

# HOW SOLAR WORKS

537 SAN PEDRO, BUSTOS, BULACAN 3007 (044) 931-1868 / (0927) 344 2366 / (0950) 247 7347

#### **OUR SERVICES**

- Solar Panels Systems Supply and Installation
- Solar Street Lights
- Solar Engineering
- Electrical Design and Planning
- Net-Metering Assistance



info@solarcell.com.ph



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## THE 3 MAIN TYPES OF SOLAR SYSTEM

### **ON-GRID**

Also known as Grid-Tied System. On-grid means your solar system is tied to your local utility's GRID. This is what most residential homes will use because you are covered if your solar system under or over produces with regards to your energy needs.



## HYBRID ON-GRID

Hybrid solar systems generate power in the same way as a common grid-tie solar system but use special hybrid inverters and batteries to store energy for later use. This ability to store energy enables most hybrid systems to also operate as a backup power supply during a blackout, similar to a UPS system.

### **OFF-GRID**

Also known as a stand-alone power system (SAPS). It means you are not connected in any way to your grid's power system or utility company. This is appealing because you are 100% self-sustaining your energy use. However, there are disadvantages because off-grid systems require you to purchase back-up battery which can be expensive.





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## HOW DOES GRID-TIED SYSTEM WORK?



- Radiates light to solarcell panels
- Operates everyday
- Peak Hours: 9AM 3PM

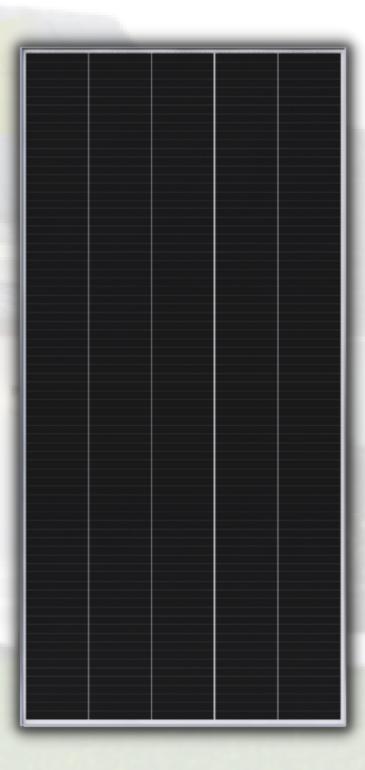
#### SOLARCELL PANELS

- Converts light into DC electricity (Electricity coming from Batteries)
- Sunpower Warranty:

#### A Better Product. A Better Warranty.

SunPower Performance 5 UPP BF panel is backed by the SunPower Performance UPP panel warranty providing 25-year product and power coverage.

· Year 1 Minimum Warranted Power Output 98.0% · Maximum Annual Degradation 0.45% Year 25 Warranted Power Output 87.2%





#### **INVERTER**

- Transform power from DC to AC (Electricity from the grid)
- Syncs the power to Meralco
- 1st Priority: SOLAR
- POWER PRODUCED = SAVINGS





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# HOW DOES GRID-TIED SYSTEM WORK?



### **BEFORE SOLAR**

- Electric Bill
- Monthly Average Bill : Php 10,000
- Annual Average Bill : Php 120,000









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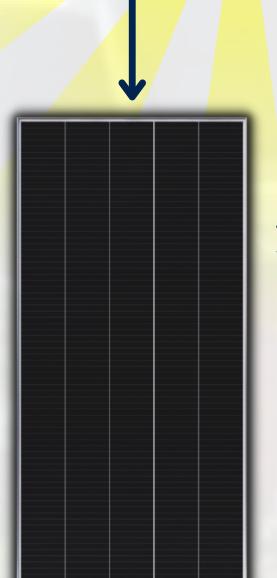
## SUN

## HOW DOES GRID-TIED SYSTEM WORK?





- Operates everyday
- Peak Hours: 9AM 3PM



#### **5KW GRID-TIED**

- Electric Bill
- Monthly Average Bill : **Php 6,500**
- Annual Average Bill : **Php 78,000**

