GRID-TIED
ON GRID SOLAR PV SYSTEM
TYPICAL APPLICATIONS

REDUCE ELECTRICITY BILL, NO BATTERY.

Works any time the sun is shining!

On Grid (Grid-Tied) Solar PV System Typical Application on Rooftop.

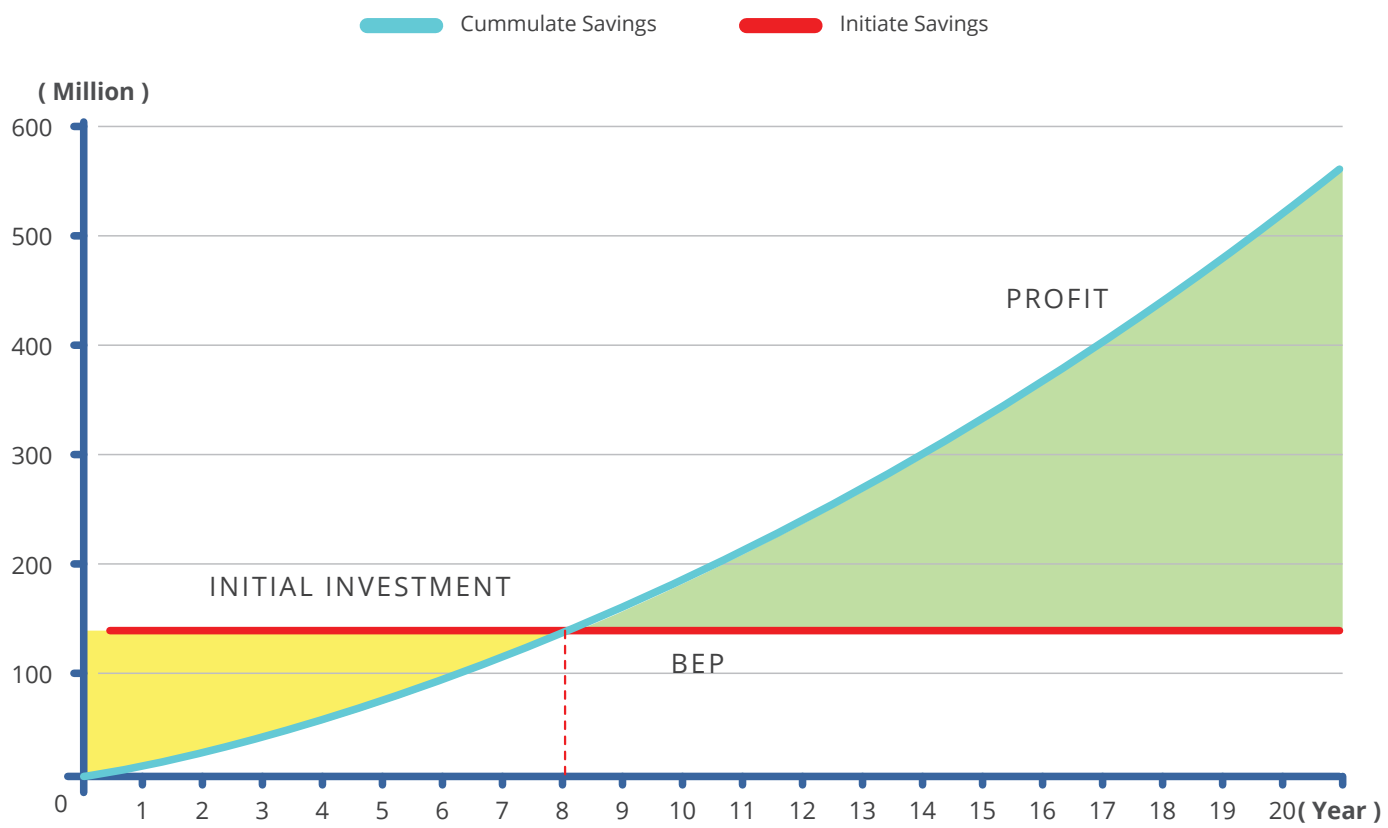
CASE STUDY

5 KW ON GRID AT HOUSE / OFFICE IN JAKARTA

Electricity Tariff :	January 2013	January 2014	January 2015
R-2 : 3.500 VA to 5.500 VA	948	1145	1524
R-2 : > 6.600 VA	980	1352	1524
B-2 : 6.600 VA to 200 kVA	1035	1352	1524

