



Electric Vehicle Charging Station Infrastructure – World – 2012 (Summary)

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Summary Report – Electric Vehicle Charging Station Infrastructure

This summary report has been specially prepared from a presentation delivered in March 2012.

The presentation comes from a highly detailed report, “The World Market for Electric Vehicle Charging Stations & Infrastructure – 2012”, published by IMS Research in March 2012.

If you would like more details about the research please contact Helena Perslow (helena.perslow@ihs.com) on +44 (0) 1933 40 22 55.

Who Are IMS Research?

IMS Research

IMS Research ((recently acquired by IHS Inc. (NYSE:IHS)) is a leading independent supplier of market research and consultancy to the global electronics industry. We offer syndicated market studies, customized client research and consultancy services.

Our initial success as a provider of market research was heavily influenced by analyst ties to the semiconductor industry. Over the last decade of remarkable growth, we have expanded into most other sectors of the electronics industry, with dedicated analyst teams focused on the factory automation, automotive, communications, computer, consumer, displays, financial & ID, LED & lighting, medical, power & energy, Solar PV, Smart Grid and security markets. We now publish more than 350 reports annually and sell to more than 50 countries worldwide.

Automotive and Transport Group

Founded in 1999, IMS Research's Automotive & Transport Group is established as an authoritative and reliable source of market information on the global automotive industry. Its customers include companies at all levels of the supply chain from vehicle manufacturers to Tier 1s to suppliers of semiconductors, components and software.

The World Market for Electric Vehicle Charging Station Infrastructure

IMS Research has been producing research on the automotive and transport market since 1999. This is IMS Research's first report on the electric vehicle charging station market, but it is the latest in a long line of research on electric and hybrid vehicles, smart grid, and power electronics.

The report provides trends, detailed revenue, unit shipment and ASP analysis of a range of electric vehicle charging station types. It also presents forecasts by region/country and by how the charging station will be used - either residential or public. The report presents market shares for the leading suppliers of electric vehicle charging stations; and also includes detailed qualitative analysis of the major trends influencing this market in the short and long term.

This report is ideal for senior managers or executives who need to assess how best to pursue opportunities in this market and compete effectively.

Definitions

In this report a charging station is either a 'private' home charger (also sometimes referred to as wall chargers or wall boxes); or a large charging facility that can also charge heavy vehicles and buses as well as several light vehicles. Charging poles or pylons are also referred to as charging stations in this report.

Electric vehicles in this report refer to:

Plug-in Hybrid Electric Vehicles (PHEVs)

These share a number of characteristics with conventional hybrid electric vehicles (HEVs). Just like conventional HEVs, they use both an internal combustion engine and battery-driven electrical motors for propulsion. However, unlike conventional HEVs, the battery in a PHEV is recharged by plugging it into a mains outlet. Also, unlike conventional HEVs, PHEVs drive on battery power alone in most circumstances. Their internal combustion engine is used if the battery is running low on charge and sometimes to recharge the battery.

Battery Electric Vehicles (BEVs)

These use battery-driven electrical motors for propulsion. They do not feature an internal combustion engine so do not require gasoline or diesel. Their battery is recharged by plugging it into a mains outlet.

Factors Affecting Growth of EV Charging Stations

EV Sales

The sales of charging stations are intimately related to the sales of electric vehicles (EVs). There is an almost 1:1 ratio between sales of EVs and private chargers (such as those used in private residences); however, sales of public chargers are leading sales of EVs, particularly in the nascent phase of the market. This 'lead' is often caused by a need to 'build up' infrastructure to encourage EV adoption.

Despite various incentives, the EV market is at introductory phase, with the people who buy EVs being early adopters. At this stage the price of oil is a significant factor in the sales (or lack) of electric vehicles. Despite being at an all-time high, the price of oil is not yet deterring a significant number of consumers from purchasing internal combustion engine (ICE) vehicles. To overcome price concerns, financial assistance is often available when purchasing an EV, which may positively influence sales. The third obstacle preventing wider uptake of EVs is "range anxiety" and the current state of public charging infrastructure.

Factors Affecting Growth of EV Charging Stations

Government Projects

How large and functional the charging station infrastructure is in a country is, to a great extent, driven and encouraged by the government. Businesses usually need some clear signs from the government that EV charging infrastructure is financially supported and desirable, in order for them to start investing. Most government projects were set up in 2010.

