Yang Ping Microgrid

How a microgrid works?

Microgrid is widely used in recent years,which can operate in grid-connected mode or islanded mode. For the islanded microgrid,one essential task is the accurate power sharing. With the hierarchical control,which is widely used in the microgrids,the active power sharing can be achieved accurately.

Is microgrid a good solution for wind power generation?

As wind power generation transitions from centralized development mode to decentralized on-site consumption mode,microgrid (MG) can provide an efficient solutionfor wind power integration into the distribution network. However,the high-penetration wind power MG is the typical weak power grid system.

Why do we need a sustainable microgrid?

From March 2014 to March 2015, he was a Visiting Scholar with the Department of Energy Technology, Aalborg University, Aalborg, Denmark. [...] The increasing trend for integrating renewable energy sources into the grid to achieve a cleaner energy system is one of the main reasons for the development of sustainable microgrid (MG) technologies.

Why are hybrid dc microgrid clusters difficult to control?

Hybrid DC microgrid clusters contain various types of converters such as BOOST, BUCK, and bidirectional DC/DC converters, making the control strategy complex and difficult to achieve plug-and-play. The common master-slave hierarchical control strategy makes it difficult to achieve accurate and stable system control.

Should DC microgrids be interconnected with DC MGS?

With the widely application of the DC microgrid (MG),the utilization of renewable resources is improved by interconnecting nearby DC MGs.Since MGs are connected by different line impedances,the intuitive tradeoff exists between the conflicting goals of current sharing and voltage regulation in the conventional droop control scheme.

Yi Yang"s 30 research works with 29 citations and 627 reads, including: Optimization of Virtual Sensor Placement in Bushing Based on Genetic Algorithm

Widespread application of distributed generation systems (DGS) will bring about new opportunities and challenges to power grid operation, control and electricity market. The microgrid technology that integrates DGS, energy storage element and loads will be an effective approach to solve the interconnection of large-scale DGS with power grid. In this paper the concept ...

Semantic Scholar extracted view of "Airport Microgrids: Transportation Energy as a Service [Viewpoint]" by M. Ganji. Semantic Scholar extracted view of "Airport Microgrids: Transportation Energy as a Service [Viewpoint]" by M. Ganji ... Chang-Ming Liaw C. Yang Ping-Hong

Jhou. Engineering, Environmental Science.

For the photovoltaic (PV) / energy-storage system (ESS) microgrids which have popularization value, it is important to study the safe and effective black start strategy of microgrids for ...

A microgrid is considered to be a smart power system that can integrate local renewable energy effectively. However, the intermittent nature of renewable energy causes operating pressure and additional expense in maintaining the stable operation by the energy management system in a microgrid. ... {Chun Sing} and Ping Yang and Lai, {Loi Lei} and ...

Ping Yang Ke Fang By introducing a feedback path in the conventional droop control loop of islanded microgrid, the voltage amplitude and frequency restoration can be effectively achieved by...

Ping Yang. Guangdong Key Laboratory of Clean Energy Technology, Guangzhou, Guangdong, People"s Republic of China. Search for more papers by this author. ... Distributed generation access to the distribution network in the form of the microgrid is widely considered to be an effective way to take advantage of distributed energy [3, 4].

T1 - Droop coefficient correction control for power sharing and voltage restoration in hierarchical controlled DC microgrids. AU - Han, Yang. AU - Ning, Xing. AU - Li, Luqiao. AU - Yang, Ping. AU - Blaabjerg, Frede. N1 - Funding Information: This work was supported by National Natural Science Foundation of China under grant No. 51977026 .

DOI: 10.1016/j.egyr.2022.05.206 Corpus ID: 249301347; Consensus enhanced droop control strategy for islanding mode multi converter system @article{Zhang2022ConsensusED, title={Consensus enhanced droop control strategy for islanding mode multi converter system}, author={Xiaomeng Zhang and Xiongchao Yang and Yang Han and Ping Yang and Amr S. ...

Ping Yang Zhuoli Zhao Due to the random volatility, a large amount of renewable energy will bring challenges to the security and stability of distribution network.

Steady-state voltage stability analysis and improvement strategies of microgrid with double fed induction wind generator. ... 2012 - YANG Ping - ?Journal of Systems Science and Mathematical Sciences? - : 2.

The application of virtual synchronous generators (VSGs) in power systems is gradually increasing to address the low inertia issue caused by the high penetration of ...

Smooth switchover of microgrid from grid-connected operation mode to islanded operation mode can guarantee the continuous power supply to important loads.A microgrid model for inverter source is established with MATLAB/Simulink software,which realizes both grid-connected and islanded operation modes of microgrid and their control methods.Then the impacts of control ...

Microgrid Zongze Xia, Fei Xia, Peixian Cong et al.-Research on Control Strategy of the Micro Grid s Hybrid Energy System Zi-jun Gao, Yang Li, Yan-ping Wang et al.-Transmission Technologies and Operational Characteristic Analysis of Hybrid UHV AC/DC Power Grids in China Zhang Tian and Gong Yanfeng-

The grid-connected microgrid operator is the bridge between the internal and external grid of the microgrid, and can provide demand response at both internal and external sides side the microgrid, the microgrid operator draws up an internal demand-side management plan, formulates peak and valley tariff periods and peak and valley leveling tariffs based on the ...

In this paper, an islanded medium-voltage (MV) microgrid placed in Dongao Island is presented, which integrates renewable-energy-based distributed generations (DGs), energy storage ...

To fully reveal the interplay of the cyber system and physical system in the microgrid, this paper proposes a generic hierarchical modeling framework for cyber-physical integration modeling of ...

Decentralized Grid-Forming Control Strategy for PV-Based DC Microgrids Using Finite Control Set Model Predictive Control. IEEE Transactions on Smart Grid ... Ping Yang; Zhuoli Zhao; Chun Sing Lai; Loi Lei Lai; Mohammad Shahidehpour Show more detail. Source: check_circle. Crossref An Adaptive Optimal Scheduling Strategy for Islanded Micro-Energy ...

DOI: 10.1109/TPEL.2015.2496869 Corpus ID: 264033998; Multiple-Time-Scales Hierarchical Frequency Stability Control Strategy of Medium-Voltage Isolated Microgrid @article{Zhao2016MultipleTimeScalesHF, title={Multiple-Time-Scales Hierarchical Frequency Stability Control Strategy of Medium-Voltage Isolated Microgrid}, author={Zhuoli Zhao and Ping ...

Ping Yang. This person is not on ResearchGate, or hasn"t claimed this research yet. ... energy storage system (ESS), and local loads. In an isolated microgrid without connection to the main grid ...

Ping Yang"s 173 research works with 2,005 citations and 15,508 reads, including: Evaluation of probabilistic model solving methods for modern power electronic distribution networks with wind power ...

DOI: 10.1109/ACPEE56931.2023.10135851 Corpus ID: 258993423; Microgrid Control Method Based on Virtual Synchronous Machines in Islanded Mode @article{Yang2023MicrogridCM, title={Microgrid Control Method Based on Virtual Synchronous Machines in Islanded Mode}, author={Pengfei Yang and Yu Zhang and Fuwen Su and Binyu Xiong and Amer Mohammad ...

Scenario S 1 : The TL in the microgrid P T L is rising from 188 to 752 kW gradually, and ? exceeds the load rate upper limit ? H at t = 202 s, as shown in Fig. 20(b).

Ping Yang"s 60 research works with 472 citations and 2,470 reads, including: A Multi-Frequency PCCM ZVS

Modulation Scheme for Optimizing Overall Efficiency of Four-Switch Buck-Boost Converter with ...

Recently, the increasing number of nonlinear loads and power electronic devices for utility and customers might become reasons for PQ degradation (Tiwari et al., 2021; Yang & Yang, 2022). Increasing the effective phenomena of the smart grids and microgrids" (MGs") PQ, beside developing PQ-sensitive equipment, intensifies PQ issues" importance.

Contact us for free full report

Web: https://www.maximgroup.co.za/contact-us/
Email: energystorage2000@gmail.com
WhatsApp: 8613816583346