Fuel Cell Electric Vehicles 2017-2027: Land, Water, Air

Description:
This report is intended for those seeking to invest, support, develop, make, sell or use vehicle fuel cell systems and their materials and associated services. It will also assist those participating in the value chain of alternatives, such as batteries and supercapacitors, to understand the considerable opportunities for both collaborative use of their components with fuel cells and scope for common technologies.

Interest is re-igniting in vehicle fuel cells after decades of minimal uptake primarily caused by high costs and lack of hydrogen infrastructure but also affected by several other challenges appraised in this report. It is easy to rehearse why fuel cells in vehicles are in the trough of disillusionment in 2015 but look closer and things are stirring as we progress to more sober forecasts and market positioning to get there.

Indeed now is the time to invest, when so many companies have left the business but the first sales in thousands of fuel cell vehicles - in the form of forklifts - are happening without subsidies and you can newly buy fuel cell cars from top names. From Taiwan and Japan, fuel cell scooters now look plausible, the USA uses fuel cells in military vehicles and now fuel cell buses and cars are even shown to double as the emergency electricity supplies sought in Japan.

Most western automotive manufacturers are preparing fuel cell vehicles for sale but nothing is guaranteed, because, as this report analyses, the other option for zero pollution at point of use, the pure electric battery or supercapacitor vehicle, is also improving rapidly and they will often go head to head in the marketplace.

Which will have predominantly green “fuel” first - fuel cell or battery alone? Which will cost least up front and over life? What performance will really be achieved? For example, refueling time is not fast if you take ages to get to a refueling station. Energy density of the fuel is irrelevant if the powertrain using it is larger and heavier. This report pricks the bubbles to reveal the genuinely good prospects and the PEM fuel cell, intelligently applied, is one of them.

These complex issues, vital to optimal targeting of investment by auto, chemical, financial, fleet management and other players are appraised in the report. Vitally, it is mainly based on 2015 interviews not out-of-date information. It presents latest conference slides from many key players and new data analysis and forecasts. That means numbers for 2017-2027 and timelines to 2030 including the latest, revised predictions from the leading players.

This is analysis not evangelism and all pros and cons are considered from a global viewpoint that takes into account the very different attitudes of governments and the very different resources of countries, carefully teasing out success criteria. The emphasis is today and in future not nostalgia from the past. There is a chapter on the background including legal, psychological, standards and other aspects, a chapter on the first commercial success - material handling vehicles, a very detailed chapter on fuel cell cars, a detailed one on buses, one on other fuel cell vehicles land, water and air and one on the fuel cell system manufacturers.

Contents:
1. EXECUTIVE SUMMARY AND CONCLUSIONS
   1.1. Scope and objective
      1.1.1. What is an electric vehicle fuel cell?
      1.1.2. The end game
      1.1.3. Fuel cell types covered
   1.2. Formidable progress, issues remaining
   1.3. Assessment of best initial markets given current fuel cell limitations
   1.4. The most active countries and companies
   1.5. The most suitable countries for fuel cell road vehicles
   1.6. Hype curve and attitude by company
   1.7. Window of opportunity for road vehicles
   1.8. Timelines 2017-2050
   1.9. Fuel cell market potential 2017-2027 for 46 EV categories
   1.10. Drive train types compared
   1.11. Need to go via hydrogen? Latest debate
1.12. Comparison with other range extenders
1.13. Fuel cells, batteries and multiple energy harvesting are allies
1.15. Forecasts by platinum producers
1.16. Searching for a USP
1.17.1. Samsung exits batteries for fuel cell vehicles - April 2016
1.17.2. ITM Power - April 2016
1.17.3. Cactus inspired skin gives electric cars a spike
1.17.4. Exiting fuel cells - June 2016
1.17.5. Nissan announces development of the world's first SOFC-powered vehicle system that runs on bioethanol electric power - June 2016
1.17.6. New class of fuel cells offer increased flexibility, lower cost - August 2016
1.17.7. Zero-emission air transport - first flight of four-seat passenger aircraft HY4 - September 2016
1.17.8. Fleets - Late 2016
1.17.9. Toyota U turn - Late 2016
1.17.10. Battery vs fuel cell assessment end 2016
1.18. News in 2017
1.18.1. Honda- GM in 2017
1.18.2. Hydrogen infrastructure headed for adequate levels but FC vehicle output badly behind plan - news in 2017

