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**For: Noemi Ripert**  
The Queens Hall, High Street, Cuckfield

Quote #: 3835159  
Valid until: 13th May 2024



## Proposed Solar Energy System

Dear Noemi,

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

On the following pages, you will see your bespoke system design and cost benefits. We have not only chosen a system that we feel will perform best now, but one that will last and out perform others.

Should you wish to look at other more cost effective options, then please let us know.

We offer flexible finance solutions for all customers.

Best Regards

**ARK Charge**





### System Cost Benefits

**£5,678**

Estimated Annual  
Electricity Bill Savings

**3 Years  
7 Months**

Payback

**31.8%**

Rate of Return on  
Investment

**£220,956**

Lifetime Electricity Bill  
Savings



## Proposed Solar Components

### Solar Panels

**Jinko Solar Co., Ltd.**

**21.750 kW** Total Solar Power

**50 x 435 Watt Panels** (JKM435N-54HL4R-B)

**22,558 kWh** per year

### Inverter

**Fox Ess**

**20.000 kW** Total Inverter Rating

1 x H3-Pro-20.0

### Middle clamp+

Middle clamp+

88 x 420082

### End Cap RIGHT / LEFT (black) 50x37

End Cap RIGHT / LEFT (black) 50x37

12 x 920043

### VS+ Mounting rail 41 x 35 x 3300 mm

VS+ Mounting rail 41 x 35 x 3300 mm

37 x 400524

### End clamp+

End clamp+

24 x 420081

### VS+ Rail connector 41 x 35

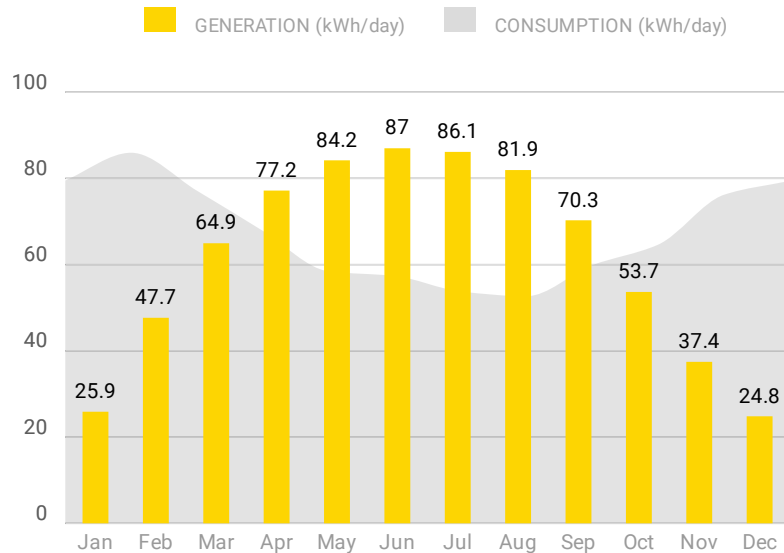
VS+ Rail connector 41 x 35

30 x 400531

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

## System Performance

**91%**  
Energy From Solar



System Performance Assumptions: System Total losses: 0%, Inverter losses: 0%, Optimizer losses: 0%, Shading losses: 1.1%, Performance Adjustment: 0%, Output Calculator: MCS. Panel Orientations: 45 panels with Azimuth 189 and Slope 47, 4 panels with Azimuth 195 and Slope 32, 1 panels with Azimuth 192 and Slope 36.

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)	21.75	kWp
Orientation of the PV system - degrees from South	Group 1: 45 panels with Orientation: 10 ° Group 2: 4 panels with Orientation: 15 ° Group 3: 1 panels with Orientation: 10 °	°
Inclination of system - degrees from horizontal	Group 1: 45 panels with Tilt: 47° Group 2: 4 panels with Tilt: 32° Group 3: 1 panels with Tilt: 36°	°
Postcode region	2	
B. Performance calculations		

kWh/kWp (Kk) from table	Group 1: 1119 Group 2: 1118 Group 3: 1127	kWh/kWp
Shade Factor (SF)	0.98	
Estimated annual output (kWp x Kk x SF)	22,558	kWh
<b>C. Estimated PV self-consumption - PV Only</b>		
Assumed annual electricity consumption, kWh	24,676.49	kWh
Assumed annual electricity generation from solar PV system, kWh	22,558	kWh
Expected solar PV self-consumption (PV Only)	15,796.40	kWh
Grid electricity independence / Self-sufficiency (PV Only)	64.01	%

