عنوان مقاله:

A Probabilistic Method to Model PHEV for Participation in Electricity Market

محل انتشار:

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خلاصه مقاله:

Strong attentions into low carbon transportation systems cause the growth rate of plug-in hybrid electric vehicles (PHEVs) increases around the world. PHEVs have the capability of grid connection. Therefore, if the effects of these vehicles such as overloading in distribution network are ignored, many problems would happen. Many assessments have been conducted over understanding the effects of PHEVs, but any pattern for describing the state of battery in different hours of day has not considered in most of them. Also, when the aggregated stored energy in such technologies is going to be represented in energy markets, awareness about the amount of available energy in battery and the status of access to this energy is needed. Thus, an appropriate pattern could support aggregators with useful information in order to participate in electricity markets. In this paper, a novel method has been proposed to model the status of stored energy in battery for various hours of day. Using this method, aggregators would have better estimation over their available energy to offer in electricity markets

کلمات کلیدی:

Plug-in Hybrid Electric Vehicle (PHEV), battery status, aggregator, vehicle-to-grid (V2G