2. INTRODUCTION
2.1. Objectives for energy sources and fuels, appropriate powertrains
2.2. Severe local pollution
2.2.1. Sustainable society with or without hydrogen?
2.3. Fuel price and diversity of supply issues
2.4. Tackling local and global pollution
2.4.1. Legal remedies
2.4.2. Financial incentives
2.4.3. Technological remedies
2.5. The fuel cell option
2.5.1. EV fuel cells
2.5.2. Superlative energy density
2.5.3. Cost parity in 2030 for road vehicles
2.5.4. Fuel cell system architecture for vehicles
2.5.5. Battery or supercapacitor across the fuel cell?
2.5.6. How and why many add supercapacitors
2.5.7. Fuel cell dominant systems
2.5.8. Regenerative fuel cell system for vehicles and HRS
2.5.9. Storage of hydrogen in vehicles
2.5.10. Sources of hydrogen, progress towards green hydrogen
2.5.11. Solar hydrogen stations
2.5.12. FC Vehicle to house emergency power
2.6. Some FC vehicle alliances
2.6.1. Global alliances
2.6.2. Toyota and BMW
2.6.3. Honda and GM
2.6.4. Suzuki and Intelligent Energy
2.7. Standards collaboration
2.8. National and regional FC vehicle initiatives
2.8.1. Brazil
2.8.2. China
2.8.3. Europe
2.8.4. UK
2.8.5. Germany
2.8.6. Nordic countries
2.8.7. Other countries in Europe
2.8.8. China
2.8.9. India
2.8.10. Iran, Turkey, Thailand and Malaysia
2.8.11. Japan
2.8.12. South Africa
2.8.13. South Korea
2.8.14. USA
2.8.15. Honda Clarity fuel cell car exhibited at EVS29 Montreal Canada June 2016

3. FUEL CELL FORKLIFTS: THE FIRST VOLUME SUCCESS
3.1. Introduction
3.1.1. Small forklift success
3.1.2. A look at many FC forklifts across the world
3.1.3. Plug Power transforms the industry
3.1.4. Asia Pacific Fuel Cell Technologies APFCT
3.2. Market analysis
3.2.1. FC material handling fleets and standards

4. FUEL CELL CARS
4.1. Current status and potential
4.1.1. Success criteria
4.1.2. Progress towards success
4.2. Lessons from mass market over-optimism in the past
4.3. Value proposition
4.4. FC car manufacturers and integrators
4.4.1. Overview: 19 OEMS and their FCs
4.4.2. Belenos Clean Power Holding Switzerland
4.4.3. BMW Germany
4.4.4. Daimler Germany
4.4.5. Ford USA
4.4.6. GM USA
4.4.7. GreenGT Belgium
4.4.8. Honda Japan
4.4.9. Hyundai Korea
4.4.10. ITM Power UK
4.4.11. Nissan Japan
4.4.12. Michelin France
4.4.13. Riversimple UK
4.4.14. Toyota Japan
4.4.15. Toyota Mirai
4.4.16. VW Group including Audi Germany
4.4.17. Other approaches
4.5. Plans for launch of fuel cell cars.
4.5.1. BMW have plans for fuel cell vehicles by 2020

5. FUEL CELL BUSES
5.1. Several purposes
5.2. Technology and timelines
5.3. Gaps in market: future prospects
5.4. Battery bus is rival or complementary?
5.5. Window of opportunity: necessary actions
5.5.1. Competitive end game
5.5.2. Daimler view of work ahead
5.6. Tremendous advances: Daimler examples
5.6.1. Advances
5.6.2. Daimler program 2015-2025
5.7. Smaller fuel cells in buses: fewer trials needed
5.8. Scepticism to overcome
5.9. Hyundai progress
5.10. Fuel cell bus trials 1990-2015
5.10.1. Trials 1990-2010
5.10.2. Trials 2011-2015
5.11. Commitment in Europe
5.12. Commitment in the USA
5.12.1. Some of the fuel cell buses currently in transit service in the US
5.12.2. Flint MTA testing Proterra hydrogen fuel cell bus prototype for one year - October 2016
5.13. Commitment in China

