

Water Heating System with Solar Energy from Solar Panel as Absorber to Reduce the Reduction of Efficiency Solar Panel Use

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Abstract : The building which has an efficient and low-energy today followed by the developers. It's not because trends on the building nowadays, but rather because of its positive effects in the long term, where the cost of energy per month to be much cheaper, along with the high price of electricity. The use of solar power (Photovoltaic System) becomes one source of electrical energy for the apartment so that will efficiently use energy, water, and other resources in the operations of the apartment. However, more than 80% of the solar radiation is not converted into electrical energy, but reflected and converted into heat energy. This causes an increase on the working temperature of solar panels and consequently decrease the efficiency of conversion to electrical energy. The high temperature solar panels work caused by solar radiation can be used as medium heat exchanger or heating water for the apartments, so that the working temperature of the solar panel can be lowered to reduce the reduction on the efficiency of conversion to electrical energy.

Keywords : photovoltaic system, efficient, heat energy, heat exchanger, efficiency of conversion

Conference Title : ICWRRED 2015 : International Conference on Water Resources and Renewable Energy Development

Conference Location : Boston, United States

Conference Dates : April 20-21, 2015