2024 4th International Conference on Energy Engineering and Power Systems (EEPS 2024)

Hangzhou, China
9-11 August 2024

Pages 1-732

IEEE

IEEE Catalog Number: CFP24VT4-POD
ISBN: 979-8-3503-6692-1

Copyright © 2024 by the Institute of Electrical and Electronics Engineers, Inc.
All Rights Reserved

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number: CFP24VT4-POD
ISBN (Print-On-Demand): 979-8-3503-6692-1
ISBN (Online): 979-8-3503-6691-4

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

Table of Contents

Source load storage adaptive scheduling method with uncertain demand of power side under new energy access 1

Qiang Ye, Zhijun Jiang, Chenhan Zhang, Xuan Deng, Yihao Zou

Frost suppression effect of air-source heat pump heating system based on compound multi-surface concentrator and automatic heat storage/release device 6

Bo Han, Kun Liu, Zhiyong Li, Meng Sun, Xuefeng Gao

A distributed energy storage capacity balanced scheduling method for parks considering carbon assets 11

Gang Lu, Eng Xia, Bo Yuan, Qiuli Zhao, Facun Liang

A Multi-temporal and spatial scale accurate prediction method for new energy power based on BP adaboost neural network 15

Zhengdeng Ye, Jing Chen, Zaichao Duan, Zhekai Tu, Peng Wu, Qibo Yan

Economic analysis of cross seasonal distributed buried pipe heat storage heating system 19

Yang Xiao, Chuan Tian, Shuai Li, Kailiang Huang, Xin Liu

Research on industrial scenarios for islanded integrated energy systems considering P2G 25

Nan Li, Haoru Liu, Hailin Mu, Xunwen Zhao

Operation of heating based on solar and biomass in Qinhuangdao 29

Chunhua Liu, Yulei Zhao, Pengfei Jie, Weiju Wang, Meng Xu

Research on large-scale energy storage configuration requirements adapting to high-proportion new energy development 33

Hui Quan, Shangxing Wang, Zhifeng Liang, Yufei Chen, Yongjun He, Xiangjun Li

Assessment of CSP potential based on GIS and AHP: A case study of Xinjiang Uygur Autonomous Region 38

Haonan Zhang, Qijian Liu, Chengao Cao, Shuyu Luo, Zhiwen Guan, Yang Wang

Exploration into the Influence of Uncertainty on the Suppression of Hydrogen Production Characteristics in New Energy Systems 45

Jiaxin Zhou, Leiya Sun, Tianze Liu, Yongqiang Zhu

Economic performance for nuclear heating system coupled with absorption heat pumps 50

Tianzuo Qu, Xinwei Cui, Dalin Wang, Weiyan Meng, Yang Chen, Yu Yang, Zhiping Yang

Distributionally Robust Optimal Operation Strategy for Energy Storage Considering Energy Storage 56

Wei Xu, Yongchang Chen, Jiajia Huan, Yifan Guo

A Simplified Model Predictive Control for Cascaded H-Bridge Converter-Based Battery Energy Storage Systems Considering State-of-Charge 61

Denghui Zhai, Jingkuan Guo

Thermoelectric model research based on gravity heat pipe 67

Xianglong Jia, Hongli Zhao, Weiman Sun, Bin Zhao

Numerical Simulation Study on the Sloshing Characteristics of Cryogenic Fuel in Marine Liquid Hydrogen Fuel Tanks 74

Hao Ma, Jianwei Zhang

New Energy Prediction Method under the Influence of Meteorological Factors Based on Generative AI 79

Linqi Gao, Qiang Yu

Different types of energy storage planning methods based on energy storage values under the constraint of electricity balance 84

Keming Wu, Jiannan Zhang, Cheng Chi, Linkun Man, Guangzhi Yao

A Light Robust Optimization Approach for Multi-Integrated Energy System based on Cooperative Game 91

Jiarong Sun, Jianan Wang

Energy storage capacity allocation for power systems with large-scale grid-connected wind and photovoltaic power 97

Suyike Huang

Evaluation of Voltage Support Effect of Hybrid MMC-based VSC-HVDC Transmission System on Sending-end Renewable Energy 102

Ersheng Pan, Ming Li, Ying Xu, Tianxiang Lei, Peng Li

Voltage Security Analysis Method Based on Kolmogorov Equations for High Proportion of New Energy Integration 107

Jun Yan, Huile Liu, Hao Duan, Daren Li, Lezhen Pan, Rui Li

Power and Energy Balance Optimization for Power Systems with Cascaded Hydropower Based on Stochastic Optimization 112

Jiayang Wang, Xingyu Liu, Siyu Lu, Ouzhu Han, Baorong Zhou, Tao Ding

Evaluation of integrated energy system based on BWM-EWM and fuzzy comprehensive evaluation method 117

Junqiang Wei, Muxiao Li, Yunhao Zhao, Yuchi Zhou, Shikun Zhang, Shuyuan Liu

Research on Capacity Configuration method of Underwater Compressed Air Energy Storage Considering Offshore Wind Power 128

Ming Shao, Suhua Lou, Yaowu Wu, Yong Lin, Weijie Wu, Zhengmin Zuo, Peiyu Liu, Mingshan Mo

Study of Power System Flexibility Enhancement Strategies for a High Percentage of Renewable Energy Sources 133

Zhiqiang He, Quanrui Zhang, Bin Wang, Zhengqiang Liu, Fei Wang

Study on the Electricity Cost of Power Users Considering Load Regulation Strategy under the Background of High Proportion of New Energy -- Taking West Inner Mongolia Region as an Example 139

Zhong Zhang, Siyuan Bian, Genhong Qi, Mingcheng Zhu, Cunbang Jia, Hongyan Yang, Ke Gao

Deep Learning Techniques in Renewable Energy Forecasting: Solving Intermittency and Instability in Solar and Wind Energy 143

Yifan Wang

Influence of Heat Shield Structure on the 40-Inch Thermal Field and Crystal Quality in a Czochralski Single-Crystal Furnace 147

Haixin Lin, Dedong Gao, Shan Wang, Zhenzhong Zhang, Yan An, Wenyong Zhang

Research on Multi-time Scale Complementary Characteristics Considering Wind and Solar Resource Endowment 152

Junci Tang, Shutao Zhou, Di Jiang, Yufeng Guo, Yilin Jia, Yihang Ouyang, Yongchao Sun, Wei Xu, Yifei Liu

Optimization and Application of Capacity Market Clearing Mechanism in New Energy Power Systems 156

