

Executive Summary

The electrification of the transportation sector promises several benefits for urban areas and the rest of the world. Electric mobility is critical to tackling climate change, reducing air pollution, and improving energy efficient utilization. To achieve the goal set by the Paris Agreement on climate change of limiting global warming to well below 2° Celsius, the transport sector—that accounts for 24% of global CO2 emissions—will need to shift rapidly towards lower and zero emission options. This will only be possible through mass electrification of the transport sector coupled with decarbonization of the electricity grid. Decisions made today will determine whether the Paris goals can be met or not and if other areas will be able to evolve in the same pace.

Electric cars and buses will add just 6% to global electricity demand by 2040, while the switch from conventional to electric vehicles will displace 7.3 million barrels per day of transport fuel, according to Bloomberg New Energy Finance. Even in markets that are small today, governments should start to prepare for an industry that is expected to grow rapidly in the next decade. Local supply chains, service providers and public transportation companies, will have to adapt to the new technology to remain competitive.

The next 20 years are expected to have rigid regulations for CO2 emissions, which could lead to the gradual disappearance of internal combustion vehicles (ICE) and the emergence of a diverse portfolio of electrified vehicles. Currently, the most immediate solution seems to be the adoption of hybrid vehicles due to the long commute for average consumers. However, in the near future, as technologies improves and costs go down, there will be a gradual increase of a pure EV fleet prevailing over other technologies in the automotive industry.

Reflecting this growth, Bright Consulting predicts global EV (PHEV or BEV) sales are set to climb from 1.3 million in 2017 to 1.7 million in 2018, reaching an estimated 2.1 million in 2019. In addition, by 2025, 22.4% of cars sold will have electric engines (or 25 million units), up from 1.77% in 2018 (0.6% PHEV and 1.2% BEV).

The electric vehicle wave will slowly reach Brazil which needs to overcome several obstacles related to regulatory and infrastructure before it can make the transition from internal combustion to electric powered vehicles.

Thus, this second version of the BRIGHT CONSULTING HYBRID AND ELECTRIC VEHICLES WHITE PAPER considers the difficulties and challenges for the development of the EVs value chain and market with a particular focus on the Brazilian market. It increases knowledge about the possibilities and development alternatives of the emerging EV industry and how less-developed markets, such as Brazil, could potentially increase their linkage to these industries.

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