6. FUEL CELLS IN OTHER VEHICLES
6.1. Underwater
6.2. On water
6.2.1. Hydrogen fuel cell technology for maritime applications
6.3. Aircraft
6.3.1. Types
6.3.2. Cost comparison by NASA
6.4. Fuel cell jet aircraft
6.5. Airport GSE
6.6. Delivery trucks
6.6.1. Fuel cell trucks in 2016
6.7. Motor scooters

7. EXAMPLES OF VEHICLE FC SYSTEM MAKERS BEYOND THE CAR FIRMS
7.1. Ballard Canada
7.2. Hydrogenics Canada
7.3. Intelligent Energy UK
7.4. Nuvera - NACCO Materials Handling USA
7.5. Proton Motor Fuel Cell Germany

8. EXAMPLES OF INTERVIEWS
8.1. 15 short interviews for seven countries
8.2. Acal Energy UK
8.3. Proton Power Systems PLC, Proton Motor Fuel Cell GmbH Germany

LIST OF TABLES
1.1. Fuel cell and other hybrid vehicle powertrains: advantages against each other
1.2. Comparison between pure electric battery power trains and fuel cell + battery ones
1.3. Current limitations of PEM fuel cells in vehicles
1.4. The keenest countries
1.5. Divided opinion on future of traction fuel cells in electric vehicles
1.6. Vehicle fuel cell timeline 2017-2023 from various sources, omitting those that have become totally unrealistic.
1.7. Vehicle fuel cell timeline 2025-2050
1.8. Electric vehicle market segments with the most potential for adoption of fuel cells identified within system number projections in thousands for annual sales. Most optimistic scenario 2017-2027
1.9. Which option?
2.1. Some reasons for adopting electric powertrains
2.2. Hydrogen storage options
4.1. Overview manufacturers and other analysts of sales fuel cell car forecasts (unit/year) by region
4.2. 19 manufacturers and developers of fuel cell cars by country, fuel cell maker and type
5.1. Fuel cell bus trials 1991-2014 showing power kW by project. Record year shown green; largest power shown brown.
5.2. Examples of PEM fuel cell buses 2011-2015 FIGURES
1.1. Fuel cell electric vehicle issues lying ahead
1.2. Hype curve for fuel cells in vehicles by year with some of the most optimistic projections for 2030
1.3. The Fuel Cells and Hydrogen Joint Undertaking FCH in Europe prepared the following cost projection
1.4. Commercial and off-road technology roadmap
1.5. Gravimetric and volumetric energy density for vehicle fuels compared
1.6. Honda promotion of the hydrogen cycle for vehicles
1.7. Energy and work synchronization
1.8. The electrified open cast mine using pure electric haul trucks and rail-veyors
1.9. Schematic of the current value chain of fuel cells in buses
1.10. Ragone plot of electrochemical vehicle energy storage options
1.11. Types of range extender by cost and local emission, with the zero emission options compared with energy harvesting, all of which has zero local emission
1.12. Types of energy harvesting by type of vehicle
1.13. Nissan view of hydrogen deployment and price 2015 onwards
1.14. Researchers from the German Aerospace Center (Deutsches Zentrum für Luft- und Raumfahrt; DLR)
1.15. The HY4 fuel cell aircraft
2.1. Toyota view of fuel security - conserve and diversify - by vehicle powertrain design
2.2. Toyota comparison of powertrain architecture, strengths and weaknesses
2.3. Energy and environmental issues
2.4. Sustainable society with strong hydrogen involvement
2.5. Analysis of energy issue as presented by Honda in 2015
2.6. PEM fuel cell schematic
2.7. Suitability of different electric powertrains in replacing internal combustion traditional powertrains
2.8. The powertrain of a battery pure electric car top (Tesla S - battery as floor) of about 350 miles range compared with a fuel cell car (Toyota Mirai, extra radiator not shown) of similar range
