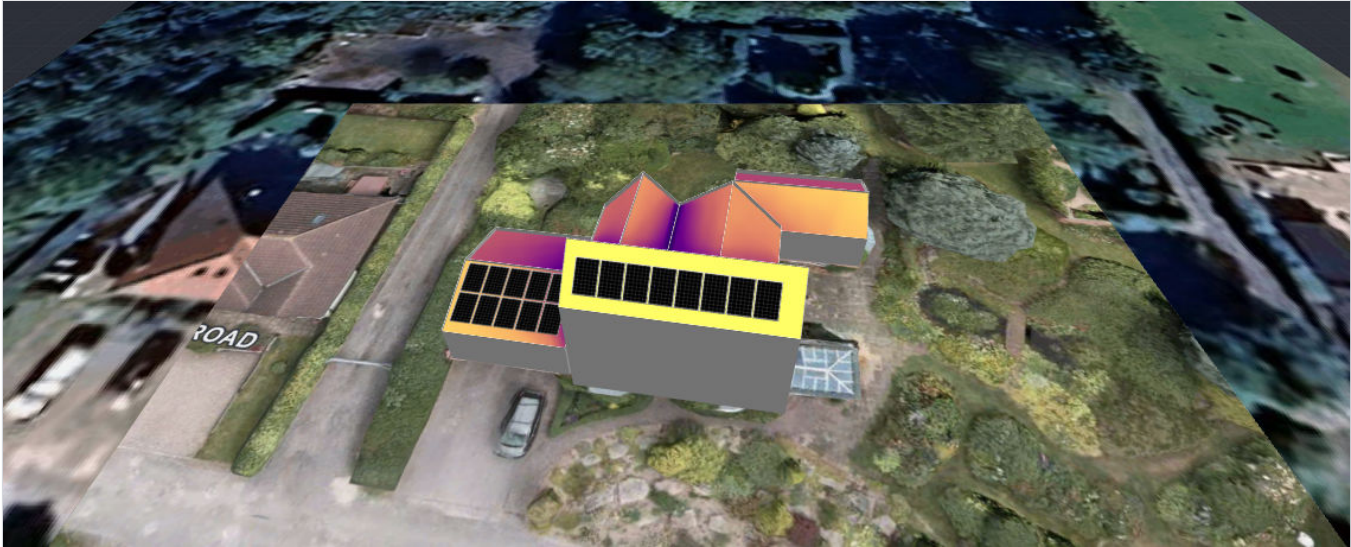


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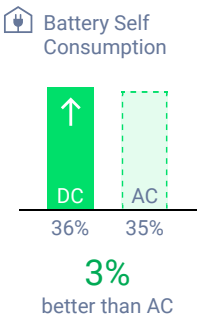


SMART BATTERY

SolarEdge Home Battery 9.7kWh x 2
Smart Battery Management



ADVANTAGES
OF DC COUPLED
STORAGE OVER
AC



SYSTEM OVERVIEW

-  18 PV modules
-  1 Inverter
-  18 Optimizers
-  2 Batteries

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FINANCIAL OVERVIEW

Net Payments	Lifetime Bill Savings (NPV)	System Profit (NPV)	Internal Return Rate (IRR)	Payback Period
£ 14,000	£ 33,911	£ 19,911	13.47 %	7.2 years
	£4,846 Savings from Battery			

SIMULATION RESULTS

Installed DC Power	Max Achieved AC Power	Annual Solar Energy Production	Annual CO2 Emission Saved	Annual Equivalent Trees Planted
8.37 kWp	8.16 kW	7,800 kWh	1.51 t	69

Max Achieved DC Power	DC/AC Oversizing	Max Active AC Power	Performance Ratio	Annual Specific Production
8.11 kW	81 %	10 kW	81 %	932 kWh/kWp

