



电网冰灾案例及抗冰融冰技术综述
许树楷, 赵杰

摘要: 介绍了近年来世界范围主要冰灾案例。综述有关电网应对冰灾影响的文献资料, 认为开展电网冰灾综合防治体系, 主要包括以下3个层面: 一是在覆冰严重的重要线路推广使用覆冰监测预警系统, 分析电网安全风险, 提高电网防冰抗冰的灾害预防能力。二是适当提高潜在的重冰地区输电线路的设计标准, 针对不同的区域, 除应用成熟的“过电流融冰”和“直流电流融冰法”等方法外, 开展基于新技术、新材料的抗冰防冰措施研究, 因地制宜采用抗冰融冰技术。三是建立完善的电网恢复决策支持系统, 当输电系统遭遇冰灾时, 能有效地整合资源, 修复电网, 迅速地恢复电力供应。

关键词: 冰灾; 电网; 抗冰; 融冰

Review of Ice Storm Cases impacted seriously on Power Systems
and De-icing Technology

XU Shu-kai, ZHAO Jie

Abstract: The worldwide ice storm cases impacted seriously on power transmission systems are presented. Furthermore, with a review of literatures related to anti-icing/de-icing technology for power grids, an integrated scheme for responding ice storm is proposed with three aspects. Firstly, to build up a monitoring system for the important transmission lines that can activate for risk analysis of damage and thus can enhance the anti-icing capability of power grids. Secondly, to upgrade the design standard of transmission lines in the potential heavy ice region, and to employ various measures for different areas, such as classic anti-icing/de-icing methods reviewed in this paper, or novel technology being developed for this purpose. Finally, to set up a decision support system to help effectually make the resource in conformity to restore the grid for quick power supply when serious ice storm befalls.

Key words: ice storm; power grid; anti-icing; de-icing

[点击此处下载](#)

[关闭窗口](#)