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Power Quality Improvement in Raps Using Hybrid Shunt Active Power Filters

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Abstract: Electricity access in rural India is still challenging factor due to various power quality issues and transmission losses. In future power system depends on renewable generations plants such as wind, solar etc. wind generation becoming an emerging source of generation for rural areas especially hill stations and islands. However power quality issues and power management system become major issues in remote area power system (RAPS). In this paper power quality improvement in remote area power system (RAPS) with PMSG based wind generation is presented. The main features of RAPS are Effective power management using hybrid energy storage system. better power quality improvement using hybrid power filters. The proposed RAPS system is validated using matab/Simulink tools. From the simulation results, we conclude that the power quality issues such as harmonics and reactive power flows are controlled.