



我国地区电力系统灾变防治体系的研究

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**摘要:** 基于我国电力系统所具有的分级、分层的特点, 提出了应用于地区电力系统的电力灾变防治体系的“三道防线”设计: 地区电网的经济运行和静大扰动时的紧急控制系统作为第二道防线; 在危急情况下的紧急解列控制系统作为第三道防线。进而对构成“三道防线”的具体实施方案进行了系统性论述。

**关键词:** 地区电力系统; 灾变防治体系; 混成自动控制系统; 紧急控制; 紧急解列

Collapse Prevention and Economical Operation System  
for the Region Power System of China

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**Abstract:** Based on the intrinsic characteristics of Multi-Layer and Multi-Level of the power system in China, an architecture design of the Collapse Prevention and Economical Operation System (CPEOS) with “3-Line of Defence” for region power systems is presented in this paper, i.e. the economical operation and static security system as the first line of defence; the emergency control system when the grid undergoing large disturbances as the second; and the separation strategies when the emergency control actions cannot keep the integrity of the power network as the third. Furthermore, a systematic study on the detailed implementation scheme of the “3-Line of Defence” is carried out.

**Key words:** region power system; collapse prevention system; hybrid automatic control system; emergency control; emergency separation

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