

电力市场

多时段下计及可中断负荷的电网输电阻塞管理

毛伟明, 周明, 李庚银

电力系统保护与动态安全监控教育部重点实验室(华北电力大学), 北京市 昌平区 102206

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摘要

将可中断电力合同引入多时段下的输电阻塞管理。首先分析了一种实际应用的可中断负荷期权合同, 并结合这种合同在多时段条件下建立了输电阻塞管理模型; 然后针对该模型利用遗传算法设计了一套多时段最优潮流求解程序; 最后通过算例对传统阻塞模型和上述阻塞模型进行了比较。分析结果表明, 本文提出的模型实现了可中断负荷在输电阻塞管理中的最优使用, 且更有利于实现社会效益的最大化。

关键词

[电力市场](#); [可中断负荷](#); [输电阻塞](#); [需求侧管理](#); [最优潮流](#); [电力系统](#)

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Multi-Period Power Transmission Congestion Management Considering Interruptible Loads

MAO Wei-ming, ZHOU Ming, LI Geng-yin

Key Laboratory of Power System Protection and Dynamic Security Monitoring and Control(North China Electric Power University), Ministry of Education, Changping District, Beijing 102206, China

Abstract

In this paper the interruptible electricity contract is led into multi-period power transmission congestion management. Firstly, a practical applicable interruptible option contract for interruptible load (IL) is analyzed and combining with this kind of contract a transmission congestion management model is established under multi-period condition; then according to this model, a multi-period optimal power flow solution program is designed by use of genetic algorithm (GA); finally by means of calculation example the traditional congestion management model is compared with above-mentioned congestion management model. Analysis result shows that by use of the proposed congestion management model the optimal application of IL in transmission congestion management is realized and the application of the proposed model is in favor of implementing the maximization of social benefit.

Key words

[electricity market](#); [interruptible load](#); [transmission congestion](#); [demand side management](#); [optimal power flow](#); [power system](#)

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通讯作者 李庚银 ligy@ncepu.edu.cn

作者个人主页 毛伟明; 周明; 李庚银

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