

Prepared by: Shannon Blake
0800 321 3142
shannon@cinergi.co.uk

For: Jess
28A Horsepool, Bromham

Quote #: 8340580
Valid until: 23rd November 2025



Solar Energy System Proposal

Dear Jess,

Thank you for inviting us to prepare your Solar PV design, and we appreciate your patience in waiting for this proposal.

We are pleased to present the following solution, of which you will find all details below.

Best Regards,
Shannon Blake
Cinergi Ltd

Who are we?

We are a team of highly accredited engineers who design, install and service both mechanical and electric power systems. We have been in the business for 40 years, forging a reputation as trusted domestic boiler experts. This is very much still a part of our offering, but power has evolved and so have we.

Our services have expanded in recent years to offer more modern and sustainable sources of power such as air source heat pumps, solar panels and electric vehicle charging stations. We are passionate about sharing our extensive knowledge with our customers, and so we offer impartial advice to help each one achieve the most efficient and cost-effective power solutions for their home or business.

This proposal has checkout disabled. If you wish to proceed with this proposal, please contact Shannon or George on shannon@cinergi.co.uk & george.bradshaw@cinergi.co.uk respectively.

Solar Options

System Option	System Size	Solar Generation	Electricity Savings	Net System Price
1 SigEnergy System - Backup, Recommended Option	10 Panels, 4.75 kW 9.0 kWh Storage	12.192 kWh per day	£1,492 per year	£12,118.60 Including 2,019.77 VAT
Solar Panels 10 AIKO-A475-MCE54Mb Aiko Energy 25.0 Year Product Warranty 30.0 Year Performance Warranty Inverter 1 x SigenStor EC 5.0SP 10 Year Product Warranty  Battery 1 Sigen Battery 6.0 and 10 (Sigenergy) 10 Year Product Warranty 				
2 Fox System - Recommended Option	10 Panels, 4.75 kW 10.4 kWh Storage	12.192 kWh per day	£1,549 per year	£8,740.40
Solar Panels 10 AIKO-A475-MCE54Mb Aiko Energy 25.0 Year Product Warranty 30.0 Year Performance Warranty Inverter 1 x H1-3.7-E-G2  Battery 1 FoxESS EP11 (Fox ESS) 				
3 SigEnergy System - Small Scale Solar, No Backup	10 Panels, 4.75 kW 9.0 kWh Storage	12.192 kWh per day	£1,492 per year	£11,154.94 Including 1,859.16 VAT
Solar Panels 10 AIKO-A475-MCE54Mb Aiko Energy 25.0 Year Product Warranty 30.0 Year Performance Warranty Inverter 1 x SigenStor EC 5.0SP 10 Year Product Warranty  Battery 1 Sigen Battery 6.0 and 10 (Sigenergy) 10 Year Product Warranty 				
4 Fox System - Small Scale Solar	6 Panels, 2.85 kW 10.4 kWh Storage	7.315 kWh per day	£1,283 per year	£7,909.75
Solar Panels 6 AIKO-A475-MCE54Mb Aiko Energy 25.0 Year Product Warranty 30.0 Year Performance Warranty Inverter 1 x H1-3.0-E-G2  Battery 1 FoxESS EP11 (Fox ESS) 				

System Option 1 of 4: SigEnergy System - Backup, Recommended Option

4.75_{kW}

System Size

£1,492

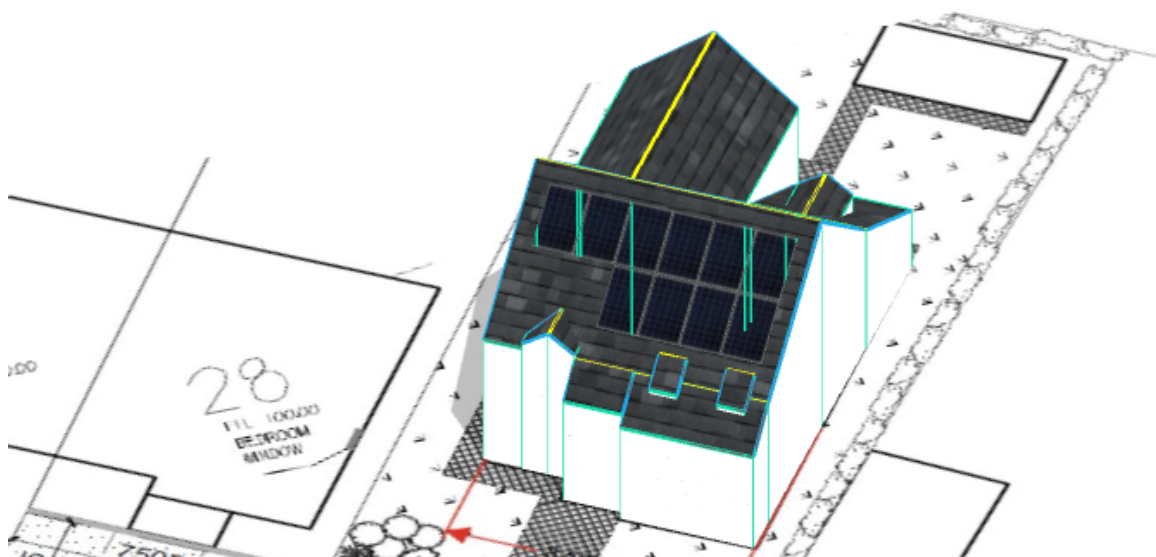
Estimated Annual
Electricity Bill Savings

£10,099

Purchase Price
excluding VAT

4,450_{kWh}

Estimated Annual
Solar Generation



Your Solution

Solar Panels

Aiko Energy

4.8 kW Total Module Power

10 x 475 Watt Panels (AIKO-A475-MCE54Mb)

4,450 kWh per year

Sigen Battery 6.0 and 10

9.04kWh of Battery Storage

Sigenenergy

1 x SigenStor BAT 10.0

10.0 Year Warranty



Sigen Energy Controller Single Phase

5 kW of Inverter Power

Sigenenergy

1 x SigenStor EC 5.0SP

10.0 Year Warranty



Sigen Energy Gateway HomeMax Single Phase

Battery Backup Box

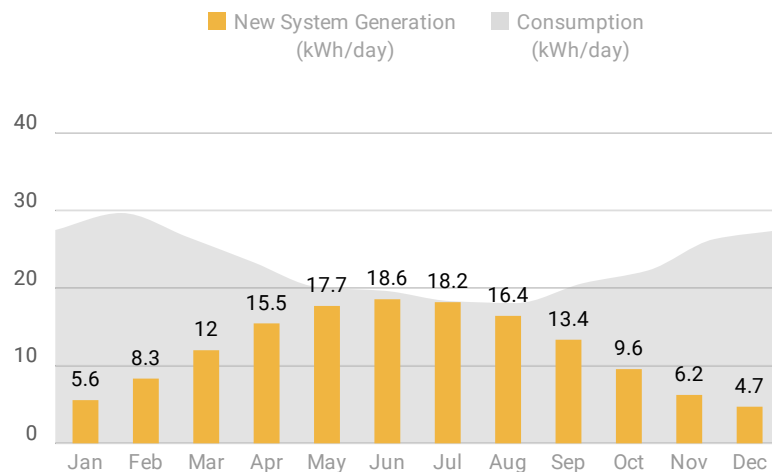
1 x HomeMax SP



Warranties: 25 Year Panel Product Warranty, 30 Year Panel Performance Warranty, 10 Year Inverter Product Warranty, 10 Year Battery Product Warranty

System Performance

52%
Energy From Solar



95%
Self Consumption

5%
Export to Grid

System Performance Assumptions: System Total losses: 0%, Inverter losses: 0%, Optimizer losses: 0%, Shading losses: 0%, Performance Adjustment: 0%, Output Calculator: MCS. Panel Orientations: 10 panels with Azimuth 217 and Slope 35.

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.

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.

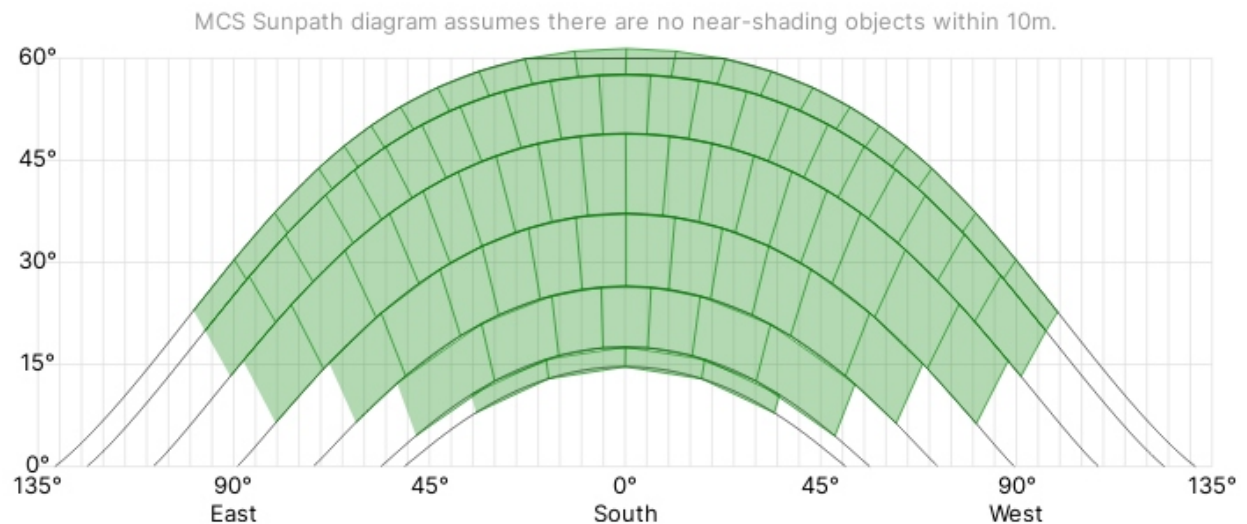
[EESS capacity not used for self consumption] Storage capacity of the battery - assumed usable capacity of battery [Total energy discharged per annum] Assumed usable capacity of battery x 730 [Additional self consumption] Estimated annual output (Section B) x self consumption rate with battery as a % (no higher than 95%) - Expected solar PV self-consumption (with EESS) (Section D)

A. Installation data		
Installed capacity of PV system - kWp (stc)	4.750	kWp
Orientation of the PV system - degrees from South	Group 1: 10 panels with Orientation: 35 °	°
Inclination of system - degrees from horizontal	Group 1: 10 panels with Tilt: 35°	°
Postcode region	5E	
B. Performance calculations		

kWh/kWp (Kk) from table	Group 1: 937	kWh/kWp
Shade Factor (SF)	1.000	
Estimated annual output (kWp x Kk x SF)	4,450	kWh
C. Estimated PV self-consumption - PV Only		
Assumed occupancy archetype	In Half Day	
Assumed annual electricity consumption, kWh	8,500.00	kWh
Assumed annual electricity generation from solar PV system, kWh	4,450	kWh
Expected solar PV self-consumption (PV Only)	2,887.59	kWh
Grid electricity independence / Self-sufficiency (PV Only)	33.97	%
D. Estimated PV self-consumption - with EESS		
Assumed usable capacity of electricity energy storage device, which is used for self-consumption, kWh	8.76	kWh
Expected solar PV self-consumption (with EESS)	4,227.77	kWh
Grid electricity independence / Self-sufficiency (with EESS)	50.0%	%
E. Additional benefits from PV and EESS		
EESS capacity not used for self-consumption	0.28	kWh
Total energy discharged per annum	6394.80	kWh
Additional self-consumption for EV, heat pumps, diverters (only when present)	0.00	kWh

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

52%

Consumption Offset

1 tons

of CO₂ reduced per year

Over System Lifetime

33,846^{km}

Car distance avoided
(lifetime)

218

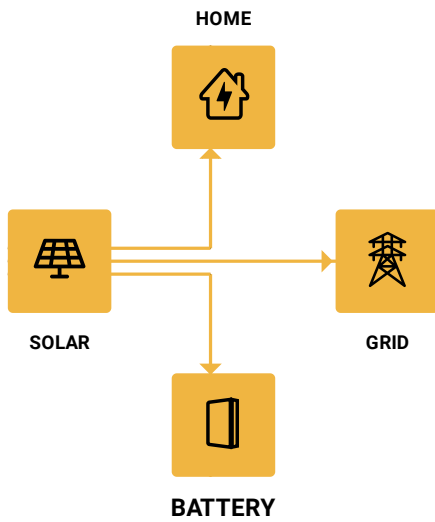
Trees planted

24

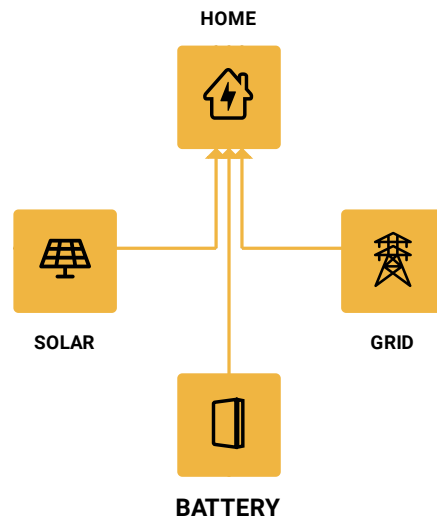
Long haul flights
avoided

How your system works

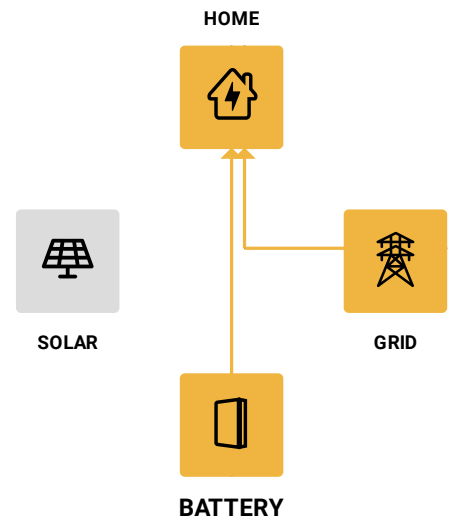
Generating Excess Solar



Partially Offset Usage

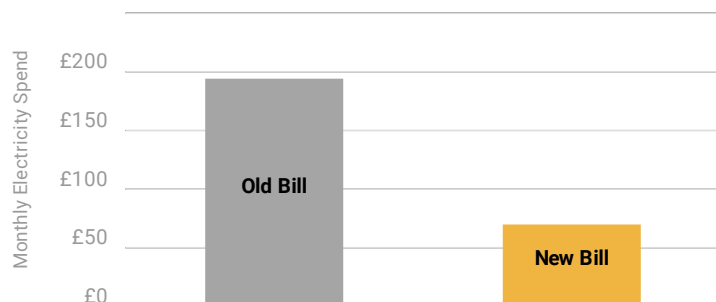


Night

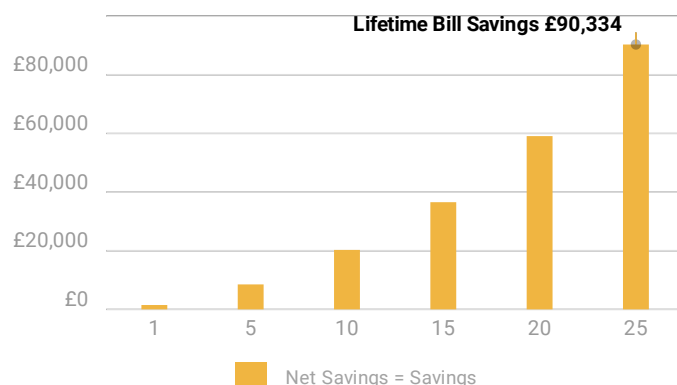


Electricity Bill Savings

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	173	849	707	1	0	230	131	99
Feb	234	829	626	4	1	224	114	110
Mar	372	824	489	8	1	224	84	140
Apr	464	701	266	11	2	192	62	130
May	549	624	120	18	3	173	23	150
Jun	557	593	105	50	8	165	15	150
Jul	564	574	103	77	12	160	11	149
Aug	509	562	105	33	5	157	18	139
Sep	401	619	244	10	2	171	59	112
Oct	296	690	427	7	1	190	73	116
Nov	187	787	631	3	0	214	113	101
Dec	146	848	733	0	0	230	136	94

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 8500 kWh per year, assuming Intelligent Octopus Go Southern - Oct 25 Electricity Tariff.

