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Cloud Effect on Power Generation of Grid-Connected Small PV Systems

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Abstract : Photovoltaic (PV) power generation systems, mainly small scale, are rapidly being deployed in Jordan. The impact of these systems on the grid has not been studied or analyzed. These systems can cause many technical problems such as reverse power flows and voltage rises in distribution feeders, and real and reactive power transients that affect the operation of the transmission system. To fully understand and address these problems, extensive research, simulation, and case studies are required. To this end, this paper studies the cloud shadow effect on the power generation of a ground mounted PV system installed at the test field of the Renewable Energy Center at the Applied Science University.

Keywords : photovoltaic, cloud effect, MPPT, power transients
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