

Prepared by: Thomas Clark
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For: Jeff
Redcross Lane, Bristol

Quote #: 1707301
Valid until: 16th March 2023



Solar Energy System Proposal

Dear Jeff,

Thank you for showing interest in Green Flare for your current and future Renewable Energy requirements.

Please see your Solar Panel Installation Quotation, which is an interactive overview of this Quotation, allowing you to see various bits of information about how this will impact your energy usage and energy bills moving forward, as well as lots of other information.

Have a look over this information, and let me know if you have any questions.

You can accept this quote on this website, so we can get your installation booked in, or you can do this by email if that is easier.

Best Regards,
Thomas Clark
Green Flare



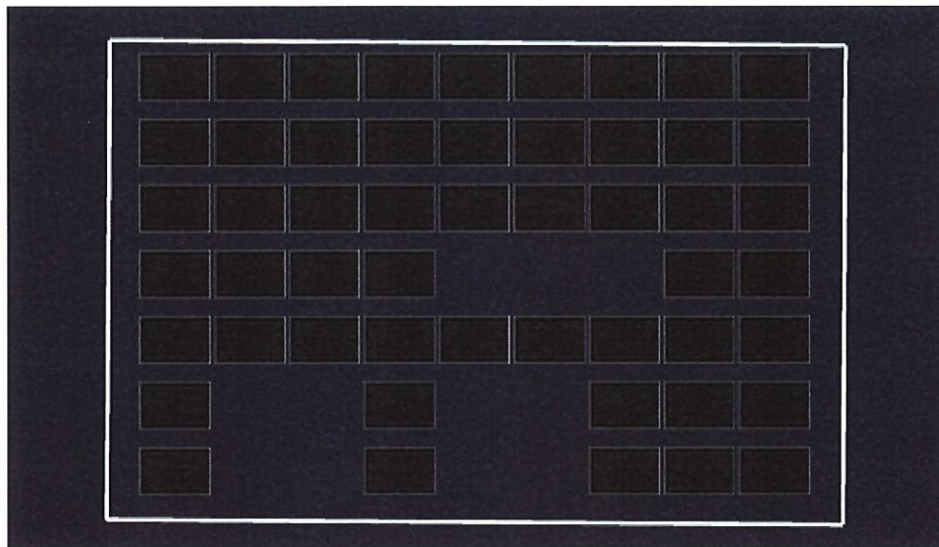
Recommended System Option

22.62 kW
System Size

£2,685
Estimated Annual
Electricity Bill Savings

£0
Total System Price

£0
Net System Price



Your Solution

JAM54D41 LB

22.620kW of Solar Power
52 x JAM54D41-435/LB
435 Watt panels
25 Year Product Warranty & 30 Year Linear
Performance Warranty
16,505kWh per year

JASOLAR



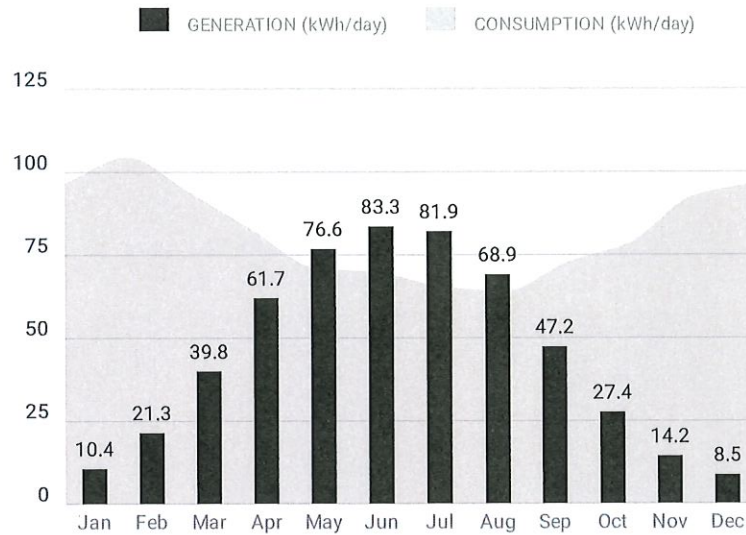
Inverter

Fox Ess
23.000 kW Total Inverter Rating
1 x T23-G3

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

System Performance

55%
Energy From Solar



56%
Self-consumption

44%
Export to grid

System Performance Assumptions: System Total losses: 29.6%, Inverter losses: 2.2%, Optimizer losses: 0%, Shading losses: 8.4%, Performance Adjustment: 0%, Output Calculator: System Advisor Model 2020.02.29.r2. Panel Orientations: 52 panels with Azimuth 270 and Slope 20.

