

## Transportation Goes Electric - Electric Vehicle Deployment to Take Over Soon

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In recent years, the fiscal incentives spurred the uptake of electric vehicles globally. Electric vehicle and battery manufacturing industries have scaled up their manufacturing processes along with expanding strategic developments including product launches, expansion, and acquisitions. Measures such as vehicle tax rebates have been introduced with the sole purpose to reduce the price gap between electric vehicles and conventional vehicles.

Along with these measures and incentives, technological advancements have paved the way for substantial demand for electric vehicles and electric vehicle batteries. ESOMAR-certified market research and consulting firm, Future Market Insights, projects the electric vehicle battery market to grow at a CAGR of 8.5% CAGR through 2027, likely to surpass US\$ 13 Bn.

The scope of electric vehicles has widened dramatically over the past several years considering the growing need for controlling carbon footprint and increasing environment sustainability. Statistically speaking, there are five million electric vehicles on the world's roads. China dominates the global electric vehicles market, followed by Europe and the United States. In this blog, we will discuss how the global transportation sector has gone electric. Along with this, we will talk about the benefits of deployment of electric vehicles and the policies accelerating their adoption.

### How are ambitious policies accelerating the adoption of electric vehicles?

Gradually, the fuel economy and standards pertaining to the CO<sub>2</sub> emissions have started playing a major role in contributing to

the acceleration of adoption of electric vehicles at a global level. Over 85% of the cars across the world are liable to meet these EV standards. According to a report published by the International Energy Agency, CO<sub>2</sub> emissions standards in the European Union played a significant role in promoting electric car sales, which in 2020 had the largest annual increase to reach 2.1 million.

Governments of the developed and developing economies are issuing ambitious policies and initiatives to support the adoption of electric vehicles. In order to scale up the electric vehicles, making accessible and convenient chargers available is of utmost importance. To address this, the governments have provided support to key players for the installation of efficient electric vehicle charging infrastructure.

Efforts by various countries have improved the overall demand and value for electric vehicles. In the United States, for instance, President Biden announced an action plan directing the region to drive American leadership forward on clean cars. The government believes that the future of electric cars is cleaner and more affordable. As per plan, an ambitious target of reaching 50% of electric vehicle (EV) sale shares in the U.S. by 2030 has been set. Keeping this in view, in June 2022, Biden issued a Notice of Proposed Rulemaking (NPRM) under which the plan to allocate \$5 billion to states to fund electric vehicle chargers over five years as part of the bipartisan infrastructure package was announced. The notice supports the commitment of constructing a national network of 500,000 electric vehicle (EV) chargers by 2030.

Speaking of China, the powerhouse of battery manufacturing, China's Ministry of Industry and Information Technology (MIIT)

finalized the New Energy Vehicles (NEV) mandate policy, imposing a mandate on automakers requiring that electric vehicles make up 40% of all sales by 2030. In January 2021 began the second phase of China's policy that regulated how both corporate average fuel consumption (CAFC) credits and new energy vehicle (NEV) credits are calculated and traded. Furthermore, presently, China is in talks with the automakers seeking the extension in cost subsidies (which was set to expire in 2022) for electric vehicles. This is because of the plans to keep the electric vehicle market growing, which eventually will lead to the growth of the overall economy.

Such broad efforts by the economies have managed to offer significant sales opportunities for electric vehicles. In the years to come, such initiatives and proposals will be able to help countries set strong standards. Furthermore, vehicle electrification does not only meet the set plans and strategies, but also encourages building the clean energy workforce of the future.

### Impact of electrifying vehicles on the environment

Amidst the vehicle transition, more ambition and action is required to protect the environment from harmful emissions. Experts suggest that electrification of vehicles is better for the environment than gas-powered vehicles. Electric vehicles contribute immensely towards cutting down emissions, decarbonising electricity generation processes, supporting sustainable battery manufacturing and so on.

Considering these factors, several countries have already switched, while others are switching to electric vehicles, making it a priority in their plans to reach their climate goals. To date, 17 countries have announced 100% zero-emission vehicle targets or the phase-out of internal combustion engine vehicles through 2050.

California, in 2021, that as per its new analysis from the California Energy Commission (CEC), the state will need nearly 1.2 million public and shared chargers by 2030 to meet the fuelling demands of the 7.5 million passenger plug-in electric vehicles (EVs) anticipated to be on California roads. Furthermore, after conducting the analysis, an executive order was issued requiring the sales of all new passenger vehicles to be zero-emission by 2035 including battery electric and fuel-cell technologies.

The prospects of greener economies have taken over the entire world. From imposing a ban on vehicles driven on fossil fuels to investing huge amounts in the development of an infrastructure that supports electric vehicles, the whole world is on a roll. Let's consider the case of the UK. The country announced a ban on new petrol and diesel cars from sale after 2030 in a bid to reach zero-emissions by 2050. To fuel the transition, the government announced investment plans of nearly £12 billion to accelerate the roll-out of charging points across the country and boost the production of EV batteries.

### Conclusion - The Future Roadmap

Even though it is considerably beneficial to boost the electrification of vehicles, in the near future, the governments will need to address some issues pertaining to the same. Issues such as sustainability of electric vehicles, availability of ample material resources for electric vehicle batteries and more. The development of strong mining regulations will have to be developed over the years as it is linked to significant environmental impacts as well as social and ethical issues.

Looking forward, the electric vehicles industry will witness a drastically positive rate of growth. The electrification will take some time but it's absolutely worth the investment and time. The whole process will also turn out beneficial for the long term increase in energy efficiency and decrease in the pollution and carbon footprint. The overall electric vehicle landscape is rapidly changing and is expected to bring an evolution in the market by deploying electric transportation on roads, seas and skies.