

Comparative Analysis of Photovoltaic Systems

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Abstract : This paper presents comparative analysis of photovoltaic systems (PVS) and proposes practical techniques to improve operational efficiency of the PVS. The best engineering and construction practices for PVS are identified and field oriented recommendation are made. Comparative analysis of central and string inverter based, as well as 600 and 1000 VDC PVS are performed. In addition, direct current (DC) and alternating current (AC) photovoltaic (PV) module based systems are compared. Comparison shows that 1000 V DC String Inverters based PVS is the best choice.

Keywords : photovoltaic module, photovoltaic systems, operational efficiency improvement, comparative analysis

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