

Your Solar Proposal

Thanks for choosing GJM Energy Ltd to provide a design for a solar PV system at 18 Chiltern Road. We're delighted to supply the attached proposal for a 11.4 kW solar array.

We expect your system to generate 8,698 kWh of clean electricity every year, and save 1,650 kg CO₂ of carbon.

There are full details on the following pages. We hope you enjoy the read!

Kind regards,

Gavin Matthews

GJM Energy Ltd

This proposal is for:

Mr.Chapman

18 Chiltern Road
SG49PJ

Prepared

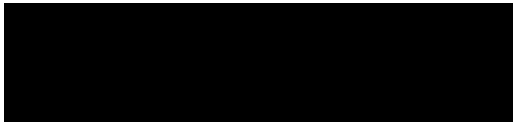
16 July 2026

Valid for

30 days



11.4 kW PV System



8,698 kWh/yr: Annual CO₂ savings
of 1,650 kg



26.3 kWh battery storage

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System Overview

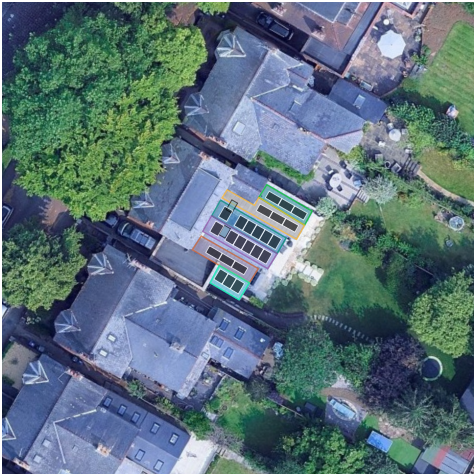
Your system comprises **24 Eurener Nexa 475W All Black TOPCon Mono solar panels** to collect sunlight and turn it into DC electricity.

The panels will be connected to **1 Sigenergy Sigenstor 10kW 1ph Hybrid inverter**, which converts the DC electricity into mains (AC) electricity.

A **Sigenergy 26.3kWh 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.

Satellite Image



Solar Panels: Eurener Nexa 475W All Black TOPCon Mono × 24

Eurener's 475W all black TOPCon panel is a high output and high efficiency panel.

Model	Nexa
Power	475 watts
Dimensions	1134 × 1762mm



Inverter: Sigenergy Sigenstor 10kW 1ph Hybrid

Sigenergy 10kW hybrid inverter for single phase.

AC Power	10000 watts
Trackers	4

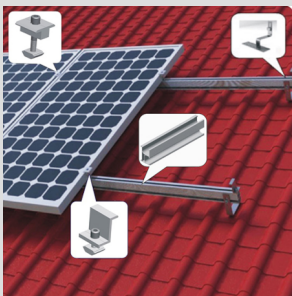
System Components



Battery: Sigenenergy 8.76kWh Battery

Sigenenergy 8.76kWh battery as part of the Sigenenergy SigenStor range.

Capacity	8.760 kWh
Quantity	3



Mounting: Fastensol pitched roof mounting system

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

Designed for	Other roofs
Colour	Black

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.

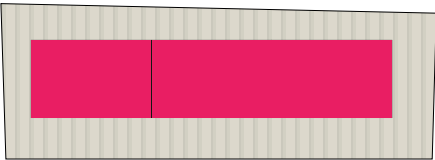
The orientation of the system

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.

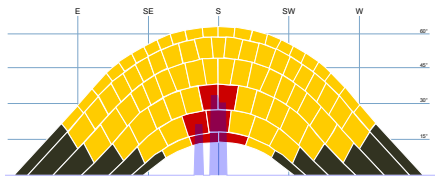
Roof diagrams



Stringing diagrams indicate which solar panels are connected to which inverter inputs.

Full sunpath and stringing diagrams for this system are given on the following page.

Sunpath diagrams



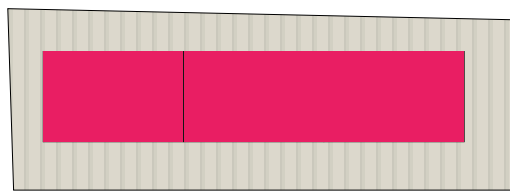
Sunpath diagrams indicate where the sky as seen from the solar array is blocked by neighbouring buildings, chimneys, trees, or other obstructions.

