

# 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.

## Contents

### STATIONARY FUEL CELL MARKET DRIVING FORCES

PLATINUM CATALYSTS

### STATIONARY FUEL CELL MARKET SHARES

### STATIONARY FUEL CELL MARKET FORECASTS

## 1. STATIONARY FUEL CELL MARKET DYNAMICS AND MARKET DESCRIPTION

### 1.1. Stationary Fuel Cell Market Dynamics and Market Description

1.1.1. Stationary Fuel Cell Ownership Models

### 1.2. Distributed Power Generation

1.2.1. On-Site Power:

1.2.2. Utility Grid Support:

### 1.3. Solid Oxide Fuel Cells (SOFC)

1.3.1. Next Generation SOFC

1.3.2. Bloom Energy Solid Oxide Fuel Cells

### 1.4. ClearEdge Power Moving away from HT-PEMFC Technology

### 1.5. Distributed Power Generation

1.5.1. Distributed Clean and Continuous Power Generation

1.5.2. Benefits of Bloom Energy

1.5.3. Stationary Fuel Cell Technology

### 1.6. Industrialization Requires Sustainable, Highly Efficient Energy

1.6.1. Fuel Cell Cogeneration

1.6.2. Stationary Fuel Cells Address Global Energy Challenge

1.6.3. Petroleum

### 1.7. Value Of Export Market Electricity

### 1.8. Fuel Cell Operation

1.8.1. Fuel Cells Definition

1.8.2. Fuel Cell Insulating Nature Of The Electrolyte

1.8.3. Inconsistency Of Cell Performance

1.8.4. Fuel Cell Performance Improvements

1.8.5. Transition To Hydrogen

### 1.9. Fuel Environmental Issues

1.9.1. Environmental Benefits Of Using Fuel Cell Technology

1.9.2. Greenhouse Gas Emissions

- 1.10. Battery Description
- 1.11. Fuel Cell Functional Characteristics
- 1.12. Water In A Fuel Cell System
- 1.13. Power Of A Fuel Cell
  - 1.13.1. Gas Control
  - 1.13.2. Temperature Control
- 1.14. Fuel Cell Converts Chemical Energy Directly Into Electricity And Heat
  - 1.14.1. Types Of Fuel Cells
- 1.15. Hydrogen Fuel Cell Technology
  - 1.15.1. Types Of Fuel Cells
  - 1.15.2. Alkaline Fuel Cells
  - 1.15.3. Phosphoric Acid Fuel Cells
  - 1.15.4. Molten Carbonate Fuel Cells
  - 1.15.5. Solid Oxide Fuel Cells
  - 1.15.6. PEM Technology
  - 1.15.7. Proton Exchange Membrane (PEM) Fuel Cells
  - 1.15.8. PEM Fuel Cells
  - 1.15.9. Proton Exchange Membrane (PEM) Fuel Cell
  - 1.15.10. Proton Exchange Membrane (PEM) Membranes And Catalysts
  - 1.15.11. Common Types Of Fuel Cells
- 1.16. Stationary Power Applications
  - 1.16.1. Traditional Utility Electricity Generation
- 1.17. On Grid And Off Grid Issues
  - 1.17.1. Stationary Public Or Commercial Buildings Fuel Cell Market
  - 1.17.2. Distributed Power Generation
- 1.18. Impact Of Deregulation
  - 1.18.1. Excess Domestic Capacity
  - 1.18.2. Power Failures
- 1.19. Fuel Cell Issues
  - 1.19.1. Solid Oxide Fuel Cells
  - 1.19.2. Fuel Cell Workings
  - 1.19.3. Environmental Benefits Of Fuel Cells
  - 1.19.4. Fuel-To-Electricity Efficiency
- 1.20. Boilers
  - 1.20.1. Domestic Hot Water
  - 1.20.2. Space Heating Loops
  - 1.20.3. Absorption Cooling Thermal Loads
- 1.21. Fuel Cell Reliability
  - 1.21.1. Power Quality

- 1.21.2. Licensing Schedules
- 1.21.3. Modularity
- 1.22. Fuel Cell Supply Infrastructure
- 1.23. Laws And Regulations
  - 1.23.1. National Hydrogen Association
  - 1.23.2. Military Solutions

## **2. STATIONARY FUEL CELL MARKET SHARES AND MARKET FORECASTS**

- 2.1. Stationary Fuel Cell Market Driving Forces
  - 2.1.1. Platinum Catalysts
- 2.2. Stationary Fuel Cell Market Shares
  - 2.2.1. Bloom Energy (SOFC) Fuel Cell Comprised Of Many Flat Solid Ceramic Squares
  - 2.2.2. FuelCell Energy (MCFC)
  - 2.2.3. ClearEdge
  - 2.2.4. ClearEdge / UTC Phosphoric Acid Fuel Cells (PAFCs)
  - 2.2.5. Ballard and IdaTech PEM
  - 2.2.6. Acumentrics
- 2.3. Stationary Fuel Cell Market Forecasts
  - 2.3.1. Stationary Fuel Cell Units Market Forecasts
  - 2.3.2. Vision For The New Electrical Grid
  - 2.3.3. Fuel Cell Clean Air Permitting
- 2.4. SOFC Fuel Cell Forecasts
  - 2.4.1. SOFC Stationary Fuel Cell Forecasts: Unit Shipment and Installed Base Market Penetration Analysis
  - 2.4.2. SOFC ROI Models
  - 2.4.3. SOFC Fuel Cell Markets
  - 2.4.4. SOFC Specialized Ceramics
  - 2.4.5. SOFC Stationary Fuel Cell Market Description
  - 2.4.6. Bloom Energy SOFC
  - 2.4.7. SOFC Methanol Fuel Cells, On The Anode Side, A Catalyst Breaks Methanol
- 2.5. PEM Stationary Fuel Cell Forecasts
  - 2.5.1. PEM Telecom Fuel Cell Back Up Power Systems
  - 2.5.2. PEM Fuel Cell: High Temperature
  - 2.5.3. PEMFC Efficiency
  - 2.5.4. Challenges for PEMFC Systems
  - 2.5.5. Operating Pressure
  - 2.5.6. Long Term Operation

