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电力市场

碳排放交易下的发电权置换优化模型

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摘要:

在碳排放交易下构建了发电商发电权交易优化模型, 给出了发电商增量利润的分配模型。通过与不考虑碳交易下的置换情况进行对比分析发现, 考虑碳交易的置换能显著提高置换效率, 并能提高发电商参与发电权置换的积极性。

关键词: 碳排放交易 发电权 发电商 交易优化模型 置换

An Optimization Model of Generating Right Exchanging Under Carbon Emission Trading

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Abstract:

The generating right exchanging optimization model under carbon emission trading was constructed based on the low-carbon economy, and the profit distribution model was also presented. By comparing with the case without consideration of carbon trading, it was found that the case with consideration of carbon trading can significantly improve the exchanging efficiency, and enhance the initiative of generators to participate in the exchange.

Keywords: carbon emission trading generation right generation company deal optimization model exchange

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参考文献:

- [1] 康重庆, 陈启鑫, 夏清. 低碳电力技术的研究展望[J]. 电网技术, 2009, 33(2): 1-7. Kang Chongqing, Chen Qixin, Xia Qing. Prospects of low-carbon electricity[J]. Power System Technology, 2009, 33(2): 1-7(in Chinese).
- [2] 康重庆, 周天睿, 陈启鑫, 等. 电网低碳效益评估模型及其应用[J]. 电网技术, 2009, 33(17): 1-7. Kang Chongqing, Zhou Tianrui, Chen Qixin, et al. Assessment model on low-carbon effects of power grid and its application[J]. Power System Technology, 2009, 33(17): 1-7(in Chinese).
- [3] 姚建刚, 周启亮, 张佳启, 等. 基于期权理论的发电权交易模型[J]. 中国电机工程学报, 2005, 25(21): 76-81. Yao Jianguang, Zhou Qiliang, Zhang Jiaqi, et al. Generation rights trade mode based on option theory[J]. Proceedings of the CSEE, 2005, 25(21): 76-81(in Chinese).
- [4] 莫莉, 周建中, 李清清, 等. 基于委托代理模型的发电权交易模式[J]. 电力系统自动化, 2008, 32(2): 30-34. Mo Li, Zhou Jianzhong, Li Qingqing, et al. Mechanism of generation rights trades based on principal-

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4. 陈皓勇 张森林 张尧 .区域电力市场环境下节能发电调度方式[J].电网技术, 2008,32(24): 16-22
5. 邵留国 黄健柏 张仕璟 .电力拍卖市场竞价模式的系统仿真分析[J].电网技术, 2007,31(24): 46-51
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7. 张森林 张尧 陈皓勇 屈少青 杨辉.水电参与电力市场竞价的关键问题研究[J].电网技术, 2010,34(1): 107-116
8. 周明 赵颖 李庚银.发电权交易对电网输电服务成本的影响[J].电网技术, 2010,34(1): 134-138