We expect your system to generate
8,157 kWh per year

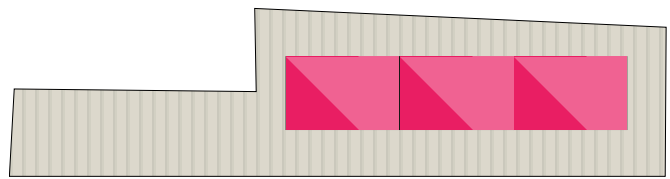
Installation data		
Installation capacity of PV system – kWp (stc)		11.4 kWp
Orientation of the PV system – degrees from South	See roof diagrams	
Inclination of system (pitch) – degrees from horizontal	See roof diagrams	
Postcode region		Zone 1
Performance Calculations		
kWh/kWp (Kk)	See sunpath diagrams	
Shade Factor (SF)	See sunpath diagrams	
Estimated output (kWp × Kk × SF)		8157 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.

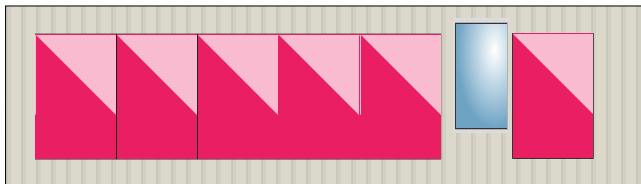
Roof diagrams



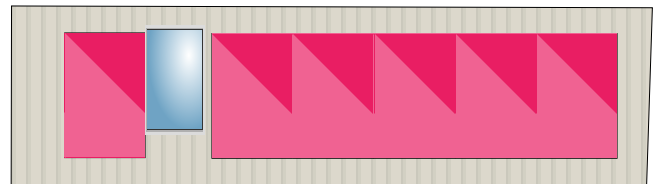
Roof 1 Orientation: -150° Pitch: 33°



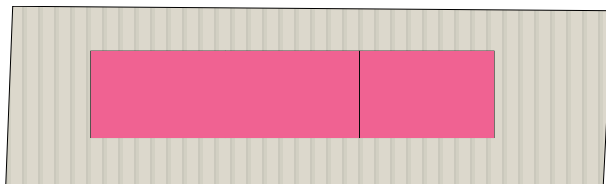
Roof 2 Orientation: 29° Pitch: 33°



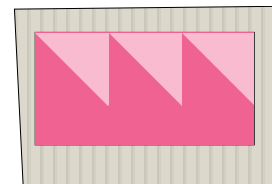
Roof 3 Orientation: -150° Pitch: 33°



Roof 4 Orientation: 30° Pitch: 33°

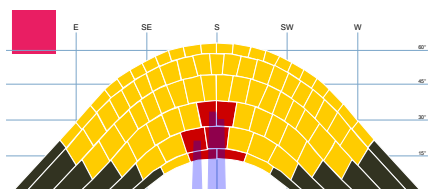


Roof 5 Orientation: -150° Pitch: 33°

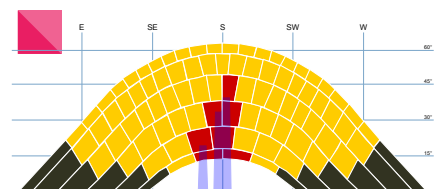


Roof 6 Orientation: 31° Pitch: 33°

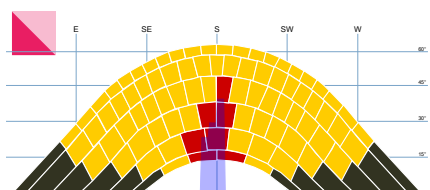
Sunpath diagrams



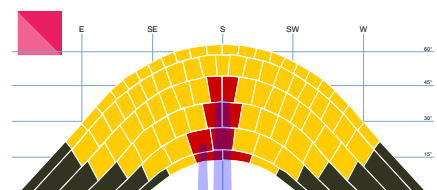
Shade factor: 0.94 Kk: 588



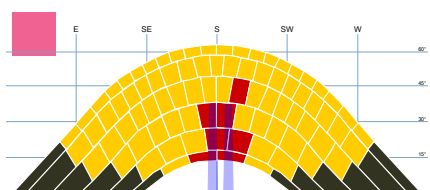
Shade factor: 0.93 Kk: 957



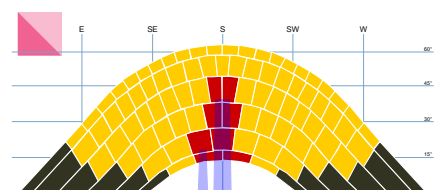
Shade factor: 0.93 Kk: 588



Shade factor: 0.92 Kk: 957



Shade factor: 0.93 Kk: 588



Shade factor: 0.92 Kk: 957

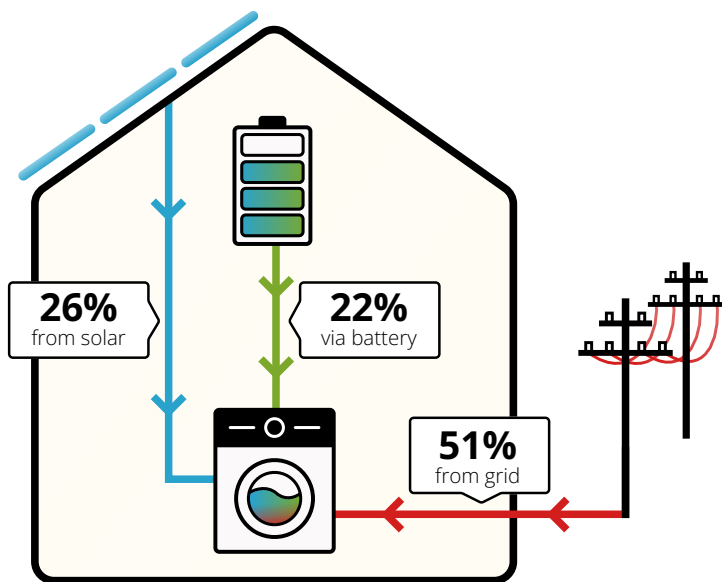