## Environmental Benefits

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



### Each Year

**91%**  
Of CO<sub>2</sub>, SO<sub>x</sub> & NO<sub>x</sub>

**6 tons**  
Avoided CO<sub>2</sub> per year

### Over System Lifetime

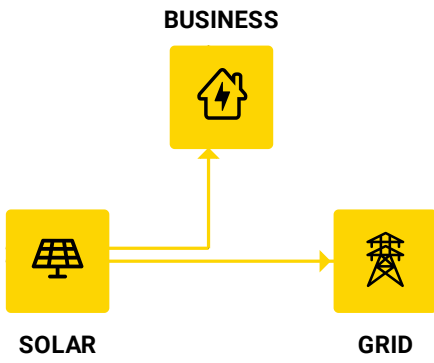
**170,763**  
Car km avoided

**1,098**  
Trees planted

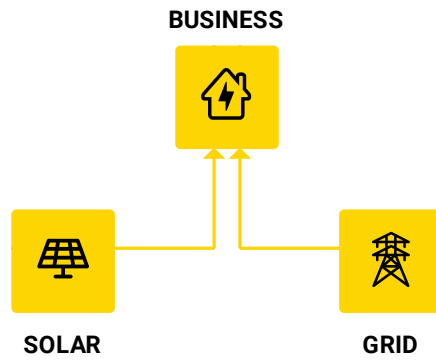
**122**  
Long haul flights avoided

### How your system works

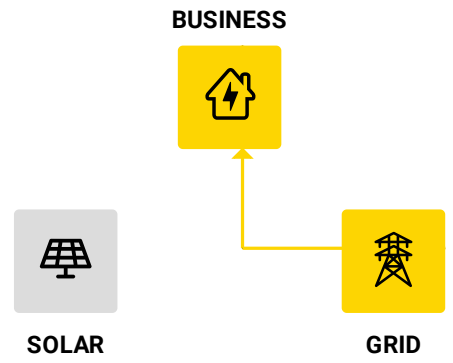
Generating Excess Solar



Partially Offset Usage



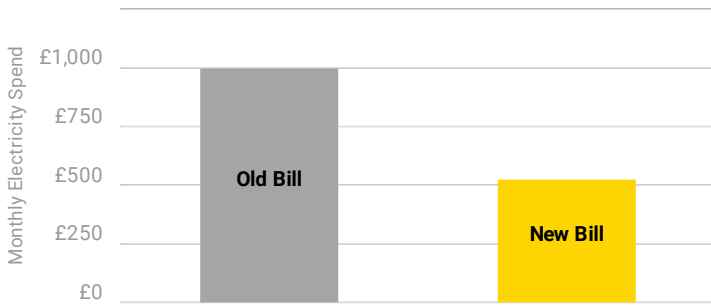
Night



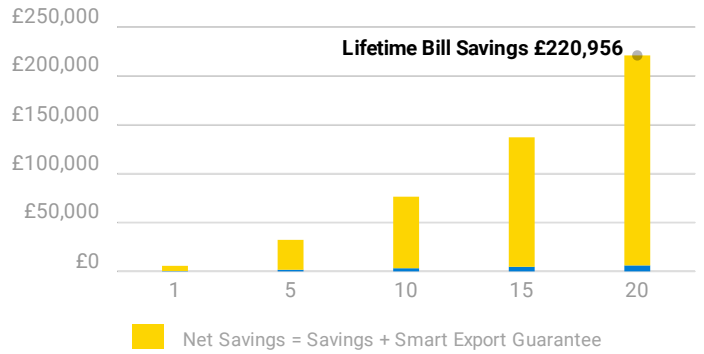


## Electricity Bill Savings

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	802	2,465	1,663	1	0	1,175	915	260
Feb	1,335	2,406	1,106	34	2	1,174	750	424
Mar	2,013	2,391	727	349	17	1,142	584	558
Apr	2,315	2,035	446	727	36	989	437	552
May	2,610	1,812	285	1,082	54	883	297	586
Jun	2,609	1,721	219	1,107	55	847	228	619
Jul	2,670	1,667	201	1,204	60	818	215	603
Aug	2,540	1,633	248	1,155	58	803	267	536
Sep	2,108	1,796	420	732	37	881	397	484
Oct	1,663	2,003	691	351	18	969	525	444
Nov	1,123	2,286	1,182	20	1	1,102	743	360
Dec	769	2,462	1,693	0	0	1,174	924	250