Amount: **Php 295,000** 

ROI: 4 years

SUNPOWER UPP 5 535W X 10 PANELS



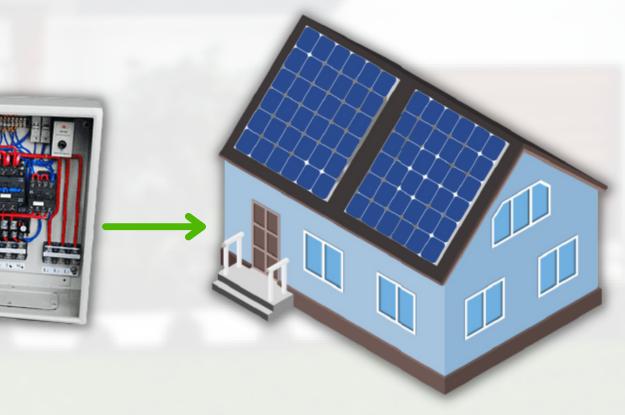


#### **BEFORE SOLAR**

- Electric Bill
- Monthly Average Bill : Php 10,000
- Annual Average Bill : **Php 120,000**

#### **AFTER SOLAR**

- Electric Bill
- Monthly Average Bill : Php 3,500
- Annual Average Bill : Php 42,000







