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## **A Voltage Support Control Strategy for Grid integrated Solar PV System During Abnormal Grid Conditions Utilizing Interweaved GI**

In this project, a unique control strategy is presented for the control of solar Photovoltaic (PV) system interfaced to the grid utilizing an Interweaved Generalized Integrator (IGI). The main aspects for the control of grid integrated Voltage Source Converters (VSC) during abnormal grid variations are the control of voltage as well as power quality. During different irregular grid variations, the primary objective of control is to deliver the PV power to the grid. The system delivers power at a Unity Power Factor (UPF) during normal operation. The profile of the PCC voltage is retained within prescribed limits by reactive power injection during variations in the grid voltage. In addition, during extreme voltage sags, LVRT activity is undertaken. In the absence of PV generation at night, the VSC and DC link capacitor act as a distribution static compensator, the usage of the system is increased. Unlike conventional control techniques, the system's power quality is not impaired. The achievements of the controller are demonstrated through simulation.

**Domain:** Power Systems \_ Hybrid Systems

**Technology:** Electrical