电力市场

基于关口金融输电权的双边拍卖模型

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摘要

介绍了金融输电权的拍卖机制，包括输电权拍卖容量的确定、拍卖的市场机制及拍卖原则等，提出了一种基于关口金融输电权的双边叫价拍卖模型。针对以往金融输电权拍卖模型的约束条件过于简单的特点，考虑了某条线路输电权的拍卖对其他线路潮流的影响，并通过计算基于直流潮流的功率传输分布因子来反映上述影响。在此基础上考虑了输电线路的可用容量约束，并建立了数学模型对其进行描述。最后通过算例分析验证了该模型的合理性。

A Bilateral Auction Model Based on Flowgate Right

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Abstract

In this paper the auction mechanism of financial transmission right (FTR) is presented, including the determination of auction capacity of transmission right, the market mechanism of the auction and the principle of auction, etc., and a bilateral auction model based on flowgate right (FGR) is proposed. In view of the feature that the constraint conditions of former financial transmission right (GTR) auction model are too simple, in this paper the impacts of the transmission right auction of a certain transmission line on power flows of other transmission lines are considered and by means of calculating power transmission distributed factors (PTDFs) based on DC power flows these impacts are reflected. On this basis, the available transfer capacity (ATC) constraints of transmission lines are taken into account and corresponding mathematical model is established to describe it. The rationality of the proposed model is validated by the analysis on the results of calculation examples.

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