

Prepared by: Sureserve**For:** 33 Siward Road, London, N17
7PJQuote #:
Valid until:

Solar Energy System Proposal

Thank you for the opportunity to present your Solar Energy System Proposal.

Best Regards,

Caroline Robinson

Sureserve Energy Services UK Limited

Recommended System Option

2.7_{kW}	£317	£0	£0
System Size	Estimated Annual Electricity Bill Savings	Total System Price	Net System Price



Your Solution

Solar Panels

Hengdian Group DMEGC Magnetics

2.7 kW Total Module Power

6 x 450 Watt Panels (DM450M10RT-B54HBT)

1,692 kWh per year

Solar Roof Pro Rail 3500mm

Solar Roof Pro Rail 3500mm

6 x ER-R-PR03500

Clenergy Self-drilling Universal Wood Screw 14-11 x 70 Hex Head

Clenergy Self-drilling Universal Wood Screw 14-11 x 70 Hex Head

36 x ER-US-6.3-70-BW-BX

Solis S6 String inverter - 1PH DC (2.5-6kW)

2.5kW of Inverter Power

SOLIS

1 x S6-GR1P2.5K

5.0 -year Standard Warranty



Universal Clamp 30-46mm with Grounding Black Anodised

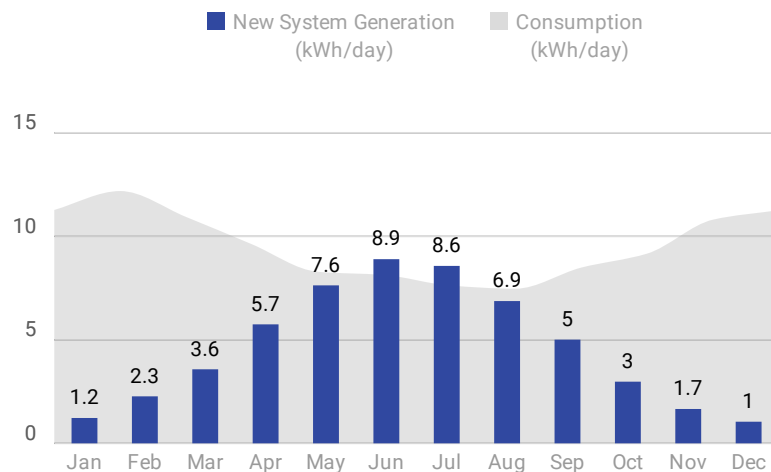
Universal Clamp 30-46mm with Grounding Black Anodised

18 x CLMC-U/30/46-G/BA

Warranties: 25 Year Panel Product Warranty, 30 Year Panel Performance Warranty, 5 Year Inverter Product Warranty

System Performance

48%
Energy From Solar



System Performance Assumptions: System Total losses: 0%, Inverter losses: 0%, Optimizer losses: 0%, Shading losses: 18.7%, Performance Adjustment: 0%, Output Calculator: MCS. Panel Orientations: 2 panels with Azimuth 272 and Slope 39, 4 panels with Azimuth 92 and Slope 39.

The performance of solar PV systems is impossible to predict with certainty due to the variability in the amount of solar radiation (sunlight) from location to location and from year to year. This estimate is based upon the standard MCS procedure is given as guidance only. It should not be considered as a guarantee of performance. The solar PV self-consumption has been calculated in accordance with the most relevant methodology for your system. There are a number of external factors that can have a significant effect on the amount of energy that will be self-consumed.

Shading will be present on your system that will reduce its output to the factor stated. This factor was NOT calculated using the MCS shading methodology, but we can confirm that the system as quoted, taking into account the shading present, will deliver at least 90% of the energy (in kWh) as set out in this performance estimate.

