

## ABSTRACT

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*With the advancement of the times, the need for electrical energy is increasing. Various attempts have been made to find new sources of electrical energy, one of which is by generating electric energy with a micro capacity that utilizes heat energy. The utilization of heat energy as a generator of electrical energy with a micro capacity can be done using thermoelectric elements. This study aims to determine the characteristics and performance of the thermoelectric as a generator of electrical energy. This study uses a thermoelectric type TEC1-12706 with aluminum as a heat receiver and The selected heat source comes from the heat of the vehicle engine then thermoelectric converts it into micro-electric energy. The results show the system can produce 2V electrical energy and can charge the battery with a current of 0.01A but it takes quite a long time.*

*Keywords :electrical energy, heat, TEG SP1848, vehicle*