

Performance Analysis of Hybrid Solar Photovoltaic-Thermal Collector with TRANSYS Simulator

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Abstract : The idea of combining photovoltaic and solar thermal collector to provide electrical and heat energy is not new, however, it is an area of limited attention. Hybrid photovoltaic-thermals have become a focus point of interest in the field of solar energy. Integration of both (photovoltaic and thermal collector) provide greater opportunity for the use of renewable solar energy. This system converts solar energy into electricity and heat energy simultaneously. Theoretical performance analyses of hybrid PV/Ts have been carried out. Also, the temperature of water (as a heat carrier) have been calculated for different seasons with the help of TRANSYS.

Keywords : photovoltaic-thermal, solar energy, seasonal performance analysis, TRANSYS

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