Electric Vehicles 2017-2037: Forecasts, Analysis and Opportunities

Description: For 20 years we have surveyed the whole electric vehicle scene land, water and air, hybrid and pure electric. The next 20 years will make all that seem just a taster. Industries will collapse but certain countries, companies and users will prosper. The unique overview report, "Electric Vehicles Change the World 2017-2037" explains all this including the barely-noticed new end game of energy independent electric vehicles EIV. Nowadays, there are EIVs announced all the time and they will become more important than the much-discussed autonomy of navigation that many of them will employ.

We show how fuel cell and non-plug-in vehicles will be sidelined as we approach peak internal combustion engine, peak car and even peak plug-in pure electric vehicle in the next two decades. We show that if, as is likely, the new 48V mild hybrids forecasted acquire EV modes of operation within ten years, the total EV market will approach one trillion dollars. We spell out how EVs leveraging navigational autonomy and/or energy independence will hugely assist the young, the old and emerging nations in particular. EIVs lead us to totally different key enabling technologies and different winners and losers. Learn how EIV hardware will be a bigger business than autonomy hardware and identify gaps in the market.

Packed with over 180 slides of detailed, easily understood new infographics, it has facts-based new forecasts uniquely in 46 categories and twenty year technological roadmaps. No more confusing of e-tuktuks with regular cars or indoor with outdoor forklifts. No more ignoring of the new sectors such as electric motorcycles and microEVs.

The number and value ten year forecasts and twenty year technology roadmaps are the result of intense travel, global interviews, conference attendance and informed calculation by PhD level analysts with appropriate experience. For example, in 2016 alone, we have interviewed many staff at EV leader Toyota during our presentations to them in Japan and the USA and when speaking alongside them in conferences across the globe including our own.

We never stop: the report is constantly updated with significant news and insights. For example, the little-discussed 48V mild hybrids appear for the first time in volume in 2017 but rapidly exceed the volume sales of the much-discussed strong hybrid and pure electric vehicles combined over many future years until we track pure electric versions dominating.

In this industry nothing is quite as it seems. Car sales will peak within 15 years for many reasons that are detailed and we identify peak internal combustion engine too but most Industrial and Commercial vehicles will see no easing of growth rate for reasons given in the report: they will power past 65% of the market - more than double that of cars.

We reveal how attention is turning away from the declining share of cost and function represented by batteries to the increasing share from power electronics adding many new power technologies. However, a major focus of this unique overview report is the vehicles themselves from personal manned multicopters to e-buses straddling traffic - showing the gaps in the market. This report priorities commercial success factors and it provides detailed statistics to support informed action plans. Unlike some, the author is not uniformly enthusiastic about everything. Indeed certain technologies will to be squeezed out to become merely niche activities and the author looks at where, when and why.

There is a detailed Executive Summary and Conclusions, Introduction and chapters on Industrial and Commercial, Cars and other applicational sectors identifying key players. There is a league table of the top 13 manufacturers of hybrid and pure electric EVs land, water and air with many famous names absent and little known names in there including seven companies not in the top 13 three years ago. Lessons are drawn.

The key enabling technologies for the future, covered in later chapters, are changing radically with multiple reversing motor generators and multiple energy harvesting including multiple electrical recuperation among those coming to the fore. This report takes a fresh, unbiased look at all the vehicle categories and technology options, most of which are subject to disruptive change. For those wanting to drill down into specific aspects the many new reports that do just that are referenced. It is a sign of the times that this report contains barely a word from its predecessor one year ago: it is almost entirely researched in 2016 then updated.
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