

## Development of Electric Generator and Water Purifier Cart

**Authors :** Luisito L. Lacatan, Gian Carlo J. Bergonia, Felipe C. Buado III, Gerald L. Gono, Ron Mark V. Ortil, Calvin A. Yap

**Abstract :** This paper features the development of a Mobile Self-sustaining Electricity Generator for water distillation process with MCU- based wireless controller & indicator designed to solve the problem of scarcity of clean water. It is a fact that pure water is precious nowadays and its value is more precious to those who do not have or enjoy it. There are many water filtration products in existence today. However, none of these products fully satisfies the needs of families needing clean drinking water. All of the following products require either large sums of money or extensive maintenance, and some products do not even come with a guarantee of potable water. The proposed project was designed to alleviate the problem of scarcity of potable water in the country and part of the purpose was also to identify the problem or loopholes of the project such as the distance and speed required to produce electricity using a wheel and alternator, the required time for the heating element to heat up, the capacity of the battery to maintain the heat of the heating element and the time required for the boiler to produce a clean and potable water. The project has three parts. The first part included the researchers' effort to plan every part of the project from the conversion of mechanical energy to electrical energy, from purifying water to potable drinking water to the controller and indicator of the project using microcontroller unit (MCU). This included identifying the problem encountered and any possible solution to prevent and avoid errors. Gathering and reviewing related studies about the project helped the researcher reduce and prevent any problems before they could be encountered. It also included the price and quantity of materials used to control the budget.

**Keywords :** mobile, self - sustaining, electricity generator, water distillation, wireless battery indicator, wireless water level indicator

**Conference Title :** ICECECE 2016 : International Conference on Electrical, Computer, Electronics and Communication Engineering

**Conference Location :** San Francisco, United States

**Conference Dates :** September 26-27, 2016