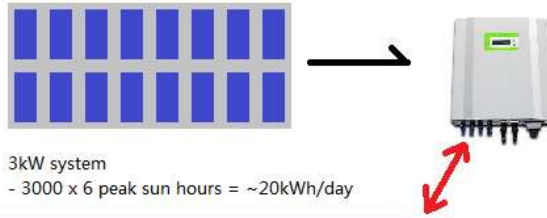


## HOW TO READ THE INVERTER

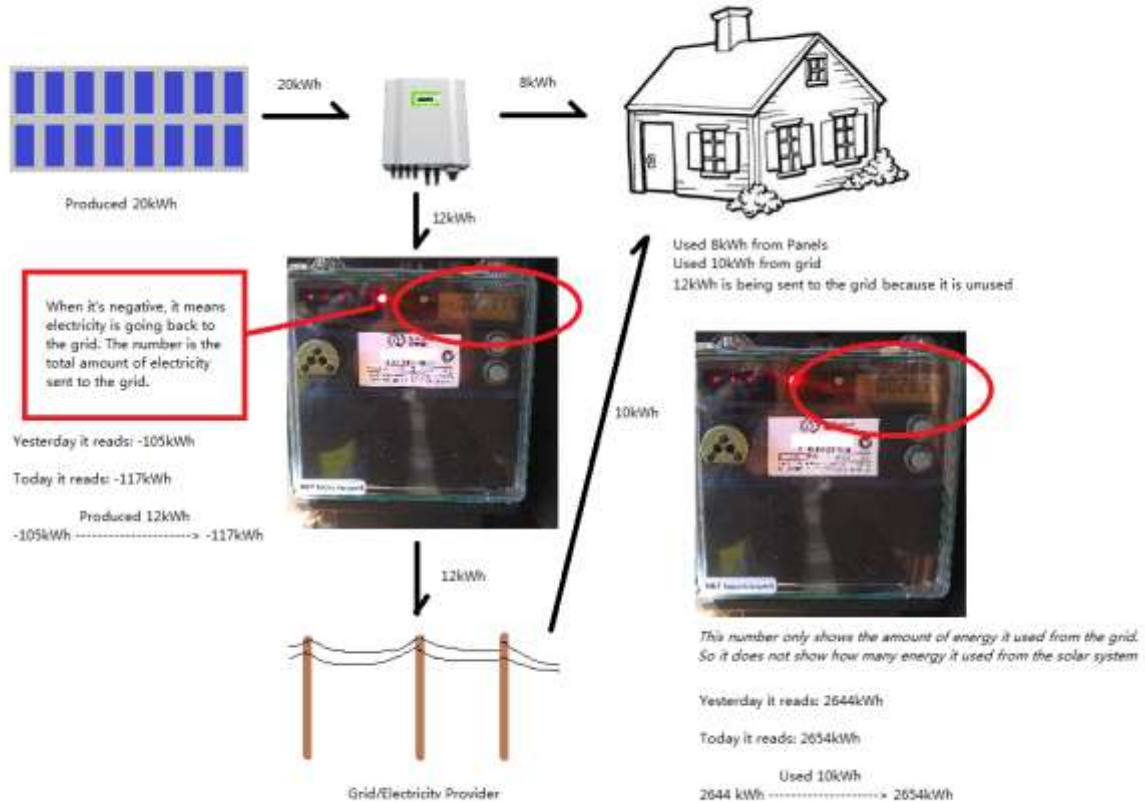


- Check Etotal (The total amount of energy the system produced since the day the system is installed): E.g. installed for 30 days, for a 3kW with ~20kWh/day, the Etotal should be 30 x 20 = 600kWh
- Check Etoday (The amount of energy it produced since sunrise til now): For 3kW, it should be ~20kWh



Note: Press the arrow button to cycle through the LCD display to see the numbers.

## FLOW DIAGRAM FOR ONE DAY



**Follow these step by step instructions to make sure your system is working fine. Do this on a sunny day (best with no clouds). Please use energy normally between recordings, like before solar was installed. DO NOT USE MORE ENERGY.**

**Step 1 – Recording numbers:** Record these numbers on a piece of paper at sunrise and record the number again during sunset. . You can check online and search for sunrise and sunset times.