- 2.5.7. Proton Exchange Membrane Fuel Cell (PEM) Residential Market
- 2.6. Molten Carbonate Fuel Cell (MCFC)
  - 2.6.1. MCFC Molten Carbonate Uses Nickel and Stainless Steel as Core Technology
  - 2.6.2. MCFC Stationary Fuel Cell Market Analysis
  - 2.6.3. Molten Carbonate Fuel Cell (MCFC) Fuel Cell Technology 95% Combustion Efficiency
- 2.7. UTC PAFC Platinum Costs
  - 2.7.1. PAFC
  - 2.7.2. Phosphoric Acid Fuel Cell (PAFC) Technology
- 2.8. Distributed Campus Environments For SOFC, PEM, MCFC, and MCFC Stationary Fuel Cells
  - 2.8.1. Government Support for Fuel Cell Technology
  - 2.8.2. Competition For Distributed Generation Of Electricity
  - 2.8.3. Stationary Fuel Cell Applications
- 2.9. Energy Market Forecasts
  - 2.9.1. FuelCell Energy Fuel Cell Stack Module MCFC Costs
  - 2.9.2. FuelCell Energy Cost Breakdown
  - 2.9.3. FuelCell Energy Fuel Cell Stack Module
  - 2.9.4. FuelCell Energy Materials Cost Reduction via Increased Power Density
  - 2.9.5. Fuel Cell Energy Achieving Higher MCFC Power Density
  - 2.9.6. SOFC Unfavorable Fuel Cell Market Characteristics
  - 2.9.7. Phosphoric Acid Fuel Cells (PAFCs)
- 2.10. PEM Membrane, Or Electrolyte
  - 2.10.1. PEM Proton-Conducting Polymer Membrane, (The Electrolyte)
- 2.11. Delivered Energy Costs
  - 2.11.1. Nanotechnology Platinum Surface Layer on Tungsten Substrate For Fuel Cell Catalyst
  - 2.11.2. SOFC Fuel Cell Prices
- 2.12. PEM, SOFC, MCFC, and PAFC Stationary Fuel Cell Applications and Uses:
- 2.13. MCFC, SOFC, PEMFC Projected Cost Long Term
- 2.14. Stationary Fuel Cells Strengths and Weaknesses
- 2.15. Fuel Cell Return On Investment Analysis
  - 2.15.1. Addressable Market
- 2.16. Stationary Fuel Cell Prices
  - 2.16.1. Solid-Oxide Fuel Cell Stack Prices
  - 2.16.2. MCFC Stationary Fuel Cell Prices
- 2.17. Stationary Fuel Cell Market Regional Analysis
  - 2.17.1. Stationary Fuel Cells U.S.
  - 2.17.2. Fuel Cells California



- 2.17.3. Regional Stationary Fuel Cell Competition
- 2.17.4. CPUC Recently Approved 6 Utility Owned Fuel Cell Projects
- 2.17.5. Stationary Fuel Cell Installations in California
- 2.17.6. California Fuel Cell Installations
- 2.17.7. Campus Fuel Cell Food Processing Agricultural Applications / Gills Onions

#### Stationary Fuel Cells

- 2.17.8. Oxnard DFC Installations
- 2.17.9. Europe and Japan
- 2.17.10. Korea
- 2.17.11. European Photovoltaic Industry Association and Greenpeace Global

#### Investments In Solar Photovoltaic Projects

- 2.17.12. German Stationary Fuel Cells
- 2.17.13. Japanese Sales Prospects
- 2.17.14. New Sunshine Project (Japan)
- 2.17.15. Fuel Cell Development in Japan
- 2.17.16. Fuel Cell Cogeneration in Japan
- 2.17.17. Softbank / Bloom: Bloom Energy Japan
- 2.17.18. Japanese Government Subsidies
- 2.17.19. Fuel Cell Cogeneration In Japan
- 2.17.20. Establishing Codes And Standards Are Very Important For Advancing Fuel Cell Systems In Japan
- 2.17.21. FuelCell Energy Geographic Market Participation
- 2.17.22. FuelCell Energy within Korea
- 2.17.23. FuelCell Energy Korean Market Partner POSCO Energy
- 2.17.24. FuelCell Energy Within the United States
- 2.17.25. FuelCell Energy Bridgeport Project
- 2.17.26. FuelCell Energy in Canada
- 2.17.27. FuelCell Energy in Europe
- 2.17.28. FuelCell Energy European Market Developments