Jian Zhang, Ye Zhang, Jingwei Hu, Nannan Xia, Bo Dong

Simulation Study on Optical Performance of Parabolic Trough Solar Collector 162

An Dai, Qiang Zhao

Research on Decoupling Control of Back Pressure and Flow Parameters in Fuel Cell Air Compressor 167

Liyong Han, Yingya Wu, Mingze Liu, Zhenxing Sun, Shuo Su

Adaptability analysis of differential protection and new protection principle for the gathering system of Desert Renewable Energy Base 172

Weitao Li, Ke Jia, Tianshu Bi, Yan Liu, Haolin Liu, Guanqun Lu

Spatiotemporal variations in fluid and sand temperature fields during Sc-CO2 fracturing 179

Boyu Liu, Tunan Sun, Dongjun Li, Jun Yao

Situational Awareness Index System for Distribution System with A High Proportion of Renewable Energy Sources 183

Tianhan Zhang, Li Li, Zikang Shen, Wei Meng, Yulin Chen, Xianbo Wang, Zhenzhi Lin

Study on the applicability of coal-fired units converted to burn biomass black pellet fuel 190

Ke Wang

Strength analysis and optimization of isolation shell for 252kV mixed gas GIS 196

Dongyun Dai, Di Tu, Xiying Zhao, Jingbo Liu, Yimin You, Jiahua Huang

Time Delay Prediction Model of NOx in Combustion Process of Boilers Based on NARMAX-FNN 201

Hanming Wu, Maoxuan Wang, Zhenguo Li, Yuankai Shao, Kai Zhang

Optimal scheduling study of integrated energy system coupling hydropower output fluctuation and supply-load deviation degree 207

Jiang Shen, Zhiyu Han, Huiling Duan, Qianxu Zhang

Study on the performance of a heat pipe for solar collectors 212

Shengle Li, Qiang Zhao

Numerical analysis on diffusion characteristics of leaked hydrogen-blended natural gas from pipelines 216

Yongkang Sun, Zixiang Li, Xiaojiang Wu

A study on the calibration of steam flowmeter readings 221

Yulong Feng, Lianbing Li

Study on Boiling Transition Characteristics during the Liquid Oxygen Chill-Down Process in a Vertical Exit-Contracted Pipe 225

Wenjing Qin, Jiaqi Zhang

Research on the Evaluation of Clean Energy Consumption Level Factoring in Complementary System of Flexible Water-storage Resources 231

Huiyu Zhang, Guojun Bao, Qingliang Wang, Qiaoyi Yang, Yonghong Hu, Ting Huang

Study on the Effects of Cooling Methods on the Multi-Physical Field Characteristics of VSC-HVDC Converter Valves 245

Yingke Wen, Zhangbin Yang, Daixiao Peng, Rui Chen, Shuai Li, Lin Ruan

An orderly regulation method of grid energy storage capacity under distributed new energy access 252

Xiaocui Xiong, Songling Chen, Xiaoming Zhang, Mingnian Zhang

Research on distributed photovoltaic marketization trading model considering auxiliary services 256

Tao Meng, Dexin Li, Chenggang Li, Wei Wang

A GSA-VMD-BiLSTM-MHSA model for short-term wind power prediction 261

Zijun Gao, Zehai Gao, Siyuan Cao, Lei Zhang

Electric Fields of Ground Electrodes in Sand Media 267

Nur Farahi Idris, Normiza Mohamad Nor, Nurul Nadia Ahmad, Azwan Mahmud

Wind-solar-pumped storage coordinated optimization scheduling method based on generalized Nash game 273

Huanzhao Li, Liang Yuan, Xin Wang, Guixi Miao, Pengcheng Cai, Zhuxin Li

Experimental Study on the Characteristics of Photovoltaic Modules under Liquid Immersion Conditions 280

Yanqi Li, Cikun Fu, Fei Li

Analyzing the Impact of Renewable Generation on Power System Rotor-Angle Stability 284

Xiaoteng Li, Jiaze Wu, Chao Duan, Yao Liu, Yanli Zhang

Research on the operation risk analysis method of power system with large-scale wind power considering multi-timescale flexibility 289

Han Su, Yuanke Zhou, Wenzhang Guo, Yuming Shen, Guifen Jiang, Yuliang Li, Xiuli Xi

Terminal Abnormal State Recognition Method Based on Change Point Detection of Sequence 295

Lingji Kong, Xiaoguang Yi, Huadong Zhang, Wenxiu Shi, Xu Meng

Simulation of Bidding Behavior of Power Generators with Behavioral Characteristics 300

Yanchao Zhang, Zhenglin Yang, Yaxian Zheng, Heng Feng

Research on the Construction of Virtual Power Plant Model and Power Trading Strategy Based on Multi-Energy Collaborative Optimization 306

Qingkai Sun, Menghua Fan, Zheng Zhao, Fan Zhang

Research on Short-Term Wind Power Data Selection Method Considering Complementary Prior Data Mining 311

Yuxuan Bai, Zhao Liu, Wei Ma, Haonan He, Yabin Shang, Meng Li, Jinghan He, Ning He

Research on Fuzzy Control Strategy for Dual Rotor Wind Power Generation System 316
Yanan Li, Hongna Li, Jianhui Cui, Bin Zhao

Research on Active Disturbance Rejection Control Strategy for Dual Rotor Wind Power System 320
Yanan Li, Hongna Li, Jianhui Cui, Bin Zhao

Coordination of Frequency Regulation Control Parameters for a Wind Farm Considering Grid Inertia 324
Haoyuan Wang, Yuqing Jin, Xiaojun Huang, Jinghao Chang

Coordinated stability control of photovoltaic plants using sliding mode algorithm 330
Huan He, Yihang Ouyang, Di Jiang, Yufeng Guo, Junci Tang, Shutao Zhou, Yang Li, Wei Xu, Bo Zhang, Yifei Liu

D_KAN Model: Enhancing Power Load Forecasting with Kolmogorov-Arnold Networks 335
Mengyuan Jiang, Huabing Zhou

Topology Optimization of Wind Power Photovoltaic Energy System Based on Quantum Optimization Algorithm 339
Weibin Ding, Deqi Zhang, Junjia Yang, Yanzuo Chen

Forecasting of Photovoltaic Output in Plateau Area Based on RBMO-LSTM 343
Chengdong Luo, Xiuhan Song, Zewei Pu, Tianyou Yu, Xuanhui Zhao, Xiaolong You

Research on Hybrid Prediction Method of New Energy Power Generation Based on Deep Learning 351
Lipeng Zhou, Shuaizheng Wang, Suhong Jiang

Generation of Scenic Output Scenarios Based on Copula Theory 356
Xiao Li, Cheng Li

