

**Editor's comment :**

Detailed report:

Abstract Section:

Luminous, Deep cycle sealed maintenance free batteries solar application, Lum 12V 100Ah 20hr and 3DGP161433 and Chinese made battery with specification Sun-Test std gel battery, 12V-100Ah, 010716w - Battery makes are unclear

What is Anambra State? – Wondering what will happen to batteries of same make in other states.

Introduction Section:

Rewrite this section. Introduction should be about the batteries used for PV cells and the problems faced and superiority.

“Solar energy is the energy from the sun. Solar energy is also the energy produced by the sun in the form of heat and light. It is one of the most renewable and readily available sources of energy on planet earth. The fact that it is available in plenty and free and does not belong to anybody makes it one of the most important of the non conventional sources of energy (<https://www.conserve-energy-future.com>, 2018). According to Iftikhar, et al., (2015), solar energy is derived from the sun and this energy is not only pollution free but also costless.”

“Energy is an important ingredient for the development and economic growth of any country. Energy usage is the key measure of prosperity of the individual, society and thus the nation as a whole. Conventional energy resources are limited with every individual and in every nation. This is depleting at a very fast rate apart from the fact that it is non-clean and is not environmentally friendly. There is a current global need for clean and renewable energy sources. Fossil fuels are non-renewable and require finite resources, which are dwindling because of high cost and environmentally damaging retrieval techniques. So, the need for cheap and obtainable resources is greatly needed. An efficient and more feasible alternative option is solar energy. In stand-alone system that uses solar energy there is need for storage battery and these batteries are expensive and some fail to store energy within months of installation. There is need for comparative study between the available batteries in the market in order to help end users save costs.”

Remove all these as these; are irrelevant to the context and elementary and requires no citations – well known facts.

Material Section:

Do not list out components. Instead give schematic diagram and mark them in figure. It seems as

record notebook of schools. Follow a standard.

Methodology Section: Give a block diagram for your design.

Also, "approximate design methodology was employed (in approximate design, several simplifying assumptions are made" are not clearly explained

Results and Discussions section:

The graphical Charts may be simplified to a single one for Indian and Chinese. More versatile tools for charts are available other than MS-Excel

Table 1 and Table 2 when compared showed that Indian Battery starts with  $\approx 13.0$  V whilst Chinese  $\approx 12.5$  V and less. This reason may be for the tripping off. This aspect is not considered at all

**Author's feedback:**

**I have done the corrections cited.**

**Thanks**