Microgrid voltage deviation

In this paper, both ICA and GA, as well as their hybrid application, are used to significantly enhance the voltage regulation in microgrids. The integration of optimization techniques ...

The new voltage unbalance coefficient and voltage deviation index of multi-node bipolar DC microgrid are defined to obtain more accurate parameters to describe the degree of voltage ...

Moreover, the correlation between harmonics and fluctuations, voltage deviations and steady-state unbalances, voltage sags and transient unbalances are analyzed. Subsequently, the ...

The central aim of the proposed method is to discover the finest solution, from which the net cost of the microgrid and voltage deviation index can be determined by uncertain parameters.

In a conventional grid, regulation of voltage and frequency are controlled by the speed variation of alternators interconnected to the grid. As the usage of DERs in power networks grows, additional ...

Abstract: Power systems proliferated by distributed generation sources are becoming increasingly prone to frequency and voltage disturbances. These problems are exacerbated in microgrids since they ...

The DC bus voltage deviations have been reduced to 5.8% and 5.4% during discharge and charge modes, respectively, which show a considerable improvement in the DC microgrid power ...

Moreover, for a class of DC Microgrids consisting of both critical nodes and ordinary nodes, this paper proposes a distributed control algorithm that restricts the voltage deviation of ...

This paper presents a comprehensive evaluation of voltage deviation improvement in microgrid operations through the integration of DR strategies optimized by ICA and GA and a hybrid ...

The DC bus voltage deviations have been reduced to 5.8% and ...

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