### **3. STATIONARY FUEL CELL PRODUCT DESCRIPTION**

- 3.1. Fuel Cells
- 3.2. Solid Oxide Fuel Cells (SOFC)
  - 3.2.1. Next Generation SOFC
- 3.3. Bloom Energy Solid Oxide Fuel Cells
  - 3.3.1. Bloom's Energy SOFC Specifications
  - 3.3.2. Bloom Energy Server Architecture
- 3.4. Ceramic Fuel Cells SOFC



- 3.4.1. Ceramic Fuel Cells BlueGen
- 3.4.2. Ceramic Fuel Cells Gennex Fuel Cell Module
- 3.4.3. Ceramic Fuel Cells Engineered Mixed Oxide Powders
- 3.5. LG
  - 3.5.1. LG Solid Oxide Fuel Cells SOFC Technology
- 3.6. SKKG Cultural and Historical Foundation / Hexis SOFC
- 3.7. Viessmann Group
- 3.8. The Ceres Fuel Cell
  - 3.8.1. Ceres Power Core Technology
- 3.9. Acumentrics
  - 3.9.1. Acumentrics Fuel Cell Systems Work
  - 3.9.2. The Fuel Reformer
  - 3.9.3. Acumentrics Small Tubes
  - 3.9.4. Acumentrics Specialized Ceramics
  - 3.9.5. Acumentrics Fuel Cell Technologies Ltd Trusted Power Innovations
- 3.10. Samsung
- 3.11. Delphi Solid Oxide Fuel Cells
  - 3.11.1. Delphi / Independent Energy Partners (IEP)
  - 3.11.2. Delphi SOFC
  - 3.11.3. Delphi Solid Oxide Fuel Cell Auxiliary Power Unit
- 3.12. LG Solid Oxide Fuel Cells
- 3.13. Phosphoric Acid Fuel Cell (PAFC) Stationary Fuel Cells
- 3.14. ClearEdge Proton Exchange Membrane PEM Fuel Cells
  - 3.14.1. ClearEdge PureCell® Model 5 System
  - 3.14.2. ClearEdge PureCell® Model 400 System
  - 3.14.3. ClearEdge PureCell® Model 400 System
  - 3.14.4. ClearEdge fuel Cell Fleet Surpasses 1 Million Hours Of Operation
  - 3.14.5. Phosphoric Acid Fuel Cells (PAFCs)
  - 3.14.6. ClearEdge UTC Product : The PureCell Model 400 Power Solution Features :
  - 3.14.7. ClearEdge UTC PureComfort® Solutions
  - 3.14.8. ClearEdge UTC PureComfort® Power Solutions Save Energy
  - 3.14.9. ClearEdge UTC CO2 Emissions Reduction
  - 3.14.10. ClearEdge UTC PureComfort® Power Solutions
- 3.15. Molten Carbonate Fuel Cell (MCFC) Power Plants
- 3.16. FuelCell Energy
  - 3.16.1. FuelCell Energy Power Plants Operating On Natural Gas
  - 3.16.2. FuelCell Energy DFC Power Plant Benefits:
  - 3.16.3. FuelCell Energy DFC Power Plant Benefits:
  - 3.16.4. FuelCell Energy Cost Breakdown

- 3.16.5. FuelCell Energy Fuel Cell Stack Module
- 3.16.6. FuelCell Energy Materials Cost Reduction via Increased Power Density
- 3.16.7. FuelCell Energy Balance-of-Plant Cost Reduction With Volume Production
- 3.16.8. FuelCell Energy Conditioning, Installation, and Commissioning
- 3.16.9. FuelCell Energy to Supply 1.4 MW Power Plant to a California Utility
- 3.16.10. FuelCell Energy Adding Power Generating Capacity At The Point Of Use Avoids Or Reduces Investment In The Transmission And Distribution System
- 3.16.11. FuelCell Energy DFC1500
- 3.16.12. FuelCell Energy Fuel Cells Within South Korean Renewable Portfolio
- 3.16.13. Enbridge and FuelCell Energy Partner
- 3.16.14. FuelCell Energy Power Plants
- 3.17. Proton Exchange Membrane PEM Stationary Fuel Cells
- 3.18. Ballard
  - 3.18.1. Ballard and IdaTech's PEM
  - 3.18.2. Ballard
  - 3.18.3. Ballard / IdaTech

#### **4. STATIONARY FUEL CELL TECHNOLOGY**

- 4.1. Fuel Cell Emissions Profile
  - 4.1.1. Direct FuelCell Technology
- 4.2. Verizon Launches Massive Green Energy Project to Power 19 Company Facilities Across the Country
- 4.3. Fuel Cells Offer An Economically Compelling Balance Of Attributes
- 4.4. Stationary Fuel Cell Government Regulation
- 4.5. Fuel Cell Type Of Electrolyte Used
  - 4.5.1. PEM Fuel Cells
  - 4.5.2. Fuel Cell Stacks
- 4.6. IdaTech Fuel Processing Technology
- 4.7. Phosphoric Acid Fuel Cells (PAFC)
  - 4.7.1. PAFC Platinum-Based Catalyst
- 4.8. Molten Carbonate Fuel Cells (MCFC)
  - 4.8.1. FuelCell Energy Degradation of the Electrolyte Support
  - 4.8.2. MCFC Stack Cost Analysis
  - 4.8.3. Molten Carbonate Fuel Cell Results
- 4.9. Solid Oxide Fuel Cells (SOFC)
  - 4.9.1. SOFC Fuel Cell/Turbine Hybrids
  - 4.9.2. Acumetrics Tubular SOFC, Solid Oxide Fuel Cell Technology
- 4.10. Fuel Reformer

