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Titolo	Business Models and Reliable Operation of Virtual Power Plants // by Heping Jia, Xuanyuan Wang, Xian Zhang, Dunnan Liu
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Descrizione fisica	1 online resource (XIV, 157 p. 82 illus., 65 illus. in color.)
Disciplina	321.319
Soggetti	Electric power distribution Cooperating objects (Computer systems) Energy policy Energy and state Energy Grids and Networks Cyber-Physical Systems Energy Policy, Economics and Management
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Nota di contenuto	Climate Change and Virtual Power Plants -- Short-term Load Forecasting for DERs based on CNN-LSTM with Attention Mechanism -- Clustering Forecasting of Outputs for VPPs Aggregated with EVs Considering Meteorological Factors -- Business Model and Practice of Virtual Power Plants -- Integrated Electricity/Heat Demand Response for Virtual Power Plants -- Optimal Operation of Virtual Power Plants Participating in Auxiliary Service Market Coordinating with Energy Storage Allocation -- Dynamic Pricing Strategy of Virtual Power Plants Based on DDPG Reinforcement Learning Algorithm -- Reliable Operation of Power Systems Integrated with Virtual Power Plants -- Reliable Operation of Power Systems Integrated with Virtual Power Plants and Wind Power Considering Cyber Malfunctions.
Sommario/riassunto	This book focuses on the business operation of virtual power plants. Both of the business models and reliable operation of virtual power plants have been addressed with engineering practices. This is achieved by providing an in-depth study on several major topics such as load forecasting for distributed energy resources, business model and

practice of virtual power plants, the business operation of virtual power plants participating in demand response, and auxiliary service market. The dynamic pricing strategy of virtual power plants and reliable operation of power systems with virtual power plants are provided as well. The comprehensive and systematic treatment in business operation of virtual power plants is one of the major features of the book, which is particularly suited for readers who are interested to learn operation mechanisms of virtual power plants. The book benefits researchers, engineers, and graduate students in the fields of energy internet, electrical engineering, and business administration, etc. .

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