Publications

Advancing minigrid clusters in Ethiopia: A Multi-Tier Framework for optimal planning and sizing

Active Damping for Dynamic Improvement of Multiple Grid-Tied Virtual Synchronous Generators

A Decomposed Harmonic Current Suppression Method for VSG-Based Microgrids Connected to Distorted Grids

Fractional Order Virtual Synchronous Generator
Power Electronics. 38, 6, p. 6874-6879 6 p.

A Hierarchical Harmonic Control Method for Wind Power Plants in Microgrids
Conference of the IEEE Industrial Electronics Society. IEEE, 10312706. (Proceedings of the Annual Conference of
the IEEE Industrial Electronics Society).

Grid code requirements – A case study on the assessment for integration of offshore wind power plants in Turkey
Çelik, Ö., Yalman, Y., Tan, A., Bayındır, K. Ç., Çetinkaya, Ü., Akdeniz, M., Chaudhary, S. K., Høyer, M. & Guerrero, J. M.,
Aug 2022, In: Sustainable Energy Technologies and Assessments. 52, 102137.

A Reference-Feed-Forward-Based Damping Method for Virtual Synchronous Generator Control
Yu, Y., Chaudhary, S. K., Agundis-Tinajero, G. D., Xu, L., Abu Bakar, N. N. B., Vasquez, J. & Guerrero, J. M., 1 Jul 2022,

A Review of Grid Code Requirements for the Integration of Renewable Energy Sources in Ethiopia
Khan, B., Guerrero, J. M., Chaudhary, S., Vasquez, J. C., Frederiksen, K. H. B. & Wu, Y., Jul 2022, In: Energies. 15, 14,
5197.
Accuracy Assessment of Reduced-and Full-Order Virtual Synchronous Generator Models Under Different Grid Strength Cases

A Comprehensive Review on Wireless Capacitive Power Transfer Technology: Fundamentals and Applications

Impacts of Large-scale Offshore Wind Power Plants Integration on Turkish Power System

Machine Learning Emulation of Model Predictive Control for Modular Multilevel Converters

A Comparison of Fixed-Parameter Active-Power-Oscillation Damping Solutions for Virtual Synchronous Generators

An Overview of Grid-Forming Control for Wind Turbine Converters

Power quality impact of distributed energy resources in low voltage distribution grids

Islanded Operation of Offshore Wind Power Plant using IBESS

Black Start Service from Offshore Wind Power Plant using IBESS

Machine Learning based Operating Region Extension of Modular Multilevel Converters under Unbalanced Grid Faults

Modeling and Mitigation Control of the Submodule-Capacitor Voltage Ripple of a Modular Multilevel Converter under Unbalanced Grid Conditions

Improved post-fault operation strategy for a cascaded H-bridge based STATCOM
Benchmarking of Modular Multilevel Converter Topologies for ES-STATCOM Realization

Improving the Reactive Current Compensation Capability of Cascaded H-Bridge Based STATCOM under Unbalanced Grid Voltage

High Performance Simulation Models for ES-STATCOM Based on Modular Multilevel Converters

Challenges in Integration of MMC STATCOM with Battery Energy Storage for Wind Power Plants

A Novel Harmonic Control Method for MMC Combining Improved Nearest Level Control and Selective Harmonic Elimination method

Primary frequency regulation supported by battery storage systems in power systems dominated by renewable energy sources

A Novel Submodule Voltage Balancing Scheme for Modular Multilevel Cascade Converter—Double-Star Chopper-Cells (MMCC-DSCC) Based STATCOM

Techno-economic Feasibility of a STATCOM with Battery Energy Storage for the Offshore Wind Power Plants

A novel individual voltage balancing scheme with reduced voltage sensors for modular multilevel cascade converter-single star bridge cell (MMCC-SSBC) based STATCOM

Capacitor Voltage Ripple Reduction Methods of Modular Multilevel Converter under Unbalanced Fault Conditions: A Comparison

Estimation and Sizing of Frequency Reserves from Flexible Demand Units

Primary Frequency Regulation with Battery Energy Storages in Wind Dominated Power System
Frequency Control with Flexible Demand and Storages to Support Large Renewable Energy Generation

Power Flow Analysis for Low-Voltage AC and DC Microgrids Considering Droop Control and Virtual Impedance