Research on photovoltaic output prediction based on deep learning and feature mining 360
Haixing Zheng, Da Li, He Jiang, Jianrui Zhang, Junhao Feng

Energy storage optimization planning considering distributed photovoltaic output characteristics 364
Tianlin Wang, Jianjian Jiang, Shizhao Hu, Liang Xu, Jiadu Dong

Photovoltaic Power Generation Forecasting based on Attention-CNN-BiLSTM Model 368
Feipeng Huang, Zhen Pan, Zeyi Huang, Zhaoyu Li, Lidan Chen, Langwen Zhang

Non-intrusive Load Identification Based on Multi-Modal Feature Fusion 373
Wei Wang, Xuanqi Yang, Zhiguo Zhou

Study on Non-contact Electret-Piezoelectric Coupled Wind Energy Harvesting Structure 380
Jiankang Bao, Yongfu Li, Xiping Jiang, Qian Wang, Jingang Wang, Changli Yu

Short-term load forecasting model based on ICCEEMDAN-MRMR and CNN-SVM 385
Shiqi Chen, Chenchen Hao, Payman Dehghanian

Multi-time-scale Cross-node Aggregation Strategy for Virtual Power Plants 390
Liqing Zhang, Chunzheng Tian, Zhiheng Li, Shuo Yin, Anbang Xie, Peng Wang, Nai Sun

Short term power load forecasting method considering prediction error correction 397

Zhang Yu, Gao Siyuan, Wu Peng

Research on the Business Model of Demand Response in Synergy with Generation-Grid-Load-Storage 401

Songsong Zheng, Yan Wu, Jie Chen, Xiaoming Yin, Lei Xiang, Xianqi Cao

Optimized Resource Combination Method for Virtual Power Plants Taking into Account Resource Response Characteristics 407

Jiapei Liu, Chao Yue, Wenwen Qin

Short term load forecasting method based on time series decomposition 411

Qian Huang, Kaiqi Zhang, Tianchang Liu, Xuhang Zhang, Li Sun, Peng Wu, Lei Li, Xiangpeng Zhang

Photovoltaic Power Generation Prediction for Market Operation Base on Multi-Scale Temporal Convolutional Network 415

Yong Liu, Zhengrong Tang, Xing Liu, Jichuan Li, Lei Jiang, Xu Zhou

Reactive power optimization based on Tent-Chebyshev switching mapping particle swarm optimization 420

Jinhao Zhang, Jianhua Ye

Photovoltaic cell defect detection based on personalized update Federated learning 425

Dawei Chen, Lu Yuan

Comprehensive Evaluation Method of Utility Boiler based on Entropy and Grey Correlation 430

Zhenyu Zhang, Kai Zhang, Shumin Zhang, Xu Yang, Gong Qian

Wind turbine fault diagnosis based on Gramian angle and federated learning 434

Lu Yuan, Dawei Chen

Icing Prediction of Fan Blades Based on Feature Correlation Analysis and Convolutional Neural Network 440

Yuechao Bie, Yi Zeng, Yuhao Zhang, Zhe Yang

Photovoltaic power prediction model based on temporal attention 444

Jun Li, Rui Wang, Guozhen Zhang, Zixin Zhang, Zhiqiang Yang, Bin Fu, Li Zhang, Haokang Ran

Using a Combination Model for Short-Term Load Forecasting with Enhanced User Privacy Protection in Virtual Power Plants 449

Wei Zhang, Yifan Sun, Liwu Gong, Weiliang Liu, Weijie Qian, Bailang Pan

Enhanced YOLOv8 Network Utilizing RGB-D Multi Modal and Multi-Scale Feature Fusion for Defect Detection in Power Transmission Scenes 455

Bingqian Zhu, Lingyu Liang, Yonghong He, Yang Wu

Loss Estimation of Distribution Network Areas with Distributed Generation Based on Improved Grey Wolf Algorithm and CatBoost 463

Haiyun An, Yuqi Hou, Qian Zhou

Short-term high-frequency powner prediction algorithm for limited output wind turbines with different confidence levels 468

Yan Zhang, Huaying Su, Rongrong Wang, Ning Wang, Xianqiang He, Mingqing Wang

Research on the power light co-transmission with PAM4 modulated signal in passive optical access network 472

Linjie Yang, Yufeng Shao, Anrong Wang, Yanlu Zhang

Research on power safety monitoring using the laplace score method and A BP neural network 476

Yang Xue, Runan Song, Penghe Zhang, Yining Yang, Zhongqiang Wu

Security analysis of remote commands for distribution network automation 482

Jianxiu Li, Feng Wang, Lisheng Li, Jiafeng Qin, Xiangyu Wen, Ying Wu, Peng Cao, Junshuai Quan

Capacity Configuration of Power Distribution System for PEDF Buildings Considering Electric Vehicles 487

Tianze Liu, Qingshan Li, Leiya Sun, Yongqiang Zhu

Research on comprehensive vulnerability assessment method of distribution network 493

Wen Xiang, Zhenggang Gu, Xin Zhang, Qian Wu, Yan Wang, Ying Wang

Design of market trading mechanisms for distributed resources based on credit evaluation 498

Shuaihao Cheng, Yang Li, Xiaodan Liu, Sheng Xiang, Ke Meng, Yu Zheng

Stochastic planning method of energy storage capacity of networked microgrid considering power supply risk 503

Weiliang Liu, Xiaolei Yang, Jianfeng Ye

Comprehensive evaluation method of county-level power supply enterprises based on cluster analysis-improved AHP-FCE coupling 507

Wen Xiang, Gang Liu, Qirui Zhang, Baihui Yuan, Meng Hou, Ying Wang, Xiaolin Wang

Equilibrium Analysis of Electricity Markets Considering Wind Power Producers with Forward Contracts 517

Zhongrui Zhao, Yuyang Zhou, Shaohua Zhang, Jingjie Ma

Fault localization in distribution networks based on improved snake optimization algorithm 523

Tianshu Ren, Changchun Chen, Feng Ding, Shilei Xu, Weizhen Liu, Chenlei Xie

Poisson process-based risk assessment of successive failures in power system under ice storms 528

Wujing Li, Biao Su, Xiangyang Guo, Ziyue Dang, Xin Liu, Jiahao Wang, Zuibing Xie, Longxiang Duan

Robust optimal scheduling of "wind storage" multi-energy complementary integrated energy microgrid considering wind power consumption 533

Huatang Su, Dezhou Yang, Wenqin Song, Jianjun Tuo, Yongcheng Liu

Design of Information Encryption Transmission Method for Power System Communication Network Based on Quantum Secure Communication Technology 537