Standards/Classifications

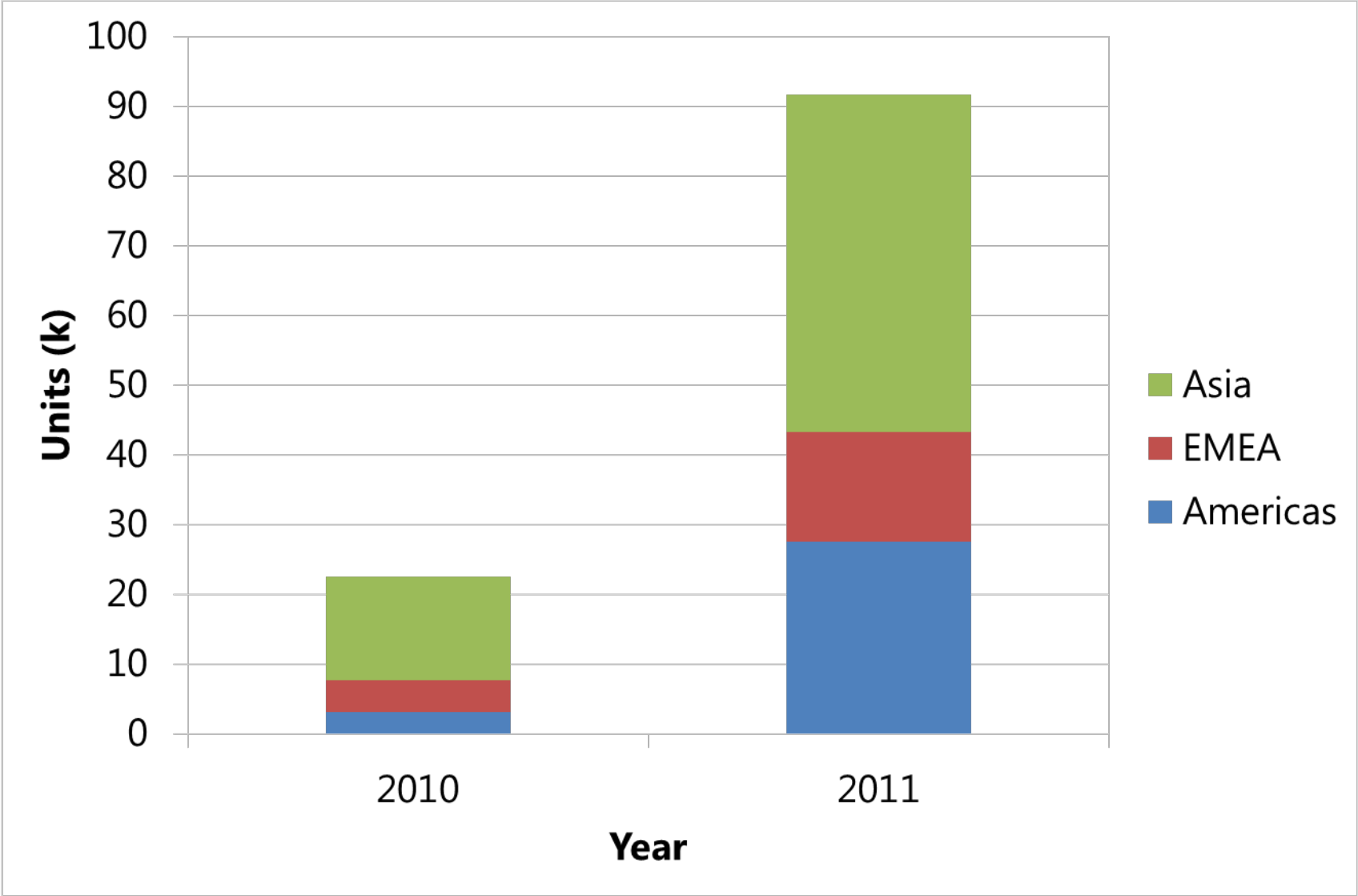
At the time of writing this report, there are no common charging station standards or classifications in the world. This is not necessarily a barrier to growth as there are numerous industries with multiple standards/classifications; however, the way that the standards are constructed, recommended to be used, and are deemed safe to be used are potential barriers.

The main safety concern has to do with what is known as the “emergency cord” which is supplied with the EV. It would typically be Level 1 or Mode 2, and it can be plugged-in directly to a household electrical socket. This is currently marketed by some vehicle manufacturers (OEMs) as a convenience product – there is no need to buy a dedicated charger. Utility companies and most EVSE suppliers in EMEA and APAC would argue that Level 1 or Mode 2 is not always safe. Depending on the ampere and the state of the fittings there is a risk of the socket overheating and catching fire.

