

***Technical Feasibility Study Of Water Resources For PLTMH in The Village Talempong, Banyuglugur, Situbondo District***

**Fahrur Rozi**

*Renewable Energy Engineering Program  
Departement of Engineering*

**ABSTRACT**

*PLTMH ( micro hydro power plant ) is energy conversion system that utilizes the flow of water as the driving for turbines to generate electricity . PLTMH development system required an initial plan its development include the form of survey and record and calculate the value potential of the region in the survey, such as the calculation of the value of debit , elevation of waterfall and the technical feasibility of the location . The selected survey location is the region with the western boundary of the district Situbondo with coordinate  $7^{\circ}45'48.2''$  S ,  $113^{\circ}37'25.5''$  E at an altitude  $\pm 400$  DPL. This region is famous by its waterfall which has a fairly large discharge and water availability that continue to exist even in the dry season. Calculation of flow on this river talempong done in 2 seasons and 2 points different locations , and using the measurement buoy method. In the dry season the measurement at first location acquired the power generation potential is 20.331 kW and at the second location has the potential for the generation is 6.681 kW, whereas the measurement of the rainy season occurs a considerable improvement in the power generation potential because of the higher water discharge in order to get the value is 96.635 kW at locations 1 and 35.562 kW at second location. Based on the technical analysis of PLTMH according to the amount of power generated , the flow of the river village of Talempong feasible alternative micro hydro power plant both for the dry season and the rainy season.*

**Kata kunci:** *PLTMH, Talempong, Debit,*