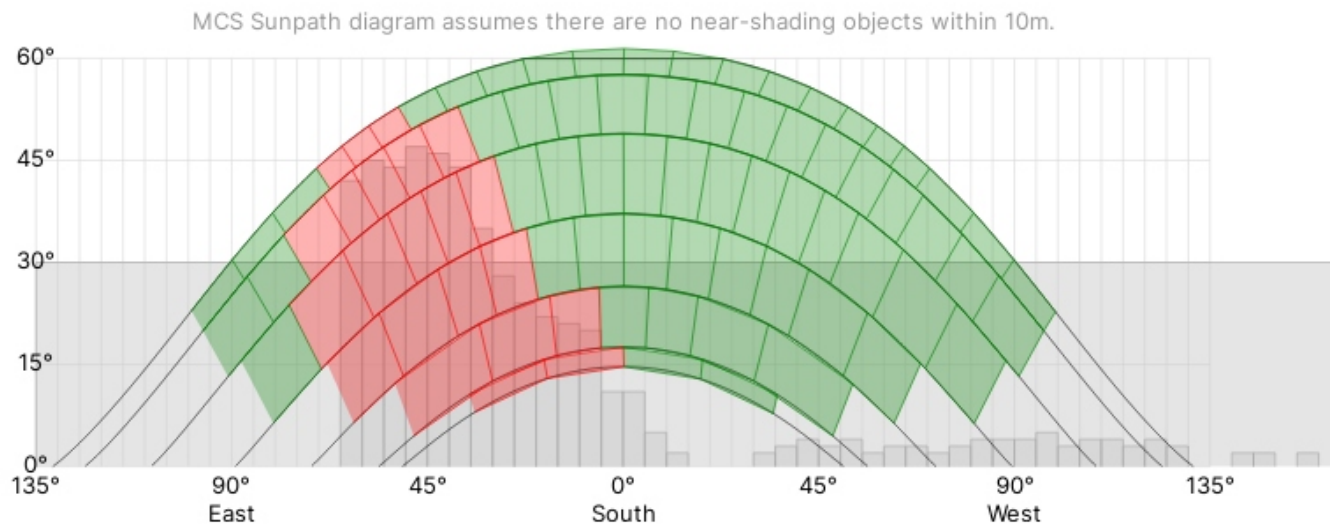
This system performance calculation has been undertaken using estimated values for array orientation, inclination, or shading. Actual performance may be significantly lower or higher if the characteristics of the installed system vary from the estimated values.

A. Installation data		
Installed capacity of PV system - kWp (stc)	2.700	kWp
Orientation of the PV system - degrees from South	Group 1: 2 panels with Orientation: 90 ° Group 2: 4 panels with Orientation: 90 °	°
Inclination of system - degrees from horizontal	Group 1: 2 panels with Tilt: 39° Group 2: 4 panels with Tilt: 39°	°
Postcode region	1	
B. Performance calculations		
kWh/kWp (Kk) from table	Group 1: 771 Group 2: 771	kWh/kWp
Shade Factor (SF)	0.813	
Estimated annual output (kWp x Kk x SF)	1,692	kWh

C. Estimated PV self-consumption - PV Only		
Assumed occupancy archetype	In Half Day	
Assumed annual electricity consumption, kWh	3,500.00	kWh
Assumed annual electricity generation from solar PV system, kWh	1,692	kWh
Expected solar PV self-consumption (PV Only)	659.89	kWh
Grid electricity independence / Self-sufficiency (PV Only)	18.85	%

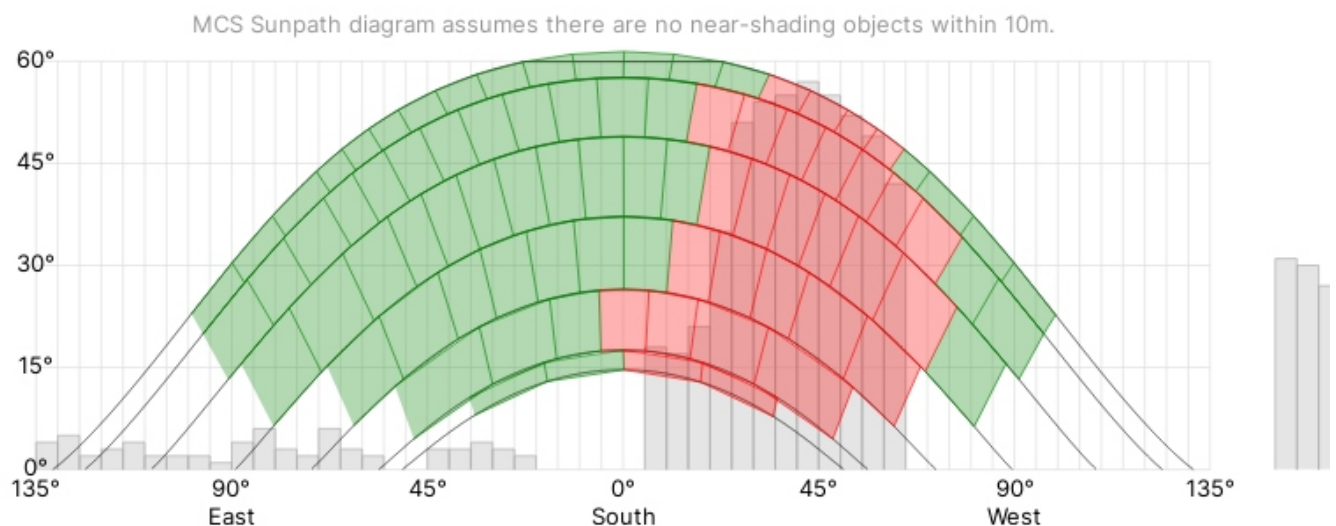
Sunpath Diagram

Disclaimer: The shade mask mapped onto the sunpath diagram is based off the field of view from a point in the center of the array. This means that the shade mask shown will only capture the shading experienced at the array center point, and will not reflect the shading casted onto other locations on the array.



