

## **ABSTRACT**

Indonesia is predicted to experience a demographic bonus in 2020-2035. Therefore, Indonesia must prepare human resources that are healthy and not easily sick. Please note that the human body consists of 50-70 percent water. The water you drink is healthy water. healthy water commonly known as alkaline water. To produce alkaline water, an electrolysis process is needed to break down water into hydrogen and oxygen. Previous versions of electrolysis equipment still do not have an automatic feature to deactivate the tool. This automatic requirement overcomes user negligence and waste of electrical energy. The process of electrolysis certainly requires electrical energy in the process. the cost of electrical energy will be economical if it is produced independently. IoT connects devices to the internet so they can be controlled and monitored remotely. This feature makes it easier for users to monitor drinking water health parameters.

By using decision matrix scoring, the second solution was chosen, namely using a large container, solar panels, and IoT, with the main feature being to automatically cut off the current when the pH parameter is met, which is 8.

With six specified specifications, every need is met properly. The tool can carry out electrolysis with an output of acidic and alkaline water and alkaline water not exceeding the health parameters set by the RI Ministry of Health. IoT features can be used for controlling and monitoring. Switch is used for tool activation and web get data from firebase then visualize. The tool can be disabled automatically through the settings from the source code. The power supply works well with the main source from the battery which is filled with solar panels.

Keywords : Power Supply, Electrolysis, Internet of Things, Automatic, Water ionizer