- Sunrise
  - Inverter
    - Etoday (should be close to 0)
    - Pac (this is the power rating of the solar system, the number it should be close to your system size when it is working. This should also be close to 0 because of no sun yet.)
    - Etotal (this number should be same as the number from yesterday after sunset)
  - Meter
    - Record the number (when it shows a kWh on the bottom left)
    - Record the negative number
- Sunset
  - Inverter
    - Etoday (should be close to 20kWh for a 3kW system)
    - Pac (this is the power rating of the solar system, the number it should be close to your system size when it is working. This should also be close to 0 because of no more sun. If not, wait a bit til it turns 0)
    - Etotal (this number should be the total of Etoday and the Etotal number that you recorded during sunrise)
  - Meter
    - Record the number (when it shows a kWh on the bottom left)
    - Record the negative number

**Step 2 – Compare the numbers:**

- Etoday should be close to 20kWh for 3kW system
- Etotal at sunset should be the total of Etoday and the Etotal number that you recorded during sunrise
- Calculate the difference of the meter numbers. For example, at sunrise the meter reads 2650 and at sunset it reads 2651. Their difference is 1kWh, so you used 1kWh from your electricity provider during the day. **If your meter number is large and seems to be close to the number what you normally use per day without solar installed, then there could be some fault in the system. (E.g. if the number reads 2664, this could mean that there's something wrong with your system)**
- Calculate the difference of the negative meter numbers. For example, at sunrise the meter reads -107 and at sunset it reads -117. Their difference is 10kWh, so you have 10kWh of unused energy and was sent to your electricity provider during the day.

The meter updates number every 30min. So every 30min, the meter checks how much energy you used and how much energy you produced. See the example below for more information.

Table 1 Energy usage for a 3kW system

Time (meter update every 30min)	Electrical appliance					Solar Generation	Overall used	Overall unused	From grid
	Washing Machine	Computer	Fridge	TV	Aircon/ Heater				
5:00am – 5:30am					500 Wh	0 Wh	500 Wh		-500 Wh
5:30am – 6:00am					500 Wh	0 Wh	500 Wh		-500 Wh
6:00am – 6:30am			26 Wh		500 Wh	632.83 Wh	526 Wh	107 Wh	
6:30am – 7:00am			26 Wh		500 Wh	632.83 Wh	526 Wh	107 Wh	
7:00am – 7:30am			26 Wh		500 Wh	743.42 Wh	526 Wh	217 Wh	
7:30am – 8:00am	626 Wh		26 Wh			743.42 Wh	652 Wh	92 Wh	
8:00am – 8:30am	626 Wh		26 Wh	100 Wh		1046.02 Wh	752 Wh	294 Wh	
8:30am – 9:00am	626 Wh		26 Wh	100 Wh		1046.02 Wh	752 Wh	294 Wh	
9:00am – 9:30am		150 Wh	26 Wh	100 Wh		1124.35 Wh	276 Wh	848 Wh	
9:30am – 10:00am		150 Wh	26 Wh	100 Wh		1124.35 Wh	276 Wh	848 Wh	
10:00am – 11:30am		150 Wh	26 Wh	100 Wh		1327.10 Wh	276 Wh	1051 Wh	
11:30am – 12:00am		150 Wh	26 Wh			1327.10 Wh	176 Wh	1151 Wh	
12:00am – 12:30am		150 Wh	26 Wh			1187.33 Wh	176 Wh	1011 Wh	
12:30am – 1:00pm	626 Wh	150 Wh	26 Wh	100 Wh	500 Wh	1187.33 Wh	1402 Wh		-215 Wh
1:00pm – 1:30pm	626 Wh	150 Wh	26 Wh	100 Wh	500 Wh	1150.46 Wh	1402 Wh		-252 Wh
1:30pm – 2:00pm	626 Wh	150 Wh	26 Wh	100 Wh		1150.46 Wh	902 Wh	248 Wh	
2:00pm – 2:30pm		150 Wh	26 Wh			1033.73 Wh	176 Wh	858 Wh	
2:30pm – 3:00pm		150 Wh	26 Wh			1033.73 Wh	176 Wh	858 Wh	
3:00pm – 3:30pm		150 Wh	26 Wh	100 Wh		875.52 Wh	276 Wh	600 Wh	
3:30pm – 4:00pm		150 Wh	26 Wh	100 Wh		875.52 Wh	276 Wh	600 Wh	
4:00pm – 4:30pm		150 Wh	26 Wh	100 Wh		419.33 Wh	276 Wh	143 Wh	
4:30pm – 5:00pm		150 Wh	26 Wh	100 Wh		419.33 Wh	276 Wh	143 Wh	
5:00pm – 5:30pm		150 Wh	26 Wh	100 Wh		319.49 Wh	276 Wh	43 Wh	
5:30pm – 6:00pm		150 Wh	26 Wh	100 Wh		319.49 Wh	276 Wh	143 Wh	
6:00pm – 6:30pm		150 Wh		100 Wh		0 Wh	250 Wh		-250 Wh
6:30pm – 7:00pm		150 Wh		100 Wh		0 Wh	250 Wh		-250 Wh
Total						19719.17Wh or 19.72 kWh	12128Wh or 12.13kWh	9657.8Wh or 9.7kWh	-1967 Wh or -2kWh

Note: Number in red is when you used electricity from the grid