

عنوان مقاله:

Development of an Optimal Charging Strategy for Plug-InHybrid Electric Vehicles in a Residential DistributionNetwork
Considering Demand Response

محل انتشار:

دومین کنفرانس منطقه ای سیرد (سال: 1392)

تعداد صفحات اصل مقاله: 5

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خلاصه مقاله:

Recently, with the growth in population, high and unstable fuel prices and CO₂ emission concerns, the utilization of PHEVs is increasing considerably. In this regard, to optimally charge /discharge these PHEVs, system operators should consider the electrical and thermal limitations in distribution network. In this paper, a smart strategy for optimal charging/discharging of PHEVs in parking lots is proposed and discussed with high penetration of PHEVs and different case studies. Three objective functions are defined for proposed methodology to minimize energy loss, voltage deviations and manage congestion on lines with respect to availability of PHEVs and current limitation of lines. To yield an optimal set of Pareto-front, a high efficient and accurate algorithm named as Fuzzy Multi Objective Particle Swarm Optimization (FMOPSO) has been used.

کلمات کلیدی:

.PHEV, Controlled charge, distribution network, power loss, voltage deviation, FMOPSO

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