The savings illustrations provided include Smart Export Guarantee (SEG) payments which you receive for any export of energy to the grid, subject to the utility company criteria and requirements. If we have suggested a fixed rate tariff, instead of a specific tariff offered by a supplier we have included a SEG rate of 15p for illustrative purposes, which is widely available in the marketplace at the time of preparing your quotation. We strongly recommend that all customers carry out their own research into SEG payments and tariffs available as these vary from supplier to supplier and you may need to change provider to receive this rate. These rates may also change during the lifespan of your solar system. Not registering for SEG will mean you do not receive the export payments detailed above

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 Intelligent Octopus Go Southern - Oct 25

Energy Charges

Daytime

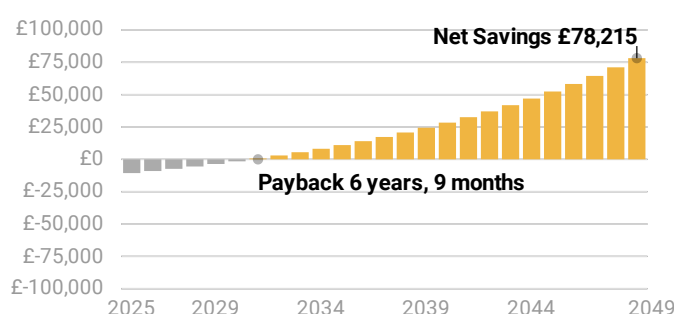
£0.29 / kWh

6am-12am Mon-Sun	
Night 12am-6am Mon-Sun	£0.07 / kWh
Smart Export Guarantee	
Outgoing Octopus All Day Mon-Sun	£0.15 / kWh
Fixed Charges	
Standing Charge	£0.44 / day

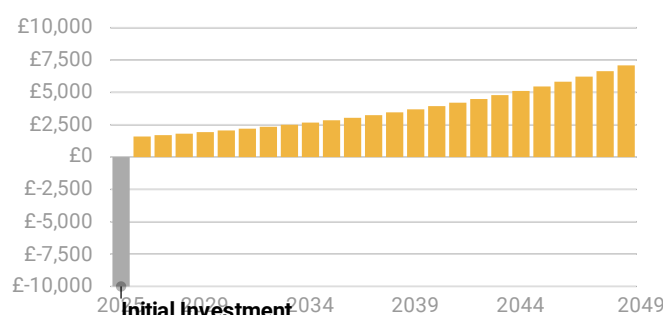
Net Financial Impact Cash

$$\begin{array}{rcl}
 \text{£90,334} & - & \text{£12,119} = \text{£78,215} \\
 \text{Utility Bill Savings} & & \text{Net System Cost} \quad \text{Estimated Net Savings}
 \end{array}$$

Cumulative Savings From Going Solar



Annual Savings From Going Solar



£78,215

Net Present Value

**6 Years
8 Months**

Discounted Payback
Period

645%

Total Return on
Investment

18.0%

Rate of Return on
Investment

Year	Electricity Consumption (kWh)	Solar Generation (kWh)	Utility Bill (before new system) (£)	Utility Bill (after new system) (£)	Annual Savings (from new system) (£)	System Costs (Net of Dealer Incentives) (£)	Customer Incentives (Upfront) (£)	Net Savings (£)	Cumulative Impacts (£)
2025	8,500	4,450	2,330	838	1,492	12,119	0	(10626)	(10626)
2026	8,500	4,435	2,493	902	1,591	0	0	1590	(9035)
2027	8,500	4,419	2,668	971	1,697	0	0	1696	(7339)
2028	8,500	4,404	2,855	1,045	1,809	0	0	1809	(5529)
2029	8,500	4,388	3,054	1,124	1,930	0	0	1930	(3599)
2030	8,500	4,372	3,268	1,210	2,059	0	0	2058	(1540)
2031	8,500	4,357	3,497	1,301	2,196	0	0	2196	655
2032	8,500	4,341	3,742	1,399	2,343	0	0	2342	2998
2033	8,500	4,326	4,004	1,504	2,500	0	0	2499	5498
2034	8,500	4,310	4,284	1,617	2,667	0	0	2667	8165
2035	8,500	4,294	4,584	1,738	2,846	0	0	2846	11011
2036	8,500	4,279	4,905	1,868	3,037	0	0	3036	14048
2037	8,500	4,263	5,248	2,007	3,241	0	0	3240	17289
2038	8,500	4,248	5,615	2,157	3,459	0	0	3458	20747

Year	Electricity Consumption (kWh)	Solar Generation (kWh)	Utility Bill (before new system) (£)	Utility Bill (after new system) (£)	Annual Savings (from new system) (£)	System Costs (Net of Dealer Incentives) (£)	Customer Incentives (Upfront) (£)	Net Savings (£)	Cumulative Impacts (£)
2039	8,500	4,232	6,008	2,317	3,691	0	0	3691	24439
2040	8,500	4,217	6,429	2,489	3,940	0	0	3939	28378
2041	8,500	4,201	6,879	2,674	4,205	0	0	4205	32584
2042	8,500	4,185	7,361	2,872	4,488	0	0	4488	37072
2043	8,500	4,170	7,876	3,085	4,791	0	0	4790	41863
2044	8,500	4,154	8,427	3,313	5,114	0	0	5114	46977
2045	8,500	4,139	9,017	3,558	5,459	0	0	5459	52436
2046	8,500	4,123	9,648	3,821	5,827	0	0	5827	58263
2047	8,500	4,108	10,324	4,103	6,221	0	0	6220	64484
2048	8,500	4,092	11,046	4,405	6,641	0	0	6640	71125
2049	8,500	4,076	11,820	4,730	7,089	0	0	7089	78215

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: 0.0%

Quotation

Payment Option: Cash

10 x Aiko Energy 475 Watt Panels (AIKO-A475-MCE54Mb) 1 x SigenStor EC 5.0SP (Sigenergy) 1 x SigenStor BAT 10.0 (Sigenergy) 1 x HomeMax SP	
Standard System Price	£7,968.48 Including £1,328.08 VAT
Scaffold Excluded - Use of existing on-site scaffold	£0.00
Panel Installation & Associated Roof Works	£909.90 Including £151.65 VAT
Bird Protection - Supplied & Installed	£287.28 Including £47.88 VAT
Electrical Installation	£1,819.79 Including £303.30 VAT
Electrical Installation Materials	£957.60 Including £159.60 VAT
G99 Application (DNO)	£0.00
MCS Certification - Solar & Battery	£175.56 Including £29.26 VAT
Total System Price	£12,118.60 Including £2,019.77 VAT
Purchase Price	£12,118.60 Including £2,019.77 VAT
Deposit Payable	£3,029.65 Including £504.94 VAT

IMPORTANT NOTES CONCERNING THIS QUOTATION

Scaffolding and Fixed Access

Unless specifically stated within the quotation table of this proposal, if it is determined that fixed scaffolding will be necessary, an additional charge will apply.

Costing

This quotation has been based on us being able to install your system as described without interruption. Should there be circumstances beyond our control which cause an interruption to the installation process we will discuss with you the implications of such a delay.

Should you decide to make any changes to the agreed installation within your cancellation period, we will produce another full quotation which considers these changes. You will be given a further cancellation period to consider this quotation.

Should you wish to make any changes to the agreed installation after your cancellation period has expired, again we will prepare a new quotation for you, but we reserve the right to charge for any reasonable costs we have incurred in working towards the original installation details.

If, during the installation process, we come across any situation that we could not reasonably be expected to foresee, for example, remedial electrical or building work, we will discuss with you the implications and costs involved in rectifying the problem.

Should you request any changes after the installation process has begun that involve additional cost, we will provide you with a quotation based on the daily or hourly rate of our installers. The rate that would apply would be £55 per hour or £440 per day.

Planning permission

If your property is a listed building or you are in a conservation area you may need planning permission. We will assist you in gaining any permission, but you are responsible for contacting your local planning authority to obtain confirmation that planning permission is not required.

We cannot be held responsible for any installations carried out where planning permission was required but not obtained. No refunds will be given in such cases.

Requirements regarding planning permission can vary from area to area.

By signing the contract, you are confirming that you have received Planning Permission or a Building Warrant for the proposed installation or ascertained that these are not required. We cannot be held responsible for any installations where Planning Permission or a Building Warrant was required but not obtained, and no refunds will be offered.

By signing and returning the Order Form, you are confirming the order for the products and installation services specified on this Quotation. This order will become binding when we notify you of its acceptance and will be governed by our installation terms and conditions.

It is a requirement of the MCS that you agree to supply feedback on the operation of the equipment if required to do so.

We are a member of the RECC, and this document is prepared in accordance with its Consumer Code, a copy of which is available on request.

Guarantees and warranties

Your equipment is guaranteed by its manufacturer, but you should contact us in the first instance if anything appears to be operating incorrectly.

In addition to the product guarantees, our work will be covered by a workmanship warranty. This workmanship warranty will be transferable to the new legal owner of the property if it is sold during the warranty period.

As members of RECC, we are required to ensure that should we cease trading, due to receivership, administration, or bankruptcy, that the workmanship warranty that we have in place for your installation will still be honoured.

When you confirm the order and we have received any requested deposit, we will register your name, address, and the total value of the contract with Quality Mark Insurers. The insurance provider will send the policy documents direct to you. This policy will be at no additional cost to you.

Deposits and advance payments

We will never ask for more than a 25% deposit, including VAT, on signing of the contract. If we require you to make any advance payments, these will be communicated to you, in writing, with the dates that they are due to us. These advance payments will never, when added to the deposit, exceed 60% of the total agreed contracted price. We will not ask for any advance payments more than 21 days from the agreed delivery or installation date.

Your deposit and any further advance payments requested will be insured with Quality Mark Insurers under their Deposit, Advanced Payment and Warranty Insurance (DAAWI) scheme so that you can get the work completed or your money back if we cannot deliver your equipment because we have gone out of business.

When you confirm the order and we receive any requested deposit, we will register your name, address, and the total value of the contract with QANW. You will be sent your insurance policy documents directly from Quality Mark Insurers. If you are not content for us to register your details in this way, please let us know.

Insurance

It is recommended that you inform your property insurers about the proposed installation to check if it will increase your buildings insurance premium.

As members of the Renewable Energy Consumer Code, we must have appropriate insurance to cover possible third-party damage, which may be caused by any of our activities. We are insured by Chiswell Insurance.

Data protection

We will keep information about individuals in accordance with data protection legislation. We will not pass information to any third party without your permission. Information about you may be passed to the Renewable Energy Consumer Code administrator and its auditors as part of the Code administrators monitoring of their compliance with the Code. The Code administrator may contact you directly.

Commissioning the system

The installation will be commissioned according to MCS installation standards to ensure that the system is safe, has been installed in accordance with documented procedures and manufacturer's requirements and is operating correctly in accordance with the system design.

Following the testing and commissioning of the system, we will give you a Compliance Certificate. This certificate confirms that we have met the requirements of the MCS, and it details key information about the installation.

We will register the installation on the MCS Installation Database (MID) and will provide to you, within 10 working days, the MCS Certificate.

After sales support and maintenance

If, following installation, the system does not appear to be operating correctly please refer to the operating instructions. We will explain to you, at the handover stage, the safe operation of the system.

If you are still in doubt as to any aspect of the systems operation, please contact us.

We will issue to you at handover information as to any maintenance requirements.

RECC and the Renewable Energy Consumer Code

We are a member of RECC, membership number **00071616** and this document is prepared in accordance with the Renewable Energy Consumer Code.

A leaflet describing the Renewable Energy Consumer Code is enclosed with this quotation. The Code can be viewed in full at www.recc.org.uk/scheme/consumer-code.

Complaints

We hope you won't have any reason to complain about any aspect of our service. But if you do, please contact us.

You may contact us by telephone, letter, or e mail, and you will find our contact details on this quotation. We will acknowledge and attempt to resolve your complaint promptly. Where we need to investigate the complaint, we will report to you our progress on any investigation within seven working days.

If we are unable to resolve your complaint, you may be able to complain to RECC. You can read about this here: <http://www.recc.org.uk/consumers/how-to-complain>.

If you wish to accept the quotation

If you wish to accept the quotation, please get in touch and we will send over your contract with our terms and conditions, please the signed Contract and your deposit payment if we have requested one. We will then contact you to arrange the date for the installation.

If you have any questions on any aspect of this quotation, the contract or any other related issue please do not hesitate to contact us.

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 23rd November 2025.

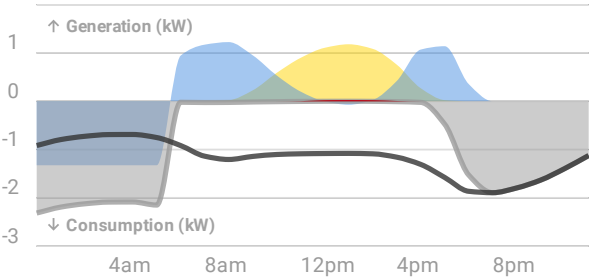
Payment Milestones

Initial Deposit Initial Deposit	£3,029.65
Second Deposit Second Deposit	£3,029.65
Final Balance Final Balance Payable upon commissioning	£6,059.30
Total	£12,118.60

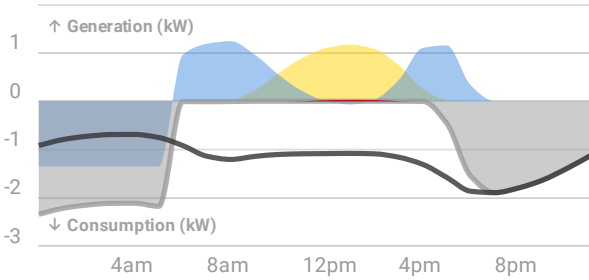
Daily Energy Flows

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

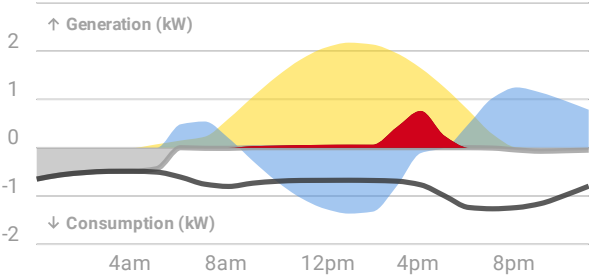
Winter Weekday



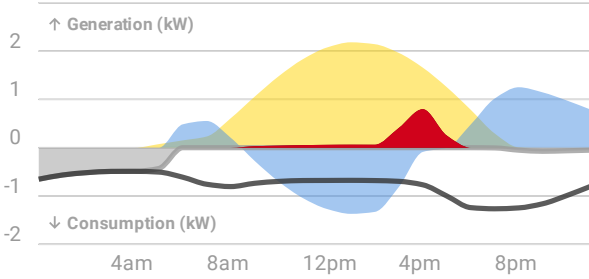
Winter Weekend



Summer Weekday



Summer Weekend



System Option 2 of 4: Fox System - Recommended Option

4.75 kW

System Size

£1,549

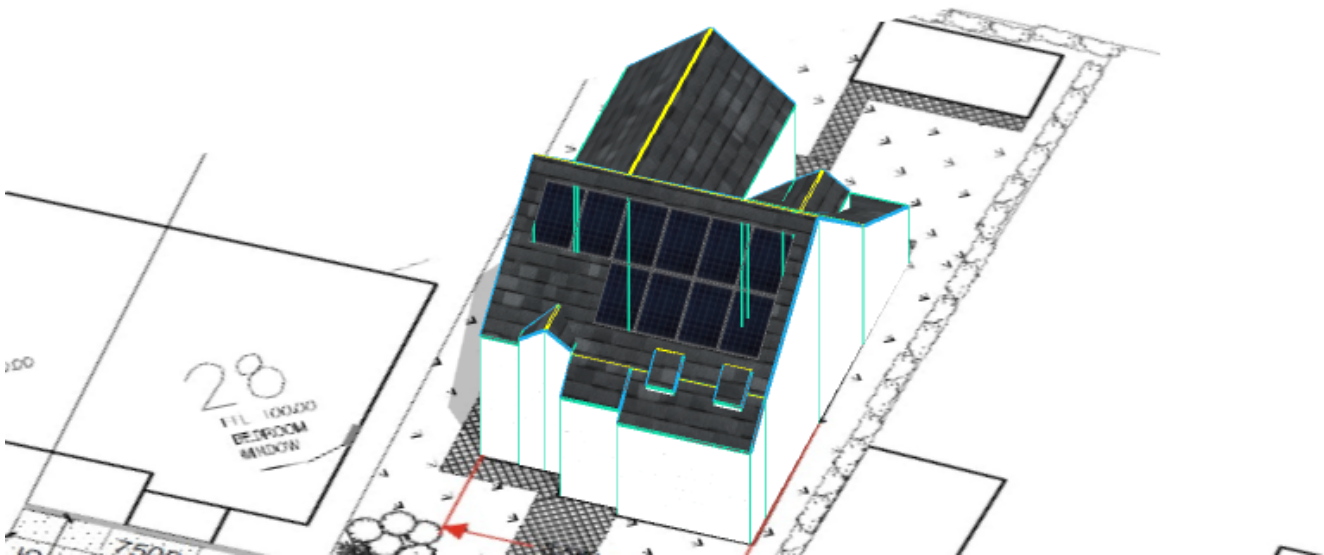
Estimated Annual
Electricity Bill Savings

£8,740

Purchase Price
excluding VAT

4,450 kWh

Estimated Annual
Solar Generation



Your Solution

Solar Panels

Aiko Energy

4.8 kW Total Module Power

10 x 475 Watt Panels (AIKO-A475-MCE54Mb)

4,450 kWh per year

FoxESS EP11

10.36kWh of Battery Storage

Fox ESS

1 x EP11 Integrated with Warming Function

10 Year Warranty



FoxESS H1 SERIES (G2) Hybrid Inverter

3.68 kW of Inverter Power

Fox ESS

1 x H1-3.7-E-G2

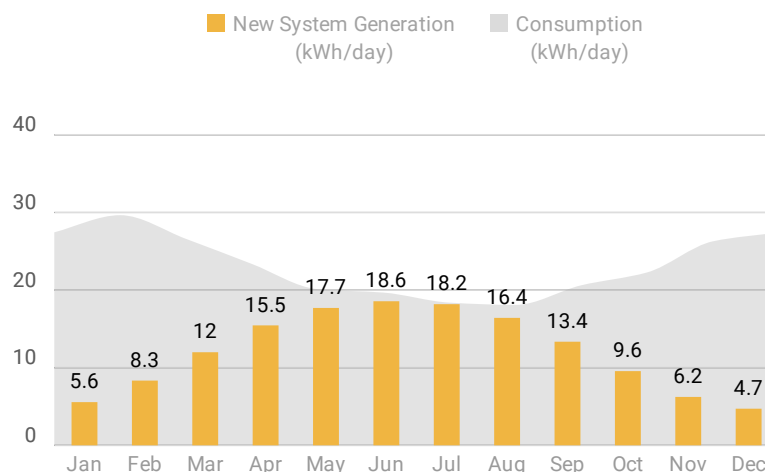
10 Years Warranty



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

System Performance

52%
Energy From Solar



95%
Self Consumption

5%
Export to Grid

System Performance Assumptions: System Total losses: 0%, Inverter losses: 0%, Optimizer losses: 0%, Shading losses: 0%, Performance Adjustment: 0%, Output Calculator: MCS. Panel Orientations: 10 panels with Azimuth 217 and Slope 35.

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.

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.

