

论文

智能AVC系统的特征和建设研究

唐寅生¹, 丁晓群²

1. 湖南电力调度通信局, 湖南省 长沙市 410007; 2. 河海大学 能源与电气学院, 江苏省 南京市 210098

摘要:

摘要: 智能电网呼唤智能AVC。本文简介了我国目前电网AVC的基本作用, 首先提出了AVC一代、二代, 及智能AVC(也称AVC三代)的概念。针对我国电力部门正在大力建设智能电网的时机, 本文首次提出实现智能AVC的发展方向及过渡期的任务, 使电网的电压质量、线路损耗及电压稳定等三项指标同时抵达最好状态, 转变电网效益增长方式。

关键词:

Research on Features of Smart AVC and Its Construction

TANG Yinsheng¹, DING Xiaoqun²

1. Hunan Electric Power Dispatch Communication Bureau, Changsha 410007, Hunan Province, China;
2. School of Energy and Electrical Engineering, Hohai University, Nanjing 210098, Jiangsu Province, China

Abstract:

Abstract: Smart Grid summons smart AVC. This paper introduces the function of present AVC in our country, and advances the concepts of the first and second generation AVC, and smart AVC (also called the third generation AVC). According to the moment of vigorously construction in Smart Grid by our power departments, this paper puts forward the development direction of Smart AVC and the transmission-period's task for the first time, which can make grid voltage quality, the line loss and the voltage stability three targets simultaneously arrive at the best condition, and transform grid benefit growth way.

Keywords:

收稿日期 2010-05-07 修回日期 2010-06-30 网络版发布日期 2010-10-17

DOI:

基金项目:

通讯作者: 唐寅生

作者简介:

作者Email: tyspmz1938@163.com

参考文献:

- [1] 余贻鑫. 智能电网的技术组成和实现顺序[J]. 南方电网技术, 2009, 3(2): 1-5. Yu Yixin. Technical composition of smart grid and its implementation sequence[J]. Southern Power System Technology, 2009, 3(2): 1-5(in Chinese).
- [2] 王梅义, 吴竞昌, 蒙定中. 大电网技术[M]. 2版. 北京: 中国电力出版社, 1995: 278-290.
- [3] 电力工业部. 关于调度机构开展安全文明生产达标和创一流工作的通知[S]. 1996.
- [4] 国家电网公司. 国家电网公司建设国际一流电网调度机构考核标准(试行)[S]. 2001.
- [5] 张勇军, 任震, 李邦峰. 电力系统无功优化调度研究综述[J]. 电网技术, 2005, 29(2): 50-55. Zhang Yongjun, Ren Zhen, Li Bangfeng. Survey on optimal reactive power dispatch of power systems[J]. Power System Technology, 2005, 29(2): 50-55(in Chinese).
- [6] 钱峰, 唐寅生, 苏喆, 等. 无功电价政策对电网节能降耗水平的影响及修订建议[J]. 电网技术, 2009, 33(4): 17-20. Qian Feng, Tang Yinsheng, Su Zhe, et al. Influence of reactive power pricing policy on energy conservation and loss reduction level in power grid and revising proposal[J]. Power System Technology, 2009, 33(4): 17-20(in Chinese).
- [7] 唐寅生, 蒋凯, 钟锦群, 等. 关于重新修订“功率因数调整电费办法”的建议[J]. 电力需求侧管理, 2006, 8(3): 22-24. Tang Yinsheng, Jiang Kai, Zhong Jinqun, et al. Suggestions about revising power-factor

扩展功能

本文信息

▶ Supporting info

▶ PDF(344KB)

▶ [HTML全文]

▶ 参考文献[PDF]

▶ 参考文献

服务与反馈

▶ 把本文推荐给朋友

▶ 加入我的书架

▶ 加入引用管理器

▶ 引用本文

▶ Email Alert

▶ 文章反馈

▶ 浏览反馈信息

本文关键词相关文章

本文作者相关文章

PubMed

regulating tariff measures[J]. Demand Side Management, 2006, 8(3): 22-24(in Chinese). [8] 朱军, 盛万兴, 唐寅生. 电力系统无功功率实时监测与控制方法研究[J]. 华中电力, 2006, 19(3): 1-3. Zhu Jun, Sheng Wanxing, Tang Yinsheng. Research on the real-time monitoring and control method of the power system reactive power[J]. Central China Electric Power, 2006, 19(3): 1-3(in Chinese). [9] 唐寅生, 李文云. 500kV漫湾—草铺输电系统优化无功潮流调整控制研究[J]. 电网技术, 2001, 25(5): 49-52. Tang Yinsheng, Li Wenyun. Regulation and control of optimum reactive power for 500kV transmission system from Manwan to Caopu[J]. Power System Technology, 2001, 25(5): 49-52(in Chinese). [10] 赵彩虹, 唐寅生. 电网降损节能面临的四大关键问题[J]. 电力设备, 2007, 8(7): 14-18. Zhao Caihong, Tang Yinsheng. The 4 key problems of energy saving and loss reducing for power grid[J]. Electrical Equipment, 2007, 8(7): 14-18(in Chinese). [11] 唐寅生, 盛万兴, 蒋凯. 特高压电网无功补偿设计和运行方式研究[J]. 中国电力, 2006, 39(6): 22-25. Tang Yinsheng, Sheng Wanxing, Jiang Kai. Research on design and operation methods of reactive power compensation for ultra-high voltage grids[J]. Electric Power, 2006, 39(6): 22-25(in Chinese). [12] 李福存. 超高压交流输电系统无功经济运行问题[R]. 北京: 中国电力科学研究院, 1998. [13] 唐寅生, 李碧君. 电力系统OPF全网最优无功的经济压差?? UJ算法及其应用[J]. 中国电力, 2000, 33(9): 42-44. Tang Yinsheng, Li Bijun, Economic voltage difference algorithm and its application for optimal reactive power flow[J]. Electric Power, 2000, 33(9): 42-44(in Chinese). [14] 唐寅生, 韩锦良. 安全约束下的500kV系统最优无功的调控方法[J]. 广东电力, 2000, 12(6): 10-13. Tang Yinsheng, Han Jinliang. Optimal reactimal power regulation method under safety limiting for 500kV system[J]. Guangdong Electric Power, 2000, 12(6): 10-13(in Chinese). [15] 广东省广电集团有限公司, 编. 国外大电力系统安全事故启示及措施研究[Z]. 2004. [16] 唐寅生, 吴军. 电压质量差别电价[J]. 华中电力, 2008, 21(1): 14-17. Tang Yinsheng, Wu Jun. Discriminative pricing of electric power based on quality[J]. Central China Electric Power, 2008, 21(1): 14-17(in Chinese).

本刊中的类似文章