

ABSTRACT

This research aims to utilize the kinetic energy of wind generated by air conditioning condensers as an alternative source of electrical energy. Through the design, construction, and testing of Archimedes-based mini turbines, this study successfully developed a product capable of capturing, converting, and storing wind energy. Testing results indicate that the turbine can produce an average voltage of 4 V and a power output of 211.3 mW, sufficient to charge a battery with a capacity of 1886 mAh in 23 hours. The product's portable design and its ability to operate independently are its main advantages. However, further research is needed to optimize the design and evaluate the product's performance under various environmental conditions.

Keywords: Archimedes turbine, AC condenser, Energy Conversion.