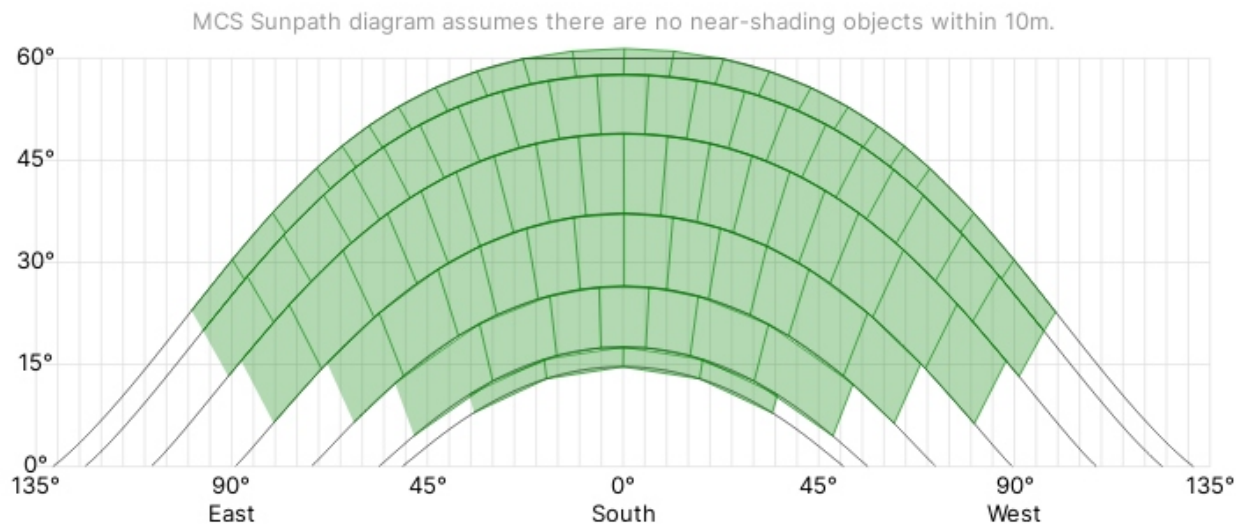
[EESS capacity not used for self consumption] Storage capacity of the battery - assumed usable capacity of battery [Total energy discharged per annum] Assumed usable capacity of battery x 730 [Additional self consumption] Estimated annual output (Section B) x self consumption rate with battery as a % (no higher than 95%) - Expected solar PV self-consumption (with EESS) (Section D)

A. Installation data		
Installed capacity of PV system - kWp (stc)	4.750	kWp
Orientation of the PV system - degrees from South	Group 1: 10 panels with Orientation: 35 °	°
Inclination of system - degrees from horizontal	Group 1: 10 panels with Tilt: 35°	°
Postcode region	5E	
B. Performance calculations		

kWh/kWp (Kk) from table	Group 1: 937	kWh/kWp
Shade Factor (SF)	1.000	
Estimated annual output (kWp x Kk x SF)	4,450	kWh
C. Estimated PV self-consumption - PV Only		
Assumed occupancy archetype	In Half Day	
Assumed annual electricity consumption, kWh	8,500.00	kWh
Assumed annual electricity generation from solar PV system, kWh	4,450	kWh
Expected solar PV self-consumption (PV Only)	2,887.59	kWh
Grid electricity independence / Self-sufficiency (PV Only)	33.97	%
D. Estimated PV self-consumption - with EESS		
Assumed usable capacity of electricity energy storage device, which is used for self-consumption, kWh	9.32	kWh
Expected solar PV self-consumption (with EESS)	4,229.09	kWh
Grid electricity independence / Self-sufficiency (with EESS)	50.0%	%
E. Additional benefits from PV and EESS		
EESS capacity not used for self-consumption	1.04	kWh
Total energy discharged per annum	6806.52	kWh
Additional self-consumption for EV, heat pumps, diverters (only when present)	0.00	kWh

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.

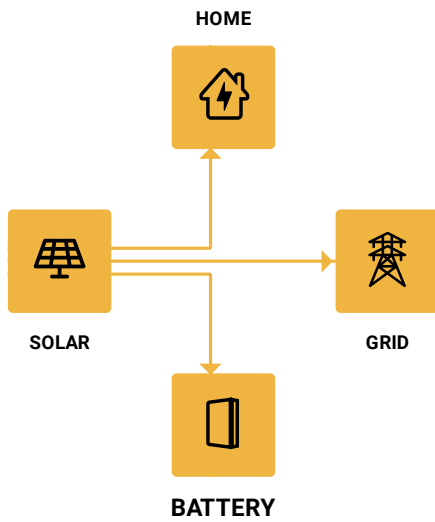


Each Year	
52%	1 tons
Consumption Offset	of CO ₂ reduced per year

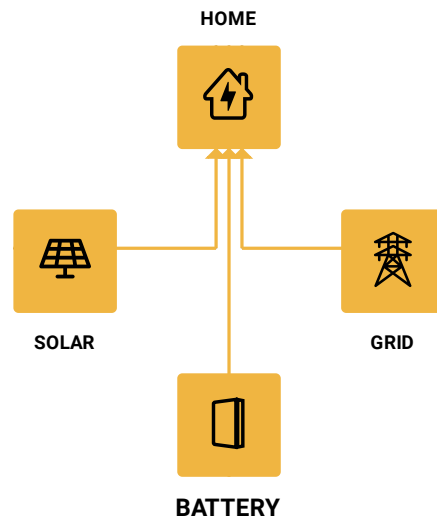
Over System Lifetime		
33,846 ^{km}	218	24
Car distance avoided (lifetime)	Trees planted	Long haul flights avoided

How your system works

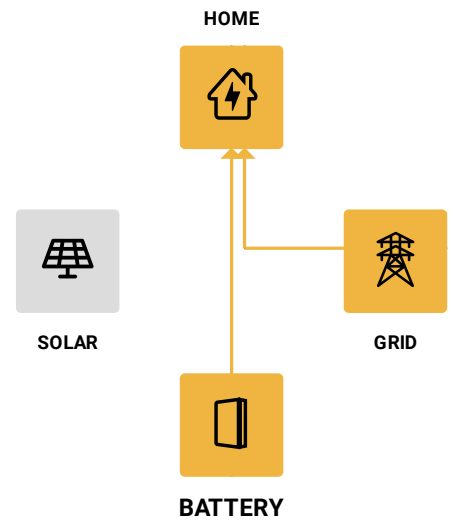
Generating Excess Solar



Partially Offset Usage

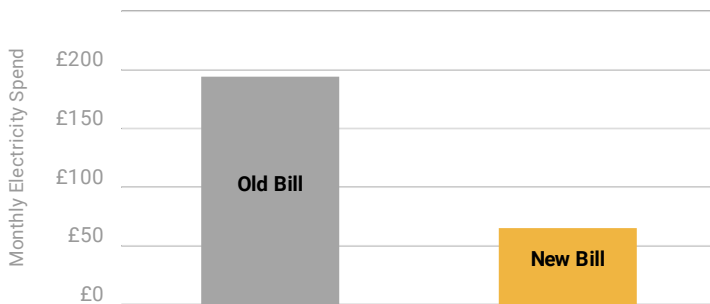


Night

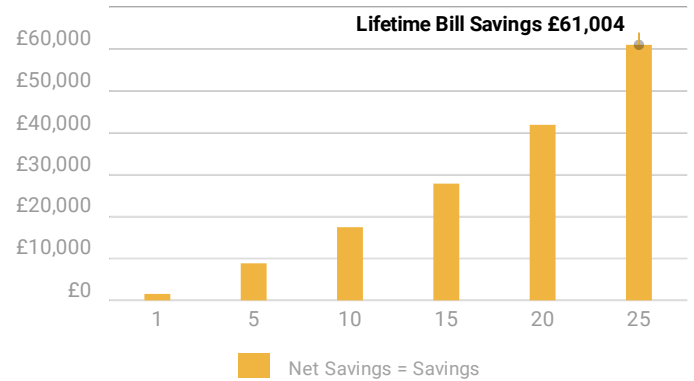


Electricity Bill Savings

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	173	849	693	1	0	230	124	107
Feb	234	829	612	2	0	224	107	117
Mar	372	824	472	5	1	224	77	147
Apr	464	701	253	7	1	192	59	133
May	549	624	110	20	3	173	20	153
Jun	557	593	100	56	8	165	13	152
Jul	564	574	98	81	12	160	9	151
Aug	509	562	98	37	6	157	16	141
Sep	401	619	230	6	1	171	56	115
Oct	296	690	412	4	1	190	68	122
Nov	187	787	617	2	0	214	105	109
Dec	146	848	719	0	0	230	128	102

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 8500 kWh per year, assuming Intelligent Octopus Go Southern - Oct 25 Electricity Tariff.

The savings illustrations provided include Smart Export Guarantee (SEG) payments which you receive for any export of energy to the grid, subject to the utility company criteria and requirements. If we have suggested a fixed rate tariff, instead of a specific tariff offered by a supplier we have included a SEG rate of 15p for illustrative purposes, which is widely available in the marketplace at the time of preparing your quotation. We strongly recommend that all customers carry out their own research into SEG payments and tariffs available as these vary from supplier to supplier and you may need to change provider to receive this rate. These rates may also change during the lifespan of your solar system. Not registering for SEG will mean you do not receive the export payments detailed above

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 Intelligent Octopus Go Southern - Oct 25

Energy Charges

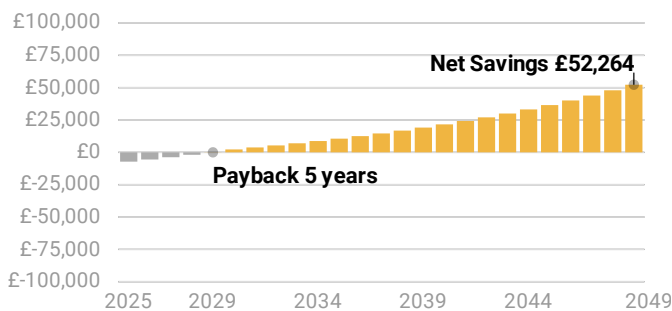
Daytime	£0.29 / kWh
---------	-------------

6am-12am Mon-Sun	
Night 12am-6am Mon-Sun	£0.07 / kWh
Smart Export Guarantee	
Outgoing Octopus All Day Mon-Sun	£0.15 / kWh
Fixed Charges	
Standing Charge	£0.44 / day

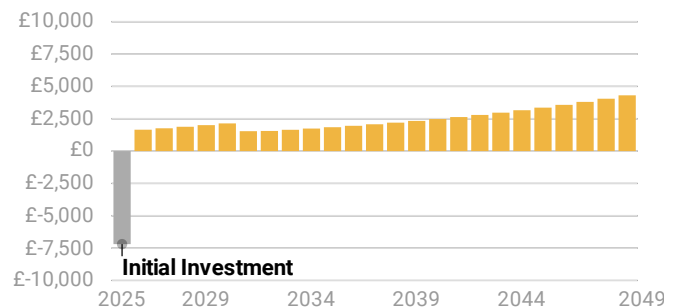
Net Financial Impact Cash

$$\begin{array}{rcl}
 \text{£61,004} & - & \text{£8,740} = \text{£52,264} \\
 \text{Utility Bill Savings} & & \text{Net System Cost} \quad \text{Estimated Net Savings}
 \end{array}$$

Cumulative Savings From Going Solar



Annual Savings From Going Solar



£52,264

Net Present Value

4 Years
11 Months

Discounted Payback
Period

598%

Total Return on
Investment

20.7%

Rate of Return on
Investment

Year	Electricity Consumption (kWh)	Solar Generation (kWh)	Utility Bill (before new system) (£)	Utility Bill (after new system) (£)	Annual Savings (from new system) (£)	System Costs (Net of Dealer Incentives) (£)	Customer Incentives (Upfront) (£)	Net Savings (£)	Cumulative Impacts (£)
2025	8,500	4,450	2,330	781	1,549	8,740	0	(7191)	(7191)
2026	8,500	4,435	2,493	841	1,652	0	0	1652	(5538)
2027	8,500	4,419	2,668	905	1,762	0	0	1762	(3776)
2028	8,500	4,404	2,855	975	1,880	0	0	1880	(1896)
2029	8,500	4,388	3,054	1,049	2,006	0	0	2005	109
2030	8,500	4,372	3,268	1,128	2,140	0	0	2139	2249
2031	8,500	4,357	3,497	1,958	1,539	0	0	1538	3788
2032	8,500	4,341	3,742	2,185	1,556	0	0	1556	5344
2033	8,500	4,326	4,004	2,358	1,646	0	0	1646	6990
2034	8,500	4,310	4,284	2,542	1,742	0	0	1742	8733
2035	8,500	4,294	4,584	2,739	1,845	0	0	1845	10578
2036	8,500	4,279	4,905	2,950	1,955	0	0	1955	12533
2037	8,500	4,263	5,248	3,175	2,073	0	0	2072	14605
2038	8,500	4,248	5,615	3,417	2,198	0	0	2198	16804

Year	Electricity Consumption (kWh)	Solar Generation (kWh)	Utility Bill (before new system) (£)	Utility Bill (after new system) (£)	Annual Savings (from new system) (£)	System Costs (Net of Dealer Incentives) (£)	Customer Incentives (Upfront) (£)	Net Savings (£)	Cumulative Impacts (£)
2039	8,500	4,232	6,008	3,676	2,333	0	0	2332	19137
2040	8,500	4,217	6,429	3,952	2,477	0	0	2476	21613
2041	8,500	4,201	6,879	4,249	2,630	0	0	2630	24244
2042	8,500	4,185	7,361	4,566	2,795	0	0	2794	27039
2043	8,500	4,170	7,876	4,905	2,971	0	0	2970	30009
2044	8,500	4,154	8,427	5,269	3,158	0	0	3158	33168
2045	8,500	4,139	9,017	5,658	3,359	0	0	3359	36527
2046	8,500	4,123	9,648	6,074	3,574	0	0	3573	40101
2047	8,500	4,108	10,324	6,520	3,803	0	0	3803	43904
2048	8,500	4,092	11,046	6,998	4,048	0	0	4048	47953
2049	8,500	4,076	11,820	7,509	4,310	0	0	4310	52263

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: 0.0%

Quotation

Payment Option: Cash

10 x Aiko Energy 475 Watt Panels (AIKO-A475-MCE54Mb) 1 x H1-3.7-E-G2 (Fox ESS) 1 x EP11 Integrated with Warming Function (Fox ESS)	
Standard System Price	£5,281.96 Excluding £0.00 VAT
Scaffold Excluded - Use of existing on-site scaffold	£0.00
Panel Installation & Associated Roof Works	£758.25
Bird Protection - Supplied & Installed	£239.40
Electrical Installation	£1,516.49
Electrical Installation Materials	£798.00
G99 Application (DNO)	£0.00
MCS Certification - Solar & Battery	£146.30
Total System Price	£8,740.40 Excluding £0.00 VAT
Purchase Price	£8,740.40 Including £0.00 VAT
Deposit Payable	£2,185.10

IMPORTANT NOTES CONCERNING THIS QUOTATION**Scaffolding and Fixed Access**

Unless specifically stated within the quotation table of this proposal, if it is determined that fixed scaffolding will be necessary, an additional charge will apply.

Costing

This quotation has been based on us being able to install your system as described without interruption. Should there be circumstances beyond our control which cause an interruption to the installation process we will discuss with you the implications of such a delay.

Should you decide to make any changes to the agreed installation within your cancellation period, we will produce another full quotation which considers these changes. You will be given a further cancellation period to consider this quotation.

Should you wish to make any changes to the agreed installation after your cancellation period has expired, again we will prepare a new quotation for you, but we reserve the right to charge for any reasonable costs we have incurred in working towards the original installation details.

If, during the installation process, we come across any situation that we could not reasonably be expected to foresee, for example, remedial electrical or building work, we will discuss with you the implications and costs involved in rectifying the problem.

Should you request any changes after the installation process has begun that involve additional cost, we will provide you with a quotation based on the daily or hourly rate of our installers. The rate that would apply would be £55 per hour or £440 per day.

Planning permission

If your property is a listed building or you are in a conservation area you may need planning permission. We will assist you in gaining any permission, but you are responsible for contacting your local planning authority to obtain confirmation that planning permission is not required.

We cannot be held responsible for any installations carried out where planning permission was required but not obtained. No refunds will be given in such cases.

Requirements regarding planning permission can vary from area to area.

By signing the contract, you are confirming that you have received Planning Permission or a Building Warrant for the proposed installation or ascertained that these are not required. We cannot be held responsible for any installations where Planning Permission or a Building Warrant was required but not obtained, and no refunds will be offered.

By signing and returning the Order Form, you are confirming the order for the products and installation services specified on this Quotation. This order will become binding when we notify you of its acceptance and will be governed by our installation terms and conditions.

It is a requirement of the MCS that you agree to supply feedback on the operation of the equipment if required to do so.

We are a member of the RECC, and this document is prepared in accordance with its Consumer Code, a copy of which is available on request.

Guarantees and warranties

Your equipment is guaranteed by its manufacturer, but you should contact us in the first instance if anything appears to be operating incorrectly.

In addition to the product guarantees, our work will be covered by a workmanship warranty. This workmanship warranty will be transferable to the new legal owner of the property if it is sold during the warranty period.

As members of RECC, we are required to ensure that should we cease trading, due to receivership, administration, or bankruptcy, that the workmanship warranty that we have in place for your installation will still be honoured.

When you confirm the order and we have received any requested deposit, we will register your name, address, and the total value of the contract with Quality Mark Insurers. The insurance provider will send the policy documents direct to you. This policy will be at no additional cost to you.

Deposits and advance payments

We will never ask for more than a 25% deposit, including VAT, on signing of the contract. If we require you to make any advance payments, these will be communicated to you, in writing, with the dates that they are due to us. These advance payments will never, when added to the deposit, exceed 60% of the total agreed contracted price. We will not ask for any advance payments more than 21 days from the agreed delivery or installation date.

Your deposit and any further advance payments requested will be insured with Quality Mark Insurers under their Deposit, Advanced Payment and Warranty Insurance (DAAWI) scheme so that you can get the work completed or your money back if we cannot deliver your equipment because we have gone out of business.

