Reasons for microgrid current sharing

We present a general framework for the control of a direct current (DC) microgrid with star topology (a common DC bus) consisting of renewable sources of energy, loads, and storage devices connected ...

Direct Current (DC) microgrids have attracted significant interest because of their advantages over Alternate Current (AC) grids (see [1], [2]) where renewable energy sources and DC loads (such as ...

The main difficulties facing the operation of parallel converters in DC microgrids (DCMGs) are load sharing, circulation current, and bus voltage regulation. A droop controller is commonly used...

It highlights the importance of proper current sharing to avoid overloading converters and circulating currents in microgrids. The benefits of DC ...

This paper proposes an event-triggered control strategy for microgrids to ensure precise voltage regulation and current sharing through fully distributed control.

This paper provides a review of various load sharing strategies used in DC microgrids. DC microgrids usually utilize parallel connections of DC-DC converters to improve system reliability and flexibility.

By taking electrical network into consideration, this paper analyzes the relation between voltage regulation and current sharing. Based on this relationship, a novel control scheme, which ...

This paper provides a new adaptive control approach for DC microgrid applications that satisfies both accurate current sharing and appropriate voltage regulation depending on the loading ...

It is well known that accurate current sharing and voltage regulation are both important, yet conflicting control objectives in multi-bus DC microgrids. In this paper a distributed control ...

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