

**Analisis Tekno Ekonomi PLTS Off-grid Kapasitas 100 Wp
pada Tambak Udang Vaname Bapak Suparman
di Daerah Banyuwangi**

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ABSTRACT

The level of electricity consumption in Indonesia is increasing along with technological developments and people's lifestyles. Currently, fossil energy is still the dominant energy source. Overcoming this, the government is targeting the role of new and renewable energy in the energy mix by 25%. One of the power plants that utilize renewable energy sources is PLTS (Solar Power Plant). This study aims to determine the advantages and disadvantages of building a PLTS with an off-grid system. This research is divided into several stages, namely literature study, data collection, data analysis, and conclusions. The analytical method used for this research is the net present value (NPV), payback period (PP), benefit cost ratio (B/C) method, and return on investment (ROI). The application of this offgrid PLTS is carried out by shrimp ponds located on Jalan Ikan Paus, Pakem Environment, Banyuwangi Regency. Based on the techno-economic research of the 100 Wp offgrid PLTS, the results showed a cash outflow of Rp. 5,287,304 and cash inflows of IDR 5,198,400. The NPV shows a negative result indicating that the PLTS project is not feasible to build. The time needed to return the capital is 17.1 years. B/C value <1 indicates that the PLTS project is not worth investing in, but the percentage of annual profit (ROI) obtained from investment returns is 5.82%.

Keywords: Offgrid, PLTS, Techno Economic