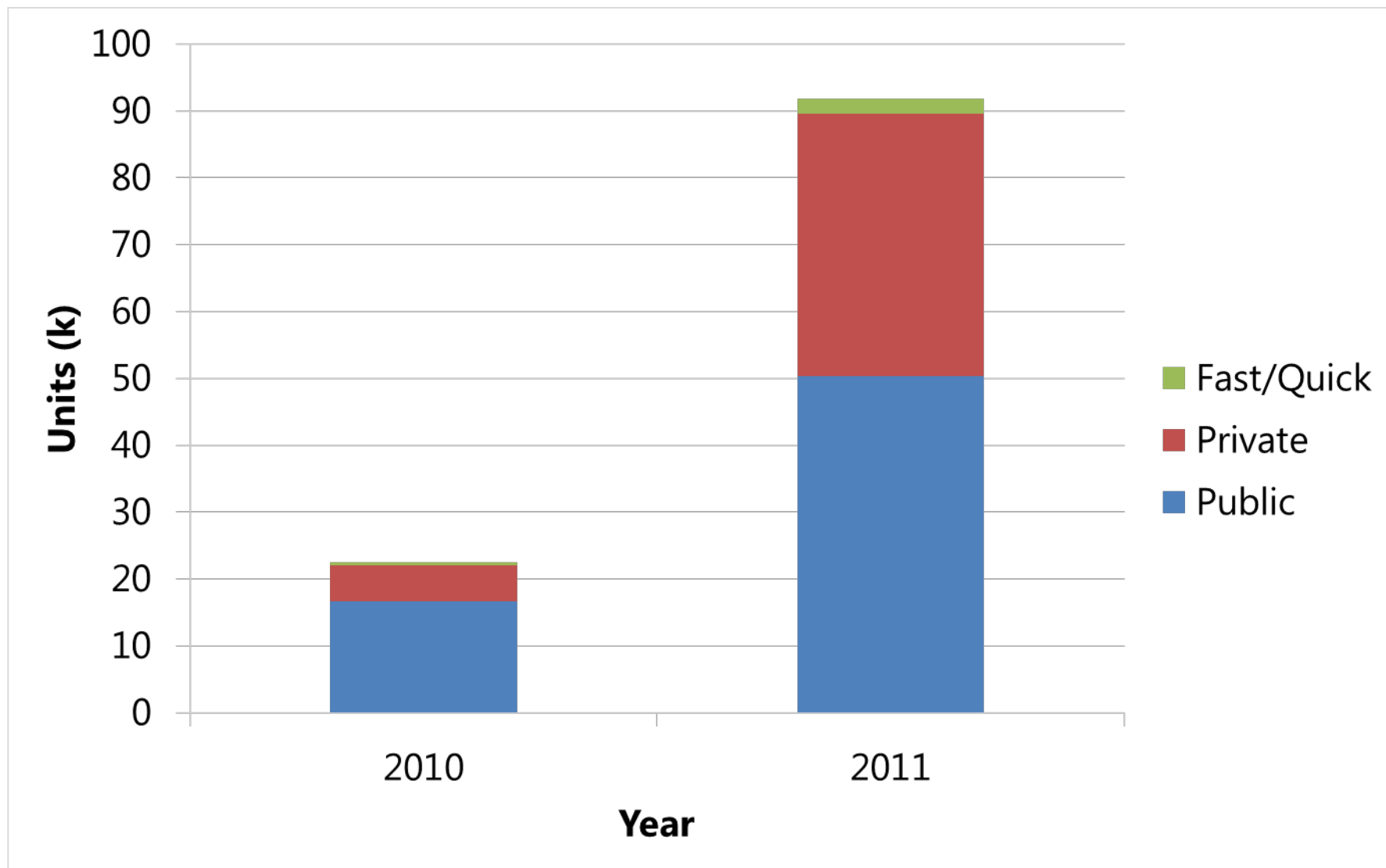
World Market for EV Charging Stations

- Public charging stations dominate shipments across the forecast period. In 2013 it is expected that shipments of public charging stations will almost be 500 thousand units per year.
- Total revenues for charging stations are expected to increase substantially between 2012 and 2013 to over \$2.2 billion.
- The number of public charging stations shipped over the forecast period is expected to be higher than the number of private charging stations shipped.
- In all regions the number of private chargers shipped will be lower than the number of EVs sold.

World Market for EV Charging Stations - Region



World Market for EV Charging Stations - Type



EV Charging Station Competitive Environment

- As with any emerging market, market shares are likely to change dramatically over the next few years. Whilst the market has relatively small sales volumes, a new entrant with one large order will instantly garner significant market share. Other factors such as new technologies are also likely to have a huge impact on the supplier base.
- Americas was dominated by four suppliers in 2010. In 2011 nine suppliers made it to the market shares list.
- EMEA is still divided by suppliers that only supply to their domestic market and those who supply to the whole region.