- 4.10.1. Specialized Ceramics
- 4.10.2. Ceramic Fuel Cells
- 4.11. Fuel Cell Description
- 4.12. Alkaline Fuel Cells (AFC)
- 4.13. Nanotechnology Enables Overcoming Stationary Fuel Cell Cost Barriers
  - 4.13.1. DMFC Micro And Portable Fuel Cells Components and Labor Costs
  - 4.13.2. SOFC Fuel Cells Components and Labor Costs:
  - 4.13.3. MCFC Fuel Cells Components and Labor Costs:
  - 4.13.4. PAFC Fuel Cells Components and Labor Costs:
- 4.14. Solar Energy Complements Fuel Cell Technology
- 4.15. DMFC Fuel Cell Already Viable Market
  - 4.15.1. DMFC Micro And Portable Fuel Cells Components and Labor Costs
  - 4.15.2. Polymer-Electrolyte Membrane PEM
  - 4.15.3. PEM Nano Metals And Alloys
  - 4.15.4. PEM
- 4.16. Platinum Catalyst
  - 4.16.1. Nanotechnology Platinum Surface Layer on Tungsten Substrate For Fuel Cell Catalyst
  - 4.16.2. Nanotechnology Platinum Catalyst Mid Size Stationary Fuel Cells
  - 4.16.2. Water Electrolysis Technology
- 4.17. Fuel Cell Nickel Borate Catalyst
  - 4.17.1. Fuel Cell High Cost Products
  - 4.17.2. Development of hydrogen technologies critical for the growth of the fuel cell industry
  - 4.17.3. PEM and SOFC For Home Units
- 4.18. PAFC and Stationary fuel cells
- 4.19. For MCFC:
- 4.20. For PAFC:
- 4.21. Fuel Cell Components
  - 4.21.1. Fuel Processor (Reformer)
- 4.22. Fuel Cell Stack
- 4.23. Power Conditioner
- 4.24. Nano Composite Membranes
- 4.25. Pall Filtering of Hydrogen
- 4.26. IdaTech

## **5. STATIONARY FUEL CELL COMPANY PROFILES**

### **5.1. Stationary Fuel Cell Acquisitions**

- 5.1.1. 2013: ClearEdge Power Acquires UTC Power
- 5.1.2. BASF Exits High-Temperature Proton Exchange Membrane Fuel Cell Business
- 5.1.3. GE
- 5.1.4. Air Liquide Invests in Plug Power
- 5.1.5. Ballard Buys IdaTech
- 5.1.6. Viessmann Group Acquires 50 Percent Share in Hexis AG
- 5.1.7. Acumentrics Acquired Fuel Cell Technologies Ltd
- 5.1.8. FuelCell Energy / Versa Power Systems Acquisition
- 5.1.9. Rolls Royce Sells Its Stationary Fuel Cell Operations Interests to LG
- 5.1.10. Other Transactions and Consolidation of Stationary Fuel Cell Market
- 5.2. Acumentrics
  - 5.2.1. Acumentrics Technologies Ltd Rugged UPS
  - 5.2.2. Acumentrics UPS Products
  - 5.2.3. Acumentrics / Fuel Cell Technologies Ltd Trusted Power Innovations
  - 5.2.4. Acumentrics / Fuel Cell Technologies
- 5.3. Advent Technologies
  - 5.3.1. Advent Technologies Investors
  - 5.3.2. Advent Technologies Target Markets For HT-PEMFC
  - 5.3.3. Advent Target Markets
- 5.4. AFC Energy
- 5.5. Alteryg
  - 5.5.1. Alteryg Mass Production And Commercial Deployment Of Rugged, Low Cost Fuel Cells
  - 5.5.2. Alteryg Global Leader In Telecom/Critical Infrastructure
- 5.6. Ansaldo Fuel Cells
- 5.7. Ballard Power Systems
  - 5.7.1. Ballard Power Systems / IdaTech LLC / ACME Group (Gurgaon, Haryana)
  - 5.7.2. Ballard Expanded Single Fuel Cell
  - 5.7.3. Ballard Hydrogen
  - 5.7.4. Ballard Buys IdaTech
  - 5.7.5. IdaTech acquires Plug Power's LPG Off-Grid, Backup Power Stationary Product Lines
  - 5.7.6. IdaTech Applications
  - 5.7.7. IdaTech Wireline Communications Networks
  - 5.7.8. Ballard Third Quarter 2013 Revenue Ballard Third Quarter 2013 Highlights
- 5.8. BASF
- 5.9. Blasch Precision Ceramics
- 5.10. Bloom Energy
  - 5.10.1. Bloom Energy Fuel Cells Customer Adobe

