

## ABSTRACT

Radio Frequency is the energy that has the potential to become an alternative to existing energy sources. World Telecommunication Development massively RF energy made available whenever and wherever. The utilization of this energy will be known by rf energy harvesting. The use of mobile phones is growing rapidly makes the Base Transfer System operator's spread in almost all regions. Electromagnetic energy from the BTS is used as an alternative energy source. Important components namely rf energy harvesting antenna catcher electromagnetic waves, wave rectifier circuit (rectifier), the amplifier circuit voltage (voltage doubler) and circuit voltage (boost converter) .Each component - This component research is needed to produce the desired voltage and more efficient. Powcket is a tool that implements this concept, with a focus on the arrest of cellular frequency range is 900 MHz. This study focused on boost converter circuit that increases the voltage results from the grasp of the antenna at a frequency of 900MHz. After various measurements, when given a boost converter circuit voltage of 1.2 to 3 volts is obtained output voltage of 5 volts. The charging process on the phone for 1 hour 41 minutes. The ideal location arrest process energy harvesting time in the open space and close to the Base Transfer System. The efficiency boost converter circuit is worth 76%.

*Keywords: energy harvesting, power harvester, mobile phone, mobile charger, boost converter, Base Transfer System, frequency of 900MHz.*