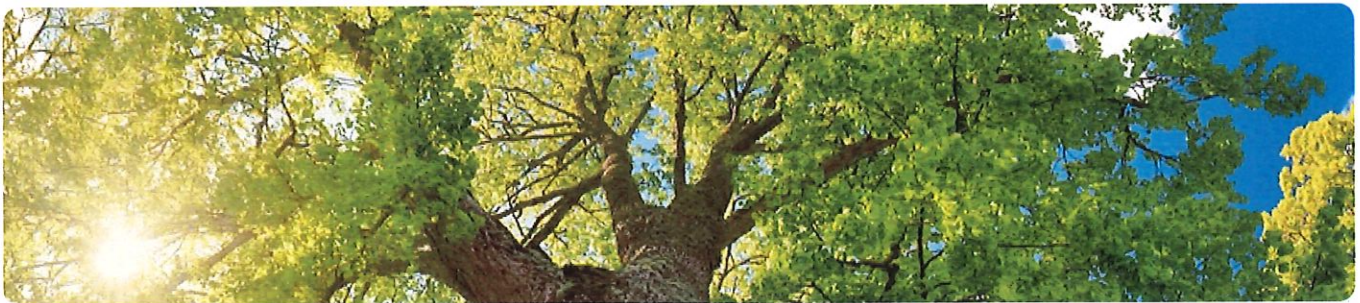
The MCS output (MIS 3002) and self-consumption (MGD 003) calculation methodology was not used in calculating the numbers in the table below. An alternative calculator System Advisor Model 2020.02.29.r2 was used.

A. Installation data		
Installed capacity of PV system - kWp (stc)	22.62	kWp
Orientation of the PV system - degrees from South	Group 1: 52 panels with Orientation: 90 °	°
Inclination of system - degrees from horizontal	Group 1: 52 panels with Tilt: 20°	°
Postcode region	5E	
B. Performance calculations		
kWh/kWp (Kk)	796.6	kWh/kWp
Shade Factor (SF)	0.91	
Estimated annual output (kWp x Kk x SF)	16,505	kWh

C. Estimated PV self-consumption - PV Only		
Assumed occupancy archetype	In Half Day	
Assumed annual electricity consumption, kWh	30,000.00	kWh
Assumed annual electricity generation from solar PV system, kWh	16,505	kWh
Expected solar PV self-consumption (PV Only)	9,202.51	kWh
Grid electricity independence / Self-sufficiency (PV Only)	30.68	%