Analysis of Back-to-Back MMC for Medium Voltage Applications under Faulted Condition

Customized power quality service provided by converter interfaced microgrids — Voltage harmonics as a study case

Internal balance during low-voltage-ride-through of the modular multilevel converter statcom

Low voltage fault ride through control in MMC-HVDC

Economic Dispatch for Operating Cost Minimization under Real Time Pricing in Droop Controlled DC Microgrid

Voltage Feedback based Harmonic Compensation for an Offshore Wind Power Plant

Participation of Flexible Loads in Load Frequency Control to Support High Wind Penetration

Control of a Modular Multilevel Converter STATCOM under internal and external unbalances

Design of reactive power regulator of synchronous generators by considering grid impedance angle for characteristic index objectives

Sizing of an Energy Storage System for Grid Inertial Response and Primary Frequency Reserve

Capacitor voltage ripple reduction and arm energy balancing in MMC-HVDC
Challenges with harmonic compensation at a remote bus in offshore wind power plant

Hosting Capacity of Solar Photovoltaics in Distribution Grids under Different Pricing Schemes

Harmonic Analysis and Active Filtering in Offshore Wind Power Plants: R. Teodorescu, C. L. Bak, (Aalborg University, Denmark), Ł. Kocewiak (DONG Energy, Denmark) C. F. Jensen (Energinet.dk, Denmark)

Methodologies for Wind Turbine and STATCOM Integration in Wind Power Plant Models for Harmonic Resonances Assessment

Control of SiC Based Front-End Rectifier under Unbalanced Supply Voltage

Development of Field Data Logger for Recording Mission Profile of Power Converters

An adaptive overcurrent protection in smart distribution grid

Enhancing the Capacity of the AC Distribution System Using DC Interlinks - A Step Towards Future DC Grid

Harmonic Resonances in Wind Power Plants: Modeling, Analysis and Active Mitigation Methods

Operation Cost Minimization of Droop-Controlled DC Microgrids Based on Real-Time Pricing and Optimal Power Flow

Field Data Logger Prototype for Power Converters

Power flow analysis for DC voltage droop controlled DC microgrids
Power flow analysis for droop controlled LV hybrid AC-DC microgrids with virtual impedance

Grid Inertial Response with Lithium-ion Battery Energy Storage Systems

Power Flow Analysis Algorithm for Islanded LV Microgrids Including Distributed Generator Units with Droop Control and Virtual Impedance Loop

Optimal Sizing and Operation of Stand-Alone Hybrid Power Systems: Case Study of Agios Efstratios

Impact of Negative Sequence Current Injection by Wind Power Plants

A MTDC system layout review based on system revenue a Kriegers Flak case study

Control of transformerless MMC-HVDC during asymmetric grid faults

Harmonic Mitigation Methods in Large Offshore Wind Power Plants

Modeling and Control of Low Voltage Flexible Units for Enhanced Operation of Distribution Feeders

Negative sequence current control in wind power plants with VSC-HVDC connection

Distribution System Augmented by DC Links for Increasing the Hosting Capacity of PV Generation

Effect of Energy Storage in Increasing the Penetration of RES in the Remote Island of Agios Efstratios
Over-current relay coordination for the protection of offshore wind power grid with HVDC connection

Application of Over-Current Relay in Offshore Wind Power Plant with VSC-HVDC Connection

Control and operation of wind turbine converters during faults in an offshore wind power plant grid with VSC-HVDC connection

Control and Protection of Wind Power Plants with VSC-HVDC Connection
Chaudhary, S., 2011, Department of Energy Technology, Aalborg University. 167 p.

Modular Multi-level converter based HVDC System for Grid Connection of Offshore Wind Power Plant

Modelling and Simulation of VSC-HVDC Connection for Offshore Wind Power Plants

Multilevel Modular Converter for VSC-HVDC Transmission Applications: Control and Operational Aspects

Negative Sequence Controllers to Reduce Power Oscillations During Electric Faults in the Offshore Wind Power Grid

Simulation of dedicated HVDC for wind power transmission

Chopper Controlled Resistors in VSC-HVDC Transmission for WPP with Full-scale Converters

Modelling and Simulation of VSC-HVDC Connection for Wind Power Plants

Simulation Study of WPP-HVDC-Grid Integrated System

Wind Farm Grid Integration Using VSC Based HVDC Transmission - An Overview