

## ABSTRACT

*Energy is a major problem in the world today, especially this country. From the data from the Ministry of Energy and Mineral Resources for 2018-2020, the consumption of electrical energy in Indonesia has increased by 6.9% annually. In the use of natural resources, their availability is dwindling and their use has consequences. The widespread issue of price increases, environmental damage and the national energy crisis demands the use of new renewable energy sources, one of which is using the Electrochemical Cell Method to generate electricity with electrolyte solutions. This research develops from previous research, namely the Experimental Study of Using Salt Water as an Alternative Energy Source, by developing variations in the cross-sectional area of the electrodes (anode and cathode) so that the power produced is greater by using 3 electrolyte solutions (NaCl, KCl, and NaOH) and seeing the effect concentration. Data collection will be carried out 3 times with variations in the cross-sectional area of 5 cm<sup>2</sup>, 10 cm<sup>2</sup>, 15 cm<sup>2</sup>, 20 cm<sup>2</sup>, 25 cm<sup>2</sup>, and 30 cm<sup>2</sup> with a water volume of 1500 ml and the concentration of each electrolyte 1.2M -2.27M. From this test, the highest value was obtained, namely the cross-sectional area of 30 cm<sup>2</sup> with NaOH electrolyte with a power of 50.73 mWatt, while the smallest was in a cross-sectional area of 5 cm<sup>2</sup> with NaCl electrolyte with a power of 3.06 mWatt.*

***Keywords: Alternative Energy, Electrochemical Cells, Electrodes, Cross-sectional Area, Electrolytes.***