Electric Vehicle Charging Infrastructure Market Report - UK 2016-2020 Analysis

Published: 18/02/2016 / Number of Pages: 43 / Price: £895.00

Introduction and Overview
The 2nd edition of the ‘Electric Vehicle Charging Infrastructure Market Report - UK 2016-2020 Analysis’ provides a comprehensive and up-to-date review of the structure of the electric vehicle charging market. This unique report provides both a quantitative and qualitative analysis of the ‘charging station products’ market and focusing on market size and trends, product mix, supply and future prospects, the report will facilitate operational and strategic decision making processes.

Key content covered:
- Market size by value - and forecast growth to 2020.
- Industry initiatives - grants, key market trends and influences.
- Major charging networks - public and private.
- Product mix - rapid, fast and standard.
- Location of infrastructure.
- Electric vehicle market overview - key trends, registration volumes etc. Supply structure and leading players els to the market.

Key areas of insight include:
- Review of the leading manufacturers and supply chain.
- Analysis of the charging infrastructure - Rapid, Fast, Standard - 2015 mix, switch to 'rapid'.
- Review of the major networks of charging stations - public/private (Polar, Ecotricity, GMEV, CYC etc), locations (carparks, service stations, retail, hotels/leisure, commercial etc.).
- Analysis of size and trends within the electric vehicle market - projections to 2020.
- Detailed market data and insight on the education construction market by AMA Research, a leading UK provider of construction market intelligence.
Some of the companies included:
ABB, Alfen BV, APT Technologies, Bosch Automotive, Chargemaster, Chargepoint Services, Charging Solutions, Cooper Industries, DBT, Eaton Electric, Ecotricity, Elektromotive, ELM, EV Charging Centre, Evalv8 Transport Innovations, Future Transport Systems, General Electric (GE), Hager UK, Honeywell International, Legrand Electric UK, Leviton, Mennekes, Mitsubishi, Nissan, Novar ED&S, Pod Point, Rittal, Rolec Services, RWE, Schneider Electric UK, Siemens, Switch EV, Tesla, Viridian EV.

Electric Charging Infrastructure Market
- Total electric charging infrastructure market - analysis of market size by value 2010-2015, trends.
- Key influencing factors - Plugged in Places scheme, development of OCPP and market characteristics.
- Future prospects and forecasts of market performance to 2020 and key influencing factors.

Review of Electric Vehicle Market
- Volumes of major manufacturers - leading models, changing mix of hybrid and electric cars etc.
- Mix between cars, light & heavy goods, motorcycles, mix between plug in hybrids, batteries.
- Review of key issues - legislation, standards and industrial initiatives affecting the market - battery swaps, inductive charging, Vehicle to Grid (V2G) technology, standardisation of components and technology etc.
- Analysis of fuel costs and traditional re-fuelling infrastructure.

Key Market Trends and Influences
- Total electric charging infrastructure market - analysis of size by value, trends and market characteristics.
- Product analysis by type of charge station - 2015 Mix of Rapid, Fast and Standard - changing trends, switch to 'rapid', market drivers - mix in development etc.
- Review of key market influences - funding support/grants, customer EV range requirements and driving distances, fleet buyers, London EV Delivery Plan.
- Regional mix of publicly accessible charge points in 2012-2015 - alternative schemes, providers, variations between regions.
- Review of key networks - public and private. Location of Networks - mix between Car Parks/street parking, Garage/Service stations, Leisure/Hotels, Commercial, Retail etc - changing trends, future changes, key drivers.
- Future prospects and forecasts of market performance to 2020 and key influencing factors.

Manufacturer Review
- Structure of the charging infrastructure supply chain, key players in the market.
- Charging stations, components, software solutions etc - Chargemaster, Ecotricity etc - new market entrants.
- Leading charging station and electrical component manufacturer profiles - products, origins, characteristics, key sectors and capabilities.
- Evolving market structure.
Report Summary
The UK electric vehicle charging infrastructure market is estimated to have grown by over 28% in 2015, in terms of value of materials. Our market size estimates exclude any installation/civil engineering work. The electric vehicle (EV) charging infrastructure market has seen significant growth in response to the introduction of the Plugged In Places grant in 2011, and further Government incentives in 2015. Other key factors supporting market growth include tightening environmental legislation, rising sales of electric vehicles and product development resulting in shorter charge times, while factors affecting the market negatively include uncertainty about future funding beyond 2020, a lack of harmonisation of products and relatively low current sales of electric vehicles - as well as more recently, lower fuel costs.