Installed Capacity:	5kW PV System
Peak Sun Hour (Based on NASA)	4.75
Effective Sunny Days (Based on PLN)	75%
Energy harvested in a day	17.85 kWh
Energy harvested in a year	**6.51525 mWh**

Upfront Cost for 5kW on Grid System :	Approx. Rp. 125.000.000,-
Assume Electrical tariff to increase 10% per year	
Return on Investment :	Approx. 8 Years



Start now to reap benefits earlier in the future.

SOLAR PV SYSTEM
PROJECT REFERENCES

PROJECT 1
21 KW SOLAR on GRID ROOFTOP PV SYSTEM

Succesfully installed 84x 250Wp Solar Panels on Factory Roof (Including Construction of Structure to Support Panels)

Successfully completed laying of cables and installation of 1 x 20 kW 3 Phase Inverter

Successfully conducted testing and commisioning




PROJECT 2
8 KW SOLAR on GRID ROOFTOP PV SYSTEM

Succesfully installed 32x 250Wp Solar Panels on Shophouse Roof (Including Construction of Structure to Support Panels)

Successfully completed laying of cables and installation of 3 x 3 kW Inverter

Successfully conducted testing and commisioning

SOLAR PV SYSTEM
PROJECT REFERENCES

PROJECT 3
15 KW SOLAR on GRID ROOFTOP PV SYSTEM

Succesfully installed 60x 250Wp Solar Panels on Factory Roof (Including Construction of Structure to Support Panels)

Successfully completed laying of cables and installation of 2 x 10 kW Inverters

Successfully conducted testing and commisioning

PROJECT 4
3 KW SOLAR on GRID ROOFTOP PV SYSTEM

Succesfully installed 12x 250Wp Solar Panels on Shophouse Roof (Including Construction of Structure to Support Panels)

Successfully completed laying of cables and installation of 1 x 3 kW Inverters

Successfully conducted testing and commisioning

F.A.Q.
ABOUT GRID-TIED PV SYSTEM

WHAT IS SOLAR PV GRID-TIED SYSTEM?
A solar PV grid-tied system is used to convert sunlight directly into electricity that can power your homes and workplace. The grid-tied system consists of only two main components: solar panels and the grid-tied PV inverter.

WHO IS IT FOR?
Grid-tied PV system is ideal for businesses and homeowners that want to reduce electricity cost and save money. It is especially suitable for homes and businesses that experience peak load during daytime.

HOW DOES GRID-TIED SYSTEM WORKS?
An array of solar panels installed on the rooftop, directly converts sunlight into DC power, and the DC power is then converted into AC power using a solar grid-tied inverter. The AC power produced by the grid-tied inverter is synchronized with power from the grid (i.e. PLN, 220Vac). When the power generated by sunlight exceeds current load usage, you may sell power back to the grid (i.e. PLN).

WHAT ARE THE BENEFITS OF INSTALLING A PV GRID-TIED SYSTEM?
- Reduce electricity cost.
- The higher the electricity price, the more money you save!
- Doesn't use batteries. No batteries to replace.
- Reduce consumption of diesel from genset.
- Sell power back to the grid (e.g. PLN).
- Reduce carbon emission.
- Go green – enjoy a cleaner and better energy.

DOES IT MAKE FINANCIAL SENSE TO INSTALL A PV GRID-TIED SYSTEM?
The higher the electricity price, the more money you save!
Investment return from a PV grid-tied system is higher than putting money in the bank.

