

MPPT WITH SINGLE DC-DC CONVERTER AND PI CONTROLLER WITH INVERTER FOR GRID CONNECTED MICROGRID

**MRS. S. N. CHAPHEKAR¹, MISS. A. A. LASINKAR²,
MRS. A. A. DHARME³ AND MRS. V.V. KHATAVKAR⁴**

^{1 & 4}. Assistant Professor, Department of Electrical Engineering,
PES's Modern College of engineering, Pune, India

²PG student, Department of Electrical Engineering,
PES's Modern College of Engineering, Pune, India

³Associate Professor, Department of Electrical Engineering,
Govt. College of Engineering, Pune, India.

Abstract

A new technology is proposed for hybrid distributed generator based on solar and wind. In this two sources are connected together to DC-DC converter in a single line followed by a DC-AC converter. Traditional system have more losses due to number of power converters while proposed system have minimum converters. In this system two controllers i.e. MPPT and PI controller are proposed to trigger DC-DC converter and DC-AC converter separately, with this scheme maximum power can be extracted from both the sources. The operations of both the proposed controllers for different conditions are simulated through simulation.

Keywords: Microgrid, Distributed power generation system, Wind driven PMSG-PV, Smart grid