Record Nr. UNINA9910253985103321 Autore Li Canbing Titolo Influences of Electric Vehicles on Power System and Key Technologies of Vehicle-to-Grid / / by Canbing Li, Yijia Cao, Yonghong Kuang, Bin Zhou Pubbl/distr/stampa Berlin, Heidelberg:,: Springer Berlin Heidelberg:,: Imprint: Springer, . 2016 ISBN 3-662-49364-0 Edizione [1st ed. 2016.] Descrizione fisica 1 online resource (114 p.) Collana Power Systems, , 1612-1287 621.042 Disciplina Soggetti **Transportation** Power electronics Automotive engineering Renewable energy resources Transportation engineering Traffic engineering Power Electronics, Electrical Machines and Networks Automotive Engineering Renewable and Green Energy Transportation Technology and Traffic Engineering Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di contenuto Influences of EVs on Power System by Improving the Microclimate --The Response of EV Charging Loads to TOU Price -- The Response of EV Charging Loads to the Grid Voltage -- The Response of Large-Scale EV Charging Loads to Frequency -- The Asynchronous Response of Small-Scale Charging Facilities to Grid Frequency -- Analysis on Typical Schemes of the Integration of EV Charging Facilities into the Grid -- EV Charging Facility Planning. Sommario/riassunto This book analyzes the influence of electric vehicles on microclimate and the indirect influence on power load from a unique perspective. It discusses different aspects of Vehicle-to-grid (V2G) technology, including large and small-scale charging infrastructures, and describes

the effect on electricity price, voltage, frequency and other key V2G

technologies. It introduces various aspects of the influence of electric vehicles on the power grids and the control strategies for achieving economic, safe and steady grid operation using V2G technologies. This book is suitable for senior undergraduates and postgraduates majoring in electrical, transportation, or environmental engineering, as well as other related professionals.