**GRID TIED SOLAR SYSTEMS:**

Grid tied solar systems (also known as a grid interactive system) are used where the electricity/Escom grid is available, but where the client wants to send access or generated power back into the grid or use the grid for power storage. This system will turn the electricity meter backwards (old wheel type meters only). Thus when the system produces more power than is utalised, the access power gets pushed into the grid, acting like a giant battery, when power is needed (e.g. at night) it is drawn from the grid making the meter run forward again. Thus this will be at a 1 unit to 1 unit off set. Grid tied systems have the benefits of reducing your electricity bill, reducing your carbon foot print, negating the need for having batteries for power storage purposes. The negative part is that when there is a power outage (the grid goes down), you will not have power (accept if a Hybrid Tied Solar Power Solution is used - See below), the client needs an "old wheel type["/](http://en.wikipedia.org/wiki/United_States_International_Trade_Commission)non-digital electricity meter and needs to ensure that the local authority allows for this kind of system.

A grid tied solar power system typically consists of **solar panel**s that convert solar rays into electric current (DC - Direct Current). From the panels the power flows to a special**grid-tied inverter** that converts the 12/24/48 Volt DC (Direct Current) power to 220/230 Volt AC (Alternating Current) that you can use in your home, farm, business or office. The power that is not utalised is than send to the**grid** and when the power requirement is higher than what the system produces, this power is drawn from the Escom/electricity grid.

**When batteries are added a grid tied system is *NORMALLY* referred to as a hybrid grid tied system. The benefit of adding batteries is that when there is a power outage (the grid goes off), there is still some backup power available to work from. *Please* specify whether you require this as an optional extra when making an enquiry or requesting a quotation, to avoid miscommunication!**

***Scientifically patented calculations apply to the various systems to eg aid preplanning, which can be discussed in consultation (which is an element of training to use systems*).**