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Effective Power Management of Grid-Connected PV System

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Abstract



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Abstract:

Photovoltaic (PV) systems suggest desirable alternate generation sources because, relative to other renewable generation sources, they can be positioned close to the load centres. The bulk of renewable energy systems run alongside current power grids. Inverter technology often plays an important part in the secure and efficient service of the grid interconnection of renewable energy systems. The generation of high-quality electricity to the grid at affordable prices is also important. They must also be able to have good conversion performance with a high power factor and low harmonic distortion. For this cause, it is important to recognise the control strategy. Therefore, this paper investigates the most relevant existing regulation methods. The key goal of this proposal is to turn surplus solar energy into usable energy to reduce power shortages, where solar energy can be turned into electricity and coordinated with the grid. With the aid of solar panels, the solar power is trapped, and can create a DC voltage. This DC voltage can be transformed to AC using a three-phase six pulse inverter centered on IGBT.

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 Contents**I. Introduction**

In order to keep the world more sustainable and pollution-free, the environment is moving to greener forms of electricity. The difficult problem is the main use of these sources for grid incorporation. Therefore, Distribution Generation is a broad field of research for grid integration, especially the single-phase rooftop system of Photovoltaic. These sources have an enormous probability of generating near-load terminals [1]. Not only can the single-phase delivery generation rooftop application fed with the Photo Voltaic source be used for household use, but with the proper control system and sufficient hardware, the surplus energy can be transmitted to the grid [2].

Authors



Figures



References



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