

论文

支撑高效需求响应的高级量测体系

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摘要:

高级量测体系(advanced metering infrastructure, AMI)是一个用来测量、收集、储存、分析、运用和传送给用户用电数据、电价信息和系统运行状况的完整的网络和系统, 能够有效地支持需求响应。简述了AMI的典型结构与组成, 从用户、公用事业、社会环境、对智能电网的支持等方面讨论了AMI的收益, 提出了AMI的设计原则, 分析了AMI与智能电网的关系; 探讨了AMI投资中存在的主要问题与应对策略, 提出了AMI建设的关键问题, 给出了中国AMI的建设模式建议, 旨在为AMI的进一步研究及实现提供参考。

关键词:

Advanced Metering Infrastructure Supporting Effective Demand Response

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Abstract:

Advanced metering infrastructure (AMI) is the totality of systems and networks for measuring, collecting, storing, analyzing, using and transferring electricity consumption data of consumers, power price information and system operation conditions, and can effectively support demand response. Typical structure and composition of AMI are briefly introduced, and the benefits brought by AMI in the fields of consumers, public utility and social environment as well as its support to smart grid are analyzed. The design principle of AMI is proposed and the relation between AMI and smart grid is researched; the main problems existing in the investment of AMI and coping strategies are investigated and some key problems in the construction of AMI are pointed out, besides, some suggestions on the construction of AMI, which would be available for reference in further study on AMI and its implementation, are given.

Keywords:

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