

Abstract

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Synchronous PV support to an isolated power system

The increase of renewable energy sources and distributed generation may have a negative impact on power systems, specially on weak ones. Therefore, their control systems are acquiring growing importance, with new proposals that aim to contribute to the control and stability of the power system as conventional generating units. This paper studies the effect that a PV system using a synchronous power controller may have on a small power system constituted by a diesel generator, two loads and the PV generating unit. The response of this power system to realistic disturbances is compared with the case where the PV unit is controlled to provide its maximum power production regardless of the state of the system.