Environmental Benefits

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



Each Year

55%
Of CO₂, SO_x & NO_x

4 tons
Avoided CO₂ per year

Over System Lifetime

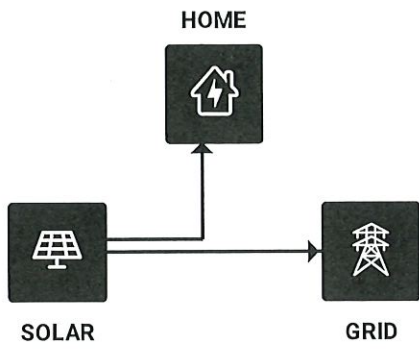
124,941
Car km avoided

803
Trees planted

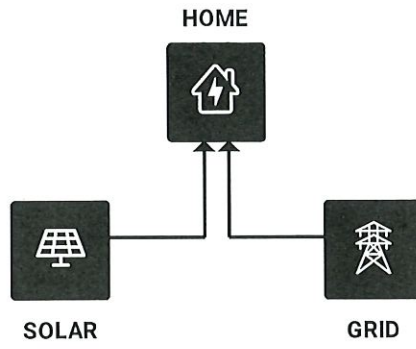
89
Long haul flights
avoided

How your system works

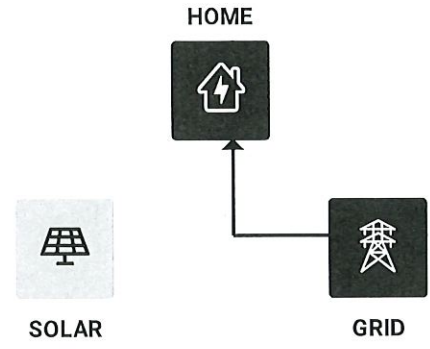
Generating Excess Solar



Partially Offset Usage

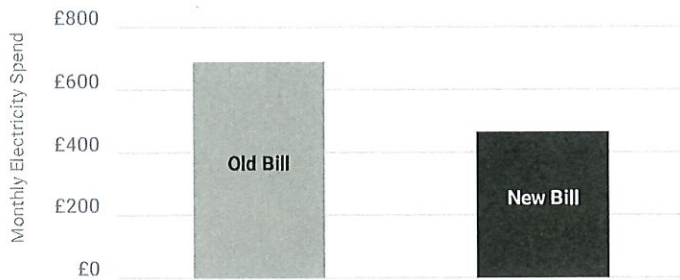


Night

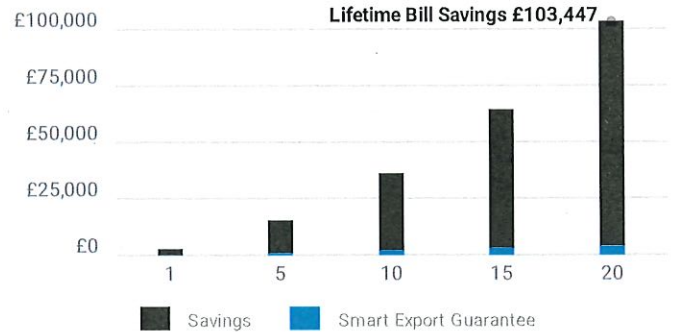


Electricity Bill Savings

First Year Monthly Bill Savings



Cumulative Bill Savings



Month	Solar Generation (kWh)	Electricity Consumption before solar (kWh)	Electricity Imported after solar (kWh)	Electricity Exported after solar (kWh)	Export Credit (£)	Utility Bill before solar (£)	Utility Bill after solar (£)	Estimated Savings (£)
Jan	324	2,996	2,674	2	0	821	735	86
Feb	596	2,926	2,354	24	1	802	648	154
Mar	1,233	2,907	2,009	335	10	797	547	251
Apr	1,852	2,474	1,439	817	25	681	379	302
May	2,374	2,202	1,110	1,281	38	609	277	331
Jun	2,500	2,093	992	1,400	42	579	242	337
Jul	2,537	2,027	949	1,460	44	561	229	333
Aug	2,135	1,985	1,042	1,192	36	550	262	288
Sep	1,415	2,183	1,355	587	18	603	364	240
Oct	849	2,436	1,774	188	6	671	488	183
Nov	426	2,779	2,369	16	0	763	653	110
Dec	264	2,993	2,729	0	0	821	750	71

Rate not specified specified, using Electricity based on location.

Your projected energy cost is calculated by considering a 7.0% 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 30000 kWh per year, assuming Electricity 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 - E.ON Electricity (Scotland)

Energy Charges

Usage Charge
All Day

£0.27 / kWh

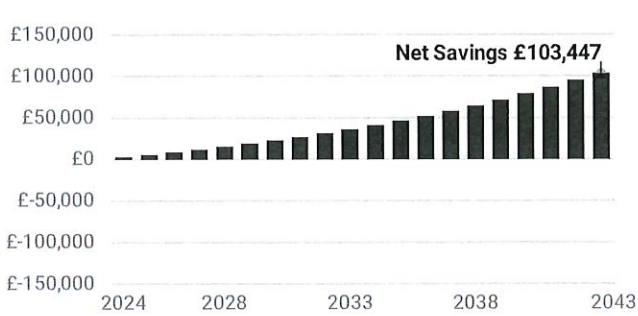
Smart Export Guarantee

Feed-In Credit <i>All Day</i>	£0.03 / kWh
Fixed Charges	
Fixed Charge	£18.29 / month

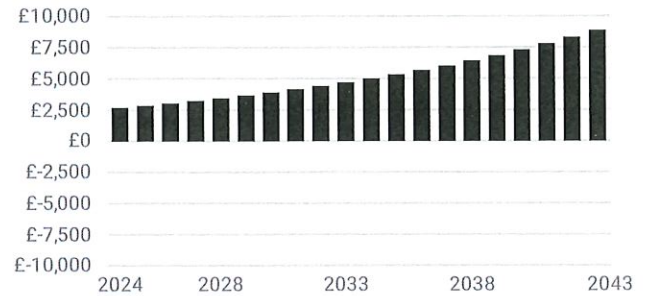
Net Financial Impact Cash

£103,447 - £0 = £103,447
 Utility Bill Savings Net System Cost Estimated Net Savings

