

How Does Solar Energy Work Anyway?



From the People of Japan



Solar Panels

These large panels made up of solar cells absorb sunlight.

What they do: Capture sunlight and convert it into DC electricity.

Where they go: Installed on rooftops or open land with lots of sunlight.

When they work: The panels work even on cloudy days – just a bit less efficiently.

Charge Controller

Protects the Battery

What it does: Regulates how much electricity flows into the battery.

Why it matters: Prevents overcharging, which can damage batteries.

Inverter

Converts the Energy

What it does: Changes the DC electricity from the battery into AC electricity (the kind homes and appliances use).

Without it: Most household devices won't work. Your inverter is what powers your fridge, fan, or phone charger.

Battery

Stores the Power

What it does: Stores electricity for use at night or when it's cloudy.

Backup power: Keeps lights and fridges running even without sun.

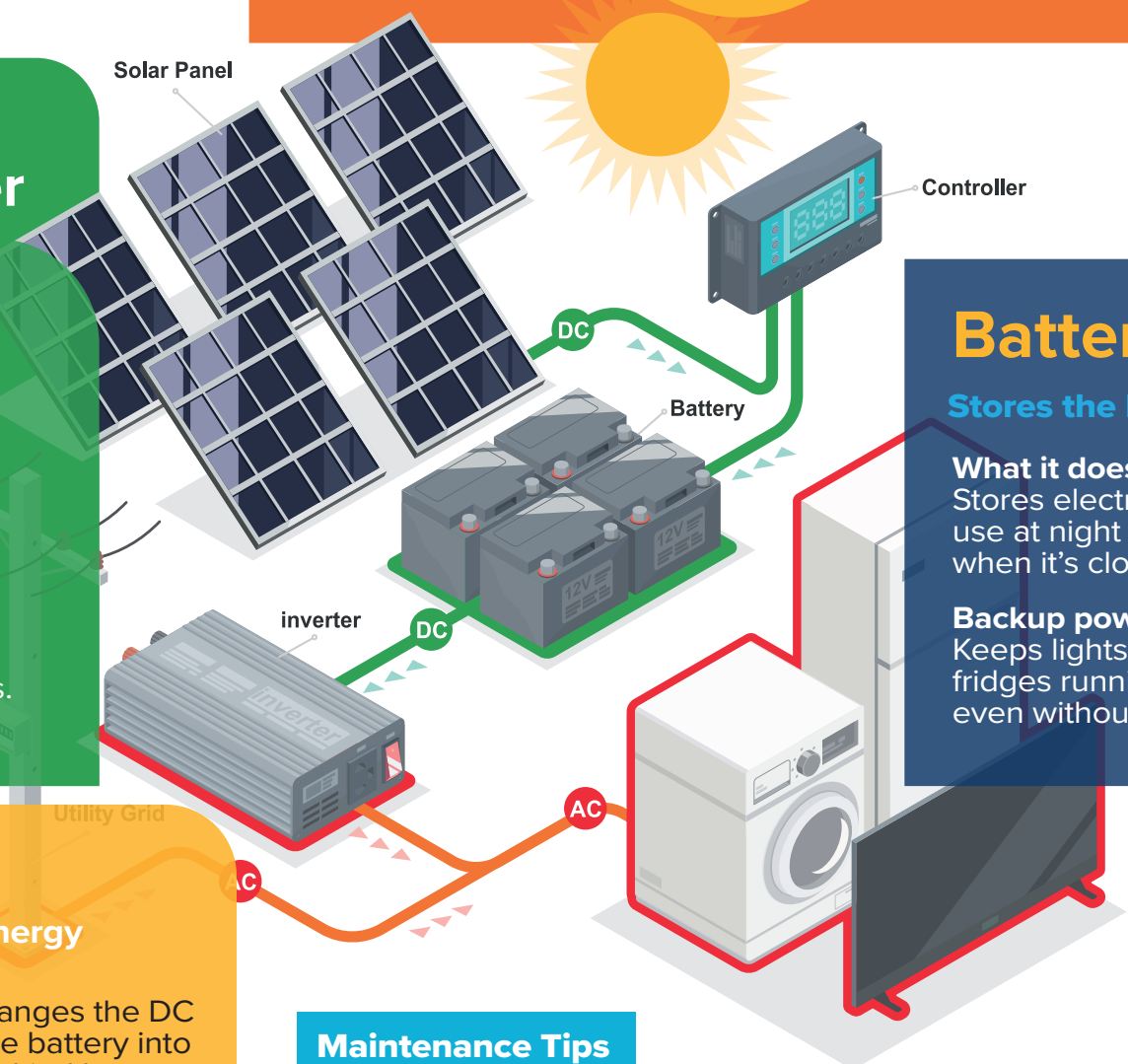
Maintenance Tips

Clean panels regularly (dust, leaves)

Check battery fluid if using lead-acid

Monitor inverter display for errors

Keep system protected from extreme weather and animals



Link to project website: [Pacific Green Transformation Project | United Nations Development Programme](#)