

UNIVERSITI TEKNOLOGI MARA

**SOLAR WATER HEATER IN UITM
BUKIT BESI IN COLLEGE**

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ABSTRACT

Nowadays, hot water is used for domestic, commercial, and industrial purposes. Solar energy is one of the alternative methods to replace the conventional energy resources like coal, petroleum, oil, etc. If a conventional water heater is used, a lot of electricity will be consumed to heat the water. In this study, a feasibility study will be conducted to determine the types of solar water heaters that can be installed, as well as to investigate the efficiency of solar water heaters used in college residences. The literature is reviewed to understand the solar water heater system, its efficiency compared to electrical water heater and the system design consideration in solar collector. A lot of information is documented from literature review. The efficiency of the system depends on availability on solar radiation, temperature requirement also the geographical condition at college residence. The fabrication has been done with dimension of 57.4cm x 52.7cm x 1.55cm with a frame of flat plate collector. A flat plate collector is used as a model for panel because it easier to place at an open area at college TAR 1. All the data and results has been collected after four days of experiment under the sunny days.

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