Weilun Lao, Ken Chen

Research on the Calculation Method of Voltage Collapse Point in Power System 541

Tao Yi, Yanjie Wang

Type-II Fuzzy Credibility Constraints Programming Based Distribution Network Planning Including Photovoltaic Power Generation 545

Yingjing He, Shuyi Shen, Jing Lou, Xinyi Lu, Xinyu Sun, Lingwei Zheng

The Application of Internet of Things Technology in Intelligent Wind Power Grid 555

Jianuo Xu

Decomposition Model of Local Cross-Channel Interaction Load and Its Application in PV-Storage Microgrids 562

Yichen Zheng, Guobing Pan, Tao Tian, Haipeng Wang

Research on power grid investment decision-making model based on quantum genetic algorithm 567

Ya Zuo, Weidong Zheng, Xiaojun Zhang, Junchen Wei, Yuqian Zhang

Architecture Design and Application Research of Software-Defined Distribution Smart Terminal 574

Haijun Xiong, Saidi Lan, Yahan Li, Yizhi Zhang

Load Balancing Scheduling for Multi-energy Power Systems based on Open Source 580

Zhengrong Wu, Hua Li, Yuxuan Yang, Yunhua Liu

Analysis of the Impact of Reverse Power Flow in New Power Systems on the Core Loss of Main Transformers 586

Zhiwei Chen, Qinwei Chen, Xiangdong Yu, Jie Wu

Research on Cybersecurity Assessment and Defense Strategies for Power Systems 590

Zhengnan Cai, Pingna Wu, Na Liu

Study on the influencing factors of impedance stability of island microgrid with grid-forming and grid-following converters 596

Huayu Zhang, Xufeng Zhao, Zhan Zhang, Yuchun Gong

Price Cap Setting and Long-term Adjustment Strategy for Electricity Spot Market Based on Supply and Demand Relationship 601

Su Chen, Mingxing Guo, Yanyuan Qian, Li Lan, Chen Fu

A Method of Collaborative Information Distribution by the Ground Transfer Application Service Gateway of the Distribution Network Transfer Intelligent Analysis System 606

Shangbin Yuan, Xiao Yang, Lianrong Pan, Yuan Fu

Line and Phase Selection Method for High Resistance Fault in Asymmetric Distribution Network Based on Flexible Grounding Technology 612

Jingzhuo Chen, Zhan Wang, Yuting Lan, Hongjie Zhu

Distributed Robust Optimization of Multi-Energy Microgrid Clusters 618

Shifeng Hu, Pengfei Yang, Yifan Zhang, Wenxing Tang

A Distributed Power System Communication Architecture Based on Message Queue and Multi Process 623

Junhong Chen, Xiaojun Chen, Zhaobin Zhong, Ruicong Xia, Tao Chen

Electric-hydrogen coupling system participation in grid peaking support capacity assessment 627

Bo Gao, Yue Teng, Kaicheng Liu, Songcen Wang, Ziqiang Wu, Bin Xu, Hong Zhang, Di Wang, Xiaoxia Yang, Fei Jiang

Prediction Method for Installed Capacity of New Energy Hydrogen Electrolysis Cells in the Power Grid Under Multiple Objective Constraints 632

Liantao Liu, Xin Zhang, Haiting Wang, Lixin Li, Yuanling Wang, Xue Zhao

Construction of a new distribution network technology and operation control system based on artificial intelligence 638

Yan Zheng, Xu Dan, Cheng Xin, Weiwei Li, Qingbo Tu, Ping Huang, Man Zhang

Research and Implementation of Key Algorithms for a Novel Power Grid Survey Data Collaborative Sharing System 643

Jiyong Zhang, Gao Yu, Donghui Liu, Bangzheng He, Xiaohu Sun, Bing Wu, Chunhui Zhao

An intelligent fault diagnosis method for power grid based on Mask R-CNN 647

Yingying Wang, Yong Li, Mingliang Jin, Xiangning Lin

Downhole Wireless Power Transmission System 654

Qi Qiao, Yingna Guo, Jiahao Lian, Chenhui Zhao

Multi objective planning of photovoltaic-electric energy storage in distribution networks 660

Shizhao Hu, Liang Xu, Jiadu Dong, Jianjian Jiang, Tianlin Wang

Reliability Assessment of Distribution Grids with Distributed Power Sources 664

Xiao Li, Cheng Li

Calculation Method of Carbon Emission Flows in Power Systems Incorporating Characteristics of Thermal Storage Operations 669

Jiawen Sun, Changling Li, Geng Yi, Zhiyong Yu

Fine-Grained Data Identification Mechanism in Edge Computing for Smart Power Grid 677

Tianmu Hu, Ziliang Zhang, Bo Liu, Haoxin Wang

Two-stage fault repair method for resilient distribution networks based on variable time step optimization 681

Nuoling Sun, Guilian Wu, Hao Chen, Chao Qin, Jiani Lu

Research and Implementation of Key Technologies for Power Internet of Things Access Platform 686

Yinghua Song, Qiaoyun Fan

Research on VPP transaction risk assessment based on game theory and cloud mode 691

Yihan Wang, Yutao Jin, Ziqing Zhu, Xianghui Cai, Chenglin Xiong

Large grids Multi-level and multi-type dynamic reactive power compensation Layout 696

Xiaodong Yu, Xu Ling, Jianghui Xi, Jiale Wang, Weigang Jin, Ying Wang, Yuan Wang

Hybrid energy storage control for photovoltaic microgrids based on improved Dung beetle optimization Algorithm 703

Guoqi Jiao, Shaojuan Yu, Liqun Liu

Short-term Price Forecasting Based on Feature Selection and Bidirectional LSTM 709

Zhuofan Xu, Yufeng Guo, Pu Wang, Xueqin Tian, Yilin Du, Yihang Ouyang, Haixiang Xu, Jianxiong Jia, Wei Xu, Yifei Liu

Research on the control method of power conversion system under the condition of three-phase voltage unbalance 714

Hang Lu, Xin Chen, Wanlin Guan, Haidi Ren, Yongchao Jia, Shuang Li

Evaluation Method for the Supply Capacity of Distribution Networks for Electric Energy Substitution Considering Power Quality 719

Yifan Sun, Jia Wu, Wei Zhang, Liwu Gong, Weiliang Liu, Weijie Qian, Bailang Pan

Research on the Bidding Strategy of Wind Farms Equipped with Energy Storage in the Electricity Markets 727

Bin Yu, Jian Lin, Wenjie Wu, Qingping Qu

New energy participates in power medium and long term trading price forecasting method 733

