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专家论坛

2009电网控制中心新技术综述

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摘要：

综述了2008—2009年国际上有关电网控制中心的几项新技术，内容包括：1）大电网会议D2.24工作组正在制订的新一代EMS结构的标准规范书。2）免费开放源码软件(free open source software，FOSS)，该软件可以从因特网上下载，它免费提供源码，允许使用者不受限制地使用、研究、修改和分发，对教学和研究非常有用。文中给出了现有的用于电力系统分析的FOSS列表，可供读者选用。3）防止电力系统大面积停电的技术，此部分将介绍2个大电网恢复计划的经验，其中包括美国PJM系统编制恢复计划的一般原则。另外加拿大Hydro-Quebec的系统结构与我国的某些区域电网有些相似，他们开发恢复计划的经验可能对我国的读者具有参考价值。

关键词：

Summary of 2009 New Technologies for Power Grid Control Centers

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Abstract:

In this paper some new technologies on control center issues in 2008-2009 are summarized. It includes three parts. The first part is a standard specification on “next generation of EMS architecture” drafted by The Working Group D2.24 of CIGRE, and five documents are to be published, including Common Requirement Document (CRD), White Paper, Standard Business Processes (SBP), Standard Business Services (SBS) and Standard Technology Services (STS), and the first two among them have been completed and published. The second part relates to Free Open Source Software (FOSS). FOSS means those types of software which can be obtained from Internet with source code free of charge, it can be used, studied, modified or distributed without any restriction, thus FOSS is very convenient for teaching and research purposes. A list of existing FOSS for power system analysis is included in this section. The third part relates to the technologies for preventing power system blackouts. In this summary experiences of two large power grids for power system restoration are presented. Practices of PJM include general principles to develop a restoration plan. The power grid configuration of Hydro-Quebec is somewhat similar to some power grids in China, their practices of developing a restoration plan is also included in this summary for interesting readers.

Keywords:

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