YOUR SOLAR QUOTE

Hi RBG.

Thanks for choosing us to provide a design for a solar PV system at Kew, Richmond, London , TW9 3AE.

We're delighted to supply the attached proposal for a 49.155 kW solar array.

We expect your system to generate 44,534 kWh of clean electricity every year, and save 9,456 kg CO_2 of carbon.

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

Kind regards,

Ian Carl dodd

49.16 kW PV System

113 x 435W panels, 1 x Huawei SUN2000 60KTL-M0 3ph & 8 x Enphase IQ Battery 5P

£64,313 inc VAT

Expected payback 6 years. Estimated first year savings £11,134

44,534 kWh/yr

Annual CO2 savings of 9,456 kg

System Overview

Your system comprises **113 Jinko Tiger Neo 435W N-Type All Black Mono solar panels** to collect sunlight and turn it into DC electricity.

The panels will be connected to **1 Huawei SUN2000 60KTL-M0 3ph inverter and 8 Enphase IQ Battery 5P inverters**, which convert the DC electricity into mains (AC) electricity.

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 435W N-Type All Black Mono x 113

No description

Model	
Power	435 watts
Dimensions	1134 x 1762mm

System components

Inverter

Huawei SUN2000 60KTL-M0 3ph

The SUN2000 3ph utility inverter by Huawei combines consistant high efficiency, reduced maintenance and reliable performance for a highly dependable p...

Enphase IQ Battery 5P x 8

All-in-one AC coupled system

System components

Battery

Enphase IQ Battery 5P

All-in-one AC coupled storage with 3.2kVA power

Enphase IQ Battery 5P

All-in-one AC coupled storage with 3.2kVA power

Enphase IQ Battery 5P

All-in-one AC coupled storage with 3.2kVA power

Enphase IQ Battery 5P

All-in-one AC coupled storage with 3.2kVA power

Enphase IQ Battery 5P

All-in-one AC coupled storage with 3.2kVA power

Enphase IQ Battery 5P

All-in-one AC coupled storage with 3.2kVA power

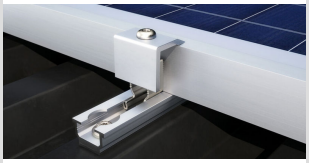
Enphase IQ Battery 5P

All-in-one AC coupled storage with 3.2kVA power

Enphase IQ Battery 5P

All-in-one AC coupled storage with 3.2kVA power

System components



Mounting: Renusol Metasole mounting system

Renusol Metasol mounting system for sheet metal roofs comes with short, non-continuous rails to provide flexibility and save material along the way.

Designed for	Trapezoidal Sheet Metal 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.

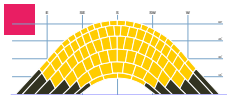
The degree of shading

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.

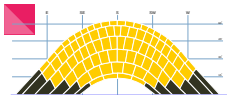
Roof diagram

Roof 1
Orientation: 29°
Pitch: 14°

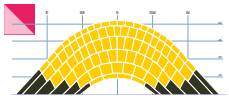
Sunpath diagrams



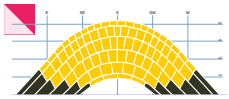
Shade factor: 1.00
Kk: 906



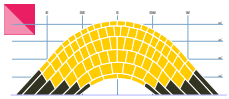
Shade factor: 1.00
Kk: 906



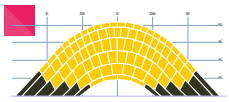
Shade factor: 1.00
Kk: 906



Shade factor: 1.00
Kk: 906



Shade factor: 1.00
Kk: 906



Shade factor: 1.00
Kk: 906

We expect your system to generate

44,534 kWh per year

Installation data

Installation capacity of PV system – kWp (stc)	49 kWp
Orientation of the PV system – degrees from South	29°
Inclination of system (pitch) – degrees from horizontal	14°
Postcode region	Zone 1

Performance Calculations

kWh/kWp (Kk)	See sunpath diagrams
Shade Factor (SF)	See sunpath diagrams
Estimated output (kWp x Kk x SF)	44534 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.

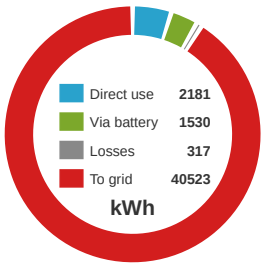
Your energy explained

In addition to the MCS calculation of system output we have run a more detailed model of your system to estimate how much of the electricity generated by the system you are likely to use yourself and how much will go to the grid.

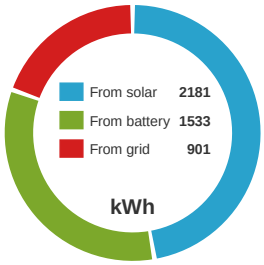
Smart Export Guarantee (SEG) information

The Smart Export Guarantee(SEG) enables Generators to receive payments from electricity suppliers for the electricity they export back to the National Grid, providing specific criteria are met. Your installation will be MCS accredited, which means that you should be able to apply for SEG payments from your electricity supplier. Further details on the SEG and its eligibility requirements, including how to apply, can be found online at ofgem.gov.uk

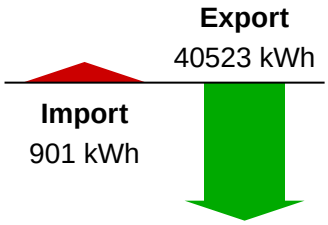
Annual Generation



Annual Consumption

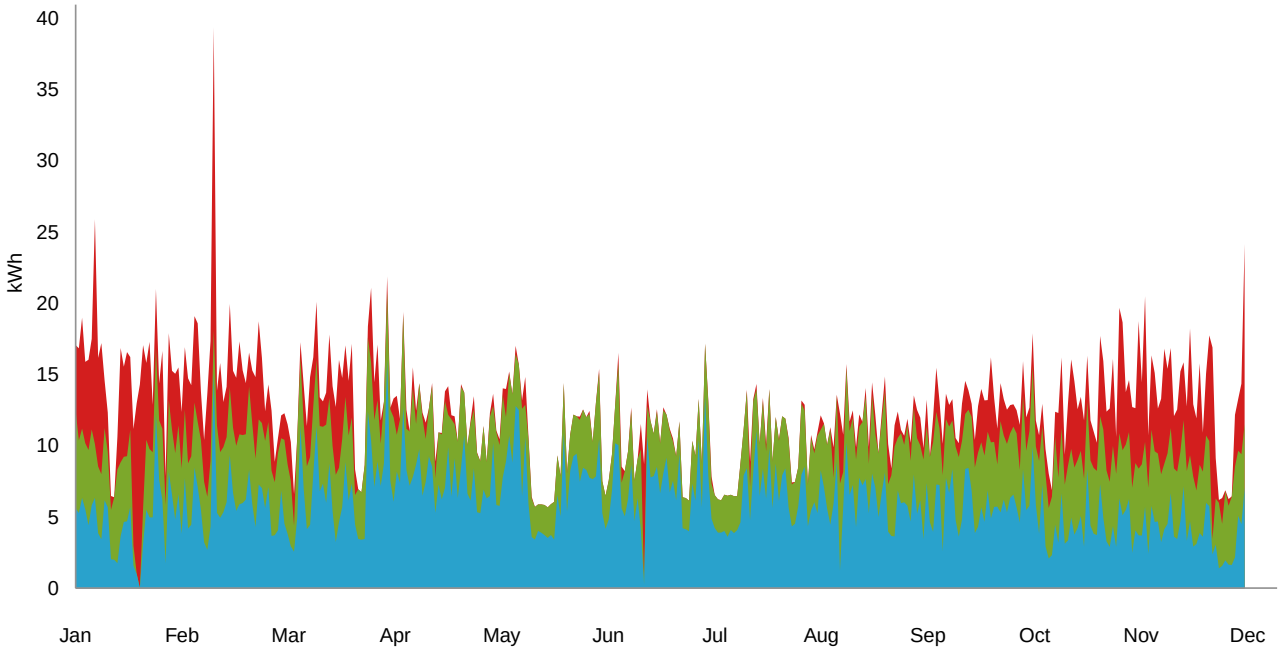


Annual Import/Export



Where your electricity will come from in a typical year

Based on an electricity usage of 4,600 kWh per year, the graph below shows how much electricity used in the property is expected to come directly from the solar panels (blue) , how much is expected to come from battery storage (green), and how much is expected to be imported from the grid (red).



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 CO_2 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

977 kg CO_2 each year

84% will be supplied by solar, saving

819 kg CO_2 each year

40,679 kWh will be exported, saving

8,637 kg CO_2 each year

Total savings

9,456 kg CO_2 each year

Your yearly CO_2 reduction of 9,456 kg is equal to...

a car ride of 33,771 miles

CO_2 absorbed by 434 trees

Disclaimer: We calculate and compare the likely annual CO_2 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 CO_2 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 CO_2 emissions of an average sized diesel car as outlined in the UK government's 'Greenhouse gas reporting: conversion factors 2022' (https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2022). To calculate what these savings equate to as the average amount of CO_2 absorbed by trees, we base this on a rate of 25kg per tree per year. Trees absorbs anywhere between 10 and 40kg of CO_2 per year on average, depending on a whole host of factors including the species, location, planting density, and age.

Quote

RBG KEW
Kew
Richmond
London
TW9 3AE

Quote reference: 863406
Quote date: 13/05/2024
Quote by: Ian Carl dodd
Quote validity: 30 days

Description of goods and services	Price
Goods	
113x Jinko Tiger Neo 435W N-Type All Black Mono solar panel	£9,605.00
Huawei SUN2000 60KTL-M0 3ph inverter	£1,875.00
8x Enphase IQ Battery 5P inverter	£23,000.00
Landis and Gyr ZMD410 3ph Meter	£468.75
9x Label sheet	£20.25
OWL Intuition	£105.00
GivEnergy LoRa LCD Wireless Modbus Pair (Programmable Channels)	£150.00
Enphase Communications Kit 2 INT	£135.00
BirdBlocker 125mm evo for Solar Panels	£131.94
WISKA 6 Way Indubox Enclosure	£33.75
CU-03 Cudis IP65 Enclosure	£18.75
WCED 16 Way Enclosure	£40.72
2x AC isolator - IMO - 100A 4-pole	£162.50
6x K&N DC isolator - KGD40B-8	£551.10
12x MC4 4mm Connector Pair	£32.10
16x AC isolator - IMO - 20A 4-pole	£224.00
3x 50m reel of 4mm2 solar cable	£112.50
212x Metasole flat channel (landscape)	£795.00
148x Renusol end clamp (black)	£351.50
152x Renusol mid clamp (black)	£361.00
88x Metasole flat channel (portrait)	£550.00
8x Renusol Metasole+ screw (box of 100)	£590.00
Goods total	**£39,313.86**

Services	
INSTALL - APPROX 7 DAYS	£25,000.00
Services total	**£25,000.00**

Total before VAT	£64,313.86
VAT at 0%	£0.00
Total including VAT	**£64,313.86**

Order form

To proceed with this order please sign below to acknowledge that you have read and accept the information contained within this quote document and our terms and conditions.

Customer signature **Customer name** **Date**

_____ _____ _____