

25 THINGS YOU NEED TO KNOW BEFORE GOING SOLAR

**Compiled by Aubrey Mavhuli of Solartech JHB East 54 Chapman Street, Klipportjie Zerolimits
Offices Germiston 1401**

Cell: 0733250405

Email: solartechjhbeast@outlook.com

1. When you power your house with solar it's not like powering with Eskom. Your power is limited by your budget, your load and the availability of the sun.
2. There is no panel that can power your whole house. You add up panels to generate enough power for your requirements. Same applies to storage batteries the more you have the more panels you need to fully charge them. The more batteries you have the more storage hence the more time to power your appliances.
3. There are 4 basic equipment for most solar installations namely: solar panels, solar battery charger(can be in-built in a smart inverter), solar inverter and solar batteries.
4. The batteries have different sizes depending on their storage capacity. For storage voltage is not a big deal, it's the amp hours (this makes up your storage capacity) that matter the most.
5. Most common batteries are 12volt (105amp hours, 200amp hrs), 2volt (500-1000amp hrs) and the latest Lithium ion batteries can be 48Volts 50 amp hrs or 48volts 100 amp hrs.
6. There are 3 types of inverters namely: off-grid (used where there is no Eskom or grid power), grid tie (used only where there is grid power) and hybrid (used off and on grid).
7. Solar installations are scalable, that is you can start off based on your budget and increase your capacity. However, if you start small select the right size inverter and the panel size for easier and economic scale up.
8. Solar batteries are the most expensive part of the solar system.
9. If your budget is small you can start with solar panels and inverter(use only during the day) or inverter with batteries(use grid power to charge).
10. Most solar panels for pv(power) and solar geyser panels are not the same type of panels. Solar power(pv) uses light energy and solar geyser uses heat of the sun.
11. There are basically 4 types of solar heating solutions namely: indirect solar geysers, direct solar geyser, retrofit solar system and heat pump.
12. Retrofit is the entry level solar water heating system in terms of costs. This involves using an existing normal electric tank, add a pump, geyserwise and tubes on the roof.
13. Indirect geysers are recommended for inland frost prone areas like Johannesburg.
14. A heat pump uses surrounding heat from the sun to indirectly heat up water. It is suitable where the roof is not North facing, not safe or where the homeowner doesn't like anything on their roof.
15. For maximum exposure in the Southern Hemisphere, all solar panels both pv and water heating should face North.
16. One 5Kw heat pump can be connected to heat up 2x200litre geysers connected in series.
17. Indirect solar geyser needs annual service to refill the glycol liquid.
18. If geyser panels are connected to the direct geyser there is a chance of them bursting in extreme frost conditions as copper pipes burst when water is frozen.

19. Using solar without understanding can be frustrating.
20. Can I use solar power(pv) for my stove, my geyser and heater? Of course, not recommended because you need a lot of panels and a bigger inverter and plenty batteries to get to that level hence I say don't do it.
21. If you want to go solar for reasons of saving on power costs in a home setup start by going solar on your geyser this is about 40 percent of your home's energy costs.
22. There are three main reasons for going solar namely: to save on energy costs, to have reliable backup power during load shedding and where there is no grid power.
23. If you are an office based business working 9 to 5 you can easily save most of your energy costs by simply putting up panels and an inverter with little backup. (Grid tie can save up to 90%) of 9 to 5 office setup business.
24. Solar power is DC (direct current) power and battery power so you need an inverter to convert it to AC (alternating current)normal power.
25. It is possible to power a whole suburb or city with solar power using solar farms 4000 panels will generate 1 megawatt hrs of power.

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