- 5.10.2. Bloom Energy / University Of Arizona NASA Mars Space Program
- 5.10.3. SoftBank & Bloom Energy Form Joint Venture
- 5.11. ClearEdge Power / UTC Power
  - 5.11.1. ClearEdge / United Technologies
- 5.12. Ceramic Fuel Cells
- 5.13. Delphi
  - 5.13.1. Delphi Automotive LLP Revenue
  - 5.13.2. Delphi Solid Oxide Fuel Cell Auxiliary Power Unit
- 5.14. Doosan Corporation
- 5.15. Elcore
- 5.16. Enbridge
- 5.17. FuelCell Energy
  - 5.17.1. FuelCell Energy Production Capacity
  - 5.17.2. FuelCell Energy POSCO 121.8 MW Order
  - 5.17.3. FuelCell Energy / Versa
  - 5.17.4. FuelCell Energy
  - 5.17.5. FuelCell Energy Revenue 2012
  - 5.17.6. FuelCell Energy / Versa Power Systems, Inc. Acquisition
  - 5.17.7. FuelCell Energy Market Activity
  - 5.17.8. FuelCell Energy Versa Power Systems Solid Oxide Fuel Cell Development:
  - 5.17.9. FuelCell Energy / Versa Systems Solid Oxide Fuel Cells
  - 5.17.10. FuelCell Energy DFC 3000 Cost Savings
  - 5.17.11. FuelCell Energy Production and Delivery Capabilities
  - 5.17.12. FuelCell Energy Food & Beverage Processing
  - 5.17.13. FuelCell Energy Strategic Alliances and Market Development Agreements
  - 5.17.14. FuelCell Energy Energy Service Company Partners
  - 5.17.15. FuelCell Energy Business Strategy
- 5.18. Fuji Electric
- 5.19. GE
  - 5.19.1. GE Unmanned Aircraft
  - 5.19.2. GE HPGS
- 5.20. HydroGen LLC
- 5.21. ITN Lithium Technology
  - 5.21.1. ITN's Lithium EC sub-Division Focused On Development And Commercialization of EC
  - 5.21.2. ITN's SSLB Division Thin-Film Battery Technology
  - 5.21.3. ITN Lithium Air Battery
  - 5.21.4. ITN Fuel Cell
  - 5.21.5. ITN Thin-film Deposition Systems

- 5.21.6. ITN Real Time Process Control
- 5.21.7. ITN Plasmonics
- 5.22. LG Electronics
  - 5.22.1. LG Business Divisions and Main Products
  - 5.22.2. LG Telemonitoring Smartcare System
  - 5.22.3. Rolls Royce Sells Its Stationary Fuel Cell Operations Interests to LG
- 5.23. Nuvera
- 5.24. Plug Power
- 5.25. POSCO Power
- 5.26. Rolls Royce
- 5.27. Samsung Everland
  - 5.27.1. Samsung
  - 5.27.2. Samsung Finds Talent And Adapts Technology To Create Products
  - 5.27.3. Samsung Adapts to Change, Samsung Embraces Integrity
  - 5.27.4. Samsung Telecom Equipment Group
  - 5.27.5. Samsung Electronics Q2 2013 Revenue
  - 5.27.6. Samsung Memory Over Logic
- 5.28. Serenergy
- 5.29. Siemens AG
- 5.30. SoftBank
- 5.31. Southern California Edison
- 5.32. Truma

## List Of Tables

### LIST OF TABLES AND FIGURES

- Table ES-1: Stationary Fuel Cell Market Driving Forces
- Table ES-2: Stationary Fuel Cell Market Growth Drivers Worldwide
- Table ES-3: Worldwide Stationary Fuel Cell Market Campus Segments
- Figure ES-4: Stationary Fuel Cell Market Shares, Dollars, 2012
- Figure ES-5: Stationary Fuel Cell Shipment Market Forecasts, Dollars, Worldwide, 2013-2019
- Figure 1-1: Traditional Power Distribution Network vs. Fuel Cell Solution
- Table 1-2: Methods Of Producing Energy
- Table 1-3: Key Aspects Of Fuel Cell Stack Costs
- Figure 1-4: Fuel Cell Operation
- Table 1-5: Fuel Cell Operation
- Figure 1-6: Stationary Fuel Cell Distributed Power Generation
- Figure 1-7: Conventional Power System with Central Generation
- Figure 1-8: Utility Power Systems with Distributed 1MW Fuel Cell System
- Table 1-9: Fuel Cell Characteristics
- Table 1-10: Fuel Cell Description
- Table 1-11: Fuel Cell Categories
- Table 1-12: Fuel Cell Performance Improvements
- Table 1-13: Environmental Concerns Relating To Energy
- Table 1-14: Environmental Benefits Of Using Fuel Cell Technology
- Table 1-15: Fuel Cell Advantages Compared To Internal Combustion Engine
- Table 1-15 (Continued): Fuel Cell Advantages Compared To Internal Combustion Engine
- Table 1-16: Low-carbon production systems
- Table 1-17: Fuel Cell Functional Characteristics
- Table 1-17 (Continued): Fuel Cell Functional Characteristics
- Table 1-18: Characteristics Of Water In Fuel Cells
- Table 1-19: Types Of Fuel Cells
- Table 1-20: Classes Of Fuel Cells
- Table 1-21: Fuel Cell Applications
- Table 1-22: Types Of Fuel Cells
- Table 1-23: Classes Of Fuel Cells
- Table 1-24: Fuel Cell Applications
- Table 1-25: Alkaline Fuel Cell Features
- Table 1-26: Phosphoric acid fuel cells applications



Table 1-27: Phosphoric Acid Fuel Cell Features

Table 1-28: Molten Carbonate Fuel Cells

Table 1-29: Solid Oxide Fuel Cell Features

Table 1-30: Proton Exchange Membrane (PEM) Fuel Cell Functions

Table 1-30 (Continued): Proton Exchange Membrane (PEM) Fuel Cell Functions

Table 1-31: Fuel Cell Issues

Table 1-32: Fuel Cell System

Table 1-33: Conceptual Operation of a Fuel Cell.

