

ISSN 1009-1831

CN 32-1592/TK

电力需求侧管理

POWER DEMAND SIDE MANAGEMENT

4

2020



Q K 2 0 3 2 8 4 9

- ◆ 面向不同竞价机制的电力市场分析与预测方法
- ◆ 售电市场环境下基于数据驱动的用户用电行为分析
- ◆ 电力需求侧管理可避免成本模型研究
- ◆ 基于模糊融合的多元温控负荷群调控及风电消纳策略



主办：英大传媒投资集团南京有限公司 | 国网（江苏）电力需求侧管理指导中心有限公司 2020年7月出版

ISSN 1009-1831



9 771009 183209

07>



投稿网站二维码

万方数据

中国科技核心期刊

全国优秀能源期刊

第22卷

总第126期



目次

2020年 第22卷·第4期·总第126期

□ 数字配用电系统专辑

- 01** 特约主编寄语 陈启鑫,王毅
- 02** 面向不同竞价机制的电力市场博弈均衡分析 别佩,王浩浩,王一,张妍,段秦刚,辜唯朕,陈启鑫
- 08** 基于属性理论的智能配电网项目后评价指标体系与方法 宫建锋,党东升,张斌,徐鹏飞
- 13** 基于CPS架构的商业楼宇智能用能控制管理系统建设与应用 刘俊,彭浩,何涵,张之涵,李诗卉,赵长乐
- 19** 增量配电业务改革背景下配售电公司的需求响应策略研究 郭双源,杨迪,王鹏,郭平平,姜庆国,陈晨
- 25** 基于大数据平台的配电网负荷预测关键技术 张小斐,耿俊成,万迪明,刘充许,周双喜
- 31** 基于配电物联网技术和并行随机森林算法的日削V2G功率容量预测 岳友,李宽宏
- 35** 多维停电计划智能管控系统关键技术研究及实现 朱军飞,徐民,周佳陈,刘峰,孙啸天,兰萱丽
- 40** 基于领域驱动设计的配售电业务建模研究及实践 孙竹君,承轶青,顾永生,蔡璟
- 45** 售电市场环境下基于数据驱动的用户用电行为分析 赵阳,胡诗尧,杨书强,冯成,王毅
- 51** 市场环境下增量配电网运营模式及交易机制研究 马伟,刘景青,贺楠,谢晓琳,陈婧

□ 研究与探讨

- 56** 电力需求侧管理可避免成本模型研究 肖勇,王岩,何恒靖,吴昊文,简渝杨,赵波,高赐威
- 62** 园区综合能源服务各利益方诉求和耦合关系研究 李夫宝,李明轩
- 66** 考虑农业电排灌负荷的配电网运行优化策略研究 纪历,杨晓伟,陈振宇,杨斌
- 71** 基于灰色和马尔科夫系统理论的需求侧响应能力预测 李新聪,王骏,汤婵娟

□ 负荷管理与客户服务

- 77** 基于模糊融合的多元温控负荷群调控及风电消纳策略 龚逊东,薛溟枫,毛晓波,潘湧涛
- 83** 考虑充电推移时间的居民EV有序充放电策略 吴巍,黄景光,方伟华,洪厚勋,陈武林,车成华,杨丽娟,韩琦
- 89** 新电改背景下我国电网公司售电服务竞争力分析 徐杰彦,卢悦,曲弘,戚巍,苏子云,潘方圆,郝添翼,褚渊
- 94** 南方区域跨省跨区电力交易偏差结算机制探讨 张廷营,陈玮,杨塑,黄筱婷,许喆,周宜广

39 广告索引

POWER DEMAND SIDE MANAGEMENT

2020 Vol.22 No.4 (Ser.126)
Jul. 20, 2020

CONTENTS

Digital power distribution and utilization system album

02 Game equilibrium analysis on electricity market orienting different bidding mechanisms

BIE Pei, WANG Haohao, WANG Yi, ZHANG Yan, DUAN Qinggang,
GU Weizhen, CHEN Qixin

08 Post - project evaluation index system and method for smart distribution network based on attribute theory

GONG Jianfeng, DANG Dongsheng, ZHANG Bin, XU Pengfei

13 Construction and application of intelligent energy consumption control management system for commercial buildings based on CPS framework

LIU Jun, PENG Hao, HE Han, ZHANG Zhihan,
LI Shihui, ZHAO Changle

19 Research on demand response strategy of power distribution and sale companies under the background of incremental power distribution business reform

