

## ABSTRACT

---

*The demand for electricity in Indonesia is always increasing and growing compared to other types of energy. Meanwhile, in the National Energy Policy Development/ Kebijakan Energi Nasional (KEN) it is hoped that new primary energy can be realized with each type of energy by 2025, including biomass, nuclear, micro-hydro, solar power, and wind power. To realize this new energy, the author makes a Hybrid Power Plant which is a combination of wind power and solar power. This generator is able to filter the incoming voltage to maintain the electrical components in it. The power plant will consist of a voltage sensor as a voltage value reader, Arduino as a control, and a relay that will disconnect or connect the power line. After that the electricity will enter the charger controller so that the incoming electricity becomes stable, then the electricity will be stored in the battery, and forwarded to the inverter to change from DC electricity to AC. The readable voltage value of this power plant has a small average value difference of 0.14 volts with the original value. The highest voltage value that can be generated from solar panels is about 22.1 volts and from windmills is about 0.79 volts, and can charge batteries for 30-78 minutes.*

*Keywords: Hybrid Power Plant, Voltage Switching, Solar Energy, Wind Energy, Arduino.*