

GLOBAL EMISSIONS STANDARDS DRIVING HYBRID AND ELECTRIC VEHICLE GROWTH

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Over the last 20 years, global regulations have had a significant impact on the level of carbon dioxide emissions standards across the auto industry. In recent years, the European Union (EU) and China have been at the forefront of establishing more aggressive targets.

The effect from this regulation has been meaningful to the automotive industry, including manufacturers as well as automotive parts suppliers. The result has been a significant increase in the research and development of hybrid and electric vehicles. As emission standards continue to rise, the importance of hybrid and electric vehicles as a percentage of total fleet sales will also continue to grow. The acceleration of hybrid and electric vehicle growth may present an attractive opportunity for investors to profit from and contribute to a more sustainable future.

Regulatory standards

Between 2012 and 2015, the EU phased in a carbon dioxide emissions target for new passenger cars of 130g/km, compared to 158.7g/km in 2007. The industry is now targeting 95g/km to be phased in for all new cars starting in 2020. These standards are based on manufacturer fleet averages, insuring auto original equipment manufacturer (OEMs) are incentivized to significantly increase the percentage of hybrid and electric vehicles in their fleets.

Similarly, China has established emissions standards in line with the EU. The China VI emission standards require manufacturers to comply with new emissions targets by mid-2020. Additionally, as of January 1, the Chinese government has instituted a set of policies to further compel the production of hybrid and electric vehicles. There are now prohibitions on new manufacturing plants for internal combustion vehicles. Further, they have established a new “cap and trade” system whereby, generally, manufacturers would need at least 10% of new vehicle output to be hybrid or electric.

Other countries, including the United States, have regulations around emissions, but given the size of the Chinese market—the largest in the world—and the EU, manufacturers have focused on adhering to the aggressive timelines established by these two markets.

Evolution of fleet composition

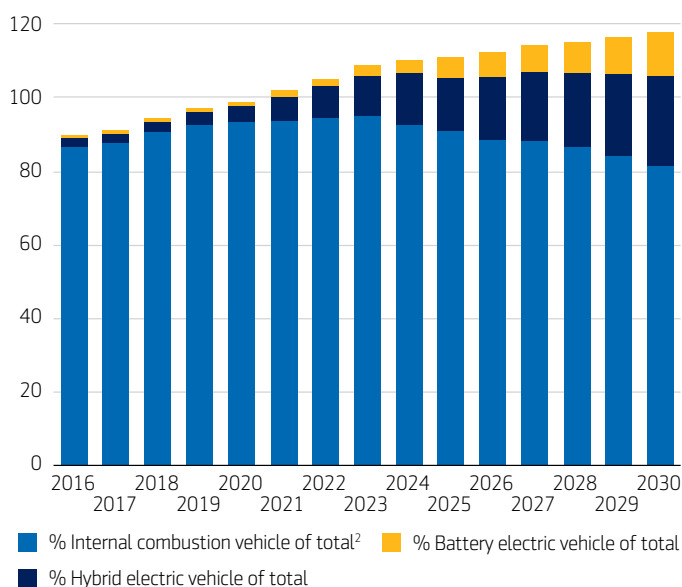
Currently, hybrid and electric vehicles are approximately 5% of global light vehicle sales volume. That figure is expected to grow to 39% by 2030 (see Exhibit 1). To achieve these levels, auto manufacturers have committed to significantly increasing their investment in electrified vehicle development. As an example, Ford recently increased its commitment from \$4.5 billion to \$11 billion to produce 40 hybrid and fully electric vehicles by 2022. This level of investment is similar across the industry as companies realize the speed of market evolution toward hybrid and electric vehicles.

As manufacturers aggressively push to manufacture hybrid and electric vehicles, auto parts suppliers also understand that they too must address this demand. Further, suppliers have realized the need to provide a full suite of products to address the range of powertrains that will be demanded by auto manufacturers. As such, recent M&A has been focused on filling in electric capabilities, and research and development is also concentrated on this trend.

Responsible investment opportunities

We believe that this evolution in the automotive space creates opportunities from a responsible investing standpoint as investors can finance those companies that are at the forefront of this electrification trend. Companies that are focused on electrification are also aligned quite well with the United Nations Sustainable Development Goals, particularly its Alternative and Clean Energy goal, and could offer an opportunity for investors to profit from and contribute to a more sustainable future.

Exhibit 1: Hybrid and electric vehicle growth is expected to accelerate (millions of units)¹



Source: Aegon AM US using publicly available BCG estimates. ¹Units of global light vehicles. ²Includes mild hybrid electric vehicle.

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