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(57) Abstract :

The present invention relates to SRF and EPLL theory for inverter control in a wind-diesel based power generation. A wind turbine is connected with permanent magnet synchronous generator (PMSG) and is configured to convert kinetic energy of wind to electrical energy. A PMSG is configured to induced current through magnet. A VSC comprising both SRF and EPLL techniques used for balancing the load, compensate for reactive power, get rid of harmonics, and control the voltage at the point of common coupling (PCC) when the load was not linear. EPLL is a better way to deal with harmonics than the SRF method.

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