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Design and Performance Analysis of Three-Phase Solar PV Integrated UPQC-A Review

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Abstract: *Today, it is important to provide consumers with clean, reliable and continuous energy from electricity. Because today many people buy and use electronic gadgets. Negative performance impacts such as voltage sags, swelling, and harmonics. For this reason, various energy sources are used to protect energy quality. This article uses a power generation system that combines photovoltaic arrays to maintain energy efficiency. UPQC is a combination of components and components that work together to improve power quality. Series converters compensate for line-side performance problems such as voltage dips and spikes and keep the load voltage constant. It also controls the PCC voltage. A shunt compensator compensates for existing trade-off problems caused by component imbalance. Draw energy from the solar power system. A reference signal is generated using a median filter as the sync reference frame control. A UPQC model was developed and simulated in MATLAB software by using the MATLAB Simulink results to compare results with and without UPQC.*

Keywords: Power Quality, shunt compensator, series compensator, UPQC, SolarPV, MPPT

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