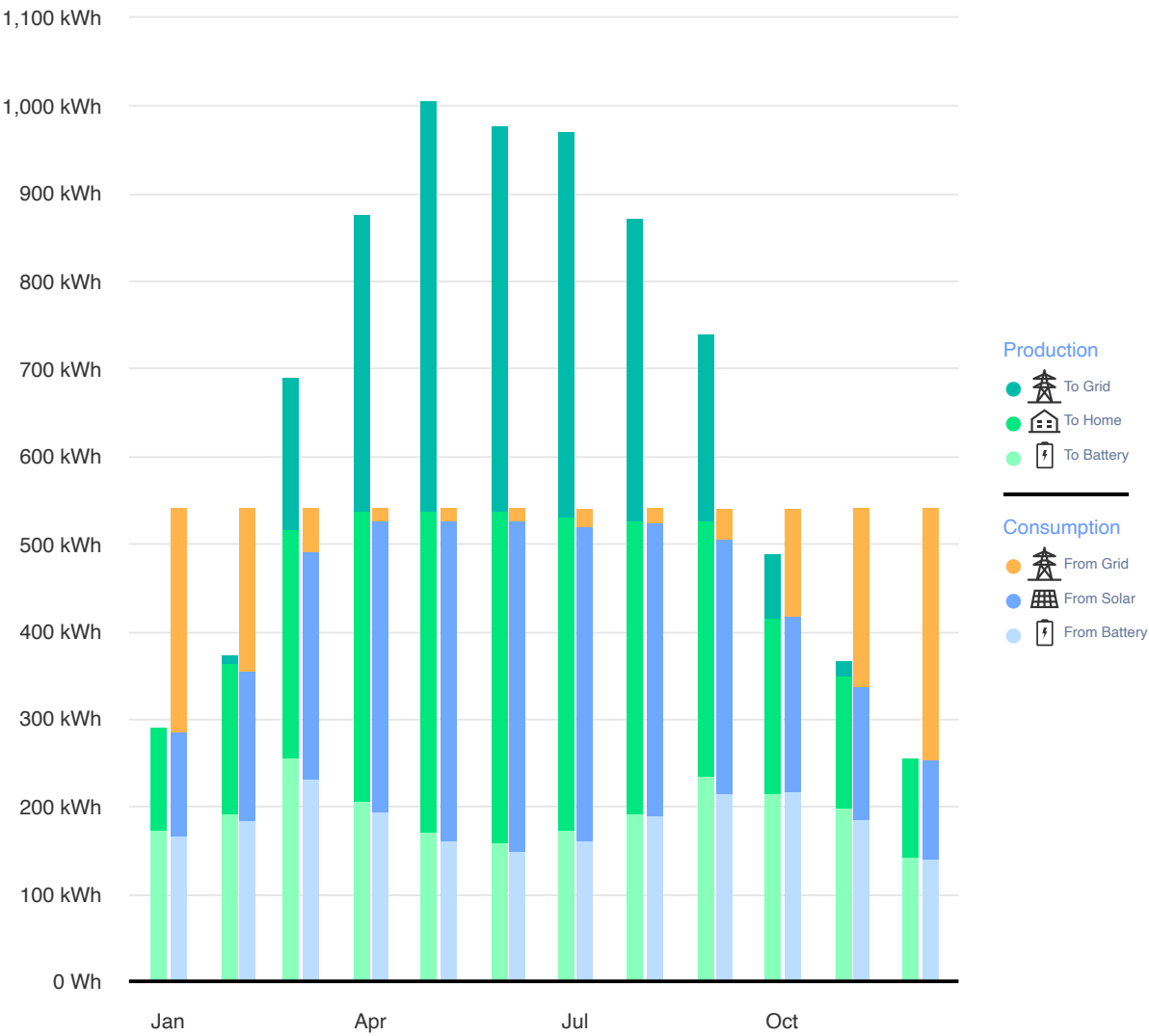
ANNUAL CONSUMPTION AND PRODUCTION RESULTS

Production	7,916 kWh	39% 29% 32%	● To Home 3,074 kWh (39%) ■ To Battery 2,318 kWh (29%) ● To Grid 2,524 kWh (32%)
Consumption	6,500 kWh	47% 34% 19% 81% Energy from solar with battery	● From Solar 3,074 kWh (47%) ■ From Battery 2,202 kWh (34%) ● From Grid 1,224 kWh (19%)

