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Implementation of Switching Circuit between Grid and Photovoltaic system with fixed and Movable Tracking

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Abstract : The objective of this paper is to design a DC to DC converter, inverter and power switching circuit for integrating the photovoltaic system to the grid. Achieve a stable output voltage of 230V AC,and to switch the power supply between the city electrical system and the designed solar photovoltaic system. Movable and static tracking systems are discussed. In that Movable solar tracking system is considered to get higher efficiency compared to static solar tracking method. The output from the PV panel is given to boost converter and inverter. Inverter output is given to load. The switching circuit is used to switch the city electric grid power to solar power and vice versa according to the availability of solar energy. When the capacity of the solar panel and the storage battery is insufficient for the load, the power switch will automatically switch to the municipal city electricity. Therefore, the load can be utilized throughout the day.

Keywords : PV Array, Grid integration, Microcontroller, tracking system, boost converter, switching system.

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