

# **Solar Powered Ice-cream Trike**

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## Abstract

Plentiful and economical energy is the life force of modern civilizations. In contrast, world is facing bitter energy crisis now a days. As stated by Ministry of Finance, the energy crisis is biggest single drain on Pakistan's economy. In order to cope with this issue, world is shifting towards renewable energy sources. Name of Solar energy is among one of the most famous forms of renewable energy. Solar panels produce DC power which has to be firstly converted into AC power to be mostly used in home appliances. In order to run refrigeration on solar we need inverter and there are many losses occur due to conversion of DC power to AC power. Inverter is also inefficient device as a 3kW inverter may regularly draw around 20 watts from your batteries when no AC current is being utilized. It would then take after that on the off chance that you are utilizing 20 watts of AC power, the inverter will draw 40 watts from the batteries and the productivity might be half. Solar panel output is varying according to sun shine; if we need constant output we add batteries so it becomes more unappealing. The purpose of our project is to avoid these inefficient and costly devices from refrigeration system. There is no need of inverters in our project so cost is also reduced. The main part of refrigeration system is compressor. In our project we use DC compressor. We coupled this compressor with MPPT and MPPT derives voltage directly by solar panels. As we know most of the power in refrigeration is used by compressor so in our project our main task was to run a compressor by DC source and we succeed in doing so. In future work on this project will be very beneficial for us as we save lot of money which we pay in the form of bills.

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