When you confirm the order and we receive any requested deposit, we will register your name, address, and the total value of the contract with QANW. You will be sent your insurance policy documents directly from Quality Mark Insurers. If you are not content for us to register your details in this way, please let us know.

Insurance

It is recommended that you inform your property insurers about the proposed installation to check if it will increase your buildings insurance premium.

As members of the Renewable Energy Consumer Code, we must have appropriate insurance to cover possible third-party damage, which may be caused by any of our activities. We are insured by Chiswell Insurance.

Data protection

We will keep information about individuals in accordance with data protection legislation. We will not pass information to any third party without your permission. Information about you may be passed to the Renewable Energy Consumer Code administrator and its auditors as part of the Code administrators monitoring of their compliance with the Code. The Code administrator may contact you directly.

Commissioning the system

The installation will be commissioned according to MCS installation standards to ensure that the system is safe, has been installed in accordance with documented procedures and manufacturer's requirements and is operating correctly in accordance with the system design.

Following the testing and commissioning of the system, we will give you a Compliance Certificate. This certificate confirms that we have met the requirements of the MCS, and it details key information about the installation.

We will register the installation on the MCS Installation Database (MID) and will provide to you, within 10 working days, the MCS Certificate.

After sales support and maintenance

If, following installation, the system does not appear to be operating correctly please refer to the operating instructions. We will explain to you, at the handover stage, the safe operation of the system.

If you are still in doubt as to any aspect of the systems operation, please contact us.

We will issue to you at handover information as to any maintenance requirements.

RECC and the Renewable Energy Consumer Code

We are a member of RECC, membership number **00071616** and this document is prepared in accordance with the Renewable Energy Consumer Code.

A leaflet describing the Renewable Energy Consumer Code is enclosed with this quotation. The Code can be viewed in full at www.recc.org.uk/scheme/consumer-code.

Complaints

We hope you won't have any reason to complain about any aspect of our service. But if you do, please contact us.

You may contact us by telephone, letter, or e mail, and you will find our contact details on this quotation. We will acknowledge and attempt to resolve your complaint promptly. Where we need to investigate the complaint, we will report to you our progress on any investigation within seven working days.

If we are unable to resolve your complaint, you may be able to complain to RECC. You can read about this here: <http://www.recc.org.uk/consumers/how-to-complain>.

If you wish to accept the quotation

If you wish to accept the quotation, please get in touch and we will send over your contract with our terms and conditions, please the signed Contract and your deposit payment if we have requested one. We will then contact you to arrange the date for the installation.

If you have any questions on any aspect of this quotation, the contract or any other related issue please do not hesitate to contact us.

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 23rd November 2025.

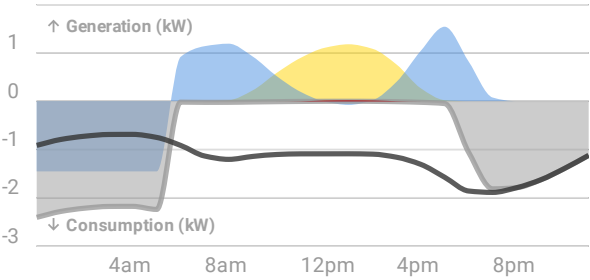
Payment Milestones

Initial Deposit Initial Deposit	£2,185.10
Second Deposit Second Deposit	£2,185.10
Final Balance Final Balance Payable upon commissioning	£4,370.20
Total	£8,740.40

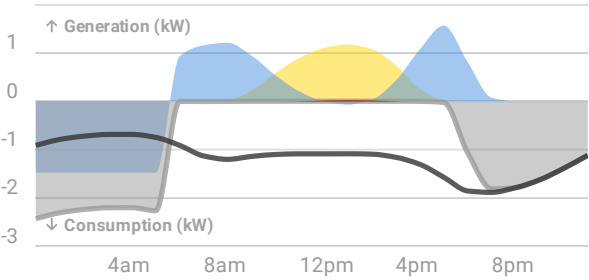
Daily Energy Flows

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

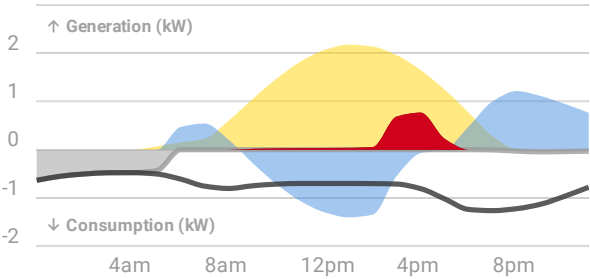
Winter Weekday



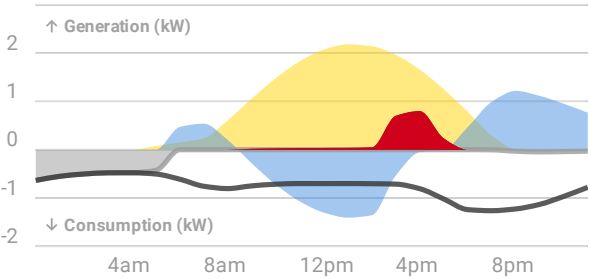
Winter Weekend



Summer Weekday



Summer Weekend



System Option 3 of 4: SigEnergy System - Small Scale Solar, No Backup

4.75 kW

System Size

£1,492

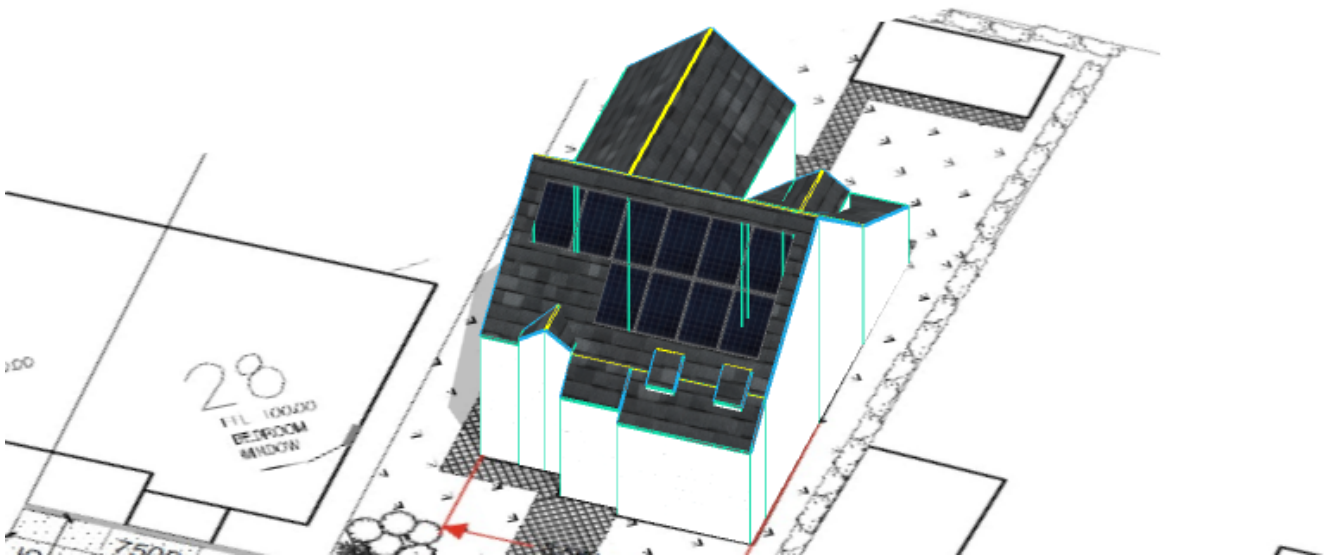
Estimated Annual
Electricity Bill Savings

£9,296

Purchase Price
excluding VAT

4,450 kWh

Estimated Annual
Solar Generation



Your Solution

Solar Panels

Aiko Energy

4.8 kW Total Module Power

10 x 475 Watt Panels (AIKO-A475-MCE54Mb)

4,450 kWh per year

Sigen Battery 6.0 and 10

9.04kWh of Battery Storage

Sigenenergy

1 x SigenStor BAT 10.0

10.0 Year Warranty



Sigen Energy Controller Single Phase

5 kW of Inverter Power

Sigenenergy

1 x SigenStor EC 5.0SP

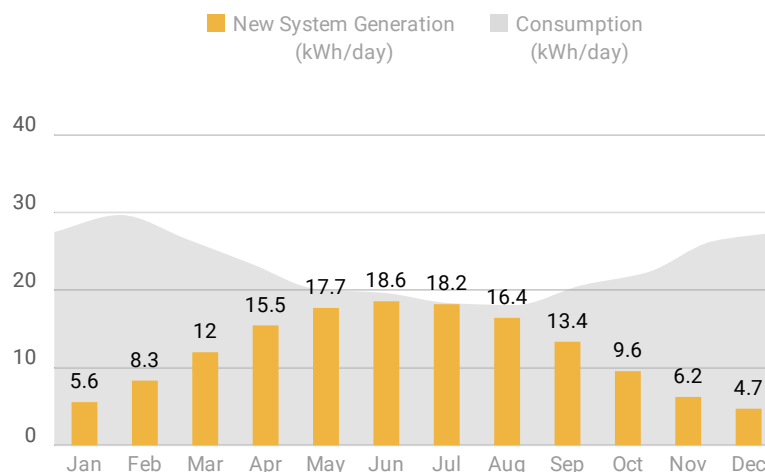
10.0 Year Warranty



Warranties: 25 Year Panel Product Warranty, 30 Year Panel Performance Warranty, 10 Year Inverter Product Warranty, 10 Year Battery Product Warranty

System Performance

52%
Energy From Solar



95%
Self Consumption

5%
Export to Grid

System Performance Assumptions: System Total losses: 0%, Inverter losses: 0%, Optimizer losses: 0%, Shading losses: 0%, Performance Adjustment: 0%, Output Calculator: MCS. Panel Orientations: 10 panels with Azimuth 217 and Slope 35.

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.

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.

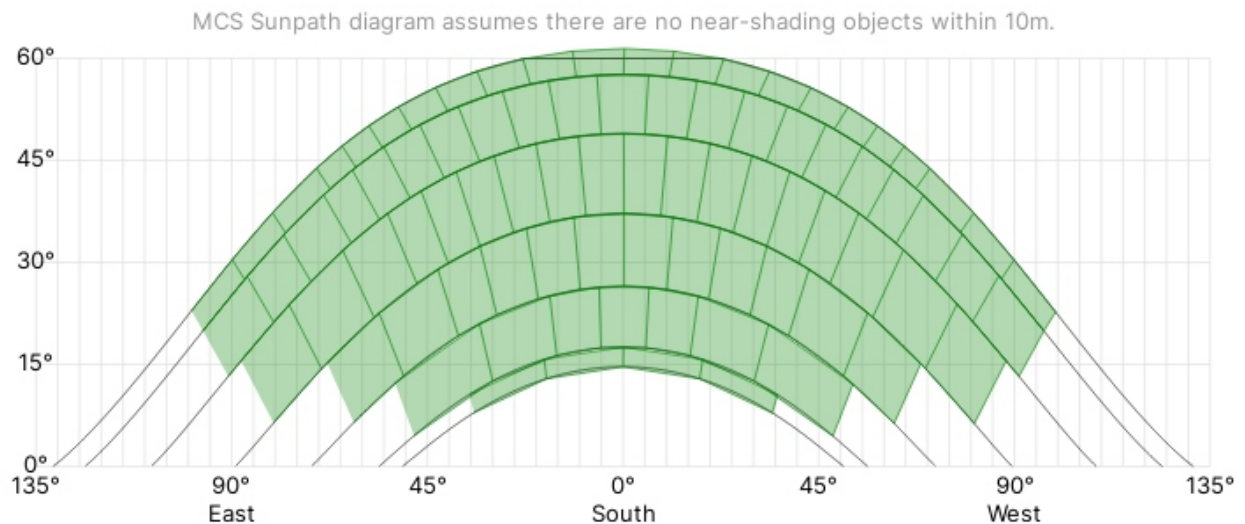
[EESS capacity not used for self consumption] Storage capacity of the battery - assumed usable capacity of battery [Total energy discharged per annum] Assumed usable capacity of battery x 730 [Additional self consumption] Estimated annual output (Section B) x self consumption rate with battery as a % (no higher than 95%) - Expected solar PV self-consumption (with EESS) (Section D)

A. Installation data		
Installed capacity of PV system - kWp (stc)	4.750	kWp
Orientation of the PV system - degrees from South	Group 1: 10 panels with Orientation: 35 °	°
Inclination of system - degrees from horizontal	Group 1: 10 panels with Tilt: 35°	°
Postcode region	5E	
B. Performance calculations		

kWh/kWp (Kk) from table	Group 1: 937	kWh/kWp
Shade Factor (SF)	1.000	
Estimated annual output (kWp x Kk x SF)	4,450	kWh
C. Estimated PV self-consumption - PV Only		
Assumed occupancy archetype	In Half Day	
Assumed annual electricity consumption, kWh	8,500.00	kWh
Assumed annual electricity generation from solar PV system, kWh	4,450	kWh
Expected solar PV self-consumption (PV Only)	2,887.59	kWh
Grid electricity independence / Self-sufficiency (PV Only)	33.97	%
D. Estimated PV self-consumption - with EESS		
Assumed usable capacity of electricity energy storage device, which is used for self-consumption, kWh	8.76	kWh
Expected solar PV self-consumption (with EESS)	4,227.77	kWh
Grid electricity independence / Self-sufficiency (with EESS)	50.0%	%
E. Additional benefits from PV and EESS		
EESS capacity not used for self-consumption	0.28	kWh
Total energy discharged per annum	6394.80	kWh
Additional self-consumption for EV, heat pumps, diverters (only when present)	0.00	kWh

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

52%

Consumption Offset

1 tons

of CO₂ reduced per year

Over System Lifetime

33,846^{km}

Car distance avoided
(lifetime)

218

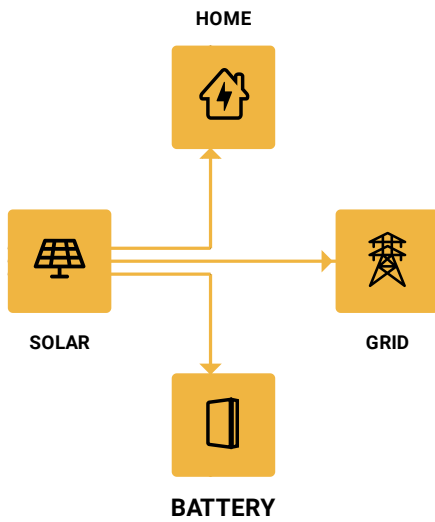
Trees planted

24

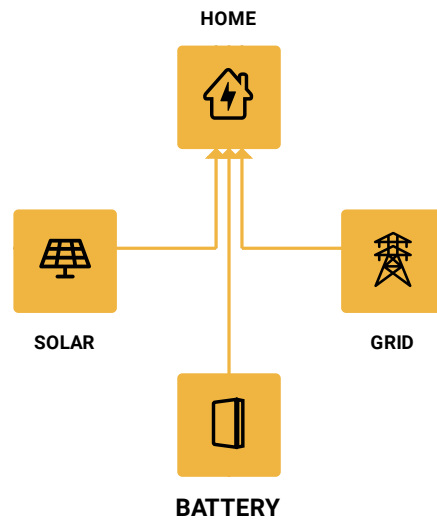
Long haul flights
avoided

How your system works

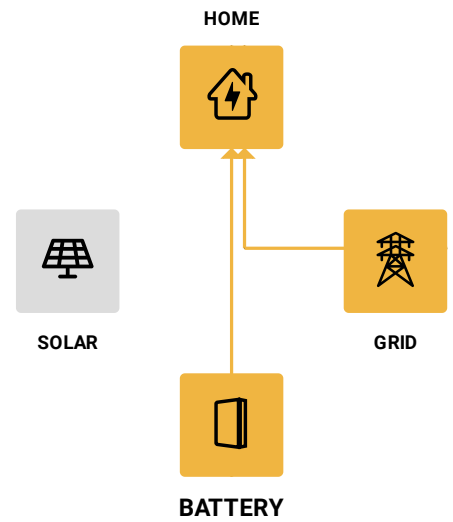
Generating Excess Solar



Partially Offset Usage

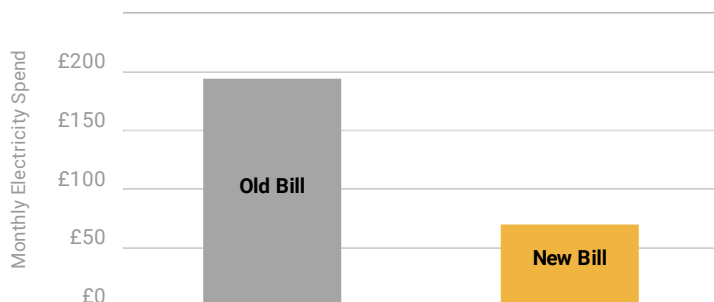


Night

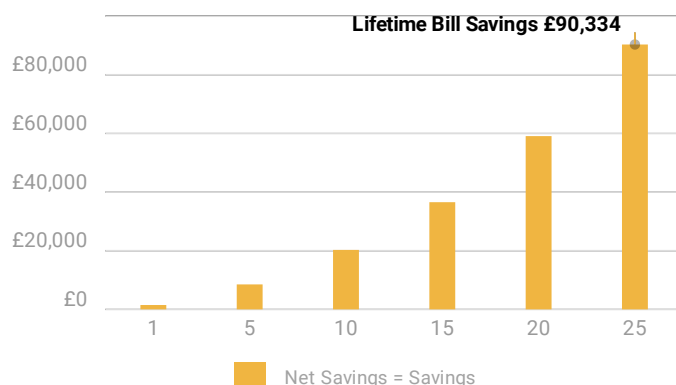


Electricity Bill Savings

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	173	849	707	1	0	230	131	99
Feb	234	829	626	4	1	224	114	110
Mar	372	824	489	8	1	224	84	140
Apr	464	701	266	11	2	192	62	130
May	549	624	120	18	3	173	23	150
Jun	557	593	105	50	8	165	15	150
Jul	564	574	103	77	12	160	11	149
Aug	509	562	105	33	5	157	18	139
Sep	401	619	244	10	2	171	59	112
Oct	296	690	427	7	1	190	73	116
Nov	187	787	631	3	0	214	113	101
Dec	146	848	733	0	0	230	136	94

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 8500 kWh per year, assuming Intelligent Octopus Go Southern - Oct 25 Electricity Tariff.