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 24676 kWh per year, assuming Tekmar Project Commercial Rate 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 - Npower (UK) Tekmar Project Commercial Rate	
<b>Energy Charges</b>	
<b>Day</b> <i>8am-10pm from 30 May to 29 Aug &amp; 30 Aug to 29 May</i>	£0.28 / kWh
<b>Night</b> <i>10pm-8am from 31 Dec to 30 Dec</i>	£0.25 / kWh
<b>BSUoS</b>	£0.01 / kWh

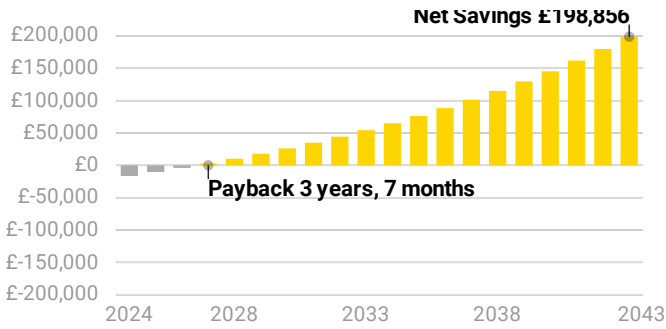


<i>All Day</i>	
<b>Operational charge Forecast Passthrough invoiced @ NBP</b> <i>All Day</i>	£0.00 / kWh
<b>RO</b> <i>All Day</i>	£0.03 / kWh
<b>FIT Charge</b> <i>All Day</i>	£0.01 / kWh
<b>Electricity Climate Change Levy</b> <i>All Day</i>	£0.01 / kWh
<b>Smart Export Guarantee</b>	
<b>FiT</b> <i>All Day</i>	£0.05 / kWh
<b>Demand Charges</b>	
<b>TNUoS</b> <i>All Day</i>	£44.68 / kW
<b>Fixed Charges</b>	
<b>Capacity charge based on 860 kVA</b>	£0.00 / day
<b>Fixed Charge</b>	£0.00 / day
<b>Other Network Charges</b>	£2.33 / day
<b>DC/DA</b>	£0.00 / day
<b>MOP</b>	£0.00 / day
<b>Forecast CM Obligation Levy charge</b>	£0.00 / month

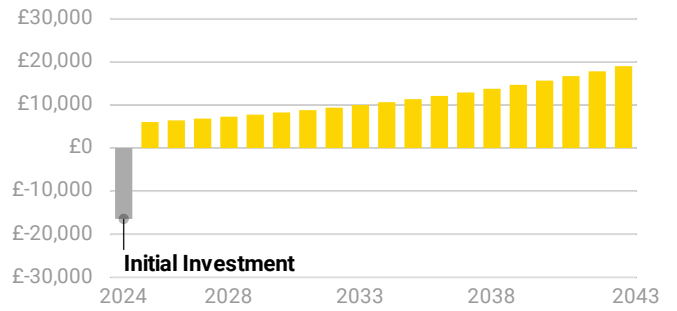
### Net Financial Impact Cash

$$\begin{array}{rclcl}
 \pounds 220,956 & - & \pounds 22,100 & = & \pounds 198,856 \\
 \text{Utility Bill Savings} & & \text{Net System Cost} & & \text{Estimated Net Savings}
 \end{array}$$

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

50 x JKM435N-54HL4R-B 435 Watt Panels (Jinko Solar Co., Ltd.) 1 x H3-Pro-20.0 (Fox Ess) 4 x 920043, 4 x 420082, 8 x 420081, 4 x 400524, 2 x 920043, 4 x 420081, 1 x 400524, 6 x 920043, 84 x 420082, 12 x 420081, 30 x 400531, 32 x 400524	
<b>Total System Price</b>	<b>£22,100.00</b> Excluding £0.00 VAT
<b>Purchase Price</b>	<b>£22,100.00</b> 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 13th May 2024.

## Quote Acceptance

I have read & accept the terms and conditions.

Signature \_\_\_\_\_

Name \_\_\_\_\_

Date \_\_\_\_\_



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