Sunpath Diagram

Disclaimer: The shade mask mapped onto the sunpath diagram is based off the field of view from a point in the center of the array. This means that the shade mask shown will only capture the shading experienced at the array center point, and will not reflect the shading casted onto other locations on the array.



Environmental Benefits

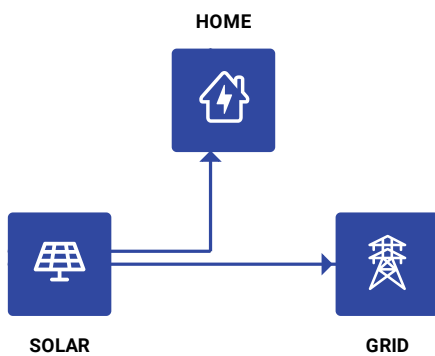
Solar has no emissions. It just silently generates pure, clean energy.



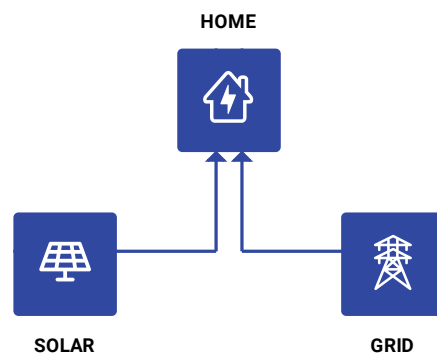
Each Year		Over System Lifetime		
48%	0.4 ^{tons}	12,808 ^{km}	82	9
Consumption Offset	of CO ₂ reduced per year	Car distance avoided (lifetime)	Trees planted	Long haul flights avoided

