

Electric Vehicles Charging Stations: Strategies and Algorithms Integrated in a Power-Sharing Model

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Abstract : Recent air emission regulations point toward the complete electrification of road vehicles. An increasing number of users are beginning to prefer full electric or hybrid, plug-in vehicle solutions, incentivized by government subsidies and the lower cost of electricity compared to gasoline or diesel. However, it is necessary to optimize charging stations so that they can simultaneously satisfy as many users as possible. The purpose of this paper is to present optimization algorithms that enable simultaneous charging of multiple electric vehicles while ensuring maximum performance in relation to the type of charging station.

Keywords : electric vehicles, charging stations, sharing model, fast charging, car park, power profiles

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