The savings illustrations provided include Smart Export Guarantee (SEG) payments which you receive for any export of energy to the grid, subject to the utility company criteria and requirements. If we have suggested a fixed rate tariff, instead of a specific tariff offered by a supplier we have included a SEG rate of 15p for illustrative purposes, which is widely available in the marketplace at the time of preparing your quotation. We strongly recommend that all customers carry out their own research into SEG payments and tariffs available as these vary from supplier to supplier and you may need to change provider to receive this rate. These rates may also change during the lifespan of your solar system. Not registering for SEG will mean you do not receive the export payments detailed above

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 Intelligent Octopus Go Southern - Oct 25

Energy Charges

Daytime

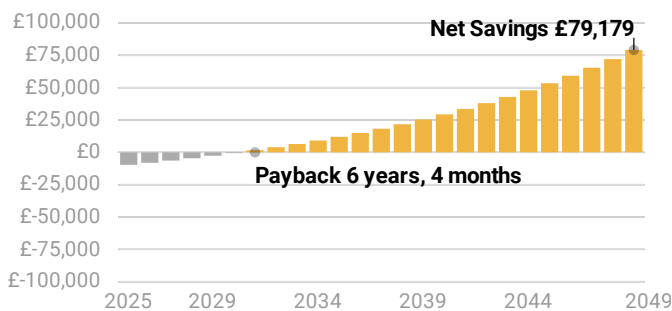
£0.29 / kWh

6am-12am Mon-Sun	
Night 12am-6am Mon-Sun	£0.07 / kWh
Smart Export Guarantee	
Outgoing Octopus All Day Mon-Sun	£0.15 / kWh
Fixed Charges	
Standing Charge	£0.44 / day

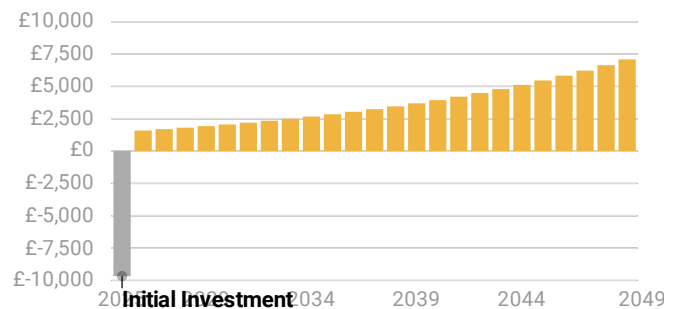
Net Financial Impact Cash

$$\begin{array}{rcl}
 \text{£90,334} & - & \text{£11,155} = \text{£79,179} \\
 \text{Utility Bill Savings} & & \text{Net System Cost} \quad \text{Estimated Net Savings}
 \end{array}$$

Cumulative Savings From Going Solar



Annual Savings From Going Solar



£79,179

Net Present Value

**6 Years
3 Months**

Discounted Payback
Period

710%

Total Return on
Investment

19.2%

Rate of Return on
Investment

Year	Electricity Consumption (kWh)	Solar Generation (kWh)	Utility Bill (before new system) (£)	Utility Bill (after new system) (£)	Annual Savings (from new system) (£)	System Costs (Net of Dealer Incentives) (£)	Customer Incentives (Upfront) (£)	Net Savings (£)	Cumulative Impacts (£)
2025	8,500	4,450	2,330	838	1,492	11,155	0	(9662)	(9662)
2026	8,500	4,435	2,493	902	1,591	0	0	1590	(8072)
2027	8,500	4,419	2,668	971	1,697	0	0	1696	(6375)
2028	8,500	4,404	2,855	1,045	1,809	0	0	1809	(4565)
2029	8,500	4,388	3,054	1,124	1,930	0	0	1930	(2635)
2030	8,500	4,372	3,268	1,210	2,059	0	0	2058	(577)
2031	8,500	4,357	3,497	1,301	2,196	0	0	2196	1618
2032	8,500	4,341	3,742	1,399	2,343	0	0	2342	3961
2033	8,500	4,326	4,004	1,504	2,500	0	0	2499	6461
2034	8,500	4,310	4,284	1,617	2,667	0	0	2667	9128
2035	8,500	4,294	4,584	1,738	2,846	0	0	2846	11974
2036	8,500	4,279	4,905	1,868	3,037	0	0	3036	15011
2037	8,500	4,263	5,248	2,007	3,241	0	0	3240	18252
2038	8,500	4,248	5,615	2,157	3,459	0	0	3458	21711

Year	Electricity Consumption (kWh)	Solar Generation (kWh)	Utility Bill (before new system) (£)	Utility Bill (after new system) (£)	Annual Savings (from new system) (£)	System Costs (Net of Dealer Incentives) (£)	Customer Incentives (Upfront) (£)	Net Savings (£)	Cumulative Impacts (£)
2039	8,500	4,232	6,008	2,317	3,691	0	0	3691	25402
2040	8,500	4,217	6,429	2,489	3,940	0	0	3939	29342
2041	8,500	4,201	6,879	2,674	4,205	0	0	4205	33547
2042	8,500	4,185	7,361	2,872	4,488	0	0	4488	38036
2043	8,500	4,170	7,876	3,085	4,791	0	0	4790	42827
2044	8,500	4,154	8,427	3,313	5,114	0	0	5114	47941
2045	8,500	4,139	9,017	3,558	5,459	0	0	5459	53400
2046	8,500	4,123	9,648	3,821	5,827	0	0	5827	59227
2047	8,500	4,108	10,324	4,103	6,221	0	0	6220	65448
2048	8,500	4,092	11,046	4,405	6,641	0	0	6640	72089
2049	8,500	4,076	11,820	4,730	7,089	0	0	7089	79178

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: 0.0%

Quotation

Payment Option: Cash

10 x Aiko Energy 475 Watt Panels (AIKO-A475-MCE54Mb) 1 x SigenStor EC 5.0SP (Sigenergy) 1 x SigenStor BAT 10.0 (Sigenergy)	
Standard System Price	£7,004.81 Including £1,167.47 VAT
Scaffold Excluded - Use of existing on-site scaffold	£0.00
Panel Installation & Associated Roof Works	£909.90 Including £151.65 VAT
Bird Protection - Supplied & Installed	£287.28 Including £47.88 VAT
Electrical Installation	£1,819.79 Including £303.30 VAT
Electrical Installation Materials	£957.60 Including £159.60 VAT
G99 Application (DNO)	£0.00
MCS Certification - Solar & Battery	£175.56 Including £29.26 VAT
Total System Price	£11,154.94 Including £1,859.16 VAT
Purchase Price	£11,154.94 Including £1,859.16 VAT
Deposit Payable	£2,788.73 Including £464.79 VAT

IMPORTANT NOTES CONCERNING THIS QUOTATION

Scaffolding and Fixed Access

Unless specifically stated within the quotation table of this proposal, if it is determined that fixed scaffolding will be necessary, an additional charge will apply.

Costing

This quotation has been based on us being able to install your system as described without interruption. Should there be circumstances beyond our control which cause an interruption to the installation process we will discuss with you the implications of such a delay.

Should you decide to make any changes to the agreed installation within your cancellation period, we will produce another full quotation which considers these changes. You will be given a further cancellation period to consider this quotation.

Should you wish to make any changes to the agreed installation after your cancellation period has expired, again we will prepare a new quotation for you, but we reserve the right to charge for any reasonable costs we have incurred in working towards the original installation details.

If, during the installation process, we come across any situation that we could not reasonably be expected to foresee, for example, remedial electrical or building work, we will discuss with you the implications and costs involved in rectifying the problem.

Should you request any changes after the installation process has begun that involve additional cost, we will provide you with a quotation based on the daily or hourly rate of our installers. The rate that would apply would be £55 per hour or £440 per day.

Planning permission

If your property is a listed building or you are in a conservation area you may need planning permission. We will assist you in gaining any permission, but you are responsible for contacting your local planning authority to obtain confirmation that planning permission is not required.

We cannot be held responsible for any installations carried out where planning permission was required but not obtained. No refunds will be given in such cases.

Requirements regarding planning permission can vary from area to area.

By signing the contract, you are confirming that you have received Planning Permission or a Building Warrant for the proposed installation or ascertained that these are not required. We cannot be held responsible for any installations where Planning Permission or a Building Warrant was required but not obtained, and no refunds will be offered.

By signing and returning the Order Form, you are confirming the order for the products and installation services specified on this Quotation. This order will become binding when we notify you of its acceptance and will be governed by our installation terms and conditions.

It is a requirement of the MCS that you agree to supply feedback on the operation of the equipment if required to do so.

We are a member of the RECC, and this document is prepared in accordance with its Consumer Code, a copy of which is available on request.

Guarantees and warranties

Your equipment is guaranteed by its manufacturer, but you should contact us in the first instance if anything appears to be operating incorrectly.

In addition to the product guarantees, our work will be covered by a workmanship warranty. This workmanship warranty will be transferable to the new legal owner of the property if it is sold during the warranty period.

As members of RECC, we are required to ensure that should we cease trading, due to receivership, administration, or bankruptcy, that the workmanship warranty that we have in place for your installation will still be honoured.

When you confirm the order and we have received any requested deposit, we will register your name, address, and the total value of the contract with Quality Mark Insurers. The insurance provider will send the policy documents direct to you. This policy will be at no additional cost to you.

Deposits and advance payments

We will never ask for more than a 25% deposit, including VAT, on signing of the contract. If we require you to make any advance payments, these will be communicated to you, in writing, with the dates that they are due to us. These advance payments will never, when added to the deposit, exceed 60% of the total agreed contracted price. We will not ask for any advance payments more than 21 days from the agreed delivery or installation date.

Your deposit and any further advance payments requested will be insured with Quality Mark Insurers under their Deposit, Advanced Payment and Warranty Insurance (DAAWI) scheme so that you can get the work completed or your money back if we cannot deliver your equipment because we have gone out of business.

When you confirm the order and we receive any requested deposit, we will register your name, address, and the total value of the contract with QANW. You will be sent your insurance policy documents directly from Quality Mark Insurers. If you are not content for us to register your details in this way, please let us know.

Insurance

It is recommended that you inform your property insurers about the proposed installation to check if it will increase your buildings insurance premium.

As members of the Renewable Energy Consumer Code, we must have appropriate insurance to cover possible third-party damage, which may be caused by any of our activities. We are insured by Chiswell Insurance.

Data protection

We will keep information about individuals in accordance with data protection legislation. We will not pass information to any third party without your permission. Information about you may be passed to the Renewable Energy Consumer Code administrator and its auditors as part of the Code administrators monitoring of their compliance with the Code. The Code administrator may contact you directly.

Commissioning the system

The installation will be commissioned according to MCS installation standards to ensure that the system is safe, has been installed in accordance with documented procedures and manufacturer's requirements and is operating correctly in accordance with the system design.

Following the testing and commissioning of the system, we will give you a Compliance Certificate. This certificate confirms that we have met the requirements of the MCS, and it details key information about the installation.

We will register the installation on the MCS Installation Database (MID) and will provide to you, within 10 working days, the MCS Certificate.

After sales support and maintenance

If, following installation, the system does not appear to be operating correctly please refer to the operating instructions. We will explain to you, at the handover stage, the safe operation of the system.

If you are still in doubt as to any aspect of the systems operation, please contact us.

We will issue to you at handover information as to any maintenance requirements.

RECC and the Renewable Energy Consumer Code

We are a member of RECC, membership number **00071616** and this document is prepared in accordance with the Renewable Energy Consumer Code.

A leaflet describing the Renewable Energy Consumer Code is enclosed with this quotation. The Code can be viewed in full at www.recc.org.uk/scheme/consumer-code.

Complaints

We hope you won't have any reason to complain about any aspect of our service. But if you do, please contact us.

You may contact us by telephone, letter, or e mail, and you will find our contact details on this quotation. We will acknowledge and attempt to resolve your complaint promptly. Where we need to investigate the complaint, we will report to you our progress on any investigation within seven working days.

If we are unable to resolve your complaint, you may be able to complain to RECC. You can read about this here: <http://www.recc.org.uk/consumers/how-to-complain>.

If you wish to accept the quotation

If you wish to accept the quotation, please get in touch and we will send over your contract with our terms and conditions, please the signed Contract and your deposit payment if we have requested one. We will then contact you to arrange the date for the installation.

If you have any questions on any aspect of this quotation, the contract or any other related issue please do not hesitate to contact us.

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 23rd November 2025.

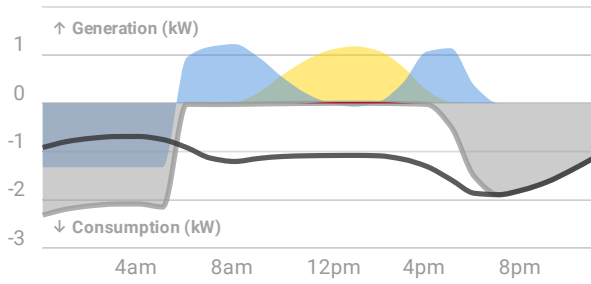
Payment Milestones

Initial Deposit Initial Deposit	£2,788.73
Second Deposit Second Deposit	£2,788.73
Final Balance Final Balance Payable upon commissioning	£5,577.48
Total	£11,154.94

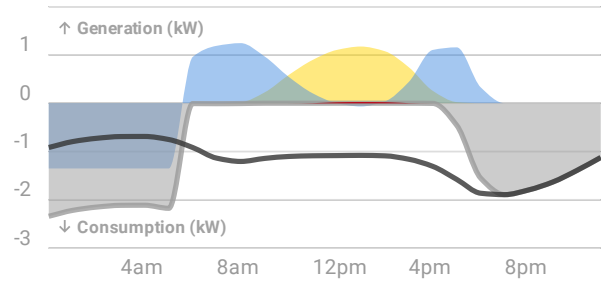
Daily Energy Flows

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

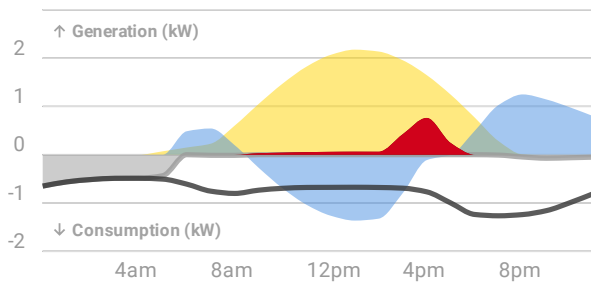
Winter Weekday



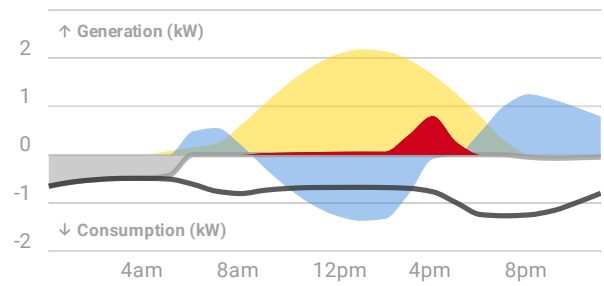
Winter Weekend



Summer Weekday



Summer Weekend



System Option 4 of 4: Fox System - Small Scale Solar

2.85 kW

System Size

£1,283

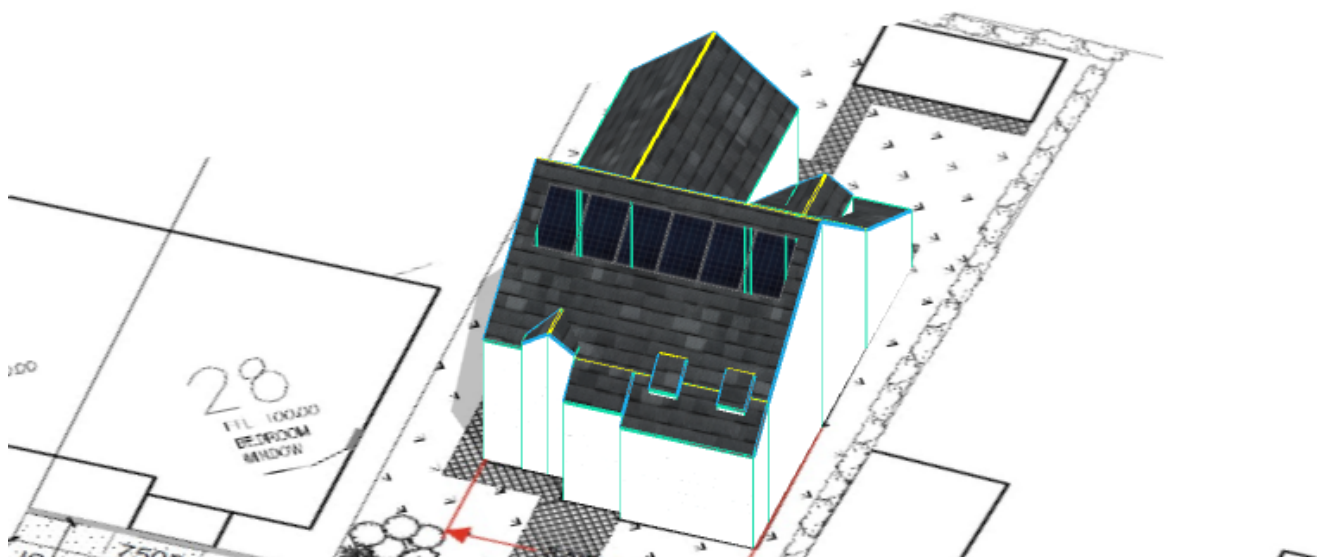
Estimated Annual
Electricity Bill Savings

£7,910

Purchase Price
excluding VAT

2,670 kWh

Estimated Annual
Solar Generation



Your Solution

Solar Panels

Aiko Energy

2.8 kW Total Module Power

6 x 475 Watt Panels (AIKO-A475-MCE54Mb)

2,670 kWh per year

FoxESS EP11

10.36kWh of Battery Storage

Fox ESS

1 x EP11 Integrated with Warming Function

10 Year Warranty



FoxESS H1 SERIES (G2) Hybrid Inverter

3 kW of Inverter Power

Fox ESS

1 x H1-3.0-E-G2

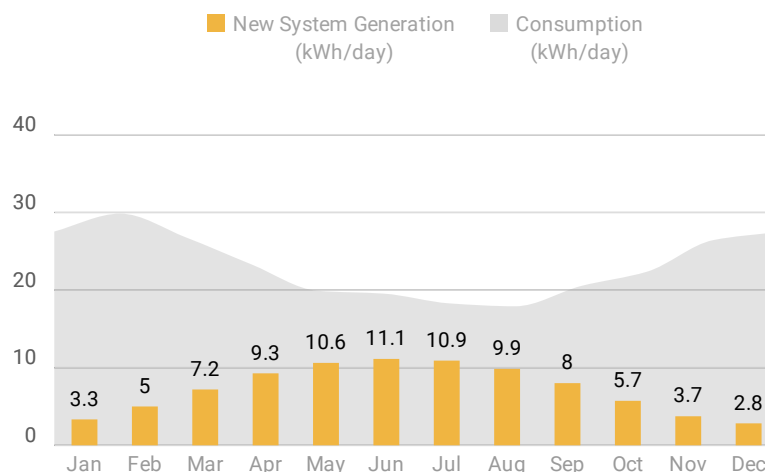
10 Years Warranty



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

System Performance

31%
Energy From Solar



95%
Self Consumption

5%
Export to Grid

System Performance Assumptions: System Total losses: 0%, Inverter losses: 0%, Optimizer losses: 0%, Shading losses: 0%, Performance Adjustment: 0%, Output Calculator: MCS. Panel Orientations: 6 panels with Azimuth 217 and Slope 35.