Table 1-34: Fuel Cell System Relative Efficiencies

Table 1-35: Fuel Cell Reliability Research And Development Issues

Table 2-1: Stationary Fuel Cell Market Driving Forces

Table 2-2: Stationary Fuel Cell Market Growth Drivers Worldwide

Table 2-3: Worldwide Stationary Fuel Cell Market Campus Segments

Figure 2-4: Stationary Fuel Cell Market Shares, Dollars, 2012

Table 2-5: Stationary Fuel Cell Market Shares, Dollars, 2012

Figure 2-6: Bloom Energy Server

Figure 2-7: FuelCell Energy Electrochemical Device

Figure 2-8: Stationary Fuel Cell Shipment Market Forecasts, Dollars, Worldwide, 2013-2019

Table 2-9: Stationary Fuel Cell Shipment Market Forecasts Dollars, Worldwide, 2013-2019

Figure 2-10: Stationary Fuel Cell Shipment Market Forecasts, Units, Worldwide, 2013-2019

Table 2-11: Stationary Fuel Cell Shipment Market Forecasts Units, Worldwide, 2013-2019d

Table 2-12: Stationary Fuel Cell Market Forces

Figure 2-13: Stationary SOFC Fuel Cell Market Forecasts, Dollars, Worldwide, 2013-2019

Figure 2-14: Stationary Fuel Cell SOFC Market Forecasts, Number Shipped, Worldwide, 2013-2019

Table 2-15: Solid Oxide Fuel Cells (SOFC) Stationary Fuel Cell Shipment Market Forecasts, Units and Dollars, Worldwide, 2013-2019

Table 2-16: Solid Oxide Fuel Cells (SOFC) Stationary Fuel Cell Shipment Installed Base and Market Penetration Forecasts Units, Worldwide, 2013-2019

Figure 2-17: Reducing Hydrogen Crossover Using Nanotechnology

Table 2-18: Ceramic Fuel Cells Advantages

Figure 2-19: Stationary Fuel Cell PEM, Market Forecasts, Dollars, Worldwide, 2013-2019

Table 2-20: Proton Exchange Membrane Fuel Cell PEM Stationary Fuel Cell Shipment

Market Forecasts, Units and Dollars, Worldwide, 2013-2019

Figure 2-21: Stationary Fuel Cell Proton Exchange Membrane (PEM) Market Forecasts, Units, Worldwide, 2013-2019

Table 2-22: PEMFC Efficiency

Table 2-23: Stationary Fuel Cell Long-Term Operation

Table 2-24: MCFC Technology Development Functions

Table 2-25: MCFC Near-zero NOX, SOX and low CO2 emissions

Figure 2-26: FuelCell Energy 2.4 MW Fuel Cell Power Plant Incheon, South Korea

Table 2-27: MCFC Stationary Fuel Cell Technology

Table 2-28: Stationary Fuel Cell Distributed Campus Environments Target Markets Worldwide, 2013

Table 2-29: Stationary Fuel Cell Shipment SOFC, PEM, MCFC, and MCFC Market Forecasts, Dollars, Worldwide, 2013-2019

Table 2-30: Stationary Fuel Cell Shipment SOFC, PEM, MCFC, and MCFC Market Forecasts, Units, Worldwide, 2013-2019

