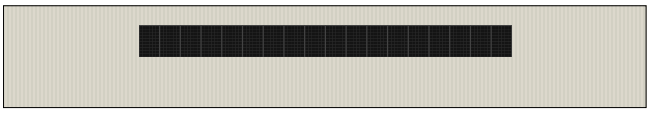
System Overview

Your system comprises **18 Jinko Tiger Neo 440W N-Type All Black Mono solar panels** to collect sunlight and turn it into DC electricity.

The panels will be connected to **1 GivEnergy 11kW 3ph Hybrid PV Battery Inverter inverter**, which converts the DC electricity into mains (AC) electricity.

A GivEnergy 3.4kWh LiFePO4 High Voltage Stackable Battery battery storage system will allow you to store excess energy from sunny days, so that you can use your generated electricity at night too.

We include all the isolators, wiring and meters needed to connect the system safely to your electrical system. Your system will be installed and certified by our trained installation team.





Solar Panels: Jinko Tiger Neo 440W N-Type All Black Mono x 18

Jinko's latest N-Type modules are loaded with features and technologies that deliver a high power performance and guarantee reliability and safety ove...

Model	JKM440N-54HL4R-B
Power	440 watts
Dimensions	1134 x 1762mm



Inverter: GivEnergy 11kW 3ph Hybrid PV Battery Inverter

The 3 phase GivEnergy Hybrid Inverter is a battery inverter and solar inverter in one unit, meaning that the battery is AC and DC coupled.

AC Power	11000 watts
Trackers	2

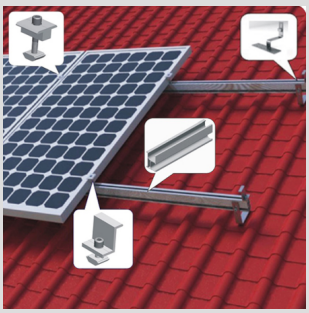
System Components



Battery: GivEnergy 3.4kWh LiFePO4 High Voltage Stackable Battery

GivEnergy's LiFePO4 chemistry is the safest cell technology on the market, offering higher capacity and higher density cells whilst monitoring individ...

Capacity	3.400 kWh
Quantity	6



Mounting: Fastensol pitched roof mounting system

Fastensol are an excellent value, fully MCS accredited choice for pitched roof mounting systems, suitable for the majority of roof types.

Designed for	Other roofs
Colour	Not specified

System Performance

We have made an estimate of the annual energy generation of your system. This takes into account the following factors that affect the output of a solar array.

The location of the system

Sunlight is weaker near the poles than near the equator. We use data from a meteorological model of the intensity of sunlight over the course of the year in different locations all over the world.

The orientation of the system

Solar panels that face south receive a little more sunlight than panels that face east or west. However, in diffuse light the orientation of the panels makes little difference, so the effect is less marked than many people imagine.

The degree of shading

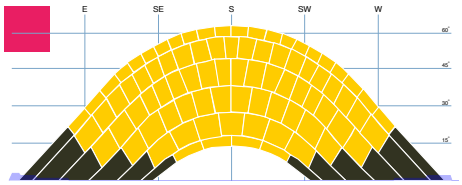
If you have trees, neighbouring buildings or nearby high ground that will shade your PV array, the output of the system will be reduced. We have used a 'sunpath diagram' that estimates how often sunlight will be blocked from reaching the panels.

Roof diagram

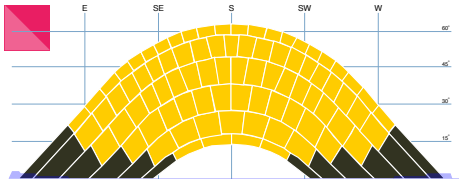


Roof South Orientation: -2° Pitch: 21°

Sunpath diagrams



Shade factor: 1.00 Kk: 861



Shade factor: 1.00 Kk: 861

We expect your system to generate

6,820 kWh per year

Installation data	
Installation capacity of PV system – kWp (stc)	8 kWp
Orientation of the PV system – degrees from South	-2°
Inclination of system (pitch) – degrees from horizontal	21°
Postcode region	Zone 11

Performance Calculations	
kWh/kWp (Kk)	See sunpath diagrams
Shade Factor (SF)	See sunpath diagrams
Estimated output (kWp x Kk x SF)	6820 kWh

Important note: The performance of solar PV systems is impossible to predict with certainty due to the variability in the amount of sunlight from location to location and from year to year. This estimate is based upon a model that takes account of meteorological data at your location and makes an allowance for losses due to shading of the panels. This is a complex calculation however, and no model can be 100% accurate. It should not be considered a guarantee of performance.
If shading is present on your system that will reduce its output to the factor stated. This factor was calculated using industry standard shading methodology and we believe that this will yield results within 10% of the actual energy estimate stated for most systems.

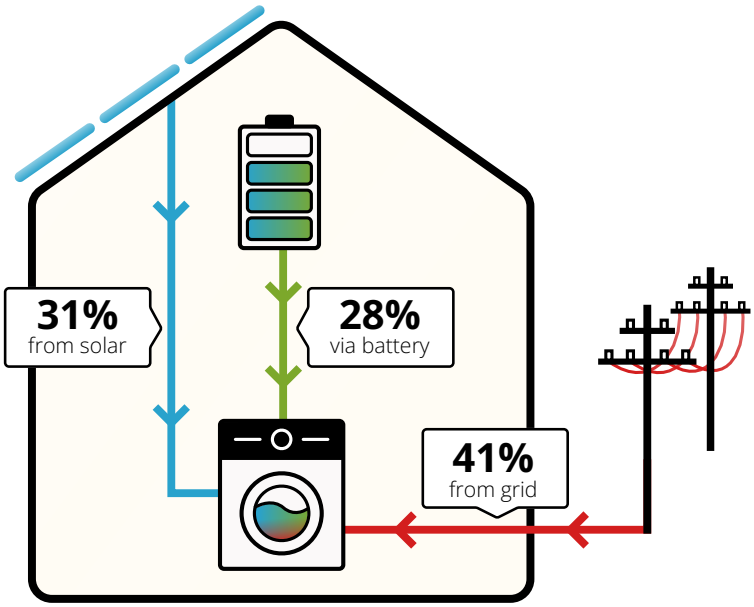
Battery Storage

We have included a 20.4 kWh battery storage unit in this proposal. On sunny days, when your PV array is producing more electricity than you are using in the property, you will be able to store the spare energy and use it at night.

Battery storage systems increase the proportion of electricity generated by a solar PV array that is consumed in the property rather than exported to the grid. Excess solar energy that is not needed during the day can be stored and subsequently used overnight

This leads to financial savings, as you replace expensive imported electricity with electricity generated by your solar panels.

Where will your power come from?



Annual Power Requirement: 6820 kWh

How battery storage reduces your grid dependence

Including battery storage will reduce your grid dependence by an extra 28% compared with a PV-only system. You should only need to buy around 41% of your power from the grid.

59%
total reduction of grid dependence with battery

Estimated PV self-consumption – PV only	
Assumed occupancy archetype	in half the day
Assumed annual domestic electricity consumption	8000 kWh
Expected solar PV self-consumption (PV Only)	2482 kWh
Grid electricity independence / Self-sufficiency (PV Only)	31%
Estimated PV self-consumption – with EESS	
Assumed usable capacity of electrical energy storage device, which is used for self-consumption	20.4 kWh
Expected solar PV self-consumption (with EESS)	4745 kWh
Grid electricity independence / Self-sufficiency (with EESS)	59%

Important note: Rather than using the MCS calculation model we have used an alternative calculation system provided by Easy PV to determine the likely self consumption of your property. This may be because the estimated system output for this solar PV system is over 6000 kWh annually, or has a battery capacity of over 15.1 kWh, or there are other factors that mean this calculation system will be more accurate for your specific solar PV system. We have assumed that your annual electricity consumption is 8000 kWh.

The energy performance and benefits of EESS is impossible to predict with certainty due to the numerous functions a system can be programmed to perform. This estimate is given as guidance only. It should not be considered as a guarantee of performance.