2.9. 2015 Toyota Mirai schematic
2.10. Greenhouse gas/ total cost of ownership comparison for fuel cell vs diesel buses, standard and articulated in 2030
2.11. Basic fuel cell system for a vehicle
2.12. Fuel cell system for 160 kW bus (e-net)
2.13. Layout of bus fuel cell system
2.14. Basic car fuel cell system
2.15. PAC-carII fuel economy car fuel cell system and electricity system
2.16. Battery pure electric vehicle system within vehicle energy management functions shown for comparison
2.17. Use of battery or supercapacitor across fuel cell in vehicle
2.18. Configuration of fuel cell with supercapacitor
2.19. Fuel cell regenerative system
2.20. Toyota view of potential sources of hydrogen
2.21. Solar hydrogen station
2.22. Smart hydrogen station and system for cars acting as emergency electricity supplies
2.23. V2H demonstration at city of Kitakyusu
2.24. Toyota opens patents
2.25. Electrification with lithium-ion battery or fuel cell system
2.27. Nissan view of standards in 2015
2.28. Working bus in London with Ballard fuel cells
2.29. Japanese attitude to hydrogen
2.30. Toyota view of fuel cell market positioning.
2.31. Honda Clarity fuel cell car exhibited at EVS29 Montreal Canada June 2016
3.1. Toyota fuel cell forklift and other fuel cell vehicles and activities
3.2. Fuel cell forklifts from across the world
3.3. Refuelling a Plug Power unit
3.4. APFCT fuel cell forklift system showing two refueller cabinets
4.1. Extracts of Daimler presentation on fuel cell cars 2014-5
4.2. Hyundai next-generation hydrogen fuel cell system
4.3. Nissan fuel cell vehicle presentation 2015 - extracts
4.4. Riversimple fuel cell car
4.5. Toyota view of positioning of fuel cell vehicles
4.6. Toyota Mirai car
4.7. Mirai possible price reduction based on cost reduction.
4.8. Toyota FCV history
4.9. Toyota fuel cell system and Mirai architecture
4.10. Pocket Mirai
4.11. Volkswagen presentation in Taiwan Oct 2014
4.12. Honda FCV Concept
5.1. Fuel cell bus for providing emergency electricity
5.2. Fuel cell electric bus schematic
5.3. Daimler's technology roadmap for launching new bus technologies to 2015
5.4. Daimler fuel cell bus and car status
5.5. Technical advances past and future of Daimler fuel cell vehicles
5.6. Cost potential of fuel cell technology
5.7. Packaging improvement planned
5.8. Modular fuel cell strategy of Daimler
5.9. Hydrogen infrastructure in Germany
5.10. Percentage interest in different powertrains by bus operators
5.11. Fuel cell powered Hyundai bus on trial in Australia
5.12. Fuel cell bus trials 1990-2010
5.13. Daimler Citaro bus
5.14. Van Hool bus with UTC Power fuel cell
5.15. New Flyer/Bluways bus with Ballard fuel cell
5.16. Proterra bus with Hydrogenics fuel cell (plug-in, battery dominant)
6.1. Urashima Fuel Cell Underwater Vehicle FCUV.
6.2. High-speed passenger ferry powered by hydrogen fuel cell technology
6.3. Boeing trial of a fuel cell concept aircraft and below flown prototype
6.4. Lange aviation fuel cell aircraft trialled in Germany
6.5. NASA cost comparison of a gasoline and fuel cell plane.
6.6. Fuel cell surveillance airship
6.7. Renault H2 Maxity Electric truck powered by batteries and Symbio fuel cell
6.8. Fuel cell scooters in Taiwan
6.9. Charging scooter with hydrogen
6.10. Replacing hydrogen canister
7.1. Ballard presentation
7.2. Intelligent Energy 100 kW fuel cell for vehicles such as buses
7.3. Transition to cars
7.4. Proton Motor Fuel cell 2015 presentation on its vehicle fuel cells

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