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Air Conditioner

1.15kw

Electric Fan Television

2.1kw

Electric Fan

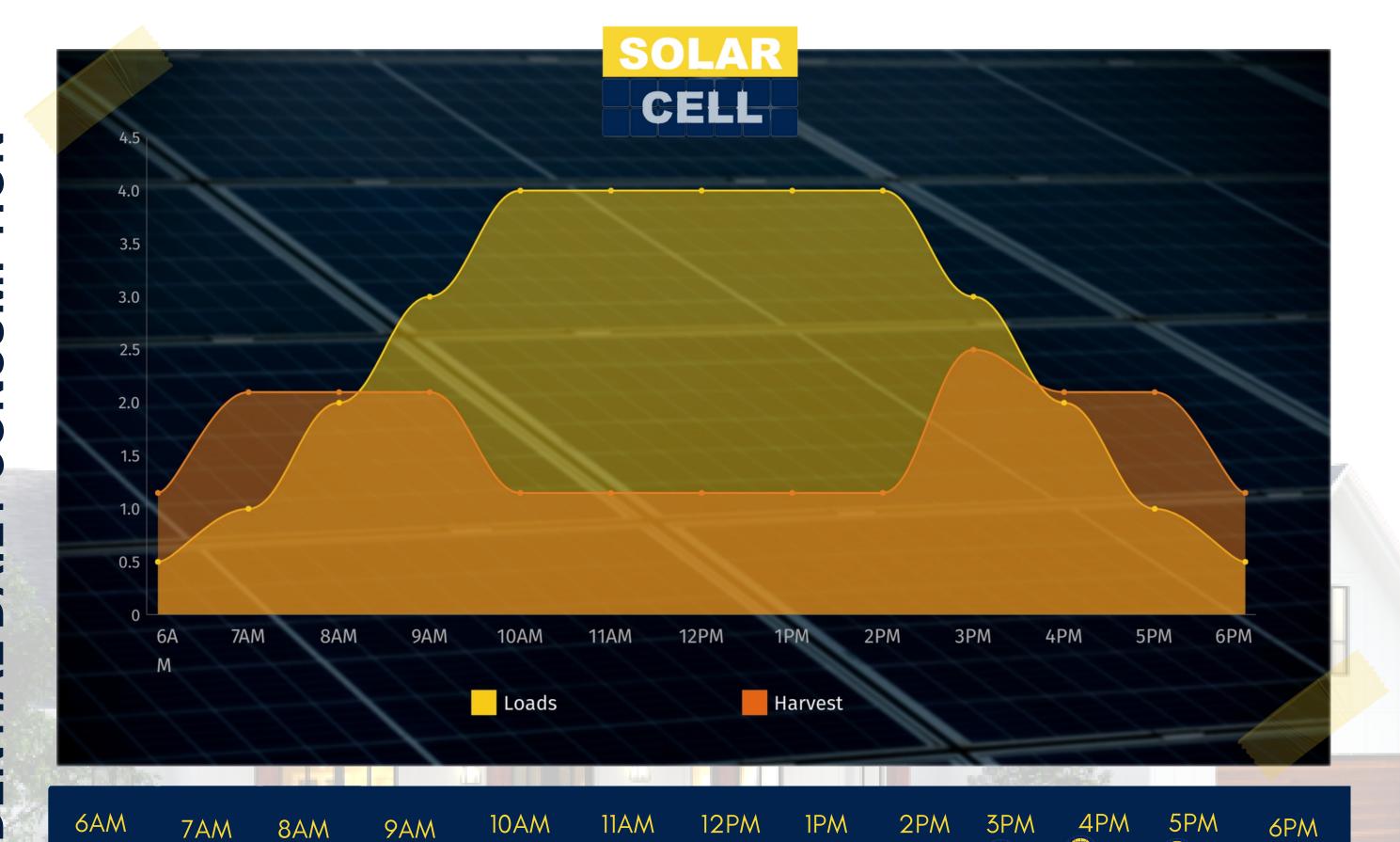
Television

2.1kw

Electric Fan

Television

2.1kw



Air Conditioner Air Conditioner Air Conditioner Air Conditioner Air Conditioner

1.15kw

1.15kw

1.15kw

Electric Fan

Television

2.1kw

Electric Fan

Television

2.1kw

Electric Fan

Television

Microwave

