## *ABSTRACT*

Most of the energy used by humans as electricity. Generally, in electric transfer we use solid media such as copper cable. Copper is used as a medium of power transfer due to that material consisting of many electrons can move freely. So when connected to power source the flow of electrons can move freely in that material.

Nowadays, we have been developing research on electric transfer through a medium other than cable. One of the ideas regarding electric transfer without wires introduced by a scientist named Nicola Tesla. But less developed, until the scientists at MIT succeeded in demonstrating a system wireless electrical transfer at the end of 2007.

This system will be known as witricity. The research in this field is still interesting to study. In this final project will designed and analyze a prototype similar system. This prototype is expected to be used as the beginning of research and development of wireless power in Indonesia.

Basic theory of this system is to use a near field magnetic resonance induction. The analogy of this system is when an opera singer who was able to break the glass near to the singer because the sound had issued the same frequency with that glass. This device will consist of transmitter and receiver which have the same working frequency. When the receiving device in the range the electric energy seemed to jump from the transmitter to the receiver. Humans who not resonate with the transmitter, will not receive electrical energy, so it will be safe.