



allstone allgrass

**Prepared by:**  
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**For: christopher**  
None, Milton of Campsie

Quote #: 1841421  
Valid until: 13th April 2023



## Solar Energy System Proposal

Dear christopher,

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

Best Regards,  
info@universalenergygroup.co.uk  
**UNIVERSAL ENERGY GROUP LTD**

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None  
None None G81 1LG

Phone:

Email:

Web:

Scan QR code on your phone to  
access the online proposal.



## Recommended System Option

11.48 kW

System Size

£2,404

Estimated Annual  
Electricity Bill Savings

£23,364

Total System Price

£23,364

Net System Price



## Your Solution

### Solar Panels

**Hengdian Group DMEGC Magnetics**

**11.480 kW** Total Solar Power

**28 x 410 Watt Panels** (DM410M10-54HBB/-V)

**9,391 kWh** per year

### Inverter

**Growatt New Energy Technology Co., Ltd.**

**10.000 kW** Total Inverter Rating

1 x SPH10000TL3-BH

### 63A FRONIUS Three Phase Smart Meter

63 A Fronius Three Phase bidirectional Smart Meter for recording power consumption in the home

85 x 63A-3

### Battery

**Growatt New Energy Technology Co., Ltd.**

**7.68 kWh** Total Battery Storage

3 x ARK 2.5L

### PV Systems on trapezoidal metal sheet roofs (Portrait)

Mounting bracket, fastening elements, module clamps

84 x MS+P

### End Clamp 30-46mm, with M module

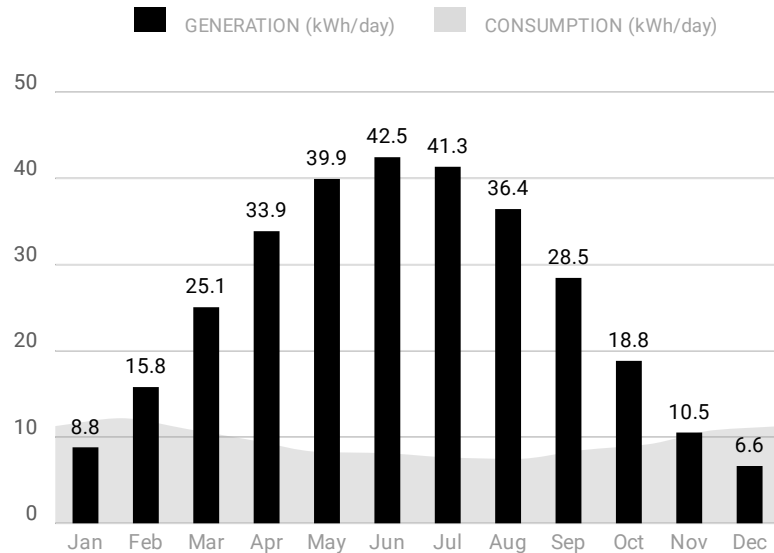
Main Components: ? M Module 17\*32.7mm ? Corrugated L-anchor Plate ? Hexagon socket button head screw M8\*35 ? Lock washer M8 ? Spring for Universal Clamp

1 x EC-M30-46/BA

Warranties: 12 Year Panel Product Warranty, 25 Year Panel Performance Warranty, 5 Year Inverter Product Warranty, 10 Year Battery Product Warranty

## System Performance

**268%**  
Energy From Solar



System Performance Assumptions: System Total losses: 0%, Inverter losses: 0%, Optimizer losses: 0%, Shading losses: 0%, Performance Adjustment: 0%, Output Calculator: MCS. Panel Orientations: 28 panels with Azimuth 160 and Slope 30.

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.

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.

Important Note: The energy performance and benefits of EESS is impossible to predict with certainty due to the numerous functions a system can be programmed to perform. This estimate is based upon the standard MCS procedure and is given as guidance only. It should not be considered as a guarantee of performance.