2.5kw

1.15kw 1.15kw

Air Conditioner

2.1kw

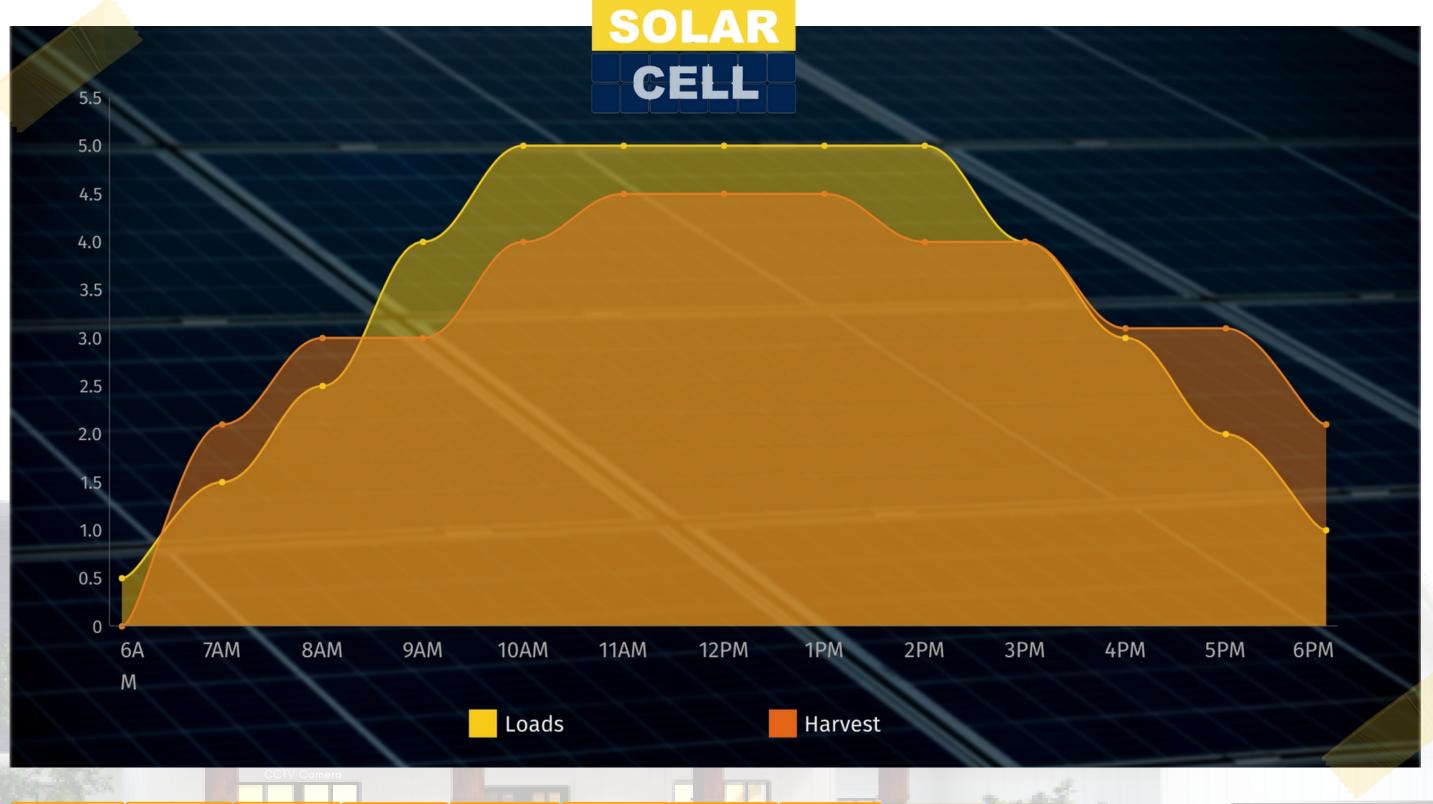
















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6AM

0kw

5555

Air Conditioner Coffee Maker CCTV Camera 2.1kw

7AM



Elerctrical Flormer Television
Printers
Telephones
CCTV Camera

3kw

MA8 9AM



Air Conditioner Computers Printers Telephones Printers Telephones Electric Fan CCTV Camera CCTV Camera 3kw