Figure 2-31: Stationary Fuel Cell Applications

Figure 2-32: Global Demand For Electric Power

Figure 2-33: Cost of Electricity Grid and Stationary Fuel Cell

Table 2-34: Complete Fuel Cell Power Plant

Table 2-35: Opportunity for PAFC Cost Reductions Opportunity Area

Table 2-36: PAFC Stack Costs

Figure 2-37: Fuel Cell Image

Table 2-38: PEM Stack Costs

Figure 2-39: Delivered Energy Costs

Table 2-40: Stationary Fuel Cell Markets

Table 2-42: Stationary Fuel Cells Strengths and Weaknesses

Table 2-43: Cost Comparison of Available Technologies for a 5kW Plant

Table 2-44: MCFC Stack Costs

Table 2-45: Stationary Fuel Cell Regional Market Segments, Dollars, 2012

Table 2-46: Stationary Fuel Cell Regional Market Segments, 2012

Figure 2-47: Stationary Fuel Cell Installations in California

Figure 2-47 (Continued): Stationary Fuel Cell Installations in California

Figure 2-48: Efficient Pipeline Pressure Reduction

Table 2-49: Types Of Campus Fuel Cell Power Plants

Figure 2-50: FuelCell Energy 600 KW DFC, Gills Onions Oxnard, CA

Figure 2-51: Korea's Energy Mix 2030

Figure 2-52: Korea's Energy Application Sectors

Figure 2-53: Korean NRE New and Renewable Energy

Figure 2-54: Korean Research & Development in NRE

Figure 2-55: Korean Local Plan for Promoting NRE  
Figure 2-56: FuelCell Energy Environmental Tangible Benefits  
Figure 2-57: Hybrid Electric Vehicles Costs  
Figure 2-58: US Energy Costs  
Figure 2-59: Hydrogen Cost From On Site Steam  
Figure 2-60: German Bonus for Electricity Produced Through CHP Units  
Table 2-61: Japanese Sales Prospects  
Figure 3-1: Bloom ES-5700 Fuel Cell  
Figure 3-2: Bloom's Energy SOFC Specifications  
Table 3-3: Bloom Energy SOCF Fuel Cell Specifications  
Table 3-3 (Continued): Bloom Energy SOCF Fuel Cell Specifications  
Figure 3-4: Bloom Energy Server  
Table 3-5: Bloom Performance Gain From Modular Architecture  
Figure 3-6: Ceramic Fuel Cells BlueGen Products  
Figure 3-7: Ceramic Fuel Cells BlueGen Installation  
Figure 3-8: Ceramic Fuel Cells BlueGen Efficiency Comparison  
Figure 3-9: LG 1 MW SOFC System  
Figure 3-10: LG Fuel Cell Power Generation Used to Power Electronics and Excess Sold to Grid  
Figure 3-11: LG Integrated Planar Solid Oxide Fuel Cells SOFC  
Figure 3-12: LG Integrated Planar Solid Oxide Fuel Cells SOFC 60 Cell Technology  
Figure 3-13: LG Integrated Planar Solid Oxide Fuel Cells SOFC  
Figure 3-14: Ceres Power SOFC Fuel Cell  
Figure 3-16: Acumentrics Fuel Cell Systems Functions  
Figure 3-17: Acumentrics Small Tubes  
Table 3-19: Acumentrics Tubular Solid Oxide Fuel Cells Functions  
Figure 3-20: Delphi Solid Oxide Fuel Cells  
Table 3-21: Delphi Solid Oxide Fuel Cells Benefits  
Table 3-22: Delphi Solid Oxide Fuel Cells Typical Applications  
Figure 3-23: Delphi Solid Oxide Fuel Cells Transportation Application  
Figure 3-24: LG Fuel Cell Process  
Table 3-25: LG Solid Oxide Fuel Cells Features  
Table 3-25 (Continued): LG Solid Oxide Fuel Cells Features  
Figure 3-26: ClearEdge PureCell® Model 5 System Generates 5 kW  
Figure 3-27: PureCell® Model 5 System Specifications  
Table 3-28: ClearEdge The Model 5 System Benefits  
Table 3-29: ClearEdge The Model 5 System Functions  
Table 3-30: ClearEdge The Model 5 system Functions  
Figure 3-31: ClearEdge PureCell® Model 400 System

Figure 3-32: ClearEdge PureCell® Model 400 System Characteristics

Figure 3-33: UTC Power Fuel Cells Also Qualify For LEED® (Leadership in Energy and Environmental Design) Points.

Table 3-34: UTC PureCell system Features

Figure 3-35: UTC Fuel cell Supplier To NASA For Space Missions For Over 40 Years

Table 3-36: UTC Performance Characteristics POWER

Figure 3-37: ClearEdge UTC PureCell Solution Emissions

Table 3-38: ClearEdge UTC Stationary Fuel Cell Energy Efficiency Positioning

Table 3-39: ClearEdge UTC Microturbine Chiller/Heater and System Level Functions

Table 3-40: ClearEdge UTC stationary Fuel cell Benefits :

Table 3-41: ClearEdge UTC Stationary Fuel Cell Emissions Benefits

Table 3-42: ClearEdge UTC Stationary Fuel Cell Emissions CO2 Emissions Reduction Calculations

Figure 3-43: ClearEdge UTC Pollutant Emissions Comparisons

Table 3-44: ClearEdge UTC PureComfort® Power Solutions

Table 3-45: FuelCell Energy Power Plant Advantages:

Table 3-46: FuelCell Energy Product Advantages

Table 3-47: FuelCell Energy Fuel Cell Power Plant Models

Table 3-48: FuelCell Energy DFC Power Plant Benefits:

Figure 3-49: Fuel Cell Electrochemical Device

Figure 3-50: Direct Fuel Cell (DFC) Power Plants Offer The Highest Efficiency Which Is Key To Customer Value

Figure 3-51: FuelCell Energy 1 MW DFC California State University - Northridge

Table 3-52: FuelCell Energy Cost Reduction Opportunities for the DFC 1500 Power Plant Operating On Pipeline-Quality Natural Gas

Figure 3-53: Enbridge and FuelCell Energy

Figure 3-54: Direct Fuel Cell Power Plant

Table 3-55: Ballard Power Systems Comprehensive Portfolio Of Fuel Cell Products

Table 3-56: Ballard Power Systems Fuel Cell Products

Figure 3-57: Ballard Power Systems Cleargen Multit-Megawatt Fuel Cell System

Figure 3-58: IdaTech Fuel Cell System

Table 3-59: Ballard / IdaTech ElectraGen ME System Functions

Table 3-60: Ballard / IdaTech ElectraGen ME System Functions

Table 4-1: Favorable Emissions Profile Of DFC Power Plants

Table 4-2: DFC Technology Advantages

Table 4-3: Fuel Cell Types Of Electrical Efficiency, Operating Temperature, Expected Capacity Range, And Byproduct Heat

