
Some recent research on electric vehicle routing

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Abstract

Goods distribution with electric vehicles has become a hot topic in the last few years. We discuss some of the most recent research done in the field of electric vehicle routing and introduce a new problem in which a fleet of battery electric vehicles (BEVs) must deliver goods to a set of customers over the course of a week. Freight BEVs are typically charged at a central depot and rarely use public charging stations during delivery routes. Thus, the charging schedule of the vehicles at the depot over the planning horizon must be determined such as to allow them to complete their routes, and charging can be done during the working day or at night. There are different types of charging stations at the depot, and a limited amount of stations for each of these types. We also discuss how the battery can be modeled in a way that allows realistic non-linear charging functions to be used, as well as how to integrate certain battery health considerations.

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