Hongjie Li, Xiaojia Li, Jianjun Hao, Jie Liu, Jiapeng Wang, Jianhua Gong, Zhaojing Han

Analysis of the Impact of Vehicle-to-Grid Operation of Electric Vehicle Exchange Station on the Output Fluctuation of Medium Voltage Distribution Network 738

Shuguo Chen, Yaomao Wu, Yue Fu, Yihong Zhang

Optimization and simulation of fast charging method for lithium iron phosphate power battery 742

Yingpeng Xiong, Yi Deng, Zhengbing Wan

A Method for defect recognition in infrared images of electric switchgear based on improved YOLOv9 747

Chenchuan Liao, Fangzhou Hao, Jiapeng Tong, Xiangwen Zhao, Mingcong Xia, Linhui Guo, Heng Wu, Xuanchang Dong, Linhuan Luo, Haixia Ma

Study on transient voltage characteristics and control measures of wind-fire bundled DC outgoing system 752

Qingshan Li, Yutong Zhou, Jiaxin Zhou, Yongqiang Zhu

Discussion on Fault-Finding Techniques for Repeated Grounding of the Neutral Line in a 400V AC TN-S System for Station Use 757

Yalin Wei, Zhichao Jian, Yangling Ou, Zhihao Wen, Wenhui Lin, Haochong Wen, Wenjian Wu, Renjie Zhang

Solar autonomous controllable MFCC-based improved cable external damage voice print identification system 763

Kai Sun, Yajun Huo, Yuan Gao, Bing Yang, Pengfei Sun, Zhicheng Zang, Zhiguo Wen, Yang Liu, Yanying Zhou, Yasheng Sun

Simulation Analysis of Induced Voltage on Sheath of 330kV High-Drop Cables Under Different Working Conditions 768

Chong Wang, Binjiang Wang, Xuefeng Zhao, Minru Kong, Lu Pu, Wei Duan, Haofei Sun, Junbo Deng

Research on optimal configuration scheme of 110kV busbar merging unit in intelligent substation 773

Jian Li, Huicheng Wu, Yanqiong Xiong

Thermal Management of Lithium-Ion Batteries based on Phase Change Materials and Immersion Coupling 777

Chengfeng Xiong, Xiaofang Du, Miaoxian Lu

Longitudinal Fault Protection Scheme of 110kV Line Based on Compensated Zero Sequence Voltage Differential Principle 790

Jiayi Wu, Xintao Dong, Dongxing Wang, Zheng Fang, Chenxu Teng, Zhenyu Wang

Research on the identification method of GIS partial discharge based on VGG-16 algorithm 796

Ziyu Wan, Wenbo Huang, Fengrui Cheng, Xixiu Wu

Experimental investigations into the characteristics of acoustic emission signals from typical damages of strain clamps for transmission lines Guoqiang 800

Zhang, Ke Li, Bo Lu, Haitao Tang, Kunpeng Ji, Kuanjun Zhu

Research on Zero-sequence Current Control Technology of 400 V Alternating Current System for Substations 805

Siyu Xia, Xuefeng Ning, Zhichao Xu, Weibiao Ye, Dawei Lu, Wenjian Wu, Xiao Hai, Juan Xu

State of Charge Estimation for Lithium Batteries Based on the Square Root Cubature Kalman Filter Algorithm 810

Hanhan Liu, Jun Su

Electromagnetic studies of AC transmission lines and off-line personnel Maoxin 815

Ren, Fan Yin, Yuanqi Fang, Jiong Chen, Ziyi Qin

Research on sag measurement method of transmission line based on Least Median of Squares and Least Squares method 821

Xingzhi Ren, Aihua Zhang, Yu Fang, Minghong Wang

Synoptic characteristics of a continuous ice covering event on ultra-high voltage transmission lines in 2023 826

Xinyi Fu, Hourong Zhang, Qiang Fan, Bo Gong, Tingyun Gu, Yongli Liao, Huayang Ye, Tiansong Hu, Haipeng Zhang, Hao Li

Analysis of Short Circuit Current Calculation Equivalence of External Power Grid with Distributed Generators 831

Weichen Liang, Dexing Xie, Chengxin Liu, Zhiyue Zhai, Xuan Li, Shiwu Xiao

A New Clamping Method Based on Phase-shifted Full-bridge Current-doubler Rectifier Circuit 836

Zhichao Ma, Chunguang Ren, Zhiping Lei

Simulation study on electric field of control cable with air gap defect 840

Jianhua Zhang, Junni Su, Kai Liu, Chao Yuan

Research and Simulation of a T-Type Three-Level Inverter Balancing Circuit 844

Yu Wang, Yinshui Xia, Shoudong Shi

Active Current Compensation Control Strategy of Grid-Side Converters in Offshore Wind Power 849

Zhen Pan, Hui Qin, Mengdie Zhu, Xiang Li, Lidan Chen

Study on TDM Signal Transmission Mechanism of Siemens DC Measuring System 854

Hao Li, Jianxiang Huang, Binghou Ding, Yaoxing Bai, Chao Liu, Yong Zheng

Optimized Design of Injection Current Probe for Cable Detection 860

Wenbo Yu, Xuedong Wang, Shiyu Chen, Peng Zhang, Chenyang Ma, Zhenchuan Wang

State of charge prediction algorithm of lithium battery based on multi-step time window and time attention mechanism of long short term memory network 866

Yu Zhang, Zhiheng Zhao, Jingyu Zhou, Zhefan Zhang, Hairui Zhou

Remaining useful life prediction of lithium battery based on charging IC curve and improved ELM 871

Yuelong Pan, Jialong Ji

Prediction of lithium battery state of charge based on real vehicle data 876

Jialong Ji, Yuelong Pan

Improvement and Application of Power Quality in a Research Institute 881

Wei Wu, Zhuo Wang, Zixuan Wang, Mengyuan Li, Jinghui Liu, Zhun Li

Application of precision laboratory power quality recovery system 886

Jinghui Liu, Zhuo Wang, Wei Wu, Xin Guan, Lei Cao, Zhun Li

Transmission tower tilt monitoring based on high resolution SAR images 890

Zhu Sha, Ying Han, Shaofeng Ni, Jing Li, Kaili Cao, Ziyong Wu, Yulin Wang

Research on Harmonic Current Analysis and Responsibility Assessment of Electric Vehicle Charging and Discharging Stations Considering V2G 894

Jiahong Lai, Dahai Zhang, Ying Wang, Hao Yu, Mingzhu Sun

Research on the Design and Application of Sampling Circuits for Deep Learning-Based Leakage Detectors 901

