

***POTENTIALS OF WATER FLOW PLANNING AT SEI GONG DAM
AS A RENEWABLE ENERGY SOURCE THROUGH
MICRO HYDRO POWER PLANT***

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ABSTRACT

The use of energy derived from petroleum or fossils has a negative impact on the environment and also the longer the amount is also less. Therefore, it is necessary to look for energy that have a cycle or can be renewable that is natural and does not damage the environment. One form of renewable energy that is sustainable and has a cycle is water.

The calculation in this plan aims to determine the potential of water flow in the Sei Gong Dam as one of the renewable energy sources through the Micro Hydro Power Plant. Calculations in this plan consist of hydrological analysis calculations, reliable discharge analysis, calculation of electric power that can be produced, and selection of suitable turbine types. Hydrological analysis calculations using climatology data from climate stations. Whereas the calculation of the mainstay flow requires the Sei Gong Dam data.

The results of the calculation in this plan get the results of a maximum rainfall of 100 years is 442.163 mm, the flood discharge plan for 100 years is 441.984 m³ / second, and the calculation of the main discharge is 0.11 m³ / second. With such hydrological results, the electrical power that can be produced is 3.24 kW. So it can be concluded that the Sei Gong Dam has the potential to be a PLTMH but with the small electric power generated. With a 6 meter high water fall, the type of turbine used is the Kaplan% Propeller type turbine.

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