



Application Based Solar Calculator with Cost Estimation

Pankaj S Yadav¹, Ashishkumar Pacharekar², Hitesh Jadhav³, Prathamesh Vekhande⁴

¹(Electrical, Viva Institute of Technology/Mumbai University, India)

Abstract: The idea represents the method for calculating the capacity of an solar panel installation and its components. This method allows considering a load variation during the day as well as specifying the required capacity of the battery. Excluding an unjustified overestimation of the panel component capacities along with the increase in efficiency of the solar panels So we will make an app to help people know the benefits of solar power and help transition them to a life powered by solar panels and other renewable sources. The calculator may allow recalculating capacities of loads on the power plant main supply bus as well as determining the energy consumption of loads per day. Another motive is to provide info about types of solar batteries and inverters which are available in the market, for energy storage to avoid power outage. It's all about figuring out what upfront cost we can comfortably incur.

Keywords - Cost Estimation, Energy Consumption, Inverters, Load, Memory, Recalculating Capacities, Solar Calculations.

I. INTRODUCTION

Solar Calculation is an android application. Based on month-to-month payments for power intake, sun strength gadget (sun gadget) calculations can be done without problems accomplished with the aid of using the Solar calculation software the solar energy potential could manually be entered and hence solar energy system (solar system) calculations could be easily done.

Currently peoples aren't a lot used to sun strength for residential purpose. But they may be searching ahead to it. That's why individuals who would really like to put in sun panels at domestic need to discern it out on their very own. Since the destiny is relying upon the renewable energy sources, we must be capable of proportion our knowledge, make humans privy to the renewable energy sources and costing of the renewable sources of energy.

Easy Solar is a fully functional online platform compatible with advanced Easy Solar mobile apps for Android, easy to use in the office or in the field. Solar energy is one of the youngest types of the energy industry and has not yet acquired a huge number of specialists and consultants. That's why people who would like to install solar panels at home have to figure it out on their own. Since the future is depending upon the renewable energy sources, we should be able to share our knowledge, make people aware of the renewable energy sources and costing of the renewable sources of energy.

II. METHODOLOGY

To determine your home's average energy requirements, look at past utility bills. You can calculate how many solar panels you need by multiplying your household's hourly energy requirement by the peak sunlight hours for your area and dividing that by a panel's wattage. So we explain in below that how many solar panels, battery and inverter, etc in detail.

How to Calculate Size of Solar Panels, Battery and Solar Inverter.

- Step 1: Calculate your Load that you want to run.
- Step 2: Size your solar inverter based on electrical load.

- Step 3 : Calculate the total current of your load.
- Step 4: Decide how many hours of battery backup you required for the Plant.
- Step 5: Calculate size of Solar panels based on battery size and current of electric load.

To avoid all these steps simply calculate your Home energy consumption in watts and put in the app you will get same as above steps. In this app you may get all of the facts approximately Solar panels, batteries, inverter and many others. Also you may get all corporation prices to that you buy. To discover the Actual electric strength intake of the gadget, will take the common via power payments in wattage. To manipulate the destiny electric charges additionally makes monetary making plans easy and correct outage. Eventually, proprietor will very own their strength rather than renting it. They can be capable of pay for the preliminary gadget investment.

