RPG™ 2017 International Conference on **Renewable Power Generation**

14:00 – 17:30, 19th October 2017

Oral Presentation (subject to change)

Session A1 Wind Technology	
14:00 --- 15:30	**0006** Effects of atmospheric stability on wind resource characteristic parameters
	0020 Study on Application Status of XLPE Insulated Submarine Cable Used in Offshore Wind Farm of China
	0023 A New HVDC Topology Structure Using Existing AC Cable Lines for Integrating Renewable Energy Sources
	0048 A Method of Wind Power Planning Considering Peak Load Regulation and Economy-social Benefit of Wind Power
	0096 Numerical Stability Analysis of PMSG-based Wind Energy Conversion System: A Simple Example of Drive System
	0143 Analytical model to composite inertia control for wind turbine generators participating in frequency regulation
15:30 --- 16:00	Poster Session and Refreshments
16:00 --- 17:45	**0146** Modified Modulation Strategy of MMC for Wind Farm Integration
	0247 Multi-machine equivalent model parameter identification method for DFIG-based wind power plant based on measurement data
	0309 Virtual Resistor Circuit-based Control Strategy of STATCOM during Network Unbalance
	0343 Research on VSC-HVDC control strategy based on large offshore wind power system

0377
SSCI Detection and Protection in Doubly-Fed Generator Based on DTFT

0405
A deep-learning-based scenario generation strategy considering the correlation between multiple wind farms

0416
Optimal Layout of Wind Farm for Lightning Protection Based on Lightning Leader Development Model

Session D1.1 Power systems integration issues

14:00 --- 15:30 **0003**
Research on Evaluation Method for Operation Economy and Technology of Regional Smart Energy Grid

0017
The Frequency Emergency Control Characteristic analysis for UHV AC/DC large receiving end power grid

0021
An Efficient Approach for Commutation Failure Immunity Level Assessment in Hybrid Multi-Infeed HVDC Systems

0088
A new scheme of UHVDC transmission line protection based on Chebyshev window filter

0089
An Improved BP Neural Network Algorithm to Wind Power Forecast

0090
A method to determine the maximum generation capacity of distribution generation in low voltage distribution feeders

15:30 --- 16:00 Poster Session and Refreshments

16:00 --- 17:45 **0092**
Research and Implementation of Outage Plan System for Reliability and Clean Energy Consumptive Power Constraint

0140
Study on Stability Mechanism of the Sending-Side Three-Machine-Group System after Multiple HVDC Commutation Failure

0150
Economic Dispatching Strategy Based on Multi-Time Scale Complementarity of Heterogenous Energy

0163
Research on Technical Scheme of Outdoor-Layout/Miniaturization Relay Protection in Smart Substation

0192
Study of online electromechanical and electromagnetic hybrid simulation system

Session D1.2: Power systems integration issues

14:00 --- 15:30 **0208**
An Adaptive Protection Scheme for Distributed Systems with Distributed Generation

0219
Inland Microgrid Multi-Source coordination optimal control Based on Multi-Scenarios Analysis

0221
Improvement of HVDC Commutation Failure Response Based on Compound Phase-shifting Control

0234
Probabilistic Forecast for Aggregated Wind Power Outputs Based on Regional NWP Data

0257
Stochastic expansion planning of interconnected distribution networks with renewable sources considering uncertainties and power transfer capability

0264
Design of Micro Automatic Weather Station for Modern Power Grid Based on STM32

15:30 --- 16:00 Poster Session and Refreshments

16:00 --- 17:45 **0292**
A coordinated charging strategy of PEVs for maximizing the distributed energy based on time and location

0318
Capacity Value Evaluation of Demand Response in Smart Distribution Systems Considering Customer Willingness Factor

0349
A Very Short-term Prediction Model for Photovoltaic Power Based on Improving the Total Sky Cloud Image Recognition

0360
An Improved Power Flow Algorithm for Hybrid AC/DC Grid With Reactive Power Control

0368
Capacity configuration optimization for stand-alone microgrid based on an improved binary bat algorithm

Session B: PV systems technology

14:00 --- 15:30

0045
General dead-time elimination PWM for voltage source inverters

0063
Global MPPT Algorithm with Coordinated Control of PSO and INC for Rooftop PV Array

0069
Study on Electromechanical Transient/Electromagnetic Transient Hybrid Simulation of Photovoltaic Grid-connected System

