

国家重点基础研究

智能调度建模技术中若干问题的研究

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摘要:

分布式一体化建模技术是智能调度的核心技术之一。该技术基于“源端维护, 全局共享”的原则, 实现了跨层、跨区的分布式一体化建模。分析了分布式一体化建模技术应用中遇到的电网模型校验、模型边界维护等问题, 并针对每个问题提出了解决方案, 具体包括: 提出了电网模型校验的有效方法, 保证了源端模型的正确性; 提出了智能边界维护的方法, 彻底解决了模型边界维护繁琐的问题; 提出了实现模型一体化在线同步的具体方法, 解决了图、数、模无扰动投入在线系统的问题。这些问题的解决方案是对智能电网分布式一体化建模方案的完善和补充。

关键词: 智能调度 分布式一体化建模 智能边界管理 模型校验 在线同步

Several Issues in Modeling Technique for Intelligent Dispatching

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Abstract:

Distributed integration modeling technique is one of core technologies of intelligent dispatching. Based on the principles of source maintenance and global sharing, this technique implements trans-layer and trans-region distributed integration modeling. The issues such as verification of power network model, maintenance of model boundary and so on, which occur during the application of distributed integration modeling, are analyzed and solutions for these issue are given. An effective method to verify power network model is put forward to ensure the correctness of the source model; an intelligent method to maintain model boundary is proposed, thus the cumbersome maintenance of model boundary is thoroughly resolved; a concrete approach for integrated online synchronization is given, thus the problem of submitting graphics, data and model into online system without disturbance is solved. Solutions of these issues are the perfection and supplement to distributed integration modeling for smart grid.

Keywords: intelligent dispatching distributed integration modeling; intelligent border management model verification online synchronization

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