

SUMMARY

Vita Oktanti, Engineering Department, Faculty of Engineering Universitas Brawijaya, April 2018, *Study Planning of Micro Hydro Power (PLTMH) Plant In Cikeusik Village, Cidahu District, Kuningan Regency, West Java Province*. Supervisor: Dr. Ir. Pitojo Tri Juwono, MT dan Prima Hadi Wicaksono, ST., MT.

Micro-Hydro power plant (PLTMH) or called micro hydro utilize height difference and water flow from river, irrigation channel, or waterfall. Water available at the river Cisanggarung yet underutilized and arising of a thought to build a power plant with a micro scale that utilizes the water flow of the river has the potential to power plants. The real condition of river Cisanggarung also has a very low head as 1.054 m. With these conditions, the electricity generated to meet the needs of most electrical energy in Villages Cikeusik Cidahu Subdistrict Regency Brass more on plans the utilization of the water resources utilized for Micro Hydro power plant (PLTMH).

In this study, the planning will be undertaken and related analysis planning power plant in the village of Cikeusik Cidahu Subdistrict Regency Brass. The building was planned edifice just intake, headrace, forebay, penstock pipe. That will be planned as a whole PLTMH Component, it will be known to power (kW) produced as well as annual energy production (kWh).

The results of this study on the planning of the obtained flow generation used is 1.509 m³/s (90%). The building's intake of 2.2 meters, with intake amounted to 1 unit. The penstock pipe of 0,97 m with a diameter pipe of 3 millimeters. Based on planning and analysis obtained by the turbine used is 1 unit type Axial Flow turbine Pump Turbine, generating power of 11.934 kW and energy amounted to 104,545.17 kWh. The results of the budget plan costs (RAB) on planning PLTMH Cikeusik is Rp 1,242,193,008.33. The results of PLTMH Cikeusik can be inferred for the community alone is not for commercial use.

Key words: PLTMH, Flow, Turbine, Electric, Plans Cost Budget

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