Chengnan Gao, Shuo Liu, Yanjun Chen, Hui Song, Xiangyang Mu

Research on transmission line ice-cover monitoring and de-icing based on convolutional neural network and stress wave signals 905

Jianfeng Yan, Xishuang Shi, Zhuangjun Guo, Hai Wei, Yimin Zhu

A Series Structure of MOSFET 911

Linze Li, Chunguang Ren, Zhichao Ma

Output Voltage Characteristics Analysis for the Starting Process of Proton Exchange Membrane Fuel Cell 915

Haiguo Yu, Chunlai Li, Pengcheng Zhang, Ning Zhang, Jiatian Gan, Xiaoling Su

Reinforcement Learning Algorithm Based Stress Wave Modal Optimization and Deicing Efficiency of Transmission Line 921

Qi Ding, Shicong Deng, Yu Luo, Xiaolei Niu, Hongle Wu

Research on sag monitoring technology of transmission line based on millimeter wave radar 927

Minghao Zhang, Xiao Ma, Mengxuan Li, Haitao Tang

Online parameter identification and state-of-charge estimation for Li-polymer battery in unmanned aerial vehicle applications 931

Yi Hao, Rui Du, Bin Wang, Rong Kang

Stress analysis of copper earthing grid subjected to ground settlement 936
Wenyan Qi, Tian Li, Zhihao Huang, Fang Ye, Jinshan Yu, Fang Geng, Hua Mao, Shenghan Zhang

Insulator Defect Detection Technology Based on Deep Learning 941
Qian Dang, Wenbo Shang, Fazheng Luo, Pengdong Lu, Guobin Lin, Xiaolin Gui

An FPGA+ARM-Based Method For Detecting Voltage Dips And Maintaining Voltage Outputs 948
Yudong Wang, Xianghua Ma

The impact of polar molecules on the DC conductivity of EPDM 952
Hongda Yang, Shiyu Chen, Zhongyuan Li, Heqian Liu, Huxu Min, Haifeng Jia

Harmonic analysis of output voltage of bipolar SPWM inverter 956
Shao Wei

Research on frequency conversion control strategy based on self-heating series resonant topology of lithium-ion battery 961
Jinsong Chen, Tao Chen, Jinwen Zhu

Comparison study on Load-carrying capacity of Electric Transmission Tower Subjected to Bolt Connection Loosening 967
Qigang Sun, Chunhui He, Yunzhu Cai, Xiangjia Chen, Zhenguo Liu

Transmission Line Defect Detection Based on Knowledge Distillation 973
Liwei Zhou, Huaxi Wu, Jing Fu, Guiwei Shao, Jiaying Tan, Huanqing Cai

Real-Time Comprehensive Assessment of IGJO-CNN Power Quality Based on Combined Empowerment Approach 977
Jia Wang, Yongzhi Min

Design of Efficient Energy Harvesting Circuit Based on Piezoelectric Generator 981
Zheng Shang, Zhanrui Yang, Li Sui, Yuhan Duan

Fault diagnosis of circuit breaker vibration signals based on MTF+CNN 986
Chunping Liu, Xiaohua Zhang, Yunhui Wang, Delong Sun, Yongbo Lang, Liguang Xu

Active power allocation strategy of wind turbines for frequency regulation considering fatigue loads 992
Qing Han, Feng Zhang, Haishu Gao, Zhipeng Xin, Keyan Li, Mingyu Jiao

Design of sensorless control for PMSM based on improved super-twisting sliding mode model reference adaptive system observer 997
Dongzhe Yang, Zehai Gao, Xiaojun Zhang, Xiaojiang Geng

Impedance analysis of cascaded converters based on DAB and LCL 1003
Xiaolei Chen, Xuanmian Zhu, Tao Liu, Guobing Pan, Hao Wu, Songdi Xia

Graph Cluster Analysis of Transformer Oil Chromatographic Data Based on Deep Reinforcement Learning 1010
Meng Liu, Yi Yang, Hao Chen, Cheng Chen, Zhuo Wang, Siyuan Wang

Extra/Ultra High Voltage AC Filter Circuit Breaker Pre-insertion Resistors State Evaluation Based on Wavelet Decomposition and TLS-ESPRIT 1016

Feiyue Ma, Ao Li, Bo Niu, Hui Ni, Beiyang Liu, Junbo Deng

Soft-Switching Scheme for DC-DC Converters under Power-Data Co-Modulation for Decoupling Power Loss and Data Communication 1020

Shunxing Han, Tianqu Hao, Feng Gao

Control Improvement and Optimization of Quadrotor UAV in Substation Expansion Applications

Guangze Zhu, Jingjing Wang, Youliang Gao, Boming Li, Ronghua Wu, Gecheng Lan, Jinghui Liu, Zhanfeng Wu, Tengfei Chang, Xiaozhi Huang 1027

A dielectric constant estimation system based on transmission coefficients 1031

Zhigang Wang, Jingjing Zhang, Yan Zhang, Rui Cao, Xiaohui Tao, Xianjun Qi

Simulation and Suppression Research on Conducted Interference in Motor Drive Systems 1036

Chaohan Zhu, Sijia Zhou

The influence of the magnetizer on the heating efficiency of the transverse flux inductor 1041

Yabin Li, Yuanhao Wang, Yonglong Peng, Yiyang Wang

Smart Energy Meter Simulation Model Design and Metering Analysis Under Non-sinusoidal Unbalanced Conditions 1045

Zhuo Wang, Huichao Zhang, Qiang Li, Zhun Li, Hongjun Wang

Differential protection method of transformer based on unbalance 1050

Jiaqi Zhang

Distance protection principle based on control rotating coordinate system 1056

Runliang Wang, Guosheng Yang, Congbo Wang, Bo Zhang

Simulation Calculation and Numerical Analysis of 1/3 Frequency Division Resonance of 500kV GIS System 1064

Zhenqiang Li, Xiaoyue Chen, Lei Wang, Siying Feng

Automated Scheduling of Power Sensor Resources under the Dianhong IOT Operating System 1071

Zhengrong Wu, Hua Li, Wenqin Chen, Zilong Liu

Simulation Analyzing the Influencing of Temperature on the Performance of Fiber Optic Current Transformer 1076

Jian Qiu, Shipu Wu, Jin Qiu, Fubin Pang, Siyuan Shen, Hui Hou, Xixiu Wu

Research on detection of foreign body defects on the surface of basin insulator based on pulsed UWB radar 1081

Hang Qi, Xianjun Qi, Yan Zhang, Rui Cao, Xiaohui Tao, Jingjing Zhang

Design of oil-water hybrid cooling structure and its heat dissipation optimisation for permanent magnet synchronous motor in new energy vehicles 1086

