

عنوان مقاله:

Stochastic Modeling of Plug-in Electric Vehicles Load Demand in Residential Grids Considering Nonlinear Battery Charge Characteristic

محل انتشار:

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خلاصه مقاله:

In order to investigate the impact of Plug-in Electric Vehicles (PEVs) in distribution network studies, realistic modeling of PEVs load demand is important. One of the most important characteristics of the PEVs is the nonlinear behavior of their batteries in charging periods that should be considered in PEVs demand modeling. An accurate stochastic modeling of PEVs load demand proposed in this paper. The charging characteristic of batteries has been considered in linear and nonlinear charge profiles, separately, and the results of them are compared with each other as well. The results show that the nonlinear modeling of batteries has a significant effect on the load of the fleet, and it should be considered in relevant studies.

کلمات کلیدی:

PEVs, Stochastic modeling, nonlinear charge profile, load demand modeling

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