A. Installation data		
Installed capacity of PV system - kWp (stc)	11.48	kWp
Orientation of the PV system - degrees from South	Group 1: 28 panels with Orientation: 20 °	°
Inclination of system - degrees from South	Group 1: 28 panels with Tilt: 30°	°
Postcode region	14	
B. Performance calculations		
kWh/kWp (Kk) from table	Group 1: 818	kWh/kWp
Shade Factor (SF)	1.00	

Estimated annual output (kWp x Kk x SF)	9,391	kWh
<b>C. Estimated PV self-consumption - PV Only</b>		
Assumed occupancy archetype	In Half Day	
Assumed annual electricity consumption, kWh	3,500.00	kWh
Assumed annual electricity generation from solar PV system, kWh	9,391	kWh
Expected solar PV self-consumption (PV Only)	1,498.30	kWh
Grid electricity independence / Self-sufficiency (PV Only)	42.81	%
<b>D. Estimated PV self-consumption - with EESS</b>		
Assumed usable capacity of electricity energy storage device, which is used for self-consumption, kWh	6.91	kWh
Expected solar PV self-consumption (with EESS)	3,256.09	kWh
Grid electricity independence / Self-sufficiency (with EESS)	93.0%	%

## Environmental Benefits

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



**Each Year**

268%  
 Of CO<sub>2</sub>, SO<sub>x</sub> & NO<sub>x</sub>

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

**Over System Lifetime**

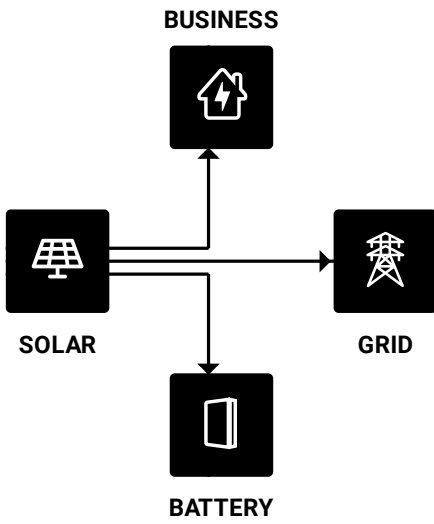
69,767  
 Car km avoided

449  
 Trees planted

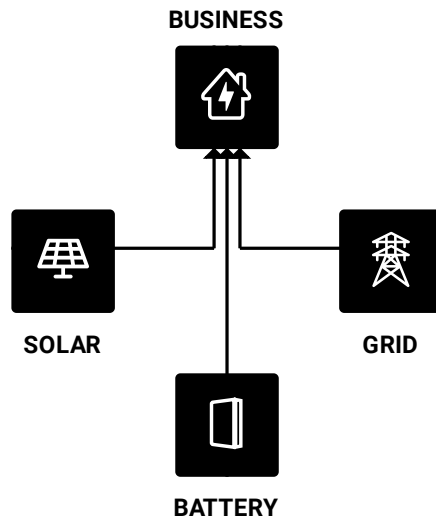
50  
 Long haul flights avoided

## How your system works

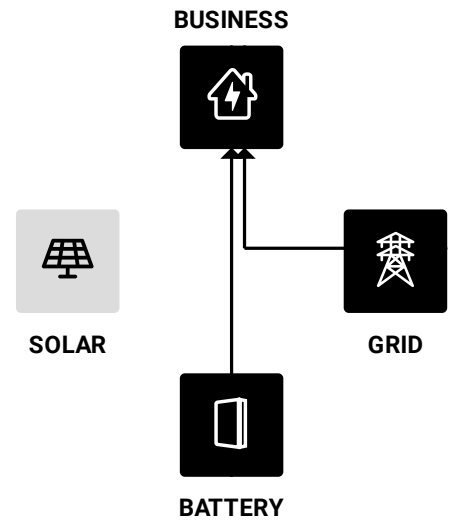
Generating Excess Solar



Partially Offset Usage

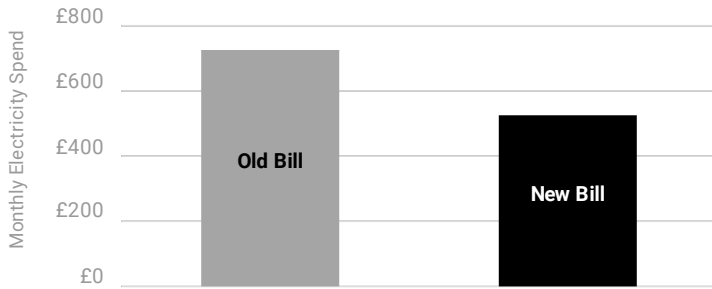


Night

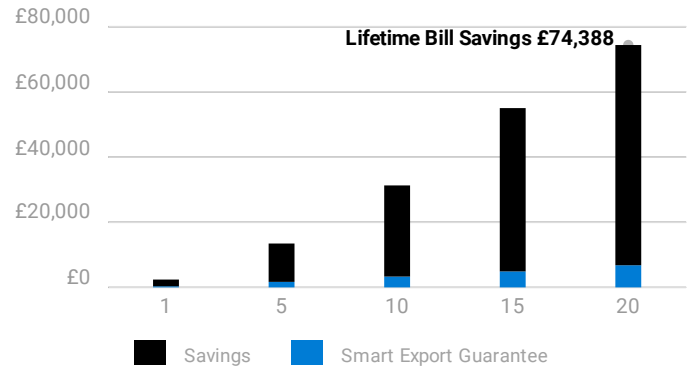


## Electricity Bill Savings

First Year Monthly Bill Savings



Lifetime 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	273	350	94	6	0	763	592	172
Feb	442	341	40	131	7	756	552	204
Mar	777	339	0	427	24	757	515	241
Apr	1,016	289	0	720	40	723	498	226
May	1,238	257	0	975	55	704	484	220
Jun	1,274	244	0	1,025	57	695	480	214