Heng Fang

Analysis of Broadband Oscillation Suppression Effect of Grid-forming Converter 1092
Muchi Zhao, Haijiao Wang, Mingyuan Zhang, Guoqing He, Chun Liu

Research on Virtual Synchronous Machine Control Strategy for Flexible DC Systems 1097
Chuihui Zeng, Weihong Xiong, Jun Xie, Renbin Su, Zhi Li

Superspiral sliding mode composite control strategy for interleaved parallel Buck converter 1103
Qinghui Wu, Shiwei Shen, Kai Cheng, Guosheng Tang

Identification of new energy inverter electromechanical model fault crossing control mode 1108
Chen Xu, Ao Wu, Yinghong Wang, Rong Wei

Research on instrument control power equipment fault identification method based on FCBF-KPCA 1112
Chenyang Ma, Yubo Shen, Shiyu Chen, Minhu Xu, Hongda Yang, Zhongyuan Li

Study on heat transfer and flow characteristics of pin-fin manifold microchannel heat exchanger 1118
Luwen Han

Investigation of Numerical simulation and Experiment of Scroll Expander for Compressed Air Energy Storage 1124
Junying Wei, Chenrui Zhang, Guangxian Yin, Wenwen Chang

Development of A GIS Equipment Partial Discharge Intelligent Detection System Based on Ultra-high Frequency Detection Technology 1130
Yurui Qin, Dongyan Shen, Shengkai Tong, Tianyu Gu

Model predictive control based on permanent magnet synchronous motor 1137
Bowen Duan, Haiyan Zhang

A multi-input single-output DC-DC converter with reduced number of switches 1142
Jiahao Li, Ziyun Jiang, Leijiao Ge, Xiping Ma

Numerical investigation of a mini-channel phase-change cold plate for a 2kW laser device 1147
Yankai Zhang, Youwei He

Development and Application of Transformer State Perception Terminals Based on Artificial Intelligence and Edge Computing 1152
Xintong Wang, Xin Chen, Xuexing Zhang, Zhendong Tang

Current sensor measurement lag state evaluation method based on data time series clustering and DE algorithm 1157
Ke Zhou, Qingren Jin, En Meng, Haibo Bao, Zhiyue Mo

Impedance regulation control strategy for distributed static series compensator 1163
Minghui Hao, Jiping Qiao, Lei Wang, Hongwei Zhang

Research on dielectric loss angle measurement based on hybrid convolutional window 1168
Xuemei Bai, Hongzhen Hua, Yu Zhang, Limin Liu

Based on the harmonic linearization railway power regulator impedance modeling 1172

Chenyu Song, Ying Wang, Leijiao Ge, Xiping Ma

Simulation study on temperature rise characteristics of medium voltage switchgear under multiple fault conditions 1177

Chuansen Li, Zhongyuan Yang, Dong Guo, Zheng Dong

Transient stability analysis of grid-connected voltage source converter under the low voltage ride through control 1182

Yan Lu, Xiaohui Song, Fei Gao, Jinjie Liu

A statistic-based static error warning method for wind turbine yaw-control system 1187

Mengjie Li, Han Zhang

COMSOL Multiphysics-based multi-physics field virtual simulation of electronic transformer 1191

Jianyang Zhu, Houyi Zhang, Keyue Qiu, Bowen Li, Qihui Feng, Yu Wang

Research on totem-pole power factor correction based on sliding mode control 1196

Xuan Li, Pingjuan Niu

Effects of hole width on spray and mixing characteristics of adjustable pintle injectors 1201

Shaolei Luan, Jiping Wu, Jiaqi Zhang, Xiao Bai

Research on Fault Diagnosis of Air Compressor Bearings Based on VMD BiLSTM Attention 1209

Zhixing Wang, Aimin Wu, Zhao Liu, Tao Wu, Xiuwei Ma, Juan Liu

Short-circuit analysis for complex faults in unbalanced distribution network with inverter interfaced distributed generators 1215

Jin He, Ming Liu, Shuai Fu, Chong Deng

Feature extraction method of regional carbon emission imbalance based on electric power big data and time series 1223

Xinghua Li, Hongwei Han, Jia Liu, Jiangbo Sha, Wenni Kang

Analysis of the economic benefits of electric vehicles and aggregators under the stackelberg game strategy 1227

Yunqi Li, Qingrong Liu, Yingjun Ruan, Fanyue Qian, Tingting Xu, Hua Meng

Design of a trustworthy monitoring model for carbon emissions in industrial parks considering green electricity consumption 1233

Jingli Feng, Tingting Jiang, Qinglei Guo, Deisheng Bai, Xiaoxiao Ma, Xiukui Pan

Unified Reliability and Economic Metric for Optimal Distribution Network Reliability Enhancement Strategies 1237

Xinghang Weng, Kai Hou, Shusheng Wang, Ruilai Xin

Prospects of High-Power EV Charging in China: Research and Analys 1242

Yongkun Wang, Zhiyong Zhou

Multi-Dimensional Evaluation of IEHS Optimization Plans Incorporating Demand Response and Carbon Tax Mechanisms 1247

Zihan Cai, Yong Xia, Yu Long, Zeyu Liu, Kai Hou, Jiarui Zhang

Low-carbon economic optimization study of wind-solar-storage integrated energy system with pumped-storage 1253

Zengbo Dong, Guoping Liu, Hui Fan, Hongbo Wu, Tianhua Han

Carbon Footprint Evaluation and Low-Carbon Grading Evaluation for Ring-network Cabinet 1262

Jingling Wang, Jianyi Zheng, Xiujuan Ma, Chen Peng, Lu Tian, Menglian Zheng, Guangyao Ying

Identification of Collusive Bidding Behavior in the Electricity Spot Market Based on Euclidean Distance and Density-Based Clustering 1269

Jingyu Fu, Tao Zhou, Xueting Zhao, Yiheng Xiong, Hui Qi, Wei Zhang, Jiaxin Zhao

Low-carbon Economic Scheduling of Virtual Power Plant Considering Electric Vehicles 1276

Na Yang, Guohua Yang, Jiang Yin, Kaizhi Zhang

Microgrid electricity carbon linkage multilateral trading optimization scheduling 1281

Huihui Xu, Yunfei Tian, Jing Peng, Ziyun Cheng, Yuyang Zhao, Yi Chai

Research on Planning of Zero-Carbon Community Microgrid with Sewage Source Heat Pump System 1286

Lin Lin, Xiaolin Li, Yanze Wang, Yunuo Zhang

Multi index evaluation of V2G scheduling optimization strategy for electric vehicles

