

調整負載分布在競爭發電市場

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摘要

這本論文解決了在競爭的發電市場一些問題。因為在單方面拍賣的電力市場，買電的公司沒有在價格上得到回饋，所以該電力市場的競爭性也跟著減少。這本論文提出一種新的方法處理在開放的電力市場超量的現象。這兒方法亦提供買方公司在電力市場上可自行調整負載分布，並處理超荷及不公平的行為靈活性。此解決方案被認為是缺乏補償需求反饋後，電價在單方面拍賣。擁塞被認為是一種機會成本起著重要作用的電力價格。在這篇論文中，有機會運行狀態被認為是一個系統，其中有一些負載模式利用廉價的能源來做調整的。因此計算出來的實際需求會有誤差。該偏差是有用的信息時，對未來市場需求拍賣市場的參與者單方面的供應。兩個優化模型基於最佳功率（OPF）之建議實施此做法。第一種模式生成一個派遣的結果，沒有擁擠的問題。其目的是減少發電成本的電力系統。第二種模式是一個完整的約束最佳功率，從第一種模式採用發電調度，其目的是盡量減少偏差平方之間期望的負載模式和機會負載模式。模擬以IEEE 30 節點系統的情況已經證明了其正確性和效率。

關鍵詞：電力市場,超負荷,最優的功率潮流(OPF),調度算法,調整負載。

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