

**PERFORMANCE ANALYSIS AND MONITORING
SOLAR PHOTOVOLTAIC SYSTEM (SPS) ON SOLAR
POWER PLANT IN TUBAN EAST JAVA**

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ABSTRACT

The need for renewable energy in the future when fossil energy currently makes use of solar energy for keep the energy needs of humans would be the right choice. Using solar energy be an option due to the nature of the source of solar energy that will not run out, as well as the use and application is easy compared to other renewable energy sources. Supporting maintenance becomes very important when PLTS was installed, then the required tools for the monitoring of remote maintenance support PLTS to know about the performance, in this research, the design of hardware and software to monitor the performance tools of PLTS used by website. PLTS which used at Tuban East Java with capacity is 1600 Wp. From the results of monitoring, the analysis is carried out a comparison with the results of the simulation using the software, from the results the efficiency of photovoltaic is 5:20% and efficiency inverters is 53.71%. From the analysis it is known that photovoltaic performance has declined by 2:03% to 2:19% when compared with analysis software.

Keyword : *Performance, PLTS, Monitoring, Solar Photovoltaic System*

