

## **AUTOMATED CONTROL TECHNIQUE TO COORDINATE MICROGRID SOURCES – GRID CONNECTED AND ISLANDED OPERATION**

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*Keywords:* microgrid, distributed generation, real and reactive power control, voltage control, frequency control.

### **ABSTRACT**

Distributed generation technology has a growing role as electrical power demand increases. However, control of embedded generation has a number of difficulties. One solution is the microgrid; bundling micro generation and load, with supervisory control making their overall behaviour seems like a “well-behaved” load or generator. Many challenges are being investigated to reduce microgrid impact on the main grid while maintaining safe and reliable operation. In the past solutions to the control of individual grid connected converters have been published. A working unified complete microgrid control has not been demonstrated. In this paper a new fully automated control strategy is presented to control the entire microgrid. It coordinates the operation of the microgrid sources and operates the microgrid in both islanded and grid connected operating modes. Challenges and their solutions are discussed with the simulation results.