0249
Identification of the Photovoltaic Model parameters using the Crow Search algorithm

0277
An Improved Maximum Power Point Tracking Algorithm with Cuk Converter for PV Systems

0293
Research on Non-Directional Voltage Ride-through Control Technology of Household PV Grid-Connected Inverters

15:30 --- 16:00 Poster Session and Refreshments

16:00 --- 17:45

0432
Active Power Control Algorithm for Photovoltaic System Based on Operating Efficiency of Photovoltaic Generation Unit

0495
An Ultra-short term PV power forecasting based on ELM segmentation model

0594
Research on Power Loss of Distribution Network with Photovoltaic Access

0737
Reliability Evaluation of Photovoltaic Power Generation Systems with Consideration of Time-Varying Factors

0777
Thermal and Reliability Analysis of Cascaded H-Bridge Multilevel PV Inverters for Grid connected Application

0837
Study on charge and discharge control strategy of super-capacitor in photovoltaic system

Invited Sessions	
14:00 --- 15:30	**0577** Linear Demagnetizing Strategy of DFIG-based Wind Turbines for Improving LVRT Responses **0769** Short-term Photovoltaic Power Probability Forecasting Based on OLPP-GPR and Modified Clearness Index **0047** Wind Turbine Model Validation Based on State Interval and Error Calculation **0186** Modelling of PV module and its Application for Partial Shading Analysis—Part I: Macro-model and Parameter Estimation of PV module **0188** Modelling of PV module and its Application for Partial Shading Analysis—Part Ⅱ: Partial Shading Analysis and Simulation Approach of Large Scale PV Array **0735** Average Value Model of Grid Side Converter in PMSG for System-Level Studies **0772** Modeling and validating solar power inverter model for power system stability analysis
15:30 --- 16:00	Poster Session and Refreshments
16:00 --- 17:45	**0301** Effective restoration strategies of interdependent power system and communication network **0303** Improving wind power utilization under stormy weather conditions by risk-limiting unit commitment **0857** Frequency control framework of power system with high wind penetration considering demand response and energy storage **0861** Optimal strategy for distribution system with PV based on voltage violation regulation **0357** Adaptability Analysis of Starting Element for Transmission Line to Wind Farm Integration **0826** Directional pilot protection based on fault current for distribution network with DG **0868** Short-circuit Current Analysis of Grid-connected LCL VSC by Operational Inductance

09:30 – 13:00 & 14:00 – 17:30, 20th October 2017

Oral Presentation (subject to change)

Session A2: Wind Technology

09:30 --- 11:00	**0422** Dynamic Striking Distance and Electrical Geometrical Model of Wind Turbine Blades Based on Lightning Physics **0476** A review on the model validation and parameter estimation approaches of wind power generators **0479** Research on Capacity Configuration Method of Concentrated Reactive Power Compensator for Wind Farm LVRT Capability **0537** Maximum Energy Yield Oriented Turbine Control in PMSG based Wind Farm **0576** Design and operation of DSTATCOM for power quality improvement in distribution systems **0617** The impacts of PMSG on SSR of DFIG and series-compensated power system based on the impedance characteristics **0627** Study of the impact on SSR in series-compensated wind farms from different structures of power grid
11:00 --- 11: 30	Poster Session and Refreshment
11:30 --- 13:00	**0676** A Combined Active and Reactive Power Control Strategy to Improve Power System Frequency Stability with DFIGs **0679** Phase Error Correction Method of Wind Field Modeling Over Complex Terrain **0702** The Optimal Scheduling Model of Wind Power Generation Considering the Participation of Electric Vehicle Batteries **0730** A Robust Optimal Shunt Dispatch Method in Wind Farm Integration Area