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ESTIMATED MONTHLY ENERGY



Total Clipped Energy PV only: 0%

Month	(kWh)	(kWh)	(kWh)	To Grid (kWh)	(kWh)	(kWh)	(kWh)	(kWh)
Jan	285	175	118	-	541	167	118	256
Feb	367	192	171	12	541	185	171	185
Mar	664	257	260	173	541	231	260	50
Apr	865	206	332	338	541	195	332	14
May	995	172	366	468	542	162	366	15
Jun	968	159	378	441	542	150	378	15
Jul	960	173	358	440	542	162	358	22
Aug	872	191	335	346	542	191	335	16
Sep	720	235	293	213	542	214	293	34
Oct	493	215	200	75	542	218	200	124
Nov	356	198	151	18	542	187	151	204
Dec	253	143	112	-	542	141	112	289

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PV MODULES

# Module	Model	Peak power	Racking type	Orientation	Azimuth	Tilt
8	Shanghai AIKO Energy Co., Ltd., AIKO-A465-MAH54Mw	3.7 kWp			189°	45°
10	Shanghai AIKO Energy Co., Ltd., AIKO-A465-MAH54Mw	4.7 kWp			190°	18°
Total:	18	8.4 kWp				

ESTIMATED BILL SAVINGS YEAR 1

Avg. Monthly

Current Monthly Bill

£ 151.67

Monthly Bill with SolarEdge

£ -2.99

Net Bill Monthly Savings

£ 154.65

£21.81 Savings from Battery

Bill Offset

101.97 %

14.38% Savings from Battery

Estimated Net Lifetime Bill Savings

£ 33,911

£4,846 Savings from Battery

Utility Provider: UK provider | Utility Rate: Octopus (0.28 £/kWh)

Export Rate: 15p export (0.15 £/kWh)

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DETAILED FINANCIAL ANALYSIS

System Price	Maintenance Cost (NPV)	Returns from Incentives (NPV)	Net Payments	Lifetime Bill Savings (NPV)
£ 14,000	£ N/A	£ N/A	£ 14,000	£ 33,911
System Profit (NPV)	Internal Return Rate (IRR)	Return Of Investment (ROI)	Levelized Cost Of Energy (LCOE)	Payback Period
£ 19,911	13.47 %	142.22 %	£/kWh 0.121	7.2 years



YEARLY CASH FLOW

# Year	System Price	Net Bill Savings	Annual Cash Flow	Cumulative Cash Flow
0	£ -14,000.00	£ 0.00	£ -14,000.00	£ -14,000.00
1		£ 1,855.86	£ 1,855.86	£ -12,144.14

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YEARLY CASH FLOW (CONTINUED)

# Year	System Price	Net Bill Savings	Annual Cash Flow	Cumulative Cash Flow
2		£ 1,887.30	£ 1,887.30	£ -10,256.85
3		£ 1,919.24	£ 1,919.24	£ -8,337.60
4		£ 1,951.89	£ 1,951.89	£ -6,385.72
5		£ 1,984.88	£ 1,984.88	£ -4,400.83
6		£ 2,018.61	£ 2,018.61	£ -2,382.22
7		£ 2,052.95	£ 2,052.95	£ -329.27
8		£ 2,087.82	£ 2,087.82	£ 1,758.55
9		£ 2,123.33	£ 2,123.33	£ 3,881.88
10		£ 2,159.41	£ 2,159.41	£ 6,041.29
11		£ 2,195.93	£ 2,195.93	£ 8,237.22
12		£ 2,233.08	£ 2,233.08	£ 10,470.30
13		£ 2,271.11	£ 2,271.11	£ 12,741.41
14		£ 2,309.56	£ 2,309.56	£ 15,050.97
15		£ 2,348.84	£ 2,348.84	£ 17,399.80
16		£ 2,388.75	£ 2,388.75	£ 19,788.55
17		£ 2,429.32	£ 2,429.32	£ 22,217.87
18		£ 2,470.60	£ 2,470.60	£ 24,688.47
19		£ 2,512.59	£ 2,512.59	£ 27,201.06
20		£ 2,555.31	£ 2,555.31	£ 29,756.37
Total:		£ 43,756.37	£ 29,756.37	

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ELECTRICAL DESIGN

Inverters & Storage	Strings per inverter	Optimizers per string	PV modules per string
 