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.

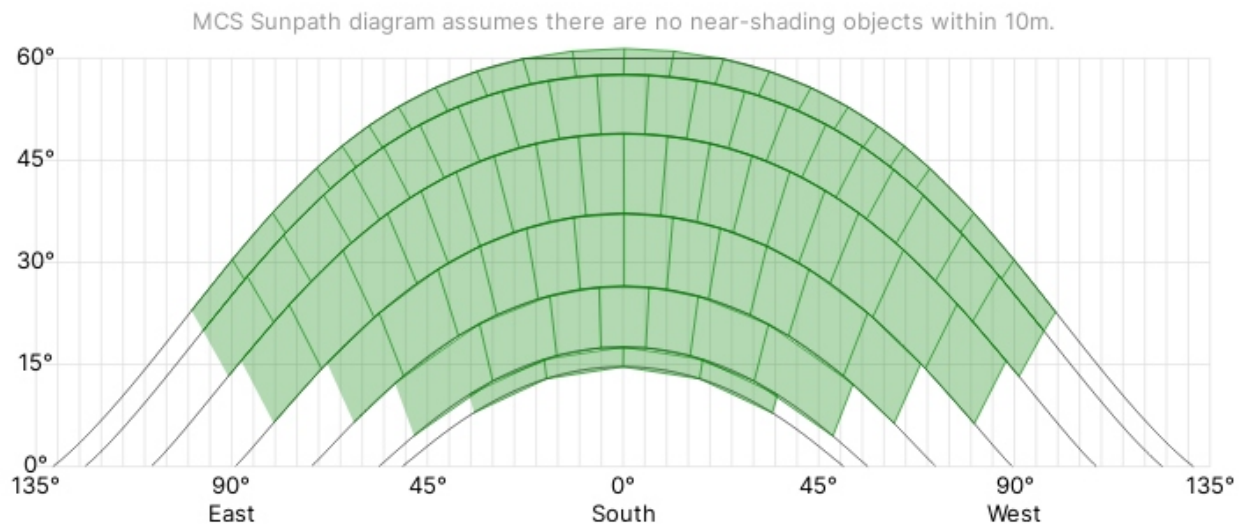
[EESS capacity not used for self consumption] Storage capacity of the battery - assumed usable capacity of battery [Total energy discharged per annum] Assumed usable capacity of battery x 730 [Additional self consumption] Estimated annual output (Section B) x self consumption rate with battery as a % (no higher than 95%) - Expected solar PV self-consumption (with EESS) (Section D)

A. Installation data		
Installed capacity of PV system - kWp (stc)	2.850	kWp
Orientation of the PV system - degrees from South	Group 1: 6 panels with Orientation: 35 °	°
Inclination of system - degrees from horizontal	Group 1: 6 panels with Tilt: 35°	°
Postcode region	5E	
B. Performance calculations		
kWh/kWp (Kk) from table	Group 1: 937	kWh/kWp

Shade Factor (SF)	1.000	
Estimated annual output (kWp x Kk x SF)	2,670	kWh
C. Estimated PV self-consumption - PV Only		
Assumed occupancy archetype	In Half Day	
Assumed annual electricity consumption, kWh	8,500.00	kWh
Assumed annual electricity generation from solar PV system, kWh	2,670	kWh
Expected solar PV self-consumption (PV Only)	2,283.37	kWh
Grid electricity independence / Self-sufficiency (PV Only)	26.86	%
D. Estimated PV self-consumption - with EESS		
Assumed usable capacity of electricity energy storage device, which is used for self-consumption, kWh	9.32	kWh
Expected solar PV self-consumption (with EESS)	2,537.34	kWh
Grid electricity independence / Self-sufficiency (with EESS)	30.0%	%
E. Additional benefits from PV and EESS		
EESS capacity not used for self-consumption	1.04	kWh
Total energy discharged per annum	6806.52	kWh
Additional self-consumption for EV, heat pumps, diverters (only when present)	0.00	kWh

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

31%

Consumption Offset

0.7^{tons}

of CO₂ reduced per year

Over System Lifetime

20,306^{km}

Car distance avoided
(lifetime)

131

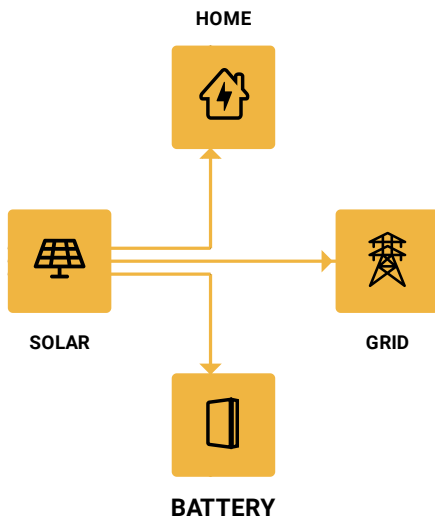
Trees planted

15

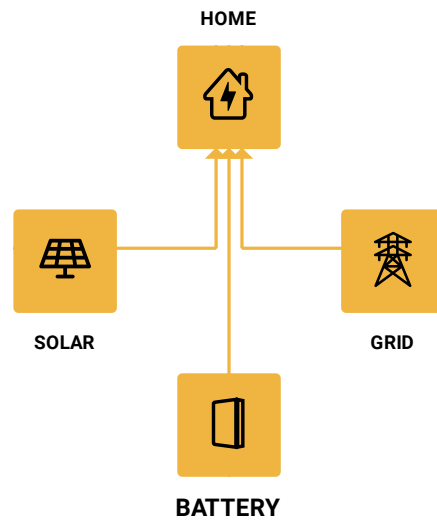
Long haul flights
avoided

How your system works

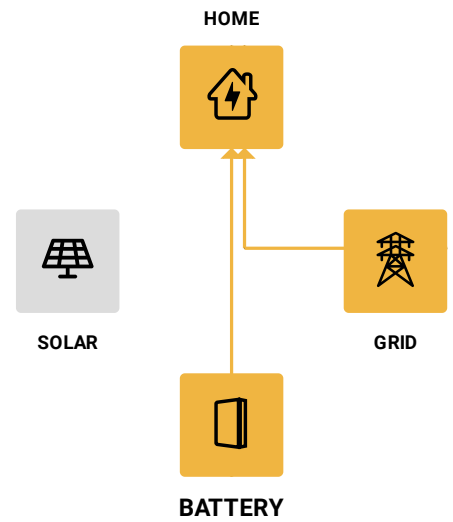
Generating Excess Solar



Partially Offset Usage

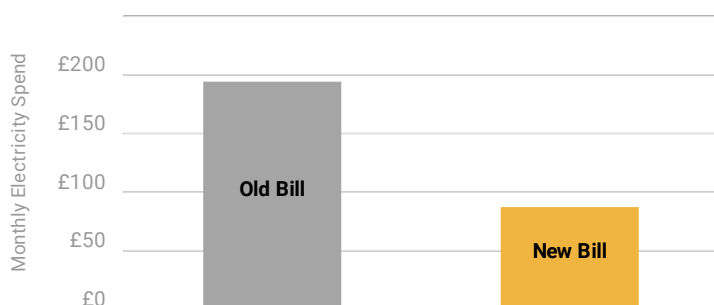


Night

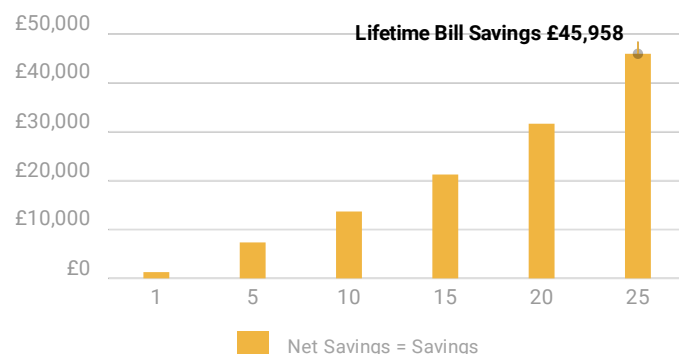


Electricity Bill Savings

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	103	849	765	0	0	230	144	87
Feb	140	829	709	0	0	224	131	93
Mar	223	824	626	4	1	224	102	122
Apr	278	701	451	16	2	192	61	131
May	329	624	321	23	3	173	52	121
Jun	334	593	284	23	3	165	50	114
Jul	338	574	259	24	4	160	51	109
Aug	305	562	281	22	3	157	51	106
Sep	240	619	404	15	2	171	54	117
Oct	178	690	536	5	1	190	81	109
Nov	112	787	695	0	0	214	125	89
Dec	88	848	779	0	0	230	146	84

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 8500 kWh per year, assuming Intelligent Octopus Go Southern - Oct 25 Electricity Tariff.

The savings illustrations provided include Smart Export Guarantee (SEG) payments which you receive for any export of energy to the grid, subject to the utility company criteria and requirements. If we have suggested a fixed rate tariff, instead of a specific tariff offered by a supplier we have included a SEG rate of 15p for illustrative purposes, which is widely available in the marketplace at the time of preparing your quotation. We strongly recommend that all customers carry out their own research into SEG payments and tariffs available as these vary from supplier to supplier and you may need to change provider to receive this rate. These rates may also change during the lifespan of your solar system. Not registering for SEG will mean you do not receive the export payments detailed above

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 Intelligent Octopus Go Southern - Oct 25

Energy Charges

Daytime

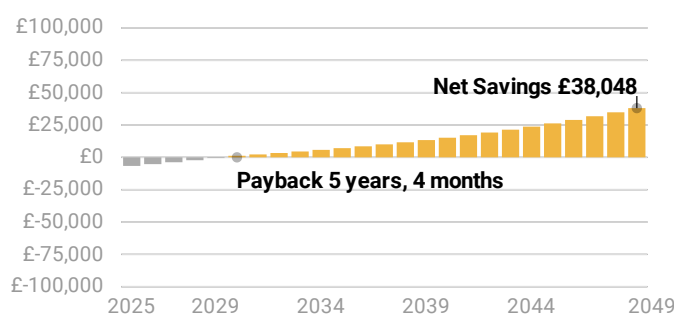
£0.29 / kWh

6am-12am Mon-Sun	
Night 12am-6am Mon-Sun	£0.07 / kWh
Smart Export Guarantee	
Outgoing Octopus All Day Mon-Sun	£0.15 / kWh
Fixed Charges	
Standing Charge	£0.44 / day

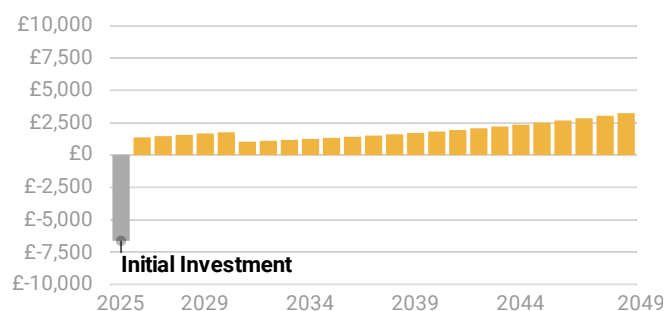
Net Financial Impact Cash

$$\begin{array}{rcl}
 \text{£45,958} & - & \text{£7,910} = \text{£38,048} \\
 \text{Utility Bill Savings} & & \text{Net System Cost} \quad \text{Estimated Net Savings}
 \end{array}$$

Cumulative Savings From Going Solar



Annual Savings From Going Solar



£38,048

Net Present Value

5 Years
4 Months

Discounted Payback
Period

481%

Total Return on
Investment

18.2%

Rate of Return on
Investment

Year	Electricity Consumption (kWh)	Solar Generation (kWh)	Utility Bill (before new system) (£)	Utility Bill (after new system) (£)	Annual Savings (from new system) (£)	System Costs (Net of Dealer Incentives) (£)	Customer Incentives (Upfront) (£)	Net Savings (£)	Cumulative Impacts (£)
2025	8,500	2,670	2,330	1,047	1,283	7,910	0	(6626)	(6626)
2026	8,500	2,661	2,493	1,122	1,371	0	0	1370	(5255)
2027	8,500	2,651	2,668	1,203	1,465	0	0	1464	(3790)
2028	8,500	2,642	2,855	1,289	1,565	0	0	1565	(2225)
2029	8,500	2,633	3,054	1,382	1,673	0	0	1672	(552)
2030	8,500	2,623	3,268	1,505	1,763	0	0	1762	1209
2031	8,500	2,614	3,497	2,460	1,037	0	0	1037	2247
2032	8,500	2,605	3,742	2,638	1,103	0	0	1103	3350
2033	8,500	2,595	4,004	2,830	1,174	0	0	1173	4524
2034	8,500	2,586	4,284	3,035	1,249	0	0	1249	5773
2035	8,500	2,576	4,584	3,254	1,330	0	0	1329	7103
2036	8,500	2,567	4,905	3,489	1,416	0	0	1415	8519
2037	8,500	2,558	5,248	3,740	1,508	0	0	1507	10027
2038	8,500	2,548	5,615	4,010	1,606	0	0	1605	11633

Year	Electricity Consumption (kWh)	Solar Generation (kWh)	Utility Bill (before new system) (£)	Utility Bill (after new system) (£)	Annual Savings (from new system) (£)	System Costs (Net of Dealer Incentives) (£)	Customer Incentives (Upfront) (£)	Net Savings (£)	Cumulative Impacts (£)
2039	8,500	2,539	6,008	4,298	1,711	0	0	1710	13343
2040	8,500	2,530	6,429	4,606	1,823	0	0	1822	15166
2041	8,500	2,520	6,879	4,937	1,942	0	0	1942	17108
2042	8,500	2,511	7,361	5,291	2,070	0	0	2069	19178
2043	8,500	2,502	7,876	5,670	2,206	0	0	2206	21384
2044	8,500	2,492	8,427	6,076	2,352	0	0	2351	23736
2045	8,500	2,483	9,017	6,510	2,507	0	0	2507	26243
2046	8,500	2,474	9,648	6,975	2,673	0	0	2673	28916
2047	8,500	2,464	10,324	7,473	2,850	0	0	2850	31766
2048	8,500	2,455	11,046	8,007	3,040	0	0	3039	34806
2049	8,500	2,446	11,820	8,578	3,241	0	0	3241	38047

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: 0.0%

Quotation

Payment Option: Cash

6 x Aiko Energy 475 Watt Panels (AIKO-A475-MCE54Mb) 1 x H1-3.0-E-G2 (Fox ESS) 1 x EP11 Integrated with Warming Function (Fox ESS)	
Standard System Price	£4,547.07 Excluding £0.00 VAT
Scaffold Excluded - Use of existing on-site scaffold	£0.00
Panel Installation & Associated Roof Works	£758.25
Bird Protection - Supplied & Installed	£143.64
Electrical Installation	£1,516.49
Electrical Installation Materials	£798.00
G99 Application (DNO)	£0.00
MCS Certification - Solar & Battery	£146.30
Total System Price	£7,909.75 Excluding £0.00 VAT
Purchase Price	£7,909.75 Including £0.00 VAT
Deposit Payable	£1,977.44

IMPORTANT NOTES CONCERNING THIS QUOTATION

Scaffolding and Fixed Access

Unless specifically stated within the quotation table of this proposal, if it is determined that fixed scaffolding will be necessary, an additional charge will apply.

Costing

This quotation has been based on us being able to install your system as described without interruption. Should there be circumstances beyond our control which cause an interruption to the installation process we will discuss with you the implications of such a delay.

Should you decide to make any changes to the agreed installation within your cancellation period, we will produce another full quotation which considers these changes. You will be given a further cancellation period to consider this quotation.

Should you wish to make any changes to the agreed installation after your cancellation period has expired, again we will prepare a new quotation for you, but we reserve the right to charge for any reasonable costs we have incurred in working towards the original installation details.

If, during the installation process, we come across any situation that we could not reasonably be expected to foresee, for example, remedial electrical or building work, we will discuss with you the implications and costs involved in rectifying the problem.