0747
Improved Virtual Inductance Based Control Strategy for DFIG under Weak Grid Condition

0781
Positive and Negative Sequence Control of DFIG based Wind Turbines and its Impact on Grid Voltage Profile Concerning Converter Control Capability

13:00 --- 14:00 Poster Session and Lunch

14:00 --- 15:30 **0797**
Voltage stability enhancement by the coordinated operation of OLTCs in the presence of wind turbines using Taguchi method

0805
The Study on Optimal Site Selection of a Met Mast in Interconnected Wind Farm

0854
An Advanced Control Strategy and Its Controllable Area for Doubly Fed Wind Farm Integrated into Power Systems with VSC-HVDC Transmission under Grid Fault

0855
A new heuristic algorithm for the problem of vessel routing optimization for offshore wind farms

0858
Wind Speed Optimization Method Of Numerical Prediction For Wind Farm Based On Kalman Filter method

0877
Ultra-short-term wind speed forecasting method based on spatial and temporal correlation models

0878
Renewable energy integration capacity assessment in reginal power grid based on an enhance sequential production simulation

15:30 --- 16:00 Poster Session and Refreshments

16:00 --- 17:30 **0898**
Inertial Response Analysis of PMSG-based WECS with VSG control
0902
The investigation of the mechanism of SSI caused by the inter-harmonics in DFIG

0906
Voltage and Reactive Power Optimization of Offshore Wind Farms Based on Terminal Voltage Control mode of Double-Fed Induction Generator

0920
Voltage Balance Optimization among Subsystems of Wind-PV-ES Hybrid Generating System

0926
Inertial and primary frequency response model of variable-speed wind turbines

0940
Control and operation of a hybrid HVDC integrating wind farm based on SB-MMC and LCC

0964
Study on the Dynamic Reactive Power Characteristics of MMC-MTDC for Wind Farm Integration

Session D2.1:
Power Systems Integration Issues

09:30 --- 11:00

0372
Framework Planning of Active Distribution Network Considering Active Management

0374
Analysis of the HVDC Grid's Influence on Short-circuit Current Level of AC system

0401
Method for Diagnosis of On-load Tap Changer Based on Wavelet Theory and Support Vector Machine

0402
Distribution system planning incorporating distributed generation and cyber system vulnerability

0406
Analysis and control strategy of unbalanced power in MMC-HVDC Grid

11:00 --- 11: 30 Poster Session and Refreshment

11:30 --- 13:00

0407
Evaluation of solar irradiance on inclined surfaces models in the short-term photovoltaic power forecasting

0421
A solution of voltage stability assessment for complicated power system incorporating wind power

0465
Coordinated Economic Dispatch and Cost Allocation of Cooperative Multi-Microgrids

0480
Research of Active Load Regulation Method for Distribution Network Considering Distributed Photovoltaic and Electric Vehicles

0482
Risk Assessment of Distribution Network Operation Considering Time Dependent Relativity

13:00 --- 14:00 Poster Session and Lunch

14:00 --- 15:30 **0499**
Study of shell circulating current and transient ground potential rise in 220KV Gis

0518
Modelling and Control of a VSC MVDC Distribution Network with DFIG Wind Farm

0539
Modelling and control system design of hybrid distribution transformer

0545
A dispatching approach for active distribution network considering PV generation reliability and load predicting interval

0554
Research on Small-signal Stability of Hybrid Multi-terminal HVDC System and Control System Parameter Design

15:30 --- 16:00 Poster Session and Refreshments

16:00 --- 17:30 **0573**
Distribution voltage control utilising the reactive power capabilities of wind generators

0585
Analytical Model of Hybrid MMC for Dynamic and Steady Studies

0590
Research on Maximum Allowable Capacity of Distributed Generation in Distributed Network under Global Energy Internet Considering Static Voltage Stability

0597
Optimal Scheduling Strategy of Active Distribution System Using Brain Storm Optimization Algorithm

0599
Optimal power factor regulation of dispersed wind farm in distribution network system under diverse load and stochastic wind conditions

