Análisis de la viabilidad para la implementación de vehículo eléctrico que preste servicio de taxi en la ciudad de Cuenca [

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text (article)

Analítica

Transportation is an essential element for socioeconomic growth; however, its development generates a series of effects such as congestion, noise, the emission of harmful substances into the environment, the depletion of non-renewable resources. One of the factors that affect the reduction of pollution to the environment is the replacement of conventional fuel vehicles by other types of propulsion systems, including electric motors. The introduction of electric vehicles can become the key element in the development of the sustainable transport strategy in urban areas, the demand for these vehicles must be driven by the owners of the vehicle fleet, especially by companies. The owners of conventional taxis in the city of Cuenca who must renew their units, according to the AFUT- Asociación Frente Unido de Taxistas-, are skeptical about the renewal with electric units proposed by local authorities, mainly due to the uncertainty about the reliability and profitability offered by this type of vehicle, which must be at least equal to those of a vehicle with an internal combustion engine. In this research, an experimental research methodology was applied by using EMOLAB computer software and a Kia Soul EV electric vehicle to obtain a database with information that describes the behavior of the electric vehicle. Applying factorial experiment designs (DOE), the variables that have the most influence on the autonomy and energy consumption of the electric vehicle were used for their evaluation
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