	BANK DEPOSIT	PV SYSTEM
Investment (per year)	7 - 9%	10 - 16% (or higher)
Trend of Yield	Adjustable, up & down	Progessively Higher
Required Investment	Min. Rp 1 Bill	Rp 125 Mill (5kW)

WHERE CAN I PUT THE SOLAR PV?
Solar panels can be securely installed on the roof of your house or building.

HOW LONG IS THE PAYBACK PERIOD FOR A TYPICAL GRID-TIED SYSTEM?
Maximum 6-10 years.

HOW MUCH YOU CAN SAVE DEPENDS ON THE SPACE YOU HAVE ?
For a typical 5.000w grid-tied system you may save up to Rp 1.000.000 per month on your electricity bill.

GRID-TIED /
ON GRID SOLAR PV FARM
SOLAR FARM APPLICATIONS

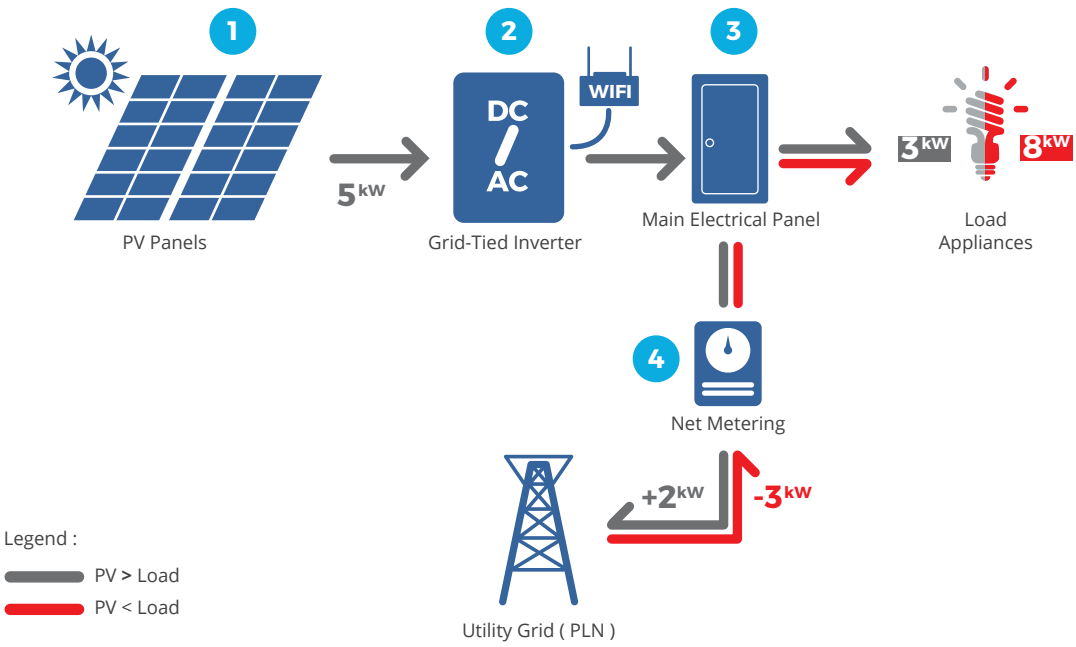
USE FREE ELECTRICITY
FROM SUNLIGHT.

On Grid (Grid-Tied) Solar PV System - Solar Farm Application

ON GRID / SOLAR PV SYSTEM

ICA SOLAR GRID-TIED SOLAR PV SYSTEM

HOW IT WORKS



1. Solar Panels convert sunlight into DC electricity.
2. Grid-tied PV Inverter, converts DC to AC electricity, which is synchronous to power grid.
3. The AC electricity is sent to the main electrical panel where it is connected directly to the grid.
4. Net metering calculates the net consumption of power (Power consumed by household - Power generated by PV). If there is surplus energy generated by PV system, it will be sent back to the utility grid and credited in our favour.

GRID TIED PV SYSTEM GIVES **DIRECT SAVINGS** TO YOUR ELECTRIC BILLS BECAUSE **ELECTRICITY GENERATED BY THE PANELS IS DIRECTLY USED TO OFFSET THE HOUSEHOLD LOAD!**