Table 4-4: Fuel Cell Technologies

Table 4-5: Fuel Cells By Fuel

Figure 4-6: Fuel Cells Offer An Economically Compelling Balance Of Attributes  
Figure 4-7: Efficiency Differences Among Fuel Cell Technologies  
Table 4-8: Stationary Fuel Cell Products Regulation  
Table 4-9: Fuel cell Types By T Electrolyte  
Figure 4-10: Polymer Electrolyte Membrane (PEM) Fuel Cells  
Figure 4-11: PEM Fuel Cell Operation  
Figure 4-12: Fuel Cell Stacks  
Figure 4-13: Fuel Cell Stack Components  
Table 4-14: Opportunity for PAFC Cost Reductions Opportunity Area  
Table 4-15: Molten Carbonate Fuel Cell R&D areas to be addressed  
Figure 4-16: MCFC Cost Components of Electricity vs. Fuel Cell Capital Cost  
Figure 4-17: Siemens Westinghouse's 250-Kilowatt Atmospheric Pressure Combined Heat And Power Fuel Cell System  
Table 4-18: Ceramic Fuel Cells Advantages  
Figure 4-19: Bloom Energy Fuel Cell Description  
Figure 4-20: Bloom Energy Fuel Cell Description (2)  
Figure 4-21: Bloom Energy Fuel Cell Description (3)  
Figure 4-22: Bloom Energy Fuel Cell Description  
Figure 4-23: Bloom Energy Fuel Cell Description (5)  
Figure 4-24: Fuel Cell Flow Plates  
Figure -4-25: Home Hydrogen Refueler  
Figure 4-26: Fuel Cell Components  
Figure4-27: How A Fuel Cell Works  
Figure4-28: Stationary Fuel Cell Steam Reformer  
Figure 4-29: Hydrogen Reformer Components  
Figure 4-30: 1 Fuel Processor (Reformer); 2 Fuel Cell Stack; 3 Power Conditioner  
Figure 4-31: Reducing Hydrogen Crossover Using Nanotechnology  
Figure 4-32: Comparison of the Performance of Nanocomposite Membranes  
Figure 4-33: Catalytic Reformer and Refinery Hydrogen System  
Table 5-1: Acumentrics Technologies Ltd Rugged UPS  
Table 5-2: Acumentrics UPS Products Target Markets  
Table 5-3: Acumentrics UPS Customers  
Table 5-4: Acumentrics Rugged-UPS Designs  
Figure 5-5: Acumentrics Fuel Cell Power Generator  
Table 5-6: Acumentrics Tubular Solid Oxide Fuel Cells Functions  
Figure 5-7: Acumentrics / Fuel Cell Technologies (FCT) Fuel Cell Test Station QA Testing Area  
Figure 5-8: Alteryg Mass Production Of Rugged, Low Cost Fuel Cells  
Figure 5-9: Alteryg Fuel Cells

Figure 5-10: Altery Freedom PowerFuel Cell, Generator, Unconditioned Batteries and Conditioned Batteries Comparison TCO

Table 5-11: Altery's Market Leading Freedom Power Systems

Figure 5-12: Ballard® Fuel Cell

Table 5-13: Ballard Hydrogen Systems

Table 5-14: Bloom Energy Customers

Table 5-15: Elcore Stationary Fuel Cell Technical Details

Figure 5-16: Enbridge Overview

Table 5-17: Enbridge Statistics

Figure 5-18: Enbridge Hybrid Fuel Cell

Table 5-19: FuelCell Energy Positioning

Table 5-20: FuelCell Energy Leading Customers

Figure 5-21: Versa Systems Solid Oxide Fuel Cells

Figure 5-22: Versa Systems Solid Oxide Fuel Cell Technology

Figure 5-23: FuelCell Energy DFC 3000 Cost Savings

Figure 5-24: FuelCell Energy Production Capabilities

Table 5-25: FuelCell Energy Active Project Pipelines

Figure 5-26: FuelCell Energy Tangible Environmental Benefits

Figure 5-27: FuelCell Energy Efficiency Differences Between Technologies

Table 5-28: FuelCell Energy Markets

Table 5-29: FuelCell Energy Partner Descriptions

Table 5-30: ITN Technologies

Figure 5-31: ITN Thin Film Battery Technology

Figure 5-32: ITN Battery

Figure 5-33: ITN Thin-Film Deposition Systems

Figure 5-34: ITN's Thin-Film Deposition Systems

Table 5-35: ITN Thin-Film Deposition Systems Products and Services Offered

Table 5-36: ITN Thin-Film Deposition Systems

Figure 5-37: ITNIYN Fuel Cells

Figure 5-38: LG Corp Holding Structure

Figure 5-39: LG Global Sales

Figure 5-40: LG Business Divisions and Main Products

Table 5-41: LG Product Offerings

Figure 5-42: LG Global Network

Figure 5-43: LG Faster and Smarter Technology Innovation

Figure 5-44: LG Global Marketing



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