How your system works

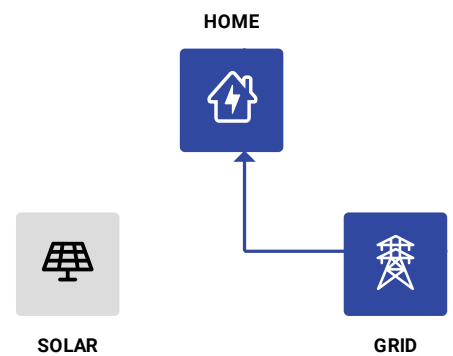
Generating Excess Solar



Partially Offset Usage

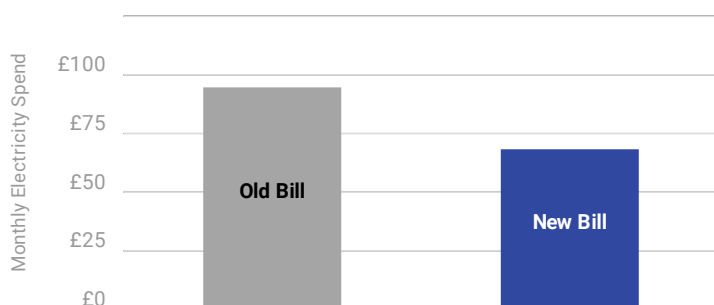


Night

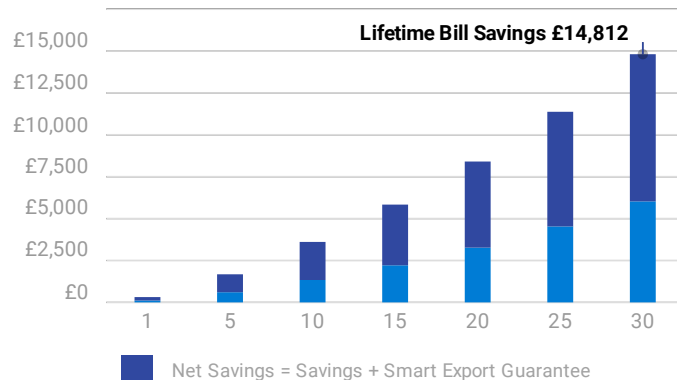


Electricity Bill Savings

First Year Monthly Bill Savings



Cumulative Bill Savings



Month	Solar Generation (kWh)	Net Grid Consumption before new system (kWh)	Electricity Imported after new system (kWh)	Electricity Exported after new system (kWh)	Export Credit (£)	Utility Bill before new system (£)	Utility Bill after new system (£)	Estimated Savings (£)
Jan	38	350	316	5	0	110	102	9
Feb	64	341	293	15	1	107	92	15
Mar	111	339	273	45	4	108	83	24
Apr	172	289	224	108	11	94	61	33
May	237	257	190	170	19	86	44	42
Jun	267	244	173	195	22	82	35	46
Jul	266	236	168	197	22	80	34	46
Aug	213	232	172	154	17	79	41	38
Sep	150	255	199	95	10	85	57	27
Oct	92	284	232	40	4	93	75	18
Nov	50	324	283	9	1	103	92	11
Dec	32	349	317	0	0	110	102	8

Rate not specified specified, using Octopus Flux S Scotland - Jul 25 based on location.

Your projected energy cost is calculated by considering a 2.7% increase in energy cost each year, due to trends in the raising cost of energy. This estimate is based on your selected preferences, current energy costs and the position and orientation of your roof to calculate the efficiency of the system. Projections are based on estimated usage of 3500 kWh per year, assuming Octopus Flux S Scotland - Jul 25 Electricity Tariff.

Your electricity tariff rates may change as a result of installing the system. You should contact your electricity retailer for further information.

Proposed Tariff Details - Octopus Energy Octopus Flux S Scotland - Jul 25

Energy Charges

Peak Import

4pm-7pm Mon-Sun

£0.36 / kWh

Standard Import

5am-4pm & 7pm-2am Mon-Sun

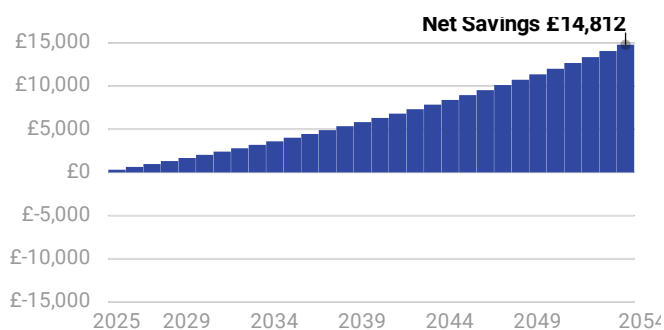
£0.26 / kWh

Flux Import <i>2am-5am Mon-Sun</i>	£0.15 / kWh
Smart Export Guarantee	
Peak Export <i>4pm-7pm Mon-Sun</i>	£0.27 / kWh
Standard Export <i>5am-4pm & 7pm-2am Mon-Sun</i>	£0.10 / kWh
Flux Export <i>2am-5am Mon-Sun</i>	£0.04 / kWh
Fixed Charges	
Standing Charge	£0.54 / day

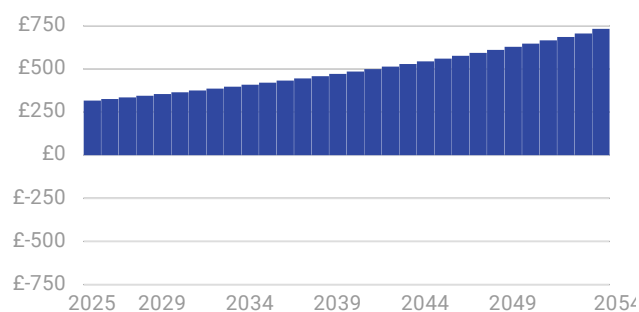
Net Financial Impact Cash

$$\begin{array}{rclcl}
 \text{£14,812} & - & \text{£0} & = & \text{£14,812} \\
 \text{Utility Bill Savings} & & \text{Net System Cost} & & \text{Estimated Net Savings}
 \end{array}$$

Cumulative Savings From Going Solar



Annual Savings From Going Solar



Estimates do not include replacement costs of equipment not covered by a warranty. Components may need replacement after their warranty period. Financial discount rate assumed: 6.75%

Quotation

Payment Option: Cash

6 x Hengdian Group DMEGC Magnetics 450 Watt Panels (DM450M10RT-B54HBT)
1 x S6-GR1P2.5K (SOLIS)
6 x ER-R-PRO3500, 36 x ER-US-6.3-70-BW-BX, 18 x CLMC-U/30/46-G/BA

Total System Price

£0.00 Excluding £0.00 VAT**Purchase Price****£0.00** Including £0.00 VAT

Price excludes Retailer Smart Meter should you want us to install your Smart Meter it will be an additional cost.
This proposal is valid until 25th December 2025.

