



May 21–24 2018 Beijing, China

Location: Beijing University of Posts and Telecommunications Hotel, No. 10 Rd. Xitucheng, Dist. Haidian, Beijing

Registration & Plenary Session

Date : Monday, May 21st, 2018, PM

Registration and Reception

Time	Activity	Location
15 : 30—17 : 00	Sign up	Multifunctional Hall, Hotel Second Floor
17 : 30—20 : 00	Reception Buffet	Chinese Restaurant, Hotel Second Floor

Date : Tuesday, May 22nd, 2018, AM

Plenary Session

Activity	Speecher	Theme	Time	Location	Host
Opening	Norman C. Beaulieu (Beijing University of Posts and Telecommunications)	Welcome	9:00-9:05	Multifunctional Hall, Hotel Second Floor	Norman C. Beaulieu (Beijing University of Posts and Telecommunications)
	Xiangming Wen (Beijing University of Posts and Telecommunications)	Opening Speech	9:05-9:15		
	Jiye Wang (State Grid Corporation of China)	Opening Speech	9:15-9:25		
Keynote Speech	Wei Chen (China Mobile Research Institute)	5G Network Slicing Enabling Energy Internet	9:25-9:50		
	Jie Hu (China Telecom Beijing Research Institute)	Building a Secure Internet of Things for Energy Industry	9:50-10:15		
	Photo & Break		10:15-10:35		
	Xueqin Jia (China Unicom Network Technology Research Institute)	China Unicom Supports Smart Grid	10:35-11:00		
	Gareth Tyson (Queen Mary University of London)	Are Live Social Broadcasts Really Broadcasts?	11:00-11:25		
	Norman C. Beaulieu (Beijing University of Posts and Telecommunications)	Can 153 Years of Advancement in Wireless Communications be Continued into 5G and Beyond: Rethinking the Fundamentals	11:25-11:50		
Buffet Lunch	Chinese Restaurant, Hotel Second Floor		12:00-13:30		



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Regular Session

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Session 1. Architecture and System Design of Energy Internet (Multifunctional Hall Room A, Hotel Second Floor)	Afternoon	Session Chair	
Preliminary Study on Planning and Design of Urban Intelligent Energy System (Xue Wang , State Grid Energy Research Institute Co.)	14:00-14:20	Yang Li (State Grid Corporation of China)	
The Construction of User Centric Service System of Energy Internet (Cuifen Bai , State Grid Energy Research Institute Co.)	14:20-14:40		
Design and Application of Standardized Power Module and Standardized Communication Module for Energy Router (Chuantong Hao , Tsinghua University)	14:40-15:00		
BREAK	15:00-15:20		
The Application of Power Grid Equipment Plug and Play based on Wide Area SOA (Zhenyu Chen , China Electric Power Research Institute)	15:20-15:40		
Definition and Framework Study for Aggregator of PEVs as Controllable Load in V2G Technology (Lin Liu , State Grid Energy Research Institute Co.)	15:40-16:00		
Energy management model of charging station micro-grid considering random arrival of electric vehicles (Wenhua Li , Nation University of Defense Technology)	16:00-16:20		
A Hierarchical Decision Architecture for Network-assisted Automatic Driving (Yunqiu Xiao , China Mobile Communications Croup Co.)	16:20-16:40		
Session 2. Energy Market, Energy Trading and Economical Optimization of Energy Internet (Multifunctional Hall Room B, Hotel Second Floor)	Afternoon		Session Chair
Research on Modes of Energy Utilization in Regional Energy Internet (Na Zhao , North China Electric Power University)	14:00-14:20		Dunnan Liu (North China Electric Power University)
Design of Carbon Emission Trading Market Mechanism Based on Integrated Energy Service Providers' Participation (Yunting Yao , China Electric Power Research Institute)	14:20-14:40		
A Visualization Compression Algorithm Considering Interactive Structure for Energy Trading of Microgrid System (Yidi Shen , Beijing University of Posts and Telecommunications)	14:40-15:00		
BREAK	15:00-15:20		
Pricing Mechanism of Integrated Energy Services Based on User Demand Analysis (Jingwen Wang , Sichuan University)	15:20-15:40		
Capacity Allocation for Regional Integrated Energy System Considering Typical Day Economic Operation (Zejian Liu , South China University of Technology)	15:40-16:00		
A novel power system source-grid-load coordinated planning model considering both efficiency power plant and demand response (Ning Zhang , State Grid Energy Research Institute)	16:00-16:20		
Joint Adjustment of Emergency Demand Response Considering Data Center and Air-conditioning Load (Gang Wu , Jiangsu Electric Power Company Research Institute)	16:20-16:40		