QIE Shuangyuan, YANG Di, WANG Peng, GUO Pingping,
JIANG Qingguo, CHEN Chen

25 Key technologies of load forecasting in distribution network based on big data platform

ZHANG Xiaofei, GENG Juncheng, WAN Diming,
LIU Chongxu, ZHOU Shuangxi

31 Day-ahead prediction of V2G power capacity based on distribution Internet of Things technology and parallel random forest algorithm

YUE You, LI Kuanhong

35 Research and implementation of key technologies of intelligent control system for multi-dimension power outage plan

ZHU Junfei, XU Min, ZHOU Jiachen, LIU Feng,
SUN Xiaotian, LAN Xuanli

40 Research and practice of business modeling based on domain-driven design for power distribution and sale

SUN Zhujun, CHENG Yiqing, GU Yongsheng, CAI Jing

Competent Authorities Yingda Media Investment Group Co., Ltd.

Sponsor Yingda Media Investment Group Nanjing Co., Ltd.

State Grid (Jiangsu) DSM Instruction Center Co., Ltd.

Editor and Publisher Editorial Board of Power Demand Side Management

Editor in Chief DONG Zhenbin

Publication Number ISSN 1009-1831

Overseas Code 4855BM

45 Analysis of data-driven based users' electricity consumption behavior in retail market

ZHAO Yang, HU Shiyao, YANG Shuqiang, FENG Cheng, WANG Yi

51 Research on operation model and trading mechanism of incremental distribution network in electricity market

MA Wei, LIU Jingqing, HE Nan, XIE Xiaolin, CHEN Jing

Academic research

56 Avoidable cost model study in power demand side management

XIAO Yong, WANG Yan, HE Hengjing, WU Haowen, JIAN Ganyang,
ZHAO Bo, GAO Ciwei

62 Research on the demands and coupling relations among the stakeholders of park level integrated energy services

LI Fubao, LI Mingxuan

66 Research on power distribution network operation optimization strategy considering agricultural electric drainage and irrigation load

JI Li, YANG Xiaowei, CHEN Zhenyu, YANG Bin

71 Demand side response capacity prediction based on grey and Markov system theory

LI Xincong, WANG Jun, TANG Chanjuan

Load management and customer service

77 Strategy for multivariate thermostatically controlled load group regulation and wind power absorption based on fuzzy theory

GONG Xundong, XUE Mingfeng, MAO Xiaobo, PAN Yongtao

83 EV orderly charge-discharge strategies for residents considering charge delay time

WU Wei, HUANG Jingguang, FANG Weihua, HONG Houxun,
CHEN Wulin, CHE Chenghua, YANG Lijuan, HAN Qi

89 Competitive power analysis on the electricity retail service of Chinese grid companies under new electricity market reform

XU Jieyan, LU Yue, QU Hong, QI Wei, SU Ziyun, PAN Fangyuan,
HAO Tianyi, CHU Yuan

94 Discussion on the deviation and settlement mechanism of inter-provincial and inter-regional power transaction in southern region

ZHANG Tingying, CHEN Wei, YANG Su, HUANG Xiaoting,
XU Zhe, ZHOU Yiguang

Add 20 West Beijing Road, Nanjing, 210024, China

Website www.sgdsm.com

E-mail dsm@sgdsm.com

Tel 86-25-82228588, 82228587

Fax 86-25-82228580

Distributed Aboard by China International Book Trading Corporation
(P.O.Box 399, Beijing, China)



Sino-cloud Power
南京国云电力有限公司
NANJING SINO-CLOUD POWER CO., LTD.

国云电力拥有公安部门认证的信息安全等级保护测评机构资质。为保障关系到国家及企事业单位平稳运行的信息与网络安全，国云电力致力于提供信息系统等级测评、信息安全风险评估、全面性渗透测试、信息安全合规审计、信息安全咨询、信息系统安全运维、安全技术培训、安全监测与预警、应急演练与应急处置等专业测试、评估、跟踪、监测与运行维护服务，打造安全稳定的网络环境，提供信息系统全生命周期的专业安全保障。

资质荣誉



CGIG 国信



CHINT
正泰集团



国家电力投资集团有限公司
STATE POWER INVESTMENT CORPORATION LIMITED



中国华能
CHINA HUANENG

服务热线：025-8422 1868 025-8422 1855

联系人：王璐璐 13813858058

电子邮箱：13851779111@139.com

总部地址：南京市玄武区中山路268号汇杰广场22楼（210008）