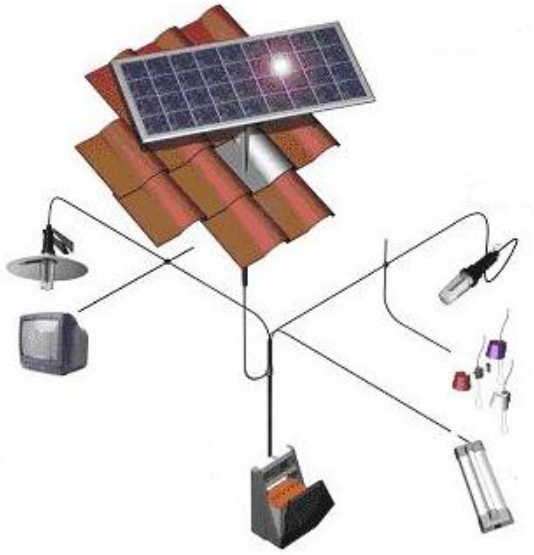
Generating electricity at home? It was made possible by the installation of solar cells , solar cells

convert sunlight into electricity. Electricity is stored in batteries, battery switch on the lights.

In the use of solar cell to generate electricity at home, there are some things we need to consider because the characteristics of the solar cell:

* Solar cell requires sunlight. Place the solar cell at the position where not obstructed by objects throughout the morning until the afternoon.
* Solar Cell - solar cell produces direct current electricity, DC.
* For higher efficiency, use DC lamps such as LED lights.
* Installing a new cable for direct current, DC for the following devices such as: LED-based lighting (Light Emiting Diode), CCTV cameras, wifi (wireless fideliity), etc..



When we make a new home, it is advisable to use electricity and solar cell. Solar cell is used for partial illumination (in this case using direct current DC) and electricity to alternating current devices such as air conditioning: Air conditioning, Refrigerator, some lighting etc.

When the DC power stored in batteries to use the device turn on the AC: water pumps, refrigerators, etc. it is necessary that the inverter can convert DC power into AC. Customize your power needs required by
solar cell
,
inverters
,
batteries
.
LED lamps as lighting Houses

There is now using energy efficient lighting such as LED lighting, DC. Compare 3 Watt LED light the equivalent of 15 Watt AC Lighting.

The drawback is:
* Installing a new cable for the LED light.
* The cost of procurement of more expensive lights.

The advantage is:
* The use of small energy
* The reliability of the LED light 10 x usual standard lamp
* Use two core electrical cable.

	AC Lamp		LED Lamp
Voltage	220 VAC		12 VDC
Watt	15 Watt		3 Watt
Lifetime	6,000 hours		50,000 hours
Cost			
+	Rp. 25,000	+	Rp. 250,000

Solar Cell for AC Electric

If we wish to use the energy of solar cells for other home equipment, follow the example of the following calculation.

If we take the alternating current electric power at 2000W for 10 hours per day (20KWh/hari) then the required 24 panels of solar cells with the capacity of each 210WP and 30 @ 12V 100Ah battery. This is based on the calculation of solar energy from 7 am until 5 pm (10 hours) and the assumption of energy conversion at least 4 hours a day

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Solar energy
The amount of solar cell
Capacity of solar cell
Calculation
Result

4 hours
24 panel
210 Watt
4 x 24 x 210
20.160 Watt hour

Basis for calculating the number of batteries are 2 x 3 x electrical needs.

The existence of the multiplier 3 to anticipate when the rain / overcast continuously for three consecutive days. While the multiplication factor 2 due to battery must be no more than 50% loss of capacity if it wants long-lasting battery, especially for such a dry battery
type gel and AGM.
In other words labored to DOD (Depth of Discharge) did not exceed 50% because it is affecting life time of the battery itself.

The amount of battery
Voltage
Ampere
Calculation
Result

100
12 Volt
100 Ampere hour
100 x 12 x 100 120.000 Watt hour