

ABSTRACT

Global warming is a process of average atmosphere temperature increases of atmosphere, sea and land. The increment of it is predicted to affect the sea level height, extreme weather intensity, and the amount of precipitation. The other effects of global warming are: dreaded farming, lost of glaciers, and the extinction of various animal species. The cause of global warming is greenhouse effect, the fossil fuels burning, deforestation, and various industrial waste.

Because of the advancement of technology, the global warming effect can be utilized to provide electrical energy. The rising demands in electrical energy is inversed in respect to the produced energy. The additional power source is needed to maintain the equilibrium. One of the alternative to it is the machine heat power. This final project is made to utilize created heat energy that is converted to the electrical energy. The thermocouple method is used as the theoretical basis. The resulted thermoelectric voltage then is used to power lamps and make the DC fan spinning. The process of designing and implementing this power generator is started with the heat that is produced and absorbed by the heat part of thermoelectric module. The cold temperature is absorbed by cold part of thermoelectric module. This temperature difference will make a potential difference (voltage) between the heat and cold part of thermoelectric. The amount of used thermoelectric will signify the output voltage. The more thermoelectric modules are used, the more output voltage will be created. At the end there will be a power to be used for lighting purposes.

The heated-machine electrical power generator can convert heat energy well. The maximum voltage provided is 25.6 volt with temperature difference of 77.3 °C and can be distributed to lit LEDs on and spins DC fan simultaneously. LED and DC fan can be turned on at the minimum thermoelectric voltage of 5 volt.

Keywords : thermoelectric, generator thermoelectric