

**EVALUATION OF THE PERFORMANCE OF MICRO HYDRO
POWER PLANT (PLTMH) IN ANDUNGBIRU VILLAGE,
TIRIS DISTRICT, PROBOLINGGO REGENCY**

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ABSTRACT

The Microhydro Power Plant (PLTMH) of the Andungbiru River was established in 2018 in Andungbiru Village, Tiris District, Probolinggo Regency. This power plant was designed with a capacity of 2 kW. Although initially intended to fulfill the electricity needs of the entire local community, at present it is only utilized to provide lighting for residential areas and public roads, particularly for underprivileged residents. The turbine used in this installation is designed to operate at a capacity of 2 kW, while the generator installed has a capacity of 40 kW. Given the relatively high water discharge of the Andungbiru River, the site possesses the potential to generate greater electrical power than is currently being produced. This study aims to evaluate the performance of the Andungbiru Microhydro Power Plant, focusing on the analysis of water discharge and the electrical power generated. The methods employed include field observations and site surveys. Based on the analysis, the recorded water discharge from the Andungbiru River was 0.4687 m³/s, of which only 90% is currently utilized. The estimated potential power output is 4 kW; however, the actual power currently generated is approximately 1,915 watts.

Keywords: PLTMH, Performance, Power Potentia