



**UNINTERRUPTABLE PV-BATTERY  
BASED GRID TIED PV INVERTER  
USING CASCADED FLC MPPT AND  
HIGH GAIN BI-FRED DC-DC  
CONVERTER**

**A PROJECT REPORT**

*Submitted by*

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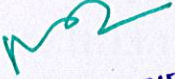
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## ABSTRACT

The proposed system illustrates the reduction in power quality problems faced in the power system and the power electronic devices that causes current harmonics, unbalanced loading and voltage unbalance due to increase in reactive power. To solve these problems, grid current should be maintained, harmonics should be reduced, energy systems should be maintained, reactive power compensation should be maintained and the power demand should be satisfied. This system focus on the design of the solar PV with Landsman converter (DC – DC) attached to the AC grid. Along with solar PV, a Battery Energy Storage System (BESS) is present to balance the power run in the proposed model. A globalized MPPT is achieved through the Fuzzy Logic Controller to abstract the maximum power from the solar PV system irrespective of change in the input obtained. Power flow Management System is attained by the Bidirectional converter with BESS. The dc voltage from the Landsman converter will be fed to the Voltage Source Inverter (VSI) and the output AC voltage is associated with the three phase AC grid. Grid synchronization will be achieved by the Hysteresis Controller using d-q theory with Park and its inverse and then Clarkes and its inverse Transformations is also used. Fast Fourier Transform (FFT) is used to derive the THD values and the system efficiency values are measured. This proposed model will be simulated using MATLAB and its efficient performance can be identified.

  
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