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峰谷分时电价的成本效益分析模型及其应用

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摘要
针对“厂网分开”后我国电力市场的现状分析了与峰谷分时电价相关的各方成本和效益，分别建立了电网公司、电力用户、发电公司和全社会的成本效益分析模型，并详细介绍了成本效益分析的计算流程。算例分析结果表明利用所提出的成本效益分析模型可得出确保各参与方的益本比均大于或等于1的“削峰填谷”电量临界值。研究成果可为各参与方分析峰谷分时电价方案的可行性提供参考。

关键词 需求侧管理(DSM)；峰谷分时电价；成本效益分析；益本比；削峰填谷

分类号

Cost-Benefit Analysis Model and its Application of Peak-Valley Time-of-Use Electricity Price

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Abstract
Considering the actuality of electricity markets in China after the division of proprietorships of power plants and power grids，the cost and benefit of each participant are analyzed one by one and the cost-benefit analysis models of power grid companies，power customers，generation companies and entire society are proposed respectively. The calculation flow of cost-benefit analysis is also presented in detail. Numerical analysis results show that the proposed cost-benefit analysis models can be used to calculate the critical power quantity of peak load leveling which can ensure that the benefit cost ratio (BCR) of each participant is more than or equal to 1. The achievements of this research can be available for reference to the participants of electricity markets in the analysis on the feasibility of the peak-valley TOU electricity price projects.

Key words demand side management (DSM)；peak-valley time-of-use (TOU) electricity price；cost-benefit analysis；benefit cost ratio (BCR)；peak load leveling

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