Battery Storage

We have included 26.3 kWh of battery storage 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: 15000 kWh

How battery storage reduces your grid dependence

Including battery storage will reduce your grid dependence by an extra 22% compared with a PV-only system. You should only need to buy around 51% of your power from the grid.

49%
total reduction of grid dependence with battery

Estimated PV self-consumption – PV only	
Assumed occupancy archetype	Home all day
Assumed annual domestic electricity consumption	15000 kWh
Expected solar PV self-consumption (PV Only)	3955 kWh
Grid electricity independence / Self-sufficiency (PV Only)	26%

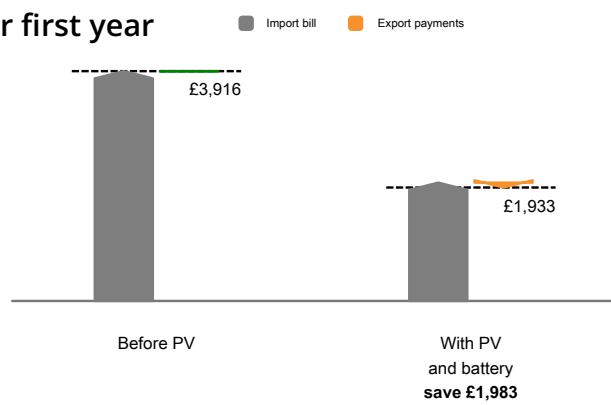
Estimated PV self-consumption – with EESS	
Assumed usable capacity of electrical energy storage device, which is used for self-consumption	26.28 kWh
Expected solar PV self-consumption (with EESS)	7277 kWh
Grid electricity independence / Self-sufficiency (with EESS)	49%

Important note: We have used a model of your system running at high resolution over the course of a year to determine the likely self-consumption of your property and performance of the battery system. The energy performance and benefits of battery systems are impossible to predict with certainty due to the numerous functions battery systems can be programmed to perform. This estimate is given as guidance only. It should not be considered as a guarantee of performance.