Commercial users are a key focus for this market. EVs offer significant long term savings and commercial users are more likely to accept higher upfront investment costs to take advantage of lower running costs than domestic users. As a result, the development of fleet charging infrastructure is a priority area. Most electric vehicles are expected to be charged at home or at work. However, a wide infrastructure of publicly accessible points is being developed. Around 35-40% of these are currently located in public car parks and on-street parking to maximise visibility, with commercial premises and garages, particularly car sales forecourts, also offering a significant resource as manufacturers attempt to bolster vehicle sales. In the future, service stations, transport hubs and commercial premises will supply a greater proportion of publicly accessible points as greater emphasis is put on enabling longer journeys and faster charging.

Fast chargers represent the largest market sector by volume, with standard speed chargers also a significant part. Rapid chargers, which are relatively new, more costly and can require upgrades to the electrical supply, remain smaller in terms of volume, but this sector is growing rapidly. Product development is primarily concerned with increased systems integration and monitoring, development of smart grid capabilities and faster, more convenient charging times. Industry participants reflect a range of backgrounds from electrical accessory/component companies to utilities, software specialists, vehicle manufacturers, battery suppliers etc., and new companies entering the market specifically - all attracted by high growth potential in the longer term. Undoubtedly, the supply and distribution structure will evolve as the sector grows, with indications already of some industry rationalisation.

Forecasting market growth of a sector in the early stages of development is extremely difficult. However, given a sustained rise in ownership levels of electric cars, our estimates indicate that the market for EV infrastructure is likely to have doubled by 2020. Industry investment in expanding the network is likely to continue to grow in the short to medium term, although government funding remains uncertain, with emphasis shifting towards provision by other sectors in the longer term. Environmental legislation is likely to continue to tighten, with savings in transport a major factor in reducing carbon emissions, prompting continued movement towards more environmentally friendly methods of travel. Expansion of networks to enable longer journey distances, for example incorporation of more charging points at service stations, is likely to drive growth in the longer term.

