

电力系统

高压配电网无功运行状态评估指标体系

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摘要:

我国现有电压无功管理相关规定缺乏操作性较强的量化标准以及客观合理的电网无功运行状态评估体系, 为此提出了高压配电网无功运行状态评估指标体系, 该体系从无功补偿容量配置、电压无功控制能力2方面评估高压配电网的无功运行状态, 利用该指标体系的评估结果能够追踪高压配电网中存在的电压无功问题, 并可追踪到引起该类问题的具体主变, 进而可制定合理的电压无功控制策略。该指标体系在浙江余杭高压配电网的无功运行状态评估中的应用验证了其正确性和合理性, 可为电压无功运行的精细化管理提供参考。

关键词: 高压配电网 无功补偿 电压无功控制 评估指标

An Index System to Assess Reactive Power Operation in High Voltage Distribution Network

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Abstract:

The executing existing regulation for voltage/ reactive power management is scant of both quantitative criteria with strong operability and related index system to assess reactive power operation in power network, for this reason, an index system to assess reactive power operation in high-voltage distribution network is proposed. The proposed index system assesses reactive power operation of high-voltage distribution network in two sides, i.e., the configuration of reactive power compensation capacity and control ability of voltage and reactive power. Using the proposed index system, the problems related to voltage and reactive power operation in high-voltage distribution network can be traced and the concrete main power transformer causing the problem can be tracked down, and then reactive control strategy of voltage/reactive power can be drafted. The application of the proposed index system in Yuhang high-voltage distribution network verifies the correctness and rationality of this index system. The proposed index system could be available for refined management of voltage and reactive power operation.

Keywords: high voltage distribution network reactive compensation voltage/reactive power control assessment index

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