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Session 3. Renewable Energy Generation and Control in Energy Internet (Multifunctional Hall Room A , Hotel Second Floor)	Morning	Session Chair
Sizing and Siting Strategy of Dispersed Wind Farm for Reducing Network Loss and Improving Loadability (Qiwei Wang , Shenyang University of Technology)	9:00-9:20	Jie Yang (Tsinghua University)
Adaptive Zone-Division AVC method Based on Reactive Power Margin Evaluation for Wind Farm (Yang-Wu Shen , State Grid Hunan Electric Power Institute)	9:20-9:40	
Peak Regulation Strategy of Regional Power Systems for Large-scale Renewable Generation Accommodation (Tianhui Meng , State Key Laboratory of Operation and Control of Renewable Energy and Storage Systems & Harbin Institute of Technology)	9:40-10:00	
BREAK	10:00-10:20	
A Transient Control Strategy of Distributed PV during Three-Phase Short Fault (Yang-Wu Shen , State Grid Hunan Electric Power)	10:20-10:40	
Distribution Network Voltage Control with High Proportion of Photovoltaic Generation (Lin Li , Key Laboratory of Smart Grid of Ministry of Education, Tianjin University)	10:40-11:00	
Optimization of Generator Starting Scheme including Multiple DC Converter Stations (Chengqian Lin , Shandong University)	11:00-11:20	
Session 4. Power Storage and Dispatch in Energy Internet (Multifunctional Hall Room B , Hotel Second Floor)	Morning	Session Chair
Active Power Analysis for the Battery Energy Storage Systems Based on a Modular Multilevel Cascade Converter (MMCC-SSBC) (Abuzaid Saeed Gadalla , North China Electric Power University)	9:00-9:20	Wenhua Li (National University of Defense Technology)
Research on the Detection of Capacity and Capacity Fading of Li-Ion Battery of Electric Vehicles Based on Tomographic Imaging (Junwei Hou , South China University of Technology)	9:20-9:40	
An Energy storage capacity determination model of electric vehicle aggregator considering the real-time response state (Yapeng Zhang , Key Laboratory of Smart Grid of Ministry of Education)	9:40-10:00	
BREAK	10:00-10:20	
Optimal Allocation of Generalized Power in Energy Internet Based on Time-Sequence Characteristics (Huiyu Zhang , State Grid Fujian Electric Power Research Institute)	10:20-10:40	
Optimal Power Dispatch Considering Deep Cycling and Carbon Emission for Wind-Coal Intensive Power Systems (Wei Zhang , Harbin Institute of Technology)	10:40-11:00	
Hierarchical and Distributed Optimal Dispatch for Coupled Transmission and Distribution Systems Considering Wind Power Uncertainty (Xu Zhang , Key Laboratory of Power System Intelligent Dispatch and Control of Ministry of Education)	11:00-11:20	
Buffet Lunch	Chinese Restaurant , Hotel Second Floor	12:00-13:30



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Session 5. The Application of Big Data Techniques in Energy Internet (Multifunctional Hall Room A, Hotel Second Floor)	Afternoon	Session Chair
Energy Load Forecasting Using Deep Learning (Cristina Heghedus , University of Stavanger)	14:00-14:20	Kai Sun (University of Tennessee)
Power Load Forecasting Based on Improved Elman Neural Network (Hui Zhao , North China University of Technology)	14:20-14:40	
Electrical Load Prediction in Energy Internet via Linear Correlation Coefficient Approach (Yangyang Ming , Tsinghua University)	14:40-15:00	
BREAK	15:00-15:20	
Household EV Charging Demand Prediction using Machine and Ensemble Learning (Songpu Ai , University of Stavanger)	15:20-15:40	
Image Embedding of PMU Data for Deep Learning towards Transient Disturbance Classification (Kai Sun , University of Tennessee)	15:40-16:00	
A Fault-tolerant Data Acquisition Scheme with MDS and Dynamic Clustering in Energy Internet (Xin Chen , Beijing University of Posts and Telecommunications)	16:00-16:20	
Research and Implementation of Data Storage Backup (Yongmin Zhao , Beijing University of Posts and Telecommunications)	16:20-16:40	
Security risk analysis and security technology research of government public data center (Wendong Wang , Beijing University of Posts and Telecommunications)	16:40-17:00	
Session 6. Information and Communication Techniques in Energy Internet (Multifunctional Hall Room B, Hotel Second Floor)	Afternoon	
Optimal Planning of Smart Grid Communication Network for Interregional Wide-Area Monitoring Protection and Control System (Peng Yu , State Key Laboratory of Networking and Switching Technology, Beijing University of Posts and Telecommunications)	14:00-14:20	Huan Wu (Beijing University of Posts and Telecommunications)
Performance Monitoring Nodes Deployment Strategies for Power Wireless Private Networks based on Improved Mixed Greedy Algorithm (Peng Lin , Beijing Vectinfo Technologies Company)	14:20-14:40	
Adaptive Resource Allocation Scheme for Wireless Cellular Networks (Yue Wang , Beijing Key Laboratory of Network System Architecture and Convergence, Beijing University of Posts and Telecommunications)	14:40-15:00	
BREAK	15:00-15:20	
Discussion and Testing of 802.11ah Wireless Communication In Intelligent Substation (Zhe Zheng , Global Energy Interconnection Research Institute Co. Ltd.)	15:20-15:40	
Markov chain-based on path selection in the heterogenous Internet of Things model (Huan Wu , Beijing University of Posts and Telecommunications)	15:40-16:00	
Dynamic Backoff based Access Mechanism for LoRaWAN Class A (Pengyu Yuan , Beijing University of Posts and Telecommunications)	16:00-16:20	
Crosstalk Permission-Based Access Scheme for High-speed Narrowband Power Line Communication Networks (Suxiang Zhang , Yantai Haiyi Software Co.Ltd.)	16:20-16:40	
An improved TPSN algorithm based on Doze Mechanism (Wenpeng Cui , Global Energy Interconnection Research Institute Co.Ltd.)	16:40-17:00	
Banquet	Chinese Restaurant, Hotel Second Floor	



