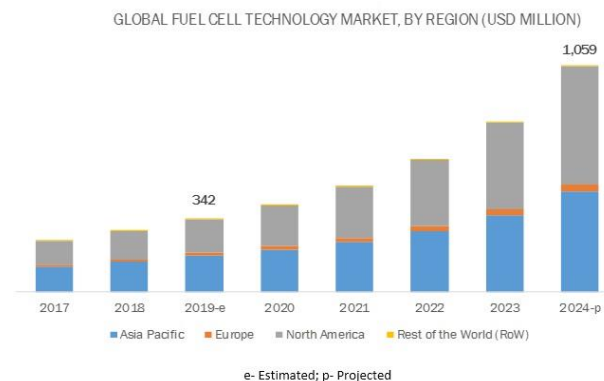
The fuel cells market, by type, is segmented into Proton Exchange Membrane Fuel Cell (PEMFC), Phosphoric Acid Fuel Cell (PAFC), Alkaline Fuel Cell (AFC), and Microbial Fuel Cell (MFC). Proton Exchange Membrane Fuel Cell (PEMFC) accounted for the majority of the advances in fuel cell technology market share in 2018. Growing demand for clean energy generation and reliance on fuel cell-based public transportation systems in developed regions is driving market growth. Moreover, advantages offered by PEMFC, such as high efficiency, low operational cost, quick maintenance, and enhanced reliability and operability are likely to drive the demand for PEMFC during the forecast period.

The transport segment is expected to be the fastest-growing market during the forecast period

The advances in fuel cell technology market, by application, is segmented into transport, portable, and stationary applications. The transport segment is growing significantly because of the widespread usage of fuel cell technology in heavy-duty operations such as public transport in regions such as Asia Pacific, which is likely to boost demand for the transport segment of the advances in fuel cell technology market during the forecast period.

Fuel cell vehicles are expected to be the fastest-growing end-user during the forecast period

The advances in fuel cell technology industry has been categorized, based on end-user, into fuel cell vehicles, utilities, and defense. The growing demand for reducing carbon emissions has given an excellent opportunity to fuel cell-powered vehicles, which is likely to boost the advances in fuel cell technology market.



Asia Pacific is expected to be the largest advances in fuel cell technology market during the forecast period

In this report, the fuel cells market has been analyzed for four regions, namely, Asia Pacific, North America, Europe, Rest of the World (RoW). Asia Pacific is estimated to be the largest market from 2019 to 2024 and is expected to see a high demand for advances in fuel cell technology owing to the growing use of fuel cell-powered vehicles in the region. Also, the increasing power generation from cleaner energy

sources is further expected to boost the advances in fuel cell technology market in the region.

Key Market Players

The major players in the advances in fuel cell technology market are Ballard Power Systems (Canada), Hydrogenics (Canada), SFC Energy (Germany), Bloom Energy (US), Plug Power (US), and Fuel Cell Energy (US).

Ballard Power Systems offers fuel cells based on Proton-Exchange Membrane (PEM) technology. One of the key focuses of Ballard Power System's product development division is fuel cell vehicles. For instance, Ballard Power signed more than eight contracts for providing its fuel cell technology with companies such as Behala (Germany), Norled A/S (Norway), Nisshinbo Holdings (Japan), Van Hool NV (Belgium). The company also has a strong emphasis on enhancing its product portfolio for fuel cell-powered vehicles and utilities. For instance, it launched four new products from December 2017 to June 2019 corresponding to fuel cell vehicles, with a particular focus on UAV and heavy-duty transport vehicles. The company also has a joint venture with multiple companies such as Nisshinbo Holdings and Wechai Power, among others that helps in enhancing its operational presence in China. For instance, Ballard Power has signed a partnership with Wechai Power, which enables it to improve its manufacturing capabilities and also focus on multiple automotive research and product development programs.

Another major player in the advances in fuel cell technology market is Hydrogenics. The company offers fuel cells based on Proton Exchange Membrane (PEM) technology, and its key strategy is to focus on growing investment and operations of fuel cell vehicles, specifically in regions such as Asia Pacific and Europe. For instance, the company signed a partnership with SinoHytec (China) in June 2016 for enhancing and co-development of new fuel cell-based power systems for the Chinese market, which can be integrated into buses and trucks from several leading

vehicle manufacturers in China. Likewise, it signed several contracts with companies such as ASKO (Norway), Golden Gate Zero Emission Marine (US), and Blue-G New Energy Science and Technology Corporation (China) for providing fuel cells for marine and on-ground vehicle propulsion applications during June 2017 to December 2018.

By type:

- Proton Exchange Membrane Fuel Cell (PEMFC)
- Phosphoric Acid Fuel Cell (PAFC)
- Alkaline Fuel Cell (AFC)
- Microbial Fuel Cell (MFC)

By application:

- Transport
- Portable
- Stationary

By end-user:

- Fuel Cell Vehicles
- Utilities
- Defense

By region:

- Asia Pacific
- North America
- Europe
- Rest of the World (RoW)

Source:

<https://www.marketsandmarkets.com/Market-Reports/fuel-cell-market-348.html>