

ABSTRACT

DESIGN OF 5V 0,3 WATT POWER SUPPLY BASED ON 12 V 0,3 WATT MICROHYDRO GENERATOR FOR POWERING A SMART WATER METER

Water are the element that very useful for every activities. Harvesting energy from flowing water are developing in many methods, one of them is power plant that using flow water for twist the propeller and change the power from propeller to electrical energy and then turning on the power of metering system.

This study aims to developing metering system for PDAM (regional water company) which is still conventional, The researcher design tools which using flow water for turning on the system and counting the volumetric water going through from pipe flow by using advanced technology and information for facilitating the consumer which want to know how much water volume in one period

Researchers designed a power supply that using water flow to rotate the turbine blades and makes the generator produce electrical power, then stabilized by the regulator device and then the power is used to turn on the load supplied by the water turbine, the load means a digital PDAM water monitoring system using sensors and a microcontroller and a water turbine. and generators as the main source of its power supply,

The results of this study showing the turbines and generators as a source of load power supply of 0.05 watts in the form of a digital water monitoring system, which has the ability to produce energy of 0.2 joules / s up to the maximum energy that can be generated is 0.3 joules / s when placed in a source of water flow with a water discharge range of 6.94 L / s to 10.82 L / s to supply a system load of 0.05 watts

Keywords : PDAM, Flow Water utilization, Turbines and generator, Power Supply