EV Charging Station Competitive Environment - Americas

Market Share Estimates for Charging Stations AMERICAS

Units (k)

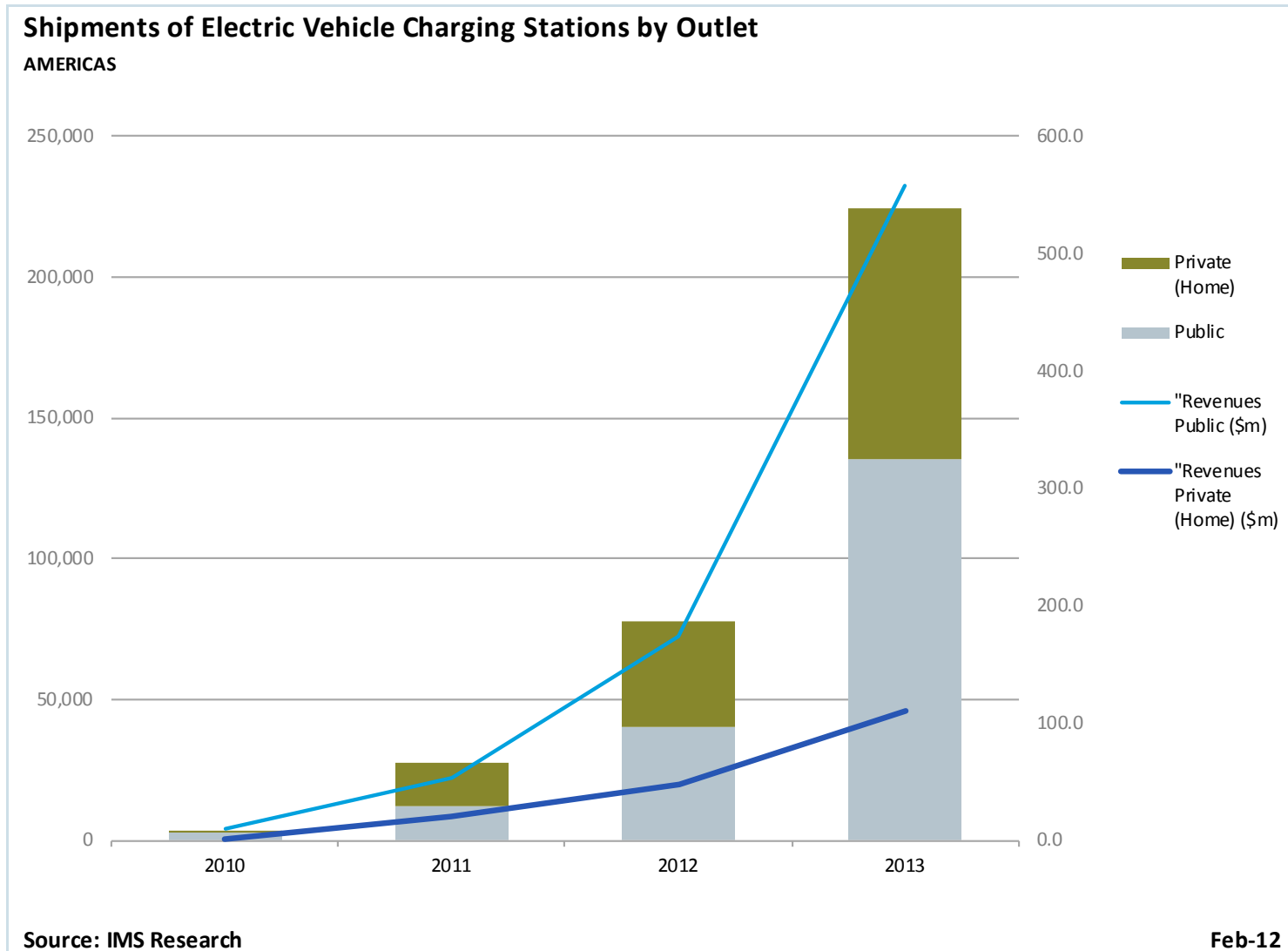
	Company Name	2010 Share	Company Name	2011 Share
1.	Clipper Creek		ECotality North America (Blink)	
2.	Columb Technologies		Columb Technologies	
3.	Eaton		AeroVironment	
4.				
5.				
6.				
7.				
8.				
9.				
	Others		Others	

The market in 2010 was estimated to be 3,170 units.
 The market in 2011 was estimated to be 27,489 units.

Source: IMS Research

Mar-12

The Americas Market for EV Charging Infrastructure



Summary

We hope you have found this presentation to be useful.

If you would like to arrange a discussion with an analyst to learn more about “The World Market for Electric Vehicle Charging Stations & Infrastructure – 2012”, published by IMS Research in March 2012, please contact us.

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