Microgrid APF Current Controller

This paper presents a novel current controller for selective harmonic compensation using active power filters (APF) in microgrids powered by renewable energy ...

Using APF, the generated compensating current is used for mitigating the current harmonics in system. This compensating current is nothing but the harmonic component generated ...

This study will focus on the control strategy for the interface current between the DC microgrid and the main DC grid. A novel control strategy will then be proposed to minimise the disturbance to the main ...

An test platform using FPGA EP3C55F484C8N as the controller is established. The effectiveness and correctness of the proposed control method are verified in the simulation and ...

Building blocks enabling 0-1000Hz microgrid, hybrid power, renewables, energy storage, voltage stabilization, power fact correction, harmonic cancellation, EV ...

In this paper, a novel current controller for selective compensation with active power filter (APF) in a microgrid (MG) is proposed. Power generation with sinusoidal voltage and high quality is essential in ...

In order to validate the adaptive control structure applied to APF, experimental testing has been carried out in a 70 kVA laboratory microgrid, where a 15 kVA three phase inverter is used as the APF.