Houpeng Hu, Jianlin Tang, Yanhong Xiao, Bin Qian, Shang Yang, Xiaoming Lin, Zhenghao Gao, Yaodan Deng 1290

Economic and low-carbon optimization model for integrated energy system considering demand response 1296

Hefei Cui, Hewen Zhou, Qie Sun

Economic operation within a cascade hydropower plant driven by the operating characteristic curve fitted by neural networks 1301

Xuhui Yue, Yulong Li, Dong Liu, Jingjing Zhang, Jiaying Liu

The optimization of basic electricity charges for the two-part electricity price based on seasonal demands 1307

Lei Wang, Junqiang Shang, Huiqun Wo, Aoqing Tao, Jiayi Li

Classification Method for Sensitive Customers of Power Quality Based on Principal Component Projection Analysis 1311

Huan Xu, Yuanqian Ma

Short term electricity price prediction using CNN-BiLSTM based on attention mechanism

Zongyao Wang, Bofeng Xu, Yaozhen Huang, Ke Luo, Sheng Li, Jiawei Sun, Ruichao Wang, Huixia Wang, Xiu Zheng 1317

Research on the Optimisation Strategy of Electricity Sales Pricing for Smart Buildings Based on Rooftop Photovoltaic Consumption 1322

Tianyang Huang, Jie Yu, Minghao Zhu

Research on Assessment Method of Regional Power Carbon Emission Reduction Potential 1327

Zhe Du, Quanhui Guo, Xueting Zhang, Qinglei Guo, Xiaoxiao Ma, Xiaowen Wu

Study on topology design and selection of low-carbon micro grid for highway traffic 1332

Xin Li, Biao Wang, Ji Ke, Zhuangzhuang Liu

Study on Energy Consumption, Economy and Pollutant Emission of Typical Hydrogen Production Process Based on Life Cycle Assessment 1338

Bin Zhou, Yuxing Yang, Youshun Kong, Peng Zhang, Tao Wang, Meng Lv, Ze Zhang

Low-carbon Economic Dispatch of Multi-Park Integrated Energy System Considering Source-Load Carbon Intensity Coupling 1345

Xizhi Shi, Peihong Yang, Pengxiang Fan

Research on Optimal Operation of Low-Carbon Rural Microgrid Based on Improved Fruit Fly Optimization Algorithm 1350

Lin Lin, Xiaolin Li, Yanze Wang, Yunuo Zhang

An electric vehicle charging temperature warning method based on ConvLSTM model 1354

Bing Gu, Zehao Li, Xiaolin Wang, Zitong Zhao

Micro Service Architecture-based Distribution Terminal Platform and Its Application Research 1361

Haijun Xiong, Saidi Lan, Yahan Li, Yizhi Zhang

Algorithm for Locating Fault Linkage Sets in End-to-End Microservice Networks under Multiple Business Scenarios 1367

Jie Tang, Qidi Hu, Yujiang Long, Wei Wei, Guangyi Zhang, Zhenjie Lin

Parameter Optimization Method of Market Power Prevention and Control Based on Genetic Algorithm Binkun 1373

Xu, Lei Jiang, Jin Sun, Mingjuan Lin, Chengqing Gui, Yuxin Zhang

Research on the Collaborative Mechanism of the Electricity Market, CET Market, and TGC Market 1378

Zhongchun Li, Yue Han, Meng Wang, Feihang Zhou, Hao Wang, Zhongde Zhang

Power Industry's Private Frequency Band Wireless Dedicated Network Comprehensive Solution Research 1384

You Xue, Jian Xu, Zhongping Xu, Runan Yang, Ran Liu

A data-driven prediction method of short-term cooling load based on machine learning and regression analysis 1391

Jie Guo, Qiang Zhao

A Review of Security Authentication Technology for the Electric Power Internet of Things 1395

Xijuan Si, Chaoyang Zhu, Yayun Zhu, Ziqing Lin, Yuqing Zhang

Carbon reduction strategy for smart buildings based on adjustable load potential 1408

Jie Zhuo, Xianglong Li, Lu Zhang, Qiwen Ke, Yichi Zhang, Zhenyu Ma, Dunnan Liu, Yibo Du

Design and research of combined heat and power rotor dehumidification system for natatoriums 1413

Chengde Sun, Rundong Liu, Liwen Hu, Zeyu Ji

Predict the future inventory and charging load of electric vehicles based on the combined model 1417

Kejian Shi, Yidong Zhu, Taiyu Gu, Dawei Hu, Ye Tian, Binhong Xu

Research on Highway Electric Vehicle Charging Strategy Considering Time-Dependent Traffic Flow 1422

Yuan Hu, Ciwei Gao, Yuan Zi, Hao Ming

Research on Multi source Data Quality Improvement Method Based on Artificial Intelligence 1427

Xiaosong Ma, Yiming Chang, Qiaochu Zhao, Huan Pang, Linghan Hu, Tiezheng Pan

Research on Electric Vehicle Charging and Discharging Scheduling Strategy Based on Dynamic Time of Use Electricity Price 1432

Jinfeng Li, Yubo Liang, Yu Yao, Xiaoming Lin, Fan Zhang, Bin Qian, Jun Dong, Jianlin Tang

Research on Control Strategy for Three-Phase Unbalanced Load in Power Market Based on Particle Swarm Optimization Algorithm 1436

Wenlin Yang

Pumped Hydro Storage Multi-Market Trading Strategy Considering Electricity Price Forecast Errors

Yilin Du, Yufeng Guo, Pu Wang, Xue Lyu, Zhuofan Xu, Yihang Ouyang, Longxiang Chen, Lei Wang, Wei Xu, Yifei Liu 1440

An Economic Optimization Approach for Load Regulation in Low-Carbon Port Microgrids 1445

Kai Qi, Dongtao Wang

Research on integrated management and energy consumption characteristics of multiple thermal systems of pure electric vehicles 1449

Jianchao Ma, Zhigang Yang, Lanping Zhao

Numerical investigation on water entry behaviors of free-fall lifeboat under different launch conditions 1458

Ningge Fan, Shunhua Chen, Di Wang

Charging and discharging model of electric vehicles under time of use electricity pricing mode 1463

Kejian Shi, Taiyu Gu, Ye Tian, Yidong Zhu, Dawei Hu, Jinhua Zhang, Liang Whang

Considering an orderly charging and discharging strategy for electric vehicles with dual intraday time slots 1467

Jiaoyang Wang

Energy management strategy of a hybrid electric vehicle with driver intent recognition 1471

Qin Bai, Yi Wang, Yuanwei Zhang, Shaohua Luo, Yang Ou

Author Index