Should you request any changes after the installation process has begun that involve additional cost, we will provide you with a quotation based on the daily or hourly rate of our installers. The rate that would apply would be £55 per hour or £440 per day.

Planning permission

If your property is a listed building or you are in a conservation area you may need planning permission. We will assist you in gaining any permission, but you are responsible for contacting your local planning authority to obtain confirmation that planning permission is not required.

We cannot be held responsible for any installations carried out where planning permission was required but not obtained. No refunds will be given in such cases.

Requirements regarding planning permission can vary from area to area.

By signing the contract, you are confirming that you have received Planning Permission or a Building Warrant for the proposed installation or ascertained that these are not required. We cannot be held responsible for any installations where Planning Permission or a Building Warrant was required but not obtained, and no refunds will be offered.

By signing and returning the Order Form, you are confirming the order for the products and installation services specified on this Quotation. This order will become binding when we notify you of its acceptance and will be governed by our installation terms and conditions.

It is a requirement of the MCS that you agree to supply feedback on the operation of the equipment if required to do so.

We are a member of the RECC, and this document is prepared in accordance with its Consumer Code, a copy of which is available on request.

Guarantees and warranties

Your equipment is guaranteed by its manufacturer, but you should contact us in the first instance if anything appears to be operating incorrectly.

In addition to the product guarantees, our work will be covered by a workmanship warranty. This workmanship warranty will be transferable to the new legal owner of the property if it is sold during the warranty period.

As members of RECC, we are required to ensure that should we cease trading, due to receivership, administration, or bankruptcy, that the workmanship warranty that we have in place for your installation will still be honoured.

When you confirm the order and we have received any requested deposit, we will register your name, address, and the total value of the contract with Quality Mark Insurers. The insurance provider will send the policy documents direct to you. This policy will be at no additional cost to you.

Deposits and advance payments

We will never ask for more than a 25% deposit, including VAT, on signing of the contract. If we require you to make any advance payments, these will be communicated to you, in writing, with the dates that they are due to us. These advance payments will never, when added to the deposit, exceed 60% of the total agreed contracted price. We will not ask for any advance payments more than 21 days from the agreed delivery or installation date.

Your deposit and any further advance payments requested will be insured with Quality Mark Insurers under their Deposit, Advanced Payment and Warranty Insurance (DAAWI) scheme so that you can get the work completed or your money back if we cannot deliver your equipment because we have gone out of business.

When you confirm the order and we receive any requested deposit, we will register your name, address, and the total value of the contract with QANW. You will be sent your insurance policy documents directly from Quality Mark Insurers. If you are not content for us to register your details in this way, please let us know.

Insurance

It is recommended that you inform your property insurers about the proposed installation to check if it will increase your buildings insurance premium.

As members of the Renewable Energy Consumer Code, we must have appropriate insurance to cover possible third-party damage, which may be caused by any of our activities. We are insured by Chiswell Insurance.

Data protection

We will keep information about individuals in accordance with data protection legislation. We will not pass information to any third party without your permission. Information about you may be passed to the Renewable Energy Consumer Code administrator and its auditors as part of the Code administrators monitoring of their compliance with the Code. The Code administrator may contact you directly.

Commissioning the system

The installation will be commissioned according to MCS installation standards to ensure that the system is safe, has been installed in accordance with documented procedures and manufacturer's requirements and is operating correctly in accordance with the system design.

Following the testing and commissioning of the system, we will give you a Compliance Certificate. This certificate confirms that we have met the requirements of the MCS, and it details key information about the installation.

We will register the installation on the MCS Installation Database (MID) and will provide to you, within 10 working days, the MCS Certificate.

After sales support and maintenance

If, following installation, the system does not appear to be operating correctly please refer to the operating instructions. We will explain to you, at the handover stage, the safe operation of the system.

If you are still in doubt as to any aspect of the systems operation, please contact us.

We will issue to you at handover information as to any maintenance requirements.

RECC and the Renewable Energy Consumer Code

We are a member of RECC, membership number **00071616** and this document is prepared in accordance with the Renewable Energy Consumer Code.

A leaflet describing the Renewable Energy Consumer Code is enclosed with this quotation. The Code can be viewed in full at www.recc.org.uk/scheme/consumer-code.

Complaints

We hope you won't have any reason to complain about any aspect of our service. But if you do, please contact us.

You may contact us by telephone, letter, or e mail, and you will find our contact details on this quotation. We will acknowledge and attempt to resolve your complaint promptly. Where we need to investigate the complaint, we will report to you our progress on any investigation within seven working days.

If we are unable to resolve your complaint, you may be able to complain to RECC. You can read about this here: <http://www.recc.org.uk/consumers/how-to-complain>.

If you wish to accept the quotation

If you wish to accept the quotation, please get in touch and we will send over your contract with our terms and conditions, please the signed Contract and your deposit payment if we have requested one. We will then contact you to arrange the date for the installation.

If you have any questions on any aspect of this quotation, the contract or any other related issue please do not hesitate to contact us.

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 23rd November 2025.

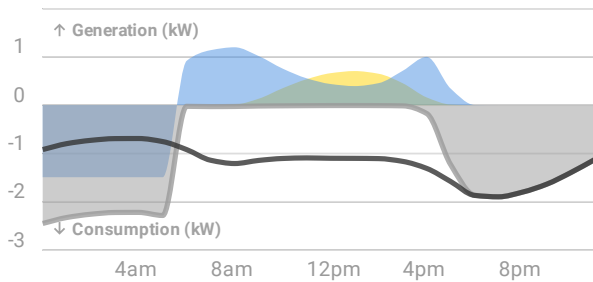
Payment Milestones

Initial Deposit Initial Deposit	£1,977.44
Second Deposit Second Deposit	£1,977.44
Final Balance Final Balance Payable upon commissioning	£3,954.87
Total	£7,909.75

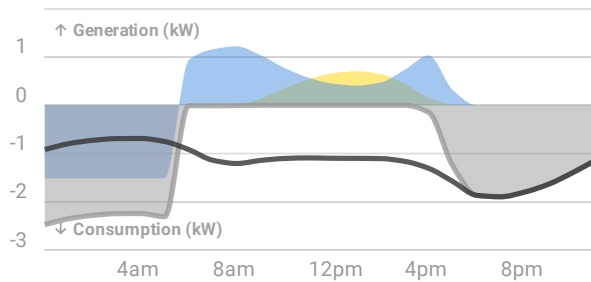
Daily Energy Flows

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

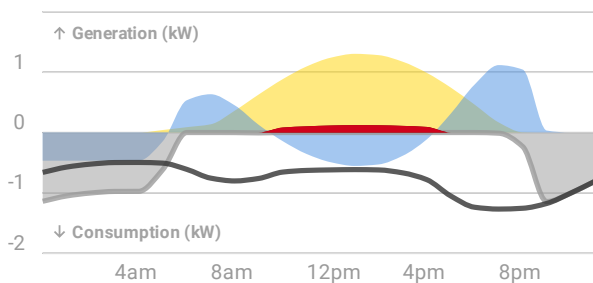
Winter Weekday



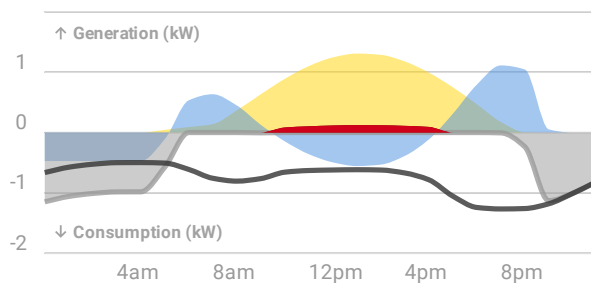
Winter Weekend



Summer Weekday



Summer Weekend



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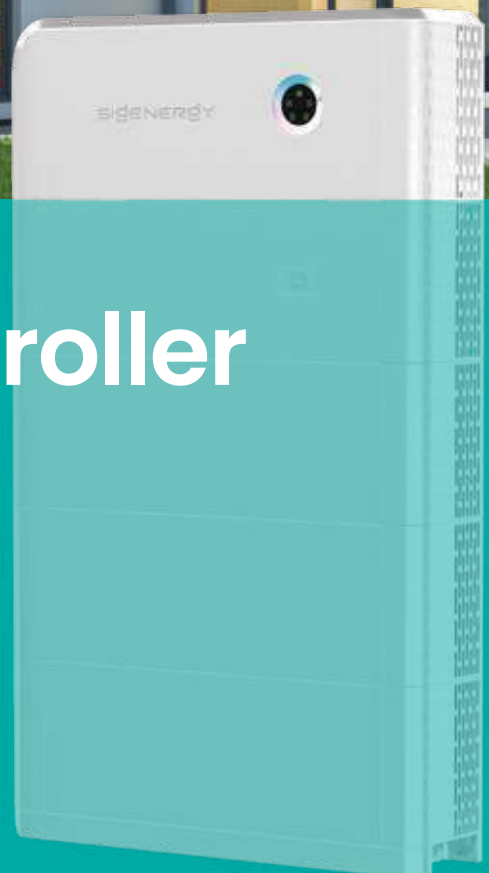
SIGENERGY



Sigen Energy Controller

3.0 – 6.0 kW Single Phase

- EMS inside for precise control
- On & off-grid compatibility
- Multi-source black start
- DC/AC ratio up to 2
- IP66 system protection rating



www.sigenenergy.com

Sigen Energy Controller 3.0–6.0 kW Single Phase

SigenStor EC	3.0 SP	3.6 SP	4.0 SP	4.6 SP	5.0 SP	6.0 SP	Units	
DC Input (from PV)								
Max. PV power	6000	7360	8000	9200	10000	12000	W	
Max. DC input voltage				600				V
Nominal DC input voltage				350				V
Start-up voltage				100				V
MPPT voltage range				50 ~ 550				V
Number of MPP. trackers				2				
Number of PV strings per MPPT				1				
Max. input current per MPPT				16				A
Max. short-circuit current per MPPT				20				A
AC Output (on-grid)								
Nominal output power	3000	3680	4000	4600	5000	6000	W	
Max. output apparent power	3300	3680	4400	5000	5500	6600	VA	
Nominal output current	13.6	16.0	18.2	20.9	22.7	27.3	A	
Max. output current	15.0	16.0	20.0	22.7	25.0	30.0	A	
Nominal output voltage				220 / 230 / 240			V	
Nominal grid frequency				50 / 60			Hz	
Power factor				0.8 leading ~ 0.8 lagging				
Total current harmonic distortion				THDi < 2%				
Efficiency								
Max. efficiency				98.0%				
European efficiency	97.0%	97.1%	97.2%	97.3%	97.4%	97.4%		
AC Output (backup)								
Peak output power (10 seconds)	4500	5520	6000	6900	7500	9000	W	
Nominal output voltage				220 / 230 / 240			V	
Nominal output frequency				50 / 60			Hz	
Power factor				0.8 leading ~ 0.8 lagging				
Total voltage harmonic distortion				THDv < 2%				
Disruption time of backup switch ¹				0			ms	
Battery Connection								
Battery module models				SigenStor BAT 5.0 / 8.0				
Number of modules per controller				1 ~ 6			pcs	
Battery module voltage range				300 ~ 600			V	
Protection								

General Data

Dimensions (W / H / D)	700 / 300 / 245	mm
Weight	18	kg
Storage temperature range	-40 ~ 70	°C
Operating temperature range	-30 ~ 60	°C
Relative humidity range	0% ~ 95%	
Max. operating altitude	4000	m
Cooling	Natural convection	
System ingress protection rating	IP66	
Communication	WLAN / Fast Ethernet / RS485 / Sigen CommMod (4G/3G/2G)	

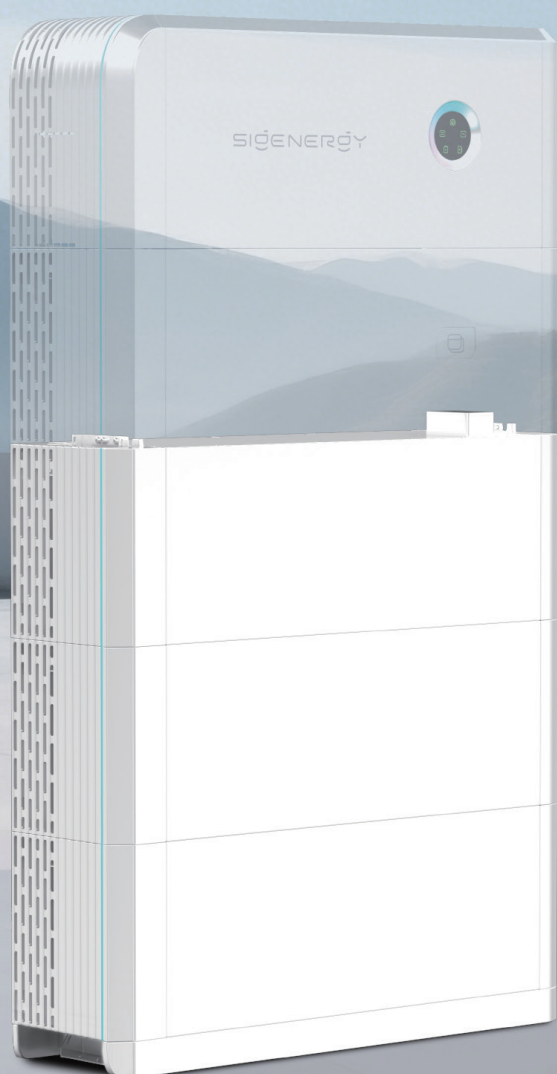
Standard Compliance

Standard ³	IEC/EN 62109-1, IEC/EN 62109-2, IEC/EN 62477, IEC/EN 61000-6-1, IEC/EN 61000-6-2
1.	This refers to the load-side disruption time, to achieve this functionality Sigen Energy Gateway needs to be used together with Sigen Energy Controller and Sigen Battery. Test conditions: In the open-circuit state of the power grid, the nominal power of the Sigen Energy Controller is higher than the total power of the home loads.
2.	This is an optional feature only supported in certain models, please contact Sigenenergy for more information.
3.	For all standards refer to the certificates category in the Sigenenergy website.

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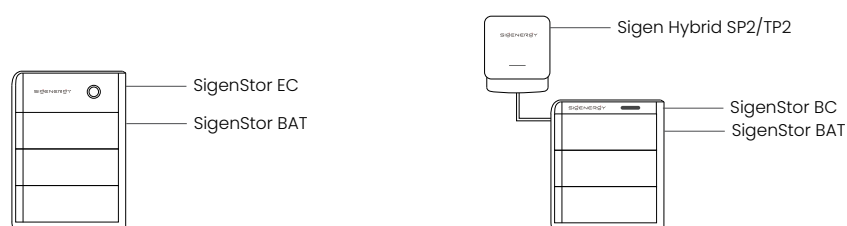
Sigen Battery

- Premium 314Ah cells with 10,000 cycles, long-lasting & reliable
- 5-layer battery safety protection to define the safety standard
- Battery optimizer inside, mix old and new, upgrade with ease
- Higher energy density, efficient storage, compact design
- 100% depth of discharge, maximum energy utilization



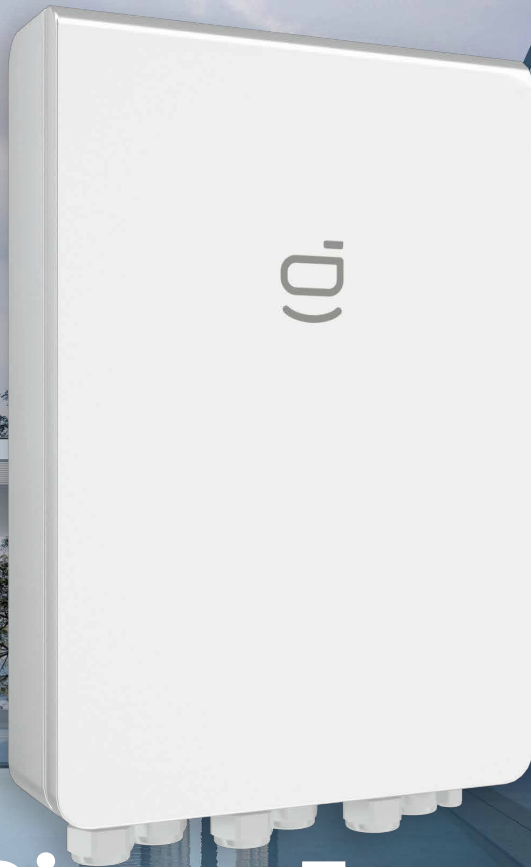
Sigen Battery 6.0 / 10.0

SigenStor BAT	6.0	10.0	Units
Performance Specification			
Battery type	LiFePO4		
Cell capacity	314		Ah
Cycle life ¹	10000		
Total energy capacity	6.02	9.04	kWh
Usable energy capacity ²	5.84	8.76	kWh
Depth of discharge ³	100%		
Max. charge / discharge power	3000	4600	W
Peak charge / discharge power (10 seconds)	4500	6900	W
General Data			
Weight	62	78	kg
Dimensions (W / H / D)	767 / 270 / 265		mm
Storage temperature range	-25 ~ 60		°C
Operating temperature range	-20 ~ 55		°C
Relative humidity range	5% ~ 95%		
Max. operating altitude	4000		m
Cooling	Natural convection		
System ingress protection rating	IP66		
Installation method	Floor standing / Wall-mounted		
Number of modules per controller	1 ~ 6		pcs
Compatible inverters	SigenStor EC series, Sigen Hybrid SP2/TP2 series ⁴		
Standard Compliance			
Standard ⁵	IEC/EN 60730-1, UN 38.3, IEC/EN 62619, IEC/EN 63056, IEC/EN 62477		
	SigenStor BC		
Operating voltage range (Single Phase)	300 ~ 600		V
Operating voltage range (Three Phase)	600 ~ 900		V
Weight	8		kg
Dimensions (W / H / D)	765 / 109 / 260 (without decorative cover)		mm
Compatible battery	SigenStor BAT series		
Compatible inverter	Sigen Hybrid SP2/TP2 series		
Communication	CAN		



1. This is provided by the battery cell manufacturer. Based on cell test condition of 25±2°C 0.5C charge and discharge rate and SOH=60%.
2. Test conditions: 100% depth of discharge, 0.2C rate charge & discharge averagely at 25°C, at the beginning of life.
3. Refers to the usable energy capacity. Battery must be recharged within 7 days after being fully discharged to keep battery healthy.
4. SigenStor BC must be used if Sigen Hybrid SP2/TP2 is to be connected to the Sigen Battery.
5. For all standards refer to the certificates category on the Sigenenergy website.