Cumulative Savings From Going Solar



Annual Savings From Going Solar



£48,825

Net Present Value

Year	Electricity Consumption (kWh)	Solar Generation (kWh)	Utility Bill (before solar) (£)	Utility Bill (after solar) (£)	Annual Savings (from solar) (£)	System Costs (Net of Dealer Incentives) (£)	Customer Incentives (Upfront) (£)	Net Savings (£)	Cumulative Impacts (£)
2024	30,000	16,505	8,259	5,574	2,685	0	0	2685	2685
2025	30,000	16,439	8,838	5,985	2,853	0	0	2852	5538
2026	30,000	16,373	9,456	6,425	3,032	0	0	3031	8569
2027	30,000	16,307	10,118	6,896	3,223	0	0	3222	11792
2028	30,000	16,241	10,826	7,399	3,427	0	0	3427	15219
2029	30,000	16,175	11,584	7,939	3,645	0	0	3645	18864
2030	30,000	16,109	12,395	8,516	3,879	0	0	3878	22743
2031	30,000	16,043	13,263	9,135	4,128	0	0	4128	26871
2032	30,000	15,977	14,191	9,796	4,395	0	0	4394	31266
2033	30,000	15,911	15,185	10,505	4,680	0	0	4679	35946
2034	30,000	15,845	16,248	11,263	4,984	0	0	4984	40930
2035	30,000	15,779	17,385	12,075	5,310	0	0	5309	46240
2036	30,000	15,713	18,602	12,945	5,657	0	0	5657	51897
2037	30,000	15,647	19,904	13,876	6,029	0	0	6028	57926
2038	30,000	15,581	21,297	14,872	6,425	0	0	6425	64351

Year	Electricity Consumption (kWh)	Solar Generation (kWh)	Utility Bill (before solar) (£)	Utility Bill (after solar) (£)	Annual Savings (from solar) (£)	System Costs (Net of Dealer Incentives) (£)	Customer Incentives (Upfront) (£)	Net Savings (£)	Cumulative Impacts (£)
2039	30,000	15,515	22,788	15,939	6,849	0	0	6849	71200
2040	30,000	15,449	24,383	17,081	7,302	0	0	7302	78502
2041	30,000	15,383	26,090	18,304	7,786	0	0	7786	86288
2042	30,000	15,317	27,916	19,614	8,303	0	0	8302	94591
2043	30,000	15,251	29,871	21,015	8,855	0	0	8855	103447

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

52 x JAM54D41-435/LB 435 Watt Panels (JA Solar) 1 x T23-G3 (Fox Ess) Tilt Racks (52 panels)	
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 16th March 2023.

Quote Acceptance

I have read & accept the terms and conditions.

Signature _____

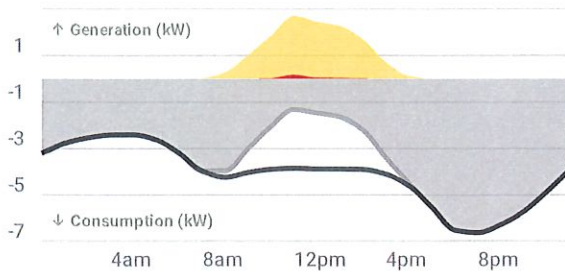
Name _____

Date _____

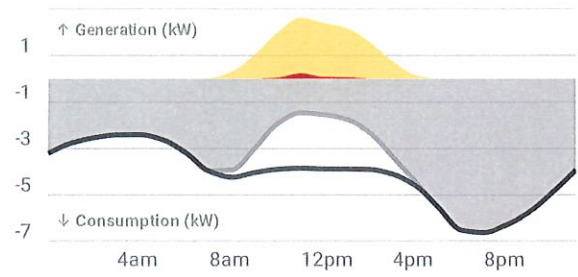
Daily Energy Flows

CONSUMPTION (kWh)
 GENERATION (kWh)
 NET CONSUMPTION (kWh)
 EXPORT TO GRID (kWh)

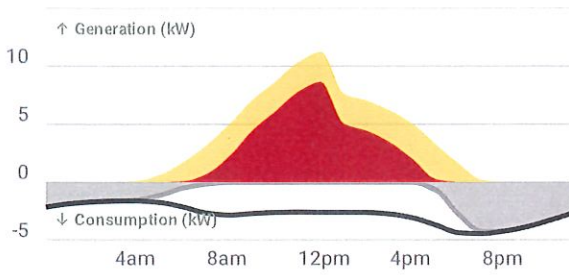
Winter Weekday



Winter Weekend



Summer Weekday



Summer Weekend

