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Electrification of the transport sector

> The prime option to cope with climate targets?

Abstract

The Paris Agreement of 2015, containing the intention of the international community to keep the rise of global temperatures below 2°C compared to pre-industrial times marks the first iteration of a renewed understanding of global energy governance. As an effect, the dissemination of sectors, explicitly those with high Greenhouse Gas (GHG) emissions has shown, that every energy-intensive sector is urged to contribute its share to the general subject of decarbonization. Actions within these sectors are urgent and need to be performed immediately in order to prevent disruptive developments. Since the transport sector alone is responsible for around 27% of the European Union's GHG emissions the transformation from conventional to a more/full electric mobility approach currently resembles the potentially most feasible approach to achieve the climate targets set by the European Union for years of 2030, as well as for 2050.

At the present time, the establishment of alternative technologies within the existing road transport sector and their implementation through different decarbonization approaches varies in the aspects of rate and general technological application. Furthermore, the existence of current barriers for electrification, such as system infrastructure, or the social acceptance are generating further obstacles for a wide-scale implementation. In this regard the question remains, if the general electrification of the transport sector is the prime option for the achievement of sectorial decarbonization efforts.