Jul	1,282	236	0	1,041	58	691	480	210
Aug	1,130	232	0	893	50	687	489	199
Sep	854	255	0	593	33	702	505	197
Oct	584	284	0	291	16	721	522	199
Nov	316	324	48	32	2	746	563	183
Dec	206	349	150	0	0	763	624	139

Rate not specified specified, using Large Business TOU (West Sussex) based on location.

Your projected energy cost is calculated by considering a 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 Large Business TOU (West Sussex) 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 - eDF energy Large Business TOU (West Sussex)

#### Energy Charges (£/kWh)

##### Consumption Charge - All Times

9am-10pm

Tier 1 (> 0 kWh): £1.03

##### Consumption Charge - Night

10pm-9am

Tier 1 (> 0 kWh): £0.88

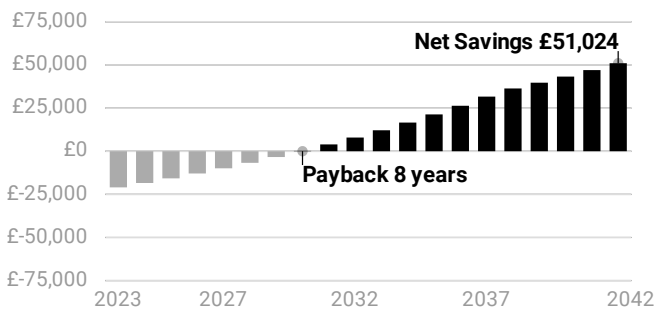


<b>Govt Discount</b>	Tier 1 (> 0 kWh): £-0.34
<b>CCL Charge</b>	Tier 1 (> 0 kWh): £0.01
<b>Feed-in Tariff (£/kWh)</b>	
<b>FiT</b>	Tier 1 (> 0 kWh): £0.06
<b>Demand Charges (£/kW)</b>	
<b>Extended Availability Charge</b>	Tier 1 (> 0 kW): £1.25
<b>Fixed Charges</b>	
<b>Standing Charge</b>	£516.71 / month
<b>Data Collection Agent Charge</b>	£0.68 / day
<b>Settlement Agent Charge</b>	£0.02 / day

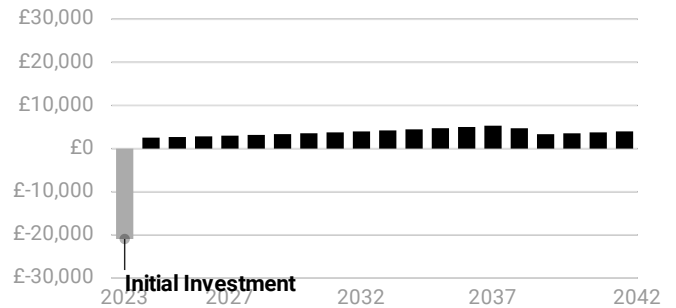
### Net Financial Impact Cash

$$\begin{array}{rcl}
 \text{£74,388} & - & \text{£23,364} & = & \text{£51,024} \\
 \text{Utility Bill Savings} & & \text{Net System Cost} & & \text{Estimated Net Savings}
 \end{array}$$

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

28 x DM410M10-54HBB/-V 410 Watt Panels (Hengdian Group DMEGC Magnetics) 1 x SPH10000TL3-BH (Growatt New Energy Technology Co., Ltd.) 3 x ARK 2.5L (Growatt New Energy Technology Co., Ltd.) 1 x 63A-3, 1 x EC-M30-46/BA, 84 x MS+P, 84 x 63A-3	
Total System Price	£23,364.00 Plus £0.00 VAT
<b>Purchase Price</b>	<b>£23,364.00</b> Plus £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 April 2023.

## Quote Acceptance

I have read & accept the terms and conditions.

Signature 

Name christopher ferns

Date 5th April 2023



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