

UNIVERSITY COLLEGE SEDAYA INTERNATIONAL
SCHOOL OF ENGINEERING
FINAL REPORT

DESIGN AND FABRICATION OF A VANELESS PUMP TO
GENERATE ELECTRICITY FROM RAINING DRAIN
WATER

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Abstract

This report presents the 'Design and Fabrication of a Micro-hydroelectric System to Generate Electricity from Raining Drain Water'. This system introduced the use of renewable energy that provides environmental friendly energy to produce electricity continuously at low cost.

The concept of this design is to utilize the free natural resources, which make use of the flow of raining drain water to turn the designed water wheel that is connected to the shaft of an AC generator to produce electricity. This process converts kinetic energy into electricity.

An Infra Red (IR) Tachometer System supported by PIC16F84a is being design for this system to measure the rotation speed of the water wheel for experimental and analysis purpose. Besides that, a UHF Radio Control water detector system is also installed to this system to further enhance its features.

This Project involves theoretical and practical engineering work with the electronics and mechanical hard wares. The hardware designing of water wheel and drainage simulation model requires strong mechanical basics. Software development in High Level Language is required for the circuits in the systems.