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Sigen Energy Gateway HomeMax Series

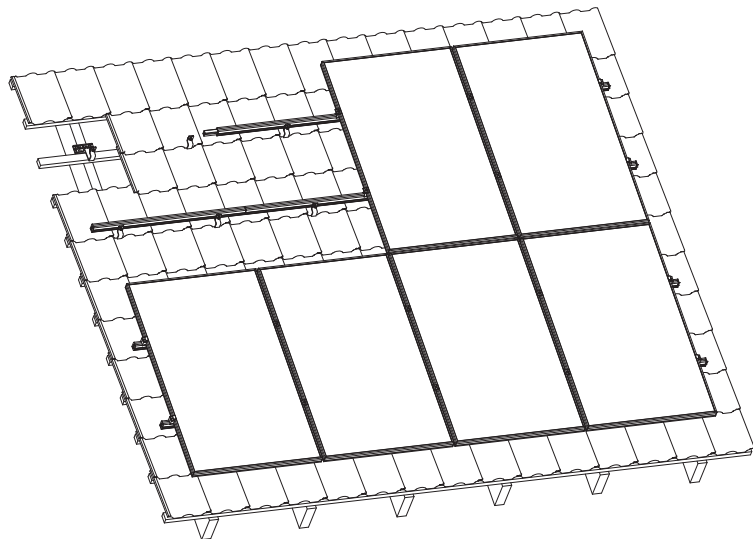
- Multiple breaker positions reserved for SigenStor or other loads
- Seamless switch to backup mode, worry-free energy usage
- Ready for generator, heat pump or other controllable loads
- Support both whole home backup & partial home backup
- 350 ms reverse power flow protection of grid & generator
- Uninterrupted power supply through PV+ESS/grid/generator

Sigen Energy Gateway HomeMax Single / Three Phase

Preliminary

Sigen Gateway	HomeMax SP	HomeMax TP	Units
Grid Connection			
Grid connection type	Single phase	Three phase	
Nominal AC input / output voltage	220 / 230 / 240	380 / 400	V
Nominal AC input / output current	100	76	A
Nominal AC input / output power	22 / 23 / 24	50 / 52.6	kW
Nominal AC frequency	50 / 60		Hz
Disruption time of backup switch ¹	0		ms
AC Output to Backup Port			
Nominal AC output voltage	220 / 230 / 240	380 / 400	V
Nominal AC output current	100	76	A
Nominal AC output power	22 / 23 / 24	50 / 52.6	kW
Nominal AC frequency	50 / 60		Hz
Overvoltage category	III		
Inverter Connection / EV Charger Port (optional)			
Max. number of connection	3	2	
Nominal AC voltage	220 / 230 / 240	380 / 400	V
Nominal AC input current	32	38	A
Compatible EV charger power	7	11 / 22	kW
EV charging mode	Solar boost charging, time-based charging, load balancing		
Smart Port Connection			
Generator output voltage	220 / 230 / 240	380 / 400	
Nominal input / output current	63	76	A
Nominal AC input / output power	13.8 / 14.5 / 15.1	50 / 52.6	kW
Generator 2-wire start	Supported		
General Data			
Dimensions (W / H / D)	455 / 660 / 179	510 / 750 / 179	mm
Weight	19	23	kg
Storage temperature range	-40 ~ 70		°C
Operating temperature range	-30 ~ 55		°C
Relative humidity range	0% ~ 95%		
Max. operation altitude	4000		m
Cooling	Natural convection		
Ingress protection rating	IP54		
Communication	Fast Ethernet, RS485, dry contact		
Installation method	Wall mounted		

1. This refers to the load-side disruption time, to achieve this functionality Sigen Energy Gateway needs to be used together with Sigen Energy Controller and Sigen Battery. Test conditions: In the open-circuit state of the power grid, the nominal power of the Sigen Energy Controller is higher than the total power of the home loads.



System Datasheet

VS+

General

System	Rooftop mounting system for pitched roofs
Content	Connection of roof substructure (wood, steel, concrete), fixing material, assembly profiles, module clamps
System warranty	10 years
Application area	Pitched roof on commercial, industrial, agricultural (except hydrogen sulfide exposition) and residential buildings
Roof covering	Tile, slate, sheet metal (trapezoidal/corrugated), sandwich, fibre-cement
Roof slope	min. 5°/max. 70° (please check the admissibility with the Renusol Configurator)

System properties

Module tilt	Roof parallel
Material	Stainless steel, aluminum

Modules

Type	PV-modules with frame height between 30-50 mm
Module size (max)	Length: unlimited; Width: unlimited
Module guidance	Portrait/Landscape

Certifications

TÜV	ID1111212485 according to 2PfG
Building authority approval	Roof hook Aluminum (Z-14-4-515) Fastening material (Solar fasteners, Hanger bolts, wood screws)
MCS012	IK0197/03, IK0197/04, IK0197/05

Services

PV layout	Provided by Renusol
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VS+ 07.2021

EN | Renusol System Datasheet

Misprints and errors, technical or other changes and changes in the availability of products are expressly reserved



H1(G2)/AC1(G2)

SINGLE-PHASE **HYBRID/AC INVERTER**



HIGH VOLTAGE

Includes high-voltage batteries for maximum round-trip efficiency.



EASY INSTALLATION

Flexible configuration, plug and play set-up, built-in fuse protection.



IP65 RATED

Engineered to last with maximum flexibility. Suitable for outdoor installation.



REMOTE MONITORING

Monitor your system remotely via smartphone app or web portal.



Advanced System Monitoring
with **FoxCloud V2.0**

REFINED – POWERFUL – FLEXIBLE

Harness the power of the sun day and night with the ground-breaking range of Hybrid & AC inverter from Fox ESS. Full of advanced features and compatible with our very own range of high-voltage batteries, the hybrid range from Fox ESS.

3kW ...>> 6kW



For more information about the Fox ESS range, visit:
www.fox-ess.com



up to
6kW
charge/
discharge

TECHNICAL SPECIFICATIONS

MODEL	H1-3.0-E-G2 AC1-3.0-E-G2	H1-3.7-E-G2 AC1-3.7-E-G2	H1-4.6-E-G2 AC1-4.6-E-G2	H1-5.0-E-G2 AC1-5.0-E-G2	H1-6.0-E-G2 AC1-6.0-E-G2
INPUT PV (ONLY FOR HYBRID)					
Max. PV Array Power [Wp]	6000	7400	9200	10000	12000
Max. Input Power [W]	4500	5500	6900	7500	9000
Max. Input Voltage [V]			600		
Start-up Input Voltage [V]			75		
Rated Input Voltage [V]			360		
MPPT Operating Voltage Range [V]			80 ~ 550		
Max. Input Current [A]			16 / 16		
Max. Short-circuit Current [A]			20 / 20		
No. of Independent MPP Trackers			2		
No. of Strings per MPP Tracker			1		
BATTERY CONNECTION					
Battery Type	Lithium Battery (LFP)				
Battery Voltage [V]	80 ~ 480				
Max. Charge/Discharge Current [A]	40				
Communication Interface	CAN(communicate with inverter, upgrade BMS)				
AC INPUT AND OUTPUT (GRID)					
Max. AC Input Power [VA]	6000	7680	9200	10000	12000
Max. AC Input Current (per phase) [A]	27.3	34.9	41.8	45.5	54.5
Rated Output Power [W]	3000	3680	4600	5000	6000
Max. Output Apparent Power [VA]	3300	4048/3680 ¹	5060	5500	6600
Rated Output Current (per phase) [A]	13.6	16.7/16 ¹	20.9	22.7	27.3
Rated Output Current (per phase) [A](For AUS)	13.0	16.0	20.0	21.7	26.1
Max. Output Current [A]	15.0	18.4	23.0	25.0	30.0
Rated Grid Voltage [V]	220/230/240				
Rated Grid Frequency [Hz]	50/60				
Power Factor	1 (Adjustable from 0.8 leading to 0.8 lagging)				
THDi [%]	<3 @rated power				
EPS OUTPUT (WITH BATTERY)					
Max. Output Apparent Power [VA]	3000	3680	4600	5000	6000
Rated Output Power [W]	3000	3680	4600	5000	6000
Peak Output Apparent Power (60s) [VA]	3600	4400	5500	6000	7200
Max. Current (per phase) [A]	13.6	16.7	20.9	22.7	27.3
Rated Output Voltage [V]	220/230/240				
Rated Output Frequency [Hz]	50/60				
Power Factor	1 (Adjustable from 0.8 leading to 0.8 lagging)				
THDv (linear Load) [%]	<2 @rated power				
Parallel operation [PCS]	10				
Switch time [ms]	<20				
EFFICIENCY					
Euro Efficiency [%]	95.26	95.70	96.23	96.30	96.33
Max. Efficiency [%]	97.01	97.08	97.04	97.08	97.08
Max. Battery Charge Efficiency (PV to BAT) (@full load) [%]	98.50				
Max. Battery Discharge Efficiency (BAT to AC) (@full load) [%]	97.00				
PROTECTION					
Insulation Monitoring	YES				
Residual Current Monitoring	YES				
DC Reverse Polarity Protection	YES				
Anti-islanding Protection	YES				
AC Short-circuit Protection	YES				
AC Overcurrent/Overvoltage Protection	YES				
DC Switch	YES				
Battery Wake-up Function	YES				
SPD	DC: Type II /AC: Type III				
AFCI	YES				
GENERAL DATA					
Dimensions (W*H*D) [mm]	434*418*185				
Weight [kg]	22				
Installation	Wall-Mounted				
Topology	Non-isolated				
Cooling Method	Natural				
Noise Emission [dB]	35				
Max. Operating Altitude [m]	2000				
Operating Temperature Range [°C]	-25 ~ 60				
Humidity (No Condensation) [%]	0 ~ 100				
Ingress protection	IP65				
Standby consumption[W]	< 15				
Monitoring Module	WiFi, LAN(Optional) , 4G(Optional)				
Communication	RS485, DRM, Ripple Control, USB, CAN				
Display	LCD, App, Website				
STANDARD COMPLIANCE (MORE AVAILABLE UPON REQUEST)					
Safety	EN 62109-1, EN 62109-2				
Grid Regulation	G98, G99, EN50549, AS / NZS 4777.2				

* More technical characteristics are available on demand and customized.
1. 3680 for G98.



H1(G2)/AC1(G2)

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up to
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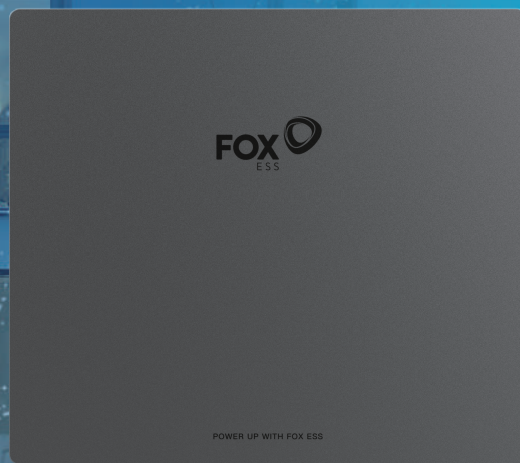
TECHNICAL SPECIFICATIONS

MODEL	H1-3.0-E-G2 AC1-3.0-E-G2	H1-3.7-E-G2 AC1-3.7-E-G2	H1-4.6-E-G2 AC1-4.6-E-G2	H1-5.0-E-G2 AC1-5.0-E-G2	H1-6.0-E-G2 AC1-6.0-E-G2
INPUT PV (ONLY FOR HYBRID)					
Max. PV Array Power [Wp]	6000	7400	9200	10000	12000
Max. Input Power [W]	4500	5500	6900	7500	9000
Max. Input Voltage [V]			600		
Start-up Input Voltage [V]			75		
Rated Input Voltage [V]			360		
MPPT Operating Voltage Range [V]			80 ~ 550		
Max. Input Current [A]			16 / 16		
Max. Short-circuit Current [A]			20 / 20		
No. of Independent MPP Trackers			2		
No. of Strings per MPP Tracker			1		
BATTERY CONNECTION					
Battery Type	Lithium Battery (LFP)				
Battery Voltage [V]	80 ~ 480				
Max. Charge/Discharge Current [A]	40				
Communication Interface	CAN(communicate with inverter, upgrade BMS)				
AC INPUT AND OUTPUT (GRID)					
Max. AC Input Power [VA]	6000	7680	9200	10000	12000
Max. AC Input Current (per phase) [A]	27.3	34.9	41.8	45.5	54.5
Rated Output Power [W]	3000	3680	4600	5000	6000
Max. Output Apparent Power [VA]	3300	4048/3680 ¹	5060	5500	6600
Rated Output Current (per phase) [A]	13.6	16.7/16 ¹	20.9	22.7	27.3
Rated Output Current (per phase) [A](For AUS)	13.0	16.0	20.0	21.7	26.1
Max. Output Current [A]	15.0	18.4	23.0	25.0	30.0
Rated Grid Voltage [V]	220/230/240				
Rated Grid Frequency [Hz]	50/60				
Power Factor	1 (Adjustable from 0.8 leading to 0.8 lagging)				
THDi [%]	<3 @rated power				
EPS OUTPUT (WITH BATTERY)					
Max. Output Apparent Power [VA]	3000	3680	4600	5000	6000
Rated Output Power [W]	3000	3680	4600	5000	6000
Peak Output Apparent Power (60s) [VA]	3600	4400	5500	6000	7200
Max. Current (per phase) [A]	13.6	16.7	20.9	22.7	27.3
Rated Output Voltage [V]	220/230/240				
Rated Output Frequency [Hz]	50/60				
Power Factor	1 (Adjustable from 0.8 leading to 0.8 lagging)				
THDv (linear Load) [%]	<2 @rated power				
Parallel operation [PCS]	10				
Switch time [ms]	<20				
EFFICIENCY					
Euro Efficiency [%]	95.26	95.70	96.23	96.30	96.33
Max. Efficiency [%]	97.01	97.08	97.04	97.08	97.08
Max. Battery Charge Efficiency (PV to BAT) (@full load) [%]	98.50				
Max. Battery Discharge Efficiency (BAT to AC) (@full load) [%]	97.00				
PROTECTION					
Insulation Monitoring	YES				
Residual Current Monitoring	YES				
DC Reverse Polarity Protection	YES				
Anti-islanding Protection	YES				
AC Short-circuit Protection	YES				
AC Overcurrent/Overvoltage Protection	YES				
DC Switch	YES				
Battery Wake-up Function	YES				
SPD	DC: Type II /AC: Type III				
AFCI	YES				
GENERAL DATA					
Dimensions (W*H*D) [mm]	434*418*185				
Weight [kg]	22				
Installation	Wall-Mounted				
Topology	Non-isolated				
Cooling Method	Natural				
Noise Emission [dB]	35				
Max. Operating Altitude [m]	2000				
Operating Temperature Range [°C]	-25 ~ 60				
Humidity (No Condensation) [%]	0 ~ 100				
Ingress protection	IP65				
Standby consumption[W]	< 15				
Monitoring Module	WiFi, LAN(Optional) , 4G(Optional)				
Communication	RS485, DRM, Ripple Control, USB, CAN				
Display	LCD, App, Website				
STANDARD COMPLIANCE (MORE AVAILABLE UPON REQUEST)					
Safety	EN 62109-1, EN 62109-2				
Grid Regulation	G98, G99, EN50549, AS / NZS 4777.2				

* More technical characteristics are available on demand and customized.
1. 3680 for G98.

Fox ESS EP11

INTEGRATED WITH HEATING FUNCTION



Smart Battery Heating

The EP11 is a high-performance, scalable battery storage system, allows for maximum flexibility, making it suitable for a broad range of storage applications.

Additional batteries can be installed in parallel allowing for a maximum storage capacity of 41.6kwh.

- Scalable to 41.6 kWh
- 90% Depth of Discharge
- Floor or Wall Mounting
- Compact & Easy Installation
- IP65 Protection Level
- High Voltage and High Efficiency



Battery Heating



Safety Reliable



Easy Installation



High Efficiency



Expandable System



90% DoD

Fox ESS EP11

HIGH VOLTAGE STORAGE BATTERY

SYSTEM NAME		EP11
ELECTRICAL CHARACTERISTICS		
Compatible PCS	All Series of H1, KH, H3, H3-Pro, US	
Battery Type	LifePO4 Prismatic Cell	
Nominal Energy [kWh]	10.36	
Nominal Voltage [V]	384	
Operating Voltage [V]	348 ~ 438	
Max.Charge/Discharge Current [A]*1	27	
Recommend Charge Current [A]	13.5	
Peak Discharge Current [A]	65 @60s	
Peak Charge Current [A]	32.4 @5s	
Battery Pack Round-Trip Efficiency [%]	≥95	
Depth of Discharge [%]	90	
Cycle Life	≥4000	
Communication	CAN	
Display	LED*5	
Scalability	Max. 4 Units in Parallel	
OPERATING CONDITIONS		
Installation Location	Outdoor/ Indoor	
Operating Temperature [°C]	Charge: 0 ~ 55 Discharge: -10 ~ 55	
Storage Temperature [°C]	0 ~ 35	
Cooling Method	Natural Convection	
Humidity [%]	5 ~ 95 (No Condensing)	
Altitude [m]	Max. 2,000	
MECHANICAL CHARACTERISTICS		
Dimensions (W*H*D) [mm]	710*625*147	
Weight [kg]	99±2	
CERTIFICATES		
Safety	IEC62619	
EMC	EN IEC 61000-6-1/3	
Transportation	UN38.3	
Ingress Protection	IP65	

*1, The current is affected by temperature, cell voltage and SOC.