Session D2.2: Power Systems Integration Issues

09:30 --- 11:00 **0608**
Research on the Demand Response Strategy of the Electricity Deviation Assessment

0653
The transmission expanding network planning with consideration of circuits outrage

0667
A Hybrid Transient Simulation Platform for Interconnected Transmission and Distribution System Based on PowerFactory and PSASP

0722
A modified R-L model based Protection for VSC-DC Distribution Lines

0731
Analysis and Modelling of Secondary and Tertiary Control for Frequency Regulation in Power Systems with Renewable Energy Sources Based on Balancing Market

11:00 --- 11: 30 Poster Session and Refreshment

11:30 --- 13:00 **0740**
A New Reliability Evaluation Method for Distribution Network

0745
The Influence of Regional Load on Subsynchronous Resonance of Wind Farm-Series compensated Power Transmission System

0766
The implementation and value of power hardware in the Loop testing bed for wind turbines integrated into grid

0806
Mixed Inter Second Order Cone Programming Taking Appropriate Approximation for the Unit Commitment in Hybrid AC-DC Grid

0834
DC-DC AUTOTRANSFORMER WITH UN-INTERRUPTED OPERATING CAPABILITY DURING DC FAULT

13:00 --- 14:00 Poster Session and Lunch

14:00 --- 15:30 **0844**
A sub/super-synchronous harmonics measurement method based on PMUs

0869
The Research and Simulation of Control Strategy for Multi-terminal Flexible High Voltage DC Transmission System with Renewable Energy Access

0872
Optimized Recovery Stratedy for Microgrid with Distributed Generations

0918
Research on Optimal Storage Capacity of DC Micro-grid System in PV Station

0925
Uncertainty Model of Renewable Energy Sources

15:30 --- 16:00 Poster Session and Refreshments

16:00 --- 17:30 **0938**
Research on fault protection of DC grid based on hybrid MMC

0957
Dynamic Characteristic and Interaction Analysis of Synchronous Generator Based on Phase-Amplitude Motion Equation

0958
Wind Farm Aggregation Method Based on Motion Equation Concept： A Case Study

0959
A Multiband Filter： Estimator of Different Frequency Components of Grid Voltage

Session C: Energy storage for renewable sources
& Session F
& Session E

09:30 --- 11:00 **Session C**
0110
PHASOR MODEL SIMULATION OF GRID INTEGRATED VARIABLE SPEED PUMPED STORAGE SYSTEM

0187
wind power fluctuation mitigation based low frequency oscillation

0210
A Battery Management System for Li-ion Battery

0248
Coordinated Control Strategy of Hybrid Energy Storage to Improve Accommodating Ability of PV

0388
Cost-benefit analysis of pumped hydro storage using improved probabilistic production simulation method

0390
Control Method of a Single-Phase AC-DC Converter with Integrated Active Filter

0643
Analysis of Controllable Capacity for Electric Vehicle Battery Swapping Stations

11:00 --- 11: 30 Poster Session and Refreshment

11:30 --- 13:00 **0688**
Siting and Sizing of Energy Storage System of Microgrid Based on Power Flow Sensitivity Analysis

0725
Comparison of Centralized and Distributed Energy Storage Configuration for AC/DC Hybrid Microgrid

Session F
0024
Renewable Energy Investment Decision Indices Based on "Element-Performance-Economic Benefits" Causality Under Global Energy Interconnection

0205
Analysis on the Peak Load Adjustment Adaptability of the existing 300MW Cogeneration Unit manufactured by STC

0516
Power Supply Company Purchase'Portfolio Optimization Considering Electric Vehicle Charging Load Forecasting

0762
A Method to Evaluate Comprehensive Economic Benefits of Hybrid Wind Power-Pumped Storage System integration Considering the Carbon Emission Trade.

