

## COORDINATION CONTROL OF AC/DC MICROGRID

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### ABSTRACT

Micro-grid conception exploits as a resolution to integrate liberal amounts of micro generation without obstructing the operation of utility grid. Generation of power from renewable energy sources like solar, wind, micro-turbines, fuel cells etc will give eloquent energy in near future. Consequently, AC/DC micro-grid will be the perfect resolution to moderate multiple reverse conversions (dc-ac-dc or ac-dc-ac) in an exclusive ac or dc grid. The contemplated micro grid contained both AC and DC networks coherent to distribution generation by using the multi-bidirectional converters. AC sources and loads are coherent to AC network whereas DC sources and loads are connected with the DC network. DC or AC links are connected by energy storage systems. This micro-grid can conduct in a grid-tied or isolated mode. For smooth power exchange between AC and DC links during multifarious supply and demand conditions, the coordination control schemes are contemplated. Modelling and simulation of a small micro grid is done using the Simulink in the MATLAB. The results of simulation shows that the system can prolonged stable operation under the contemplated coordination control schemes when the grid is commutated from one operating condition to another.

**KEYWORDS:** Micro Grid, Energy Management, Grid Operation, Grid Control, PV System