Contents Listing

List of Contents

1. INTRODUCTION 6

1.1 BACKGROUND 6

1.2 SOURCES OF INFORMATION 6

2. SUMMARY & FUTURE PROSPECTS 7

2.1 SUMMARY 7

2.2 FUTURE PROSPECTS 8
3. ECONOMIC ENVIRONMENT 10

3.1 GDP 10

3.2 INFLATION & INTEREST RATES 11

3.3 UNEMPLOYMENT 12

3.4 HOUSEHOLD CONSUMPTION 12

3.5 HOUSING & CONSTRUCTION 13

3.6 STERLING 14

3.7 POPULATION PROFILE 14

3.8 CONCLUSIONS 15

4. THE UK ELECTRIC VEHICLE CHARGING INFRASTRUCTURE MARKET 16

4.1 MARKET DEFINITION 16

4.2 MARKET SIZE & TRENDS - ELECTRIC VEHICLE INFRASTRUCTURE 16

4.3 MARKET INFLUENCES - LEGISLATION, INITIATIVES, FUEL PRICE 19

4.3.1 Legislation & Industry Initiatives 19

4.3.2 Cost of Fuel & Existing Infrastructure 22

4.4 MAJOR PUBLIC AND PRIVATE NETWORKS 23

4.5 PRODUCT MIX - STANDARD, FAST, RAPID 26

4.6 LOCATION OF INFRASTRUCTURE 28

5. ELECTRIC VEHICLES 31

5.1 MARKET DEFINITION - ELECTRIC VEHICLES 31

5.2 MARKET SIZE & TRENDS - ELECTRIC CARS 31

5.3 PRODUCT MIX - ELECTRIC CARS, BUSES/COACHES, MOTORCYCLES ETC. 35

6. SUPPLIERS AND PROVIDERS TO THE INDUSTRY 37

6.1 SUPPLY CHAIN AND STRUCTURE - VEHICLE CHARGING INFRASTRUCTURE 37

6.2 MAJOR SUPPLIERS INTO THE INDUSTRY 38

6.2.1 Charging Stations & Components 38
Tables & Charts

CHART 1 UK MARKET AND FORECASTS FOR ELECTRIC VEHICLE INFRASTRUCTURE 2010-2020 - BY VALUE (£M AT MSP) 7

TABLE 2 GDP DATA - 2012-2015 - KEY CONSTITUENT ELEMENTS 10

CHART 3 INTEREST RATES AND INFLATION (CPI) FROM 2000-2020 12

CHART 4 PDI & SAVINGS RATIO AT CURRENT PRICES 2000-2020 13

TABLE 5 EXCHANGE RATE FLUCTUATIONS 2011-2017 - STERLING TO THE DOLLAR, AND THE EURO, SPOT RATES 14

TABLE 6 UK MARKET FOR ELECTRIC VEHICLE CHARGING INFRASTRUCTURE 2010-2020 16

TABLE 7 2015 REGISTRATIONS OF MOST POPULAR CARS AVAILABLE UNDER THE PLUGGED IN CARS GRANT 20

TABLE 8 PUBLICLY ACCESSIBLE CHARGE UNITS INSTALLED BY REGION 2012-2015 21

TABLE 9 UK AVERAGE FUEL PRICES 2009-2015 (P/L) 22

TABLE 10 CHARGING TIMES & RELATED ELECTRICITY SUPPLY - STANDARD, FAST & RAPID CHARGING 26

CHART 11 CHARGING STATION PRODUCT MIX (STANDARD, FAST & RAPID) BY VOLUME 2015 27

CHART 12 CHARGING STATION PRODUCTS IN DEVELOPMENT (STANDARD, FAST & RAPID) BY VOLUME 2015 28

CHART 13 LOCATION OF INFRASTRUCTURE IN THE UK BY VOLUME 2015 (ENGLAND, SCOTLAND, WALES, NORTHERN IRELAND) 28

TABLE 14 LOCATION OF CHARGE POINTS - CAR PARK/ON-STREET, GARAGE/SERVICE STATIONS, LEISURE, COMMERCIAL, TRANSPORT HUBS ETC BY VOLUME 2012-2015 29

TABLE 15 ELECTRIC & HYBRID CAR REGISTRATIONS 2010-2015 (ANNUAL VOLUME/CUMULATIVE TOTAL) 31

CHART 16 PROJECTED EV TAKE-UP TO MEET GOVERNMENT TARGETS FOR VEHICLE SALES (2015-2020) 32

TABLE 17 ELECTRIC VEHICLE RANGE REQUIREMENTS 33

TABLE 18 ADVANTAGES AND DISADVANTAGES OF ELECTRIC VEHICLES 34

CHART 19 ELECTRIC VEHICLES REGISTERED IN THE UK BY TYPE - 2015 (%) - ELECTRIC CARS, LIGHT/HEAVY GOODS, MOTORCYCLES ETC. 35
Established in 1989, AMA Research is widely recognised as the leading specialist provider of market research to the UK building and construction industries. AMA's research and analysis goes beyond the more commonly available range of statistical and company information to provide expert, informed commentary and in-depth market analysis, making the reports a valuable and relevant resource for understanding the UK's construction and associated markets.

We offer the following:

- **Consultancy and bespoke research projects**
- **Published research reports** - 150+ high quality, detailed research reviews covering a wide range of environmental, building and construction products.

Our extensive experience and in-house research database enables us to offer specialised and flexible bespoke research services, as well as giving excellent value for money. Our experienced in-house team of researchers are experts in their fields and adept in conducting original and relevant research for reports or bespoke projects, and key decision makers across the building and construction industries, both in the UK and abroad, frequently use our high-quality reports as their primary source of market data.

To find out more about AMA Research, visit: www.amaresearch.co.uk or call us on +44 1242 235724.