
New possibilities for solar power in Ghana



Solar has evolved into a mature technology, no longer experimental ready to play its part as the major source of generated energy in Africa. Solar is now the cheapest form of power generation in the world.



What are the benefits of solar?

Clean power

Good for the environment

Cheapest form of power generation in the world

Long term life of equipment (30-40 years)

In Ghana you get on average around 12 hours of sunlight per day as the country is close to the equator

Fast payback on investment (great ROI %)

Use the banks money (pays for itself)

The panels can be installed in a wide range of places

Minimises use of diesel generators



Benefits of Battery Storage

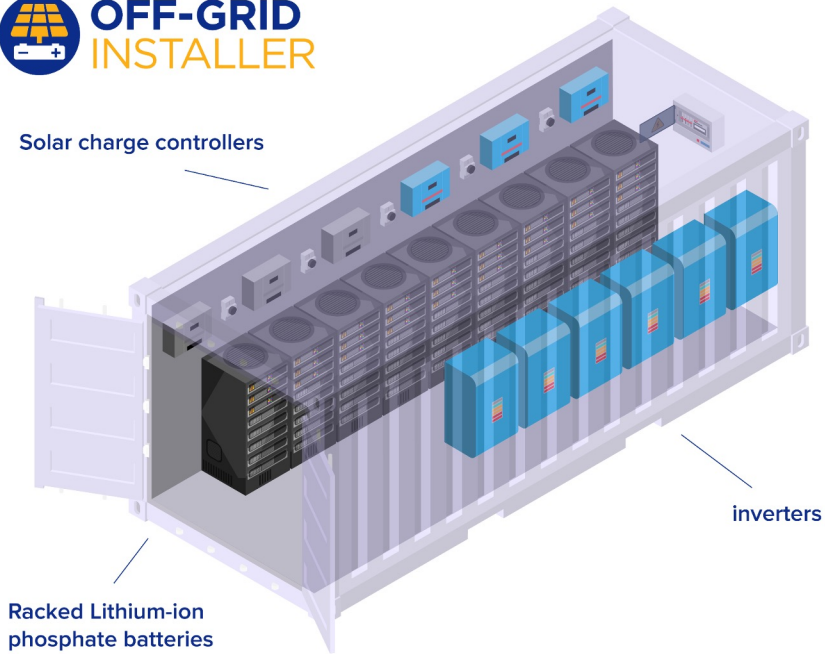
- Can store excess energy and use when there is no sun
- Can be charged during off-peak times and used during peak times
- Can be set-up like a UPS system, making sure your power is always on
- Avoids factory shut down during power outages
- Avoids on using diesel generators
- Make the most out of your solar panels
- Gives you more control of your power
- Containerised battery storage 1mWh to 3mWh



Container system



Solar charge controllers



Racked Lithium-ion phosphate batteries



Where can solar be used in Ghana?

- Residential homes of all sizes
- Mines and mine infrastructure
- Factories and warehousing
- Schools and Hospitals
- Farms
- Churches of all sizes
- Universities
- Villages in even the remotest parts of the country

Example Payback

Significant reduction in power costs for all Ghanaian companies

- Solar costs on average between \$900 and \$1400 per kW of solar installed (without batteries)
- A typical small factory with a 50kW solar array costs \$61,000
- The factory uses 200,000 kWh per annum
- A kw of solar in Ghana generates around 1300 kWh per year
- $50 \times 1300 = 65,000$ kWh per year, generating 32.5% of the power used
- kWh cost for commercial 0.13\$
- $65,000 \times 0.13 = \$8,450$
- $61,000 / 8450 = 7.21$ years = 13.852 % ROI



OFF-GRID
INSTALLER



Who are off-grid installer?

Off-grid installer has engineers with 16 years experience in the field

We design, supply, and oversee local contractors to install the equipment

We have extensive knowledge of Ghana, the International Director of the company lived in Ghana for over 15 years

We have an agent on the ground and contact with a Ghanaian electrical contractor who works with the mining companies

In essence knowledge transfer to Ghanaians

We commission the system alongside local electrical contractors



Any questions?