0910
A Novel Bidding Method for Wind Generation Company in Nodal Power Market

13:00 --- 14:00 Poster Session and Lunch

14:00 --- 15:30 **Session E**
0039
Techno-economic analysis of a PV-wind-battery-diesel standalone power system in a remote area

0083
The influence of cogging force on Solar Thermo Acoustic Generation systems

0282
A Bi-level Planning Model for Optimal Allocation of WT-PV-ESS in Distribution Networks

0296
Joint maintenance scheduling of the Municipal Solid Waste Incineration Power Plant and Connected Power System Devices

0438
Design and Control of Portable Fuel Cell Power Supply System

0457
Pumped-storage power generation system based on wave energy

15:30 --- 16:00 Poster Session and Refreshments

16:00 --- 17:30 **0555**
A Strategy to Stabilize Power Fluctuation of Distributed Renewable Energy in a Combined Heat and Power Microgrid

0649
Application of Multi-criteria Decision Analysis tool for design of a Sustainable Micro-grid for a remote village in the Himalayas

0798
Economic Operation Analysis of natural Gas-Power Multi-energy Flow System

0927
Optimisation Procedure for Designing a Magnetic Gear

0929
Energy Management System controller for a Rural Microgrid

Invited sessions

09:30 --- 11:00 **0238**
Frequency Control Capability of Wind Turbine under Different Operation Status

0490
Research on the Impact of DFIG Virtual Inertia Control on Power System Small-Signal Stability Considering the Phase-Locked Loop

0821
Comparative Study on Primary Frequency Control Schemes for Variable-Speed Wind Turbines

0887
Study on the adaptation virtual Inertia Control Strategy of DFIG and Assessment of equivalent virtual inertia time constant of connected power system

0791
Harmonic Control Optimization Model Considering Power Generation of Microgrid

0816
Hybrid passivity-based control strategy for split-capacitor-based shunt active power Filter

0817
A PCC Voltage Power Quality Restoring Strategy Based on the Droop Controlled Grid-connecting Microgrid

11:00 --- 11:30 Poster Session and Refreshments

11:30 --- 13:00 **0123**
Suppression of Synchronous Resonance for Virtual Synchronous Generators

0180
Reactive Power Control Strategy of DFIG-Based Wind Farm to Mitigate SSO

0189
SSO Damping in DFIG Based Wind Farm Integrated by Hybrid Series Compensator

0269
The Mechanism and Characteristic Analyses of Subsynchronous Oscillations Caused by the Interactions between Direct-drive Wind Turbines and Weak AC Power Systems

0275
A review of emerging SSR/SSO issues and their classifications

0362
Small Signal Stability Analysis of Parralled-inverters for Multiple Photovoltaic Generation Units Connected to Weak Grid

13:00 --- 14:00 Poster Session and Lunch

14:00 --- 15:30 **0396**
A Method to Suppress Sub-Synchronous Oscillation of DFIG-Based Wind Farms Based on Virtual Impedance

0632
Sub-synchronous Torsional Interaction with VSC-HVDC affected by Feed-Forward Compensations in Current Controllers

0646
PLL Effect on Sub-synchronous Torsional Interaction with VSC-HVDC

0712
Damping Characteristics of Sub-synchronous Torsional Interaction of DFIG-Based Wind Farm Connected to HVDC System

0802
Analysis of Impedance Characteristics Pertaining to Thermal Power Unit Based on State Space

0658
Study on resonant control of grid-side converter in wind power system under voltage distortion

0859
The control of grid connected converter based on model prediction control under unbalanced grid voltage

15:30 --- 16:00 Poster Session and Refreshment

16:00 --- 17:30 **0367**
Impact of Series Compensation on Operation Performance of Large-scale PV Plants

0471
Study on Active Power Steady-State Security Region Considering TCSC

0525
Large Disturbance Stability Evaluation of Interconnected Multi-Inverter Power Grids with Virtual Synchronous Generator Model

0347
Analysis of the Influence of Renewable Energy Generation on Market Power

0481
Operation and coordination control of a DC micro-grid incorporating all-DC wind farm

0903
Improved Active and Reactive Power Control for Symmetrical Bipolar MMC-HVDC Systems During DC side Pole-to-Ground Fault

0950
Cost Comparision of AC and DC Collector Grid for Integration of Large Scale PV Power Plants