ABSTRACT

Photovoltaic (PV) or solar cell can be used for power source for electrical equipment, for example water pump, TV, radio, and Base Transceiver station (BTS). PV is used for BTS in region which no electrical supply and region which have problem in continuity of electrical power supply. PV has weakness, the weakness is output power PV will follow the load which connect with PV, so it can make low average power of PV. This matter cause low energy ratio. BTS to use PV as source of power, have to equip also with battery, as supporter of cell of surya give energy to BTS.

This final project, MPPT which used MPPT measurement of open circuit to overcome problems change of power, and use battery as support to PV. The simulation result show PV without battery with MPPT have power ratio equal to 61.2 % and PV without battery which do not use MPPT have power ratio equal to 50.9 %. While PV-BatteryI using MPPT have power ratio equal to 74.6 % and PV-battery without MPPT have power ratio equal to 50.3 %. Base on result of average power ratio which have been got, we can make conclusion that PV using MPPT have larger ones average mean power ratio than average power ratio of PV which do not use MPPT.

Keyword: PV, MPPT, load, battery, power ratio
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