III. FIGURES AND TABLES

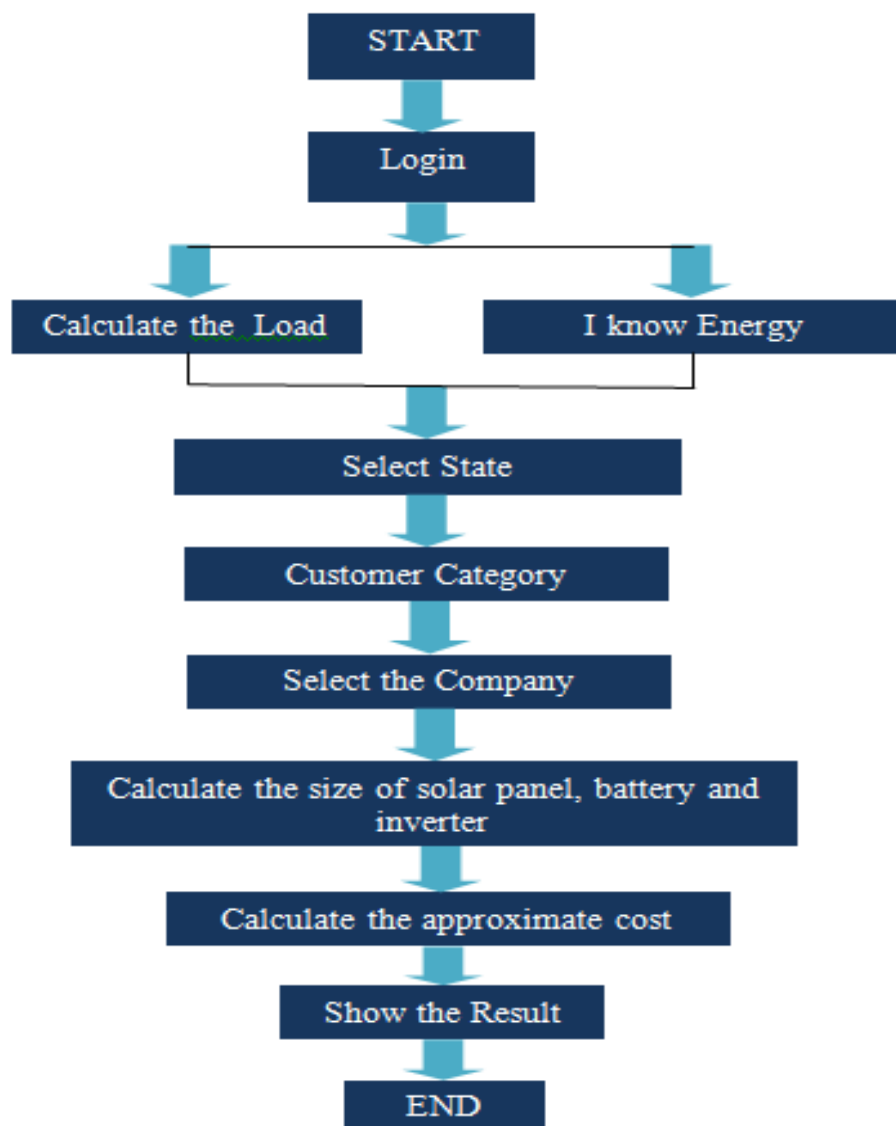


Fig 1 Flowchart of User

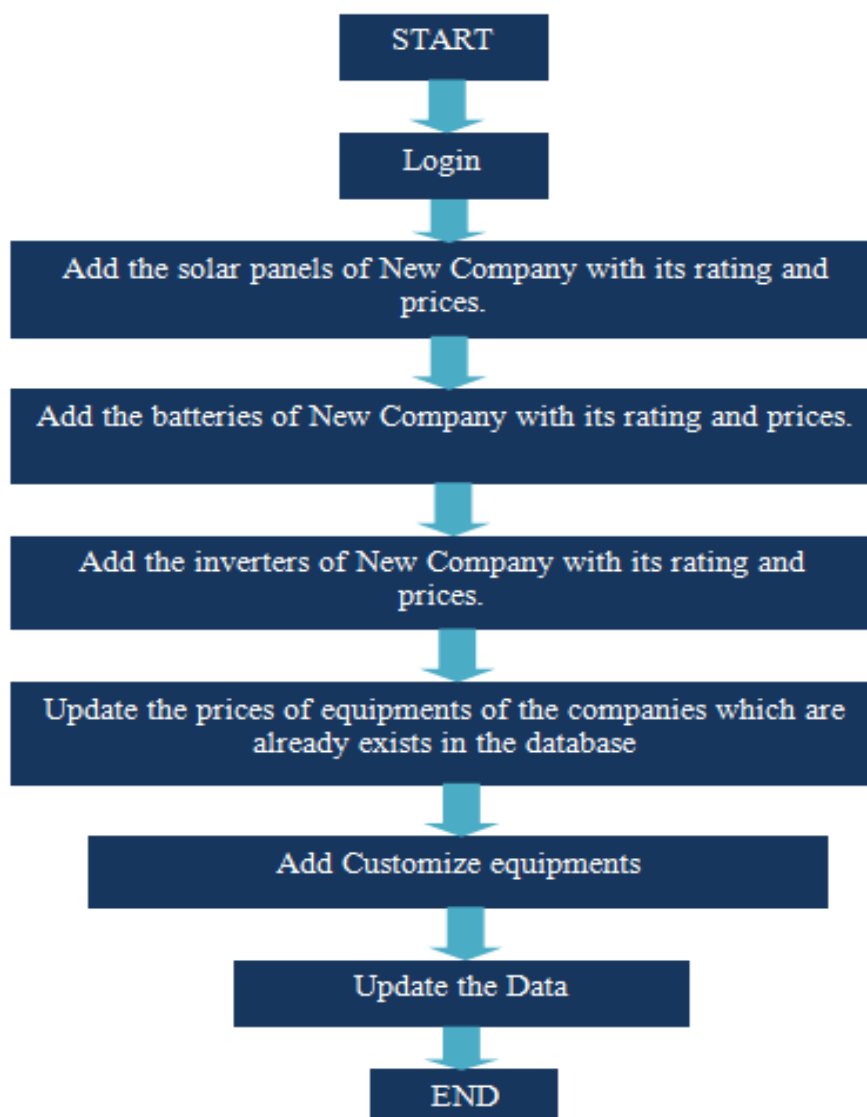


Fig 2 Flowchart of Admin

Once we input all of the required values to the consumer enter and command calculate, compilation will start and very last output will be exhibited to the consumer.

Table 1. Result Table

Particulars	Load/Energy consumption/Size of power plant	Company	Rating	Quantity	Price (Rs.)
Solar Panel	1200W	Luminous	150W	15	65,250
Battery		Luminous	200AH	4	71,196
Inverter		Luminous	1500W	1	8,450
Estimated Cost					Rs. 1,58,999/-

Note - This is the approximate estimated cost value plus/minus 10 % to actual cost.

IV. CONCLUSION

An android app which is user friendly will determine the precise cost of solar panel installation for personal homes, small town, farmhouse, etc. Management of the future electrical costs also makes financial planning simple and accurate outage. This software will offer steering approximately designing/putting in the sun electricity plant. A purchaser gets to understand approximately the no. of solar panels required, length of these panels no. of batteries and inverters required, ability of plant and calculation of electricity intake.

Acknowledgements

We shall be failing in our duty, if we will not express our sincere gratitude to all those distinguished personalities with the help of whom we have successfully completed our project. My deep gratitude to **Dr. Arun Kumar**, PRINCIPAL, VIVA INSTITUTE OF TECHNOLOGY, who always been playing a great role in all round development of the student. My deep gratitude to **Prof. Bhushan Save**, THE HEAD OF ELECTRICAL DEPARTMENT and our project coordinator **Prof. Mukeshkumar Mishra** and our project guide **Prof. Chitraksha Vangala** for his valuable guidance, advice and constant aspiration to our work, teaching and non-teaching staff for their kind support, help and assistance, which they extended as and when required. Last but not the least we wish to thank my friends for providing technical and moral support. We hope that this project report would meet the high standards of all concerned people and for their continuous co-operation during the whole period of period of project that helped us in enhancement of this project.

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