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Session 7. Stability, Security and Efficiency of Power System in Energy Internet (Multifunctional Hall Room A, Hotel Second Floor)	Morning	Session Chair
Outage Management Strategy for Multi-Microgrids Considering Uncertain Islanding Duration (Xiaodong Yang , Zhejiang University of Technology)	9:00-9:20	Wenpeng Jing (Beijing University of Posts and Telecommunications)
Fault Characteristics Study of VSC Converter and Protection Design in DC Microgrids (Ranran Xie , Shandong University)	9:20-9:40	
Power System Transient Stability Assessment Based on Voltage Phasor and Convolution Neural Network (Jinxiu Hou , China Electric Power Research Institute)	9:40-10:00	
BREAK	10:00-10:20	
Blackout Risk Assessment of Cascading Outages Considering Wind Power Uncertainty (Di Xu , Shandong University)	10:20-10:40	
An Early Warning Analysis Technique of Electric Equipment Temperature Based on Association Rule Mining (Jiming Yao , Beijing Vectinfo Technologies Company)	10:40-11:00	
Network Behavior Abnormal Detection for Electricity Management System based on Long Short-Term Memory (Bingfeng Cui , State Grid Corporation of China)	11:00-11:20	
Research and application of transient step current source for DC current transformer on-site transient performance calibration (Fubin Pang , State Grid Jiangsu Electric Power Co. Ltd. Research Institute)	11:20-11:40	
Energy Efficiency Analysis of Building System Based on Air-Source Heat Pump Considering Comfortability (Lijia Du , Tianjin University)	11:40-12:00	
Session 8. Management, Control and Scheduling of Power System in Energy Internet (Multifunctional Hall Room B, Hotel Second Floor)	Morning	Session Chair
A Potential Solution for Intelligent Energy Management -- Knowledge Graph (Xiang Wang , China Electronics Technology Group Corporation)	9:00-9:20	Xiang Wang (China Electronics Technology Group Corporation)
A Multi-time Scale Robust Energy Management Scheme for Grid-Connected Micro-grid (Yang Chen , National University of Defense Technology)	9:20-9:40	
Deep Learning-based Distributed Optimal Control for Wide Area Energy Internet (Gang Yang , Tsinghua University)	9:40-10:00	
BREAK	10:00-10:20	
Voltage Control of Distribution Network with distributed generation based on Voltage Sensitivity Matrix (Qiong Tao , China Electric Power Research Institute)	10:20-10:40	
LCC-HVDC Supplementary Controller Design Based on Global Fast Terminal Sliding Mode Control (Qipu Liu , Hohai University)	10:40-11:00	
A NSGA based on-site operation and maintenance smart scheduling method (Wenhao Zhang , Beijing University of Posts and Telecommunications)	11:00-11:20	
Coordinated Optimal Scheduling of Multi-energy Microgrid considering uncertainties (Zhipeng Yang , Shandong University)	11:20-11:40	
Stochastic Multi-objective Scheduling Approach for Integrated Community Energy System (Wei Lin , Tianjin University)	11:40-12:00	