4kw



Computers Printers Telephones Coffee Maker **CCTV** Camera 4.5kw

**11AM** 



Air Conditioner Computers Printers Telephones Microwave CCTV Camera 4.5kw

**12PM** 



Printers Telephones

CCTV Camera

4.5kw

1PM



2PM

Electric Fan CCTV Camera 4kw

Air Conditioner Computers

Printers Telephones Electric Fan CCTV Camera 4kw

3PM

Air Conditioner

Computers Printers Telephones CCTV Camera

3kw

4PM

Printers Telephones CCTV Camera

Air Conditioner

3kw

5PM

Coffee Maker Computers **CCTV** Camera

2.1kw

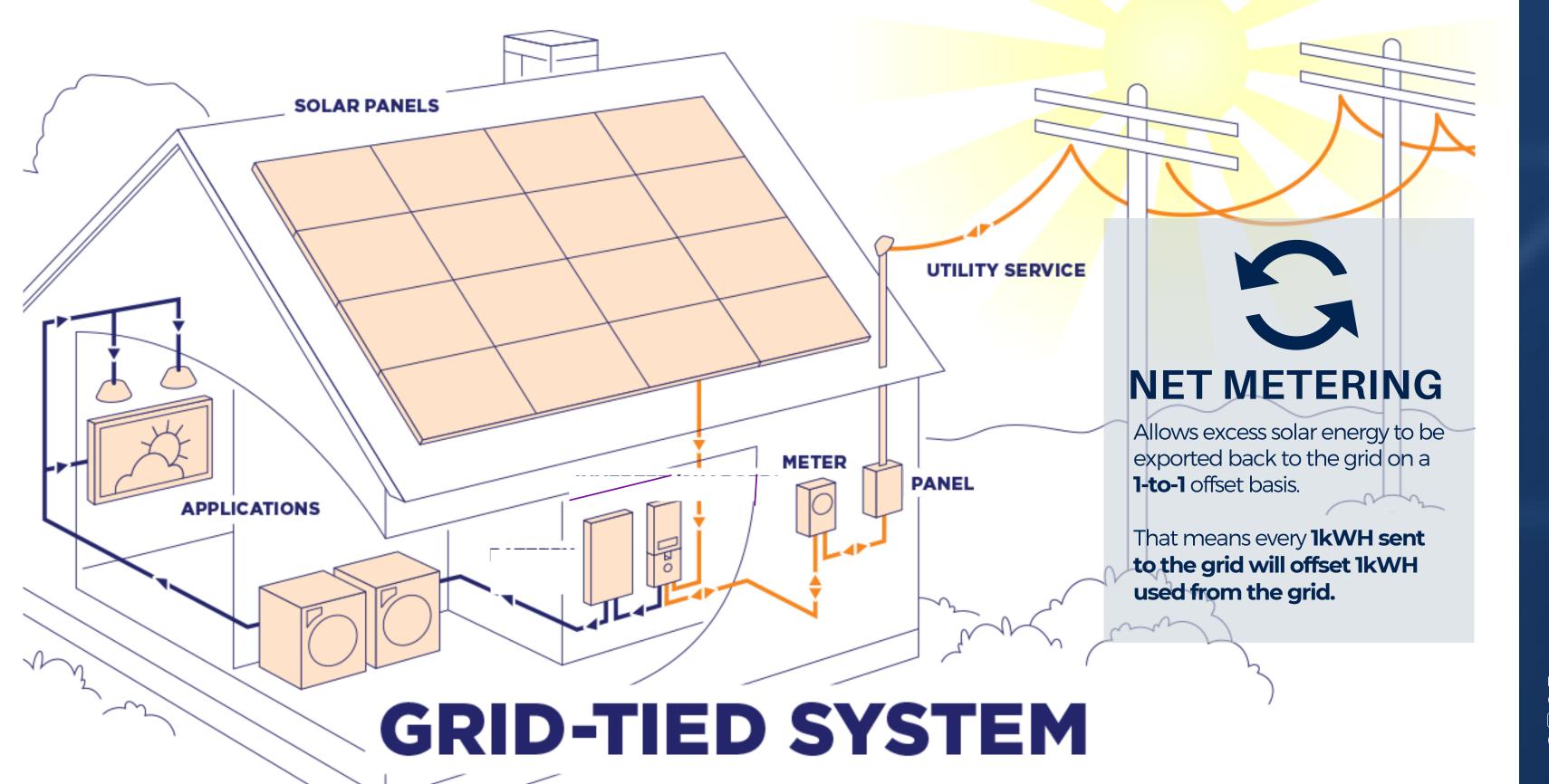
Air Conditioner

6PM

1111

## HOW DOES NET METERING WORK?







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### SUN

- Radiates light to solarcell panels
- Operates everyday
- Peak Hours: 9AM 3PM

## HOW DO HYBRID OFF-GRID SYSTEM WORK?



## SOLAR INVERTER (HYBRID OFF-GRID INVERTER)



#### **BATTERIES**

- Store excess power from Solar Panels
- Can be used as a back-up power or main power
- Lead Acid/Gel Type Deep Cycle or Lithium Batteries
- Lead Acid Batteries Warranty: 1 Year
- Life Span: 3 Years





**SOLAR PANELS** 





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### SUN

## HOW DO HYBRID OFF-GRID SYSTEM WORK?

- Radiates light to solarcell panels
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# S SOLAR PANEL

#### SET-UP 1:

1st - SOLAR 2nd - BATTERY 3rd - MERALCO

#### SET-UP 2:

(BLACKOUT)

1st - SOLAR

2nd - MERALCO

3rd - BATTERY

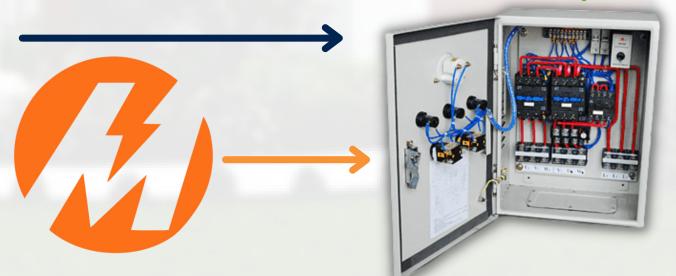
















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"WHERE THERE'S SUN, THERE'S SOLARCELL"



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