

Solar PV and grid-connected electricity system with multiple modes operation for homes and buildings

Abstract

This paper presents the designed proposal of a solar PV and grid-connected electricity system with multiple modes operation for homes and buildings. It introduces to a more resourceful solar PV system that suits with the needs for different occasions rather have to be limited to one particular application. This concept uses a DC motor and synchronous generator as an electromechanical inverter to alternatively present popular approach of using solid-state inverters in converting the solar DC supply into AC, suitable to run common electrical appliances. The block concept of the system and the main controller with programming flowcharts for the multiple operations are proposed for a 2kW output power.