Microgrid based on impedance characteristics

Abstract Droop control is an effective power regulation method for islanded microgrids to cope with fluctuations in renewable energy and loads. However, its power coordination performance ...

Analysis and simulation results in the study show that the impedance of the cable line or the impedance of the over- head line has little effect on the transmit power of a separate inverter, but it has a great ...

An adaptive virtual complex impedance-based power-sharing control scheme is proposed in this paper. The scheme adaptively tunes the virtual resistance and virtual inductance to achieve ...

An impedance and inner controller design approach considering both stability constraints and power quality requirements based on the small-signal model of GPS-based microgrids is presented for ...

In order to solve the power decoupling problem of micro source, virtual impedance control is widely used in micro source. In this paper, the virtual impedance control is analysed in detail,...

Abstract--AC Microgrids, in presence of highly non-linear loads, require a tighter regulation of line voltage to maintain power quality. This article proposes an outer virtual impedance loop to shape the ...

In this paper, based on the above analysis, the fuzzy adaptive virtual impedance controller is proposed for reactive power sharing of microgrid and circulating current between inverters caused ...

In contrast to previous studies, this study critically investigates how two popular control strategies namely droop control and virtual impedance strategies are implemented in parallel ...

In this paper, an improved voltage control strategy for microgrids (MG) is proposed, using an artificial neural network (ANN)-based adaptive proportional-integral (PI) controller combined ...

To this end, the proposed work has developed a closed loop input and output impedance transfer function of a DC microgrid by splitting the microgrid into two subsystems namely the source and load ...

Microgrid based on impedance characteristics

Web: https://www.williamsandcopaintcontractors.co.za