Quote Acceptance

I have read & accept the terms and conditions.

Signature

Name

Date



This proposal has been prepared by Sureserve Energy Services UK Limited using tools from OpenSolar. Please visit www.opensolar.com/proposal-disclaimer for additional disclosures from OpenSolar.

S6-GR1P(2.5-6)K

Solis Single Phase Inverters



360 degree

Features:

- ▶ Max. efficiency 97.7%
- ▶ String current up to **14A**
- ▶ Super high frequency switching technology
- ▶ Wide voltage range and low startup voltage
- ▶ 2 MPPT design with precise MPPT algorithm
- ▶ Integrated Export Power Manager (EPM)
- ▶ Integrated AFCI (DC arc-fault circuit protection)
- ▶ Compact and lightweight
- ▶ Friendly and adaptable connection to the grid



Model:

S6-GR1P2.5K	S6-GR1P3K	S6-GR1P3.6K
S6-GR1P4K	S6-GR1P4.6K	S6-GR1P5K
S6-GR1P6K		

Datasheet

Model Name	S6-GR1P2.5K	S6-GR1P3K	S6-GR1P3.6K	S6-GR1P4K	S6-GR1P4.6K	S6-GR1P5K	S6-GR1P6K
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Input DC

Recommended max. PV power	3.75 kW	4.5 kW	5.4 kW	6 kW	6.9 kW	7.5 kW	9 kW
Max. input voltage	550 V	600 V					
Rated voltage	250 V	330 V					
Start-up voltage	60 V	120 V					
MPPT voltage range	50-450 V	90-520 V					
Max. input current				14 A / 14 A			
Max. short circuit current				22 A / 22 A			
MPPT number/Max. input strings number				2/2			

Output AC

Rated output power	2.5 kW	3 kW	3.6 kW	4 kW	4.6 kW	5 kW	6 kW
Max. apparent output power	2.8 kVA	3.3 kVA	4 kVA	4.4 kVA	5 kVA	5 kVA	6 kVA
Max. output power	2.8 kW	3.3 kW	4 kW	4.4 kW	5 kW	5 kW	6 kW
Rated grid voltage	1/N/PE, 220 V / 230 V						
Rated grid frequency	50 Hz / 60 Hz						
Rated grid output current	11.4 A / 10.9 A	13.6 A / 13.0 A	16.0 A / 15.7 A	18.2 A / 17.4 A	20.9 A / 20.0 A	22.7 A / 21.7 A	27.3 A
Max. output current	13.3 A	15.7 A	16.0 A	21.0 A	23.8 A	25.0 A	27.3 A
Power Factor	>0.99 (0.8 leading - 0.8 lagging)						
THDi	<3%						

Efficiency

Max. efficiency	97.3%	97.3%	97.6%	97.7%
EU efficiency	96.5%	96.6%	97.1%	97.1%

Protection

DC reverse-polarity protection	Yes
Short circuit protection	Yes
Output over current protection	Yes
Surge protection	Yes
Grid monitoring	Yes
Anti-islanding protection	Yes
Temperature protection	Yes
Integrated AFCI (DC arc-fault circuit protection)	Yes ⁽¹⁾
Integrated DC switch	Optional

General Data

Dimensions (W*H*D)	310*543*160 mm		
Weight	11 kg	11.2 kg	12 kg
Topology	Transformerless		
Self consumption (night)	<1 W		
Operating ambient temperature range	-25 ~ +60°C		
Relative humidity	0-100%		
Ingress protection	IP66		
Cooling concept	Natural convection		
Max. operation altitude	4000 m		
Grid connection standard	G98 or G99, VDE-AR-N 4105 / VDE V 0124, EN 50549-1, VDE 0126 / UTE C 15 / VFR:2019, RD 1699 / RD 244 / UNE 206006 / UNE 206007-1, CEI 0-21, C10/11, NRS 097-2-1, TOR, EIFS 2018.2, IEC 62116, IEC 61727, IEC 60068, IEC 61683, EN 50530, MEA, PEA		
Safety/EMC standard	IEC/EN 62109-1/-2, IEC/EN 61000-6-2/-3		

Features

DC connection	MC4 connector
AC connection	Quick connection plug
Display	LCD
Communication	RS485, Optional: Wi-Fi, GPRS

(1) Activation required.