Financial Benefits

We have run a detailed model to estimate financial returns from your solar installation over a 25 year period.

Your first year



Your PV system will generate electricity that you would otherwise need to buy from the grid. In the first year of operation, assuming you are on a flat tariff of 26.11 p/kWh, we expect your electricity bill to fall from £3,916 to £2,016 - a saving of £1,900.

You will also export excess electricity to the grid. With a flat export tariff paying 12.00 p/kWh, we expect you to earn £83 from exported electricity in the first year, making the effective cost of electricity for your property £1,933 in the first year.

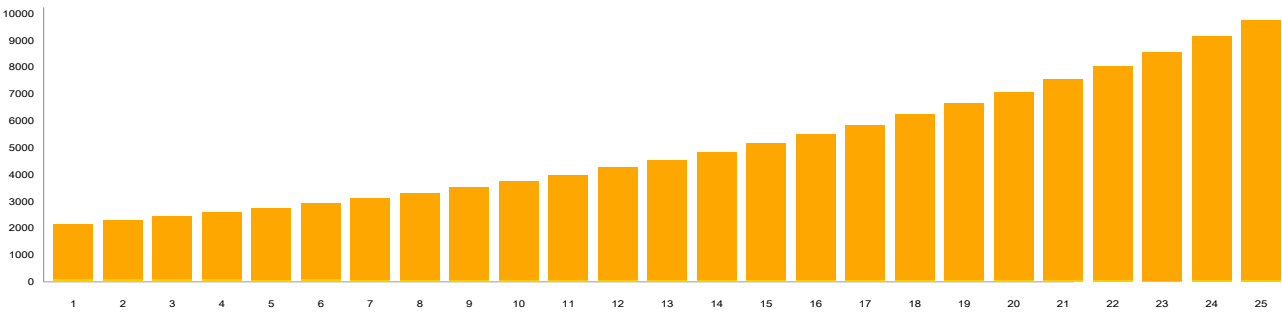
These 'first year' figures have been calculated without allowing for inflation or gradual solar panel degradation. When these are taken into account we can run a full lifetime simulation of benefits, shown in the graph below.

How we calculate your system's financial projections

On the following page we show tables for cumulative income and expenditure over the full lifetime of your system.

Assumptions

Projection length	25 years
Degradation Rate	0.5% per year
Inflation rate	7.04%
Future import tariff:	July Price Cap 26.11 p/kWh increasing with inflation
Existing export tariff:	12p SEG 12.00 p/kWh not increasing with inflation



Environmental Benefits

Your new PV system will supply your property with clean, green electricity - and in sunny periods some will also be exported back to the grid.

Overall you'll be making a big contribution to reducing CO₂ not just by lowering the carbon intensity of your own electricity, but by putting low-carbon electricity back in the grid for others to use too.

Your current electricity supply produces

3,106 kg CO₂
each year

49% will be supplied by solar, saving

1,507 kg CO₂
each year

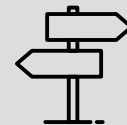
692 kWh will be exported, saving

143 kg CO₂
each year

Total savings

1,650 kg CO₂
each year

**Your yearly CO₂
reduction of 1,650 kg
is equal to...**



**a car ride of 5,893
miles**



**CO₂ absorbed by 76
trees**

Disclaimer: We calculate and compare the likely annual CO₂ emissions for your home based on your generation and usage with the solar PV system detailed in this document versus estimates for a property like yours using energy from the grid. Your actual CO₂ emissions will depend on lots of factors, like how much energy your solar panels generate, how much of this energy you use directly and how much energy you continue to use from the grid. To calculate what these savings equate to in miles driven, we base this on the CO₂ emissions of an average sized diesel car as outlined in the UK government's 'Greenhouse gas reporting: conversion factors 2024' (<https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2024>). To calculate what these savings equate to as the average amount of CO₂ absorbed by trees, we base this on a rate of 22kg per tree per year. Trees absorb anywhere between 10 and 40kg of CO₂ per year on average, depending on a whole host of factors including the species, location, planting density, and age.