

GRID TIED SOLAR PHOTO VOLTAIC POWER GENERATION SYSTEM: A PERFORMANCE EVALUATION

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ABSTRACT

Rapid urbanization, increasing population, developing economy, and increased aspiration of human beings are the main reasons for increase in power consumption in the world. This has lead to the unprecedented pressure on our grids, where main sources of power generation are conventional sources of energies which are almost impossible for future expansion to generate additional power. Increase in power demands and lowering of expansion opportunities has opened up research towards non conventional sources of energy, one such area is solar energy. This research work is aimed towards evaluating performance of the 100 kwp Solar Photo Voltiac System, which is grid tied and main sources of power in the vicinity. In this paper, for the year 2013, the solar photovoltaic behavior as being analyzed for power generation pattern throughout the year. This paper also evaluates and helps us to enlighten the fruits of economic benefits in adopting solar photovoltaic grid tied system in terms of economic benefits and bridging the energy demand and supply gap. This paper will demonstrate economic cost analysis including pay back calculation for the 100kwp Grid Tied Solar PV power Generation.

KEYWORDS: Kilowatt hour [KWH]