

# Stationary Fuel Cells: Market Shares, Strategies, and Forecasts, Worldwide, 2013-2019

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## Abstracts

LEXINGTON, Massachusetts (December 10, 2013) – WinterGreen Research announces that it has published a new study Stationary Fuel Cell Market Shares, Strategy, and Forecasts, Worldwide, 2013 to 2019. The 2013 study has 553 pages, 238 tables and figures. Worldwide markets are poised to achieve significant growth as the Stationary Fuel Cells used to provide distributed power for campus environments achieve better technology and economies of scale. They have achieved grid parity in many cases. They improve and lower energy costs. They threaten to erode utility profitability.

Stationary Fuel Cells are on the cusp of becoming commercially viable, creating companies that are profitable and produce electricity at or below parity with the grid giving every user alternatives to the grid. Bloom Energy has solved the SOFC engineering challenges. Breakthroughs in materials science, and revolutionary designs give Bloom SOFC technology a cost effective, all-electric solution. Vendors have solved the SOFC conundrum, developing new materials that make units affordable and provide energy device economies of scale and support for wind and solar renewable energy sources.

Stationary fuel cells represent the base for distributed power generation worldwide. No more new coal plants, no more extensions to the grid. Distributed power has become mainstream. Distributed generation (DG) refers to power generation at the point of consumption.

Generating power on-site, rather than centrally, eliminates the cost, complexity, interdependencies, and inefficiencies associated with energy transmission and distribution. Distributed energy is evolving in a manner like distributed PC and laptop

computing, cars for transportation, and smart phones. As distributed Internet data and telephony have found a place in the market, so also will distributed energy generation become widespread. Distributed power shifts energy generation control to the consumer much to the consternation of the existing utility companies.

Renewable energy is intermittent and needs stationary fuel cells for renewables to achieve mainstream adoption as a stable power source. Wind and solar power cannot be stored except by using the energy derived from these sources to make hydrogen that can be stored. Stationary fuel cells are likely to function as a battery in the long term, creating a way to use hydrogen that is manufactured from the renewable energy sources. It is likely that the wind and tide energy will be transported as electricity to a location where the hydrogen can be manufactured. It is far easier to transport electricity than to transport hydrogen. Hydrogen serves as an energy storage mechanism.

Stationary fuel cell markets need government sponsorship. As government funding shifts from huge military obligations, sustainable energy policy becomes a compelling investment model for government.

Stationary fuel cell markets at \$793.7 million in 2012 are projected to increase to \$9.6 billion in 2019. Growth is anticipated to be based on demand for distributed power generation that uses natural gas. Systems provide clean energy that is good for the environment. Growth is based on global demand and will shift from simple growth to rapid growth measured as a penetration analysis as markets move beyond the early adopter stage. The big box retailers including many, led by Walmart, the data centers, and companies like Verizon are early adopters.

Eventually hydrogen will be used as fuel in the same stationary fuel cell devices. The hydrogen is manufactured from solar farms. Stationary fuel cells have become more feasible as the industry is able to move beyond platinum catalysts.

WinterGreen Research is an independent research organization funded by the sale of market research studies all over the world and by the implementation of ROI models that are used to calculate the total cost of ownership of equipment, services, and software. The company has 35 distributors worldwide, including Global Information Info Shop, Market Research.com, Research and Markets, Electronics.CA, Bloomberg, and Thompson Financial.

WinterGreen Research is positioned to help customers face challenges that define the modern enterprises. The increasingly global nature of science, technology and

engineering is a reflection of the implementation of the globally integrated enterprise. Customers trust WinterGreen Research to work alongside them to ensure the success of the participation in a particular market segment.

WinterGreen Research supports various market segment programs; provides trusted technical services to the marketing departments. It carries out accurate market share and forecast analysis services for a range of commercial and government customers globally. These are all vital market research support solutions requiring trust and integrity.

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