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新能源与分布式发电

电动汽车充电对电网影响的综述

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摘要：

在政府对电动汽车产业的大力推动下，我国电动汽车产业将步入快速发展期，同时也极大的推动了电动汽车充电站和充电桩的建设，大量电动汽车的充电行为将会给电网带来较大的影响。本文首先指出电动汽车的普及程度、类型、充电时间、充电方式以及充电特性的不同会使得电动汽车对电网的影响发生变化。然后针对电动汽车充电对电网的影响问题，从输电网、配电网角度对国内外关于电动汽车接入电网的研究现状进行详细分析。最后针对充电站对电网的谐波污染问题，介绍了各种谐波污染的治理方法。

关键词：

A Survey of Influence of Electrics Vehicle Charging on Power Grid

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Abstract:

With the vigorous promotion of government, the electric vehicle industry has entered a rapid development period, at the same time it pushed forward the construction of the charging stations and charging points. And charging behaviors of a large number of electric vehicles(EVs) will cause great influence on the grid. This paper pointed out that this influence varies with the penetration of EVs, EVs' type, charging time, charging mode and charging characteristics, then detailed analysis the research on the impact of EVs' charging on grid home and abroad from the perspective of transmission network and distribution. Finally, this paper introduces many ways to control the harmonic pollution which caused by EV charging station.

Keywords:

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