



中国科技期刊卓越行动计划集群
中国应用型核心期刊



Scopus® JST
DOAJ EBSCO



ISSN 2095-8676
CN 44-1715/TK
CODEN NFNJJK

南方能源建设

SOUTHERN ENERGY CONSTRUCTION

2025年3月 第12卷第2期 Vol.12 No.2

封面文章 极端天气对风电开发全过程的影响及应对策略

—— 孟丹, 陈正洪[□], 许杨[□], 曾鹏, 王明, 崔杨, 许沛华



* 封面底图由即梦AI生成

ISSN 2095-8676



03>



主办单位：南方电网数字传媒科技有限公司
中国能源建设集团广东省电力设计研究院有限公司

◆ 能源气象

- 极端天气对风电开发全过程的影响及应对策略 孟丹, 陈正洪, 许杨, 曾鹏, 王明, 崔杨, 许沛华 (1)
- 风电场和光伏电站对局地气候的影响研究进展 邓鸣阳, 裴浩, 徐丽娜, 刘诗梦 (15)
- 极端寒潮天气过程风机凝冰受限容量分析 蓝浩宸, 卢炳夫, 李仲怡, 黄丹, 李勇, 赵金彪 (26)
- 我国社会用电量对气温变化的响应及其时空差异 许畅, 陈正洪, 刘军 (36)
- 强风作用下 110 kV 换向分支杆风振响应和薄弱位置分析 杨子焯, 王梦薇, 匡春霖, 施伟国, 何畅 (48)

◆ 风力发电

- 老旧风电场改造升级进展及关键技术展望 许扬, 蔡安民, 张立英, 贾蓉 (58)
- 风机叶片主梁损伤分析及其维修方案可靠性检验 李秀海, 毛建晖, 骆传龙, 史博文 (71)
- 尾流干扰抑制策略对双风力发电机气动性能影响 石柳提, 陈云辉, 涂佳黄 (79)
- 海上风电场智能维检平台方案设计 杨源 (97)

◆ 新能源汽车充放电

- 考虑 V2G 的重卡换电站电池热模型 彭夏泠, 韩松, 刘勋川, 贺国刚 (104)
- 基于虚拟同步的 V2G 调度控制策略 郑伟, 张乐, 张建军, 吴长令, 赵浩然, 闫阔 (116)

◆ 氢能和储能

- 基于多特征融合的锂电池热失控预警方法 戴明威, 张春富, 杨佳武 (128)
- 乙醇氢气预混燃料层流燃烧特性 陆皓炜, 姜根柱, 王筱蓉 (134)
- 小型先进绝热压缩空气储能系统建模仿真与动态分析 王宇轩, 张羽丰, 李连生 (145)

◆ 无线电能传输

- 平台式无人机强耦合无线电能传输方法 赵航, 贾静, 杨哲, 张力月, 杨磊, 陈团 (158)

◆ 电力市场

- 电力现货市场下中长期合约价值分析及定价建议 刘艺锋, 李玉婷, 彭欣然, 卢斌 (169)
- 典型环境权益产品交易现状、问题及对策 郭蓉, 拾杨, 孙丽洁, 崔茗莉, 查道顺, 冯天天 (181)

◆ 信息

- 广告目次 (96)

CONTENTS

◆Energy Meteorology

- The Impact of Extreme Weather on the Entire Process of Wind Power Development and Response Strategies MENG Dan, CHEN Zhenghong, XU Yang, ZENG Peng, WANG Ming, CUI Yang, XU Peihua (1)
- Research Progress on the Impact of Wind Farms and Photovoltaic Power Plants on Local Climate DENG Mingyang, PEI Hao, XU Lina, LIU Shimeng (15)
- Analysis of the Limited Capacity of Wind Turbine Icing in Extreme Cold Wave Weather Process LAN Haochen, LU Bingfu, LI Zhongyi, HUANG Dan, LI Yong, ZHAO Jinbiao (26)
- The Response of Social Electricity Consumption on Temperature Changes and Its Temporal and Spatial Variations in China XU Chang, CHEN Zhenghong, LIU Jun (36)
- Wind-Induced Vibration Response and Weak Locations of 110 kV Diverging Branch Rods Under Strong Wind YANG Ziye, WANG Mengwei, KUANG Chunlin, SHI Weiguo, HE Chang (48)

◆Wind Power Generation

- Progress and Key Technology Prospects in the Renovation and Upgrading of Old Wind Farms XU Yang, CAI Anmin, ZHANG Liying, JIA Rong (58)
- Analysis of Spar Cap Damage of Wind Turbine Blades and Reliability Verification of Repair Scheme LI Xiuhai, MAO Jianhui, LUO Chuanlong, SHI Bowen (71)
- Impact of Wake Interference Suppression Strategies on the Aerodynamic Performance of Twin Wind Turbines SHI Liuti, CHEN Yunhui, TU Jiahuang (79)
- The Scheme Design of Offshore Wind Power Intelligent Maintenance and Repair Platform YANG Yuan (97)

◆Charging and Discharging Technology for New Energy Vehicles

- Thermal Model of Heavy Truck Swapping Station Battery Considering V2G PENG Xialing, HAN Song, LIU Xunchuan, HE Guogang (104)
- V2G Scheduling Control Strategy Based on Virtual Synchronization ZHENG Wei, ZHANG Le, ZHANG Jianjun, WU Changling, ZHAO Haoran, YAN Kuo (116)

◆Hydrogen Energy and Energy Storage

- Lithium Battery Thermal Runaway Warning Method Based on Multi-Feature Fusion DAI Mingwei, ZHANG Chunfu, YANG Jiawu (128)
- Laminar Combustion Characteristics of Ethanol-Hydrogen Premixed Fuel LU Haowei, JIANG Genzhu, WANG Xiaorong (134)
- Simulation and Dynamic Analysis of Small Advanced Insulated Compressed Air Energy Storage System WANG Yuxuan, ZHANG Yufeng, LI Liansheng (145)

◆Wireless Energy Transmission

- Strongly Coupled Platform Wireless Power Transmission Method for UAV ZHAO Hang, JIA Jing, YANG Zhe, ZHANG Liyue, YANG Lei, CHEN Tuan (158)

◆Electricity Market

- Value Analysis and Pricing Recommendations for Medium- and Long-Term Contracts in the Electricity Spot Market LIU Yifeng, LI Yuting, PENG Xinran, LU Bin (169)
- Current Situation, Problems and Solutions of Trading Typical Environmental Interest Products GUO Rong, SHI Yang, SUN Lijie, CUI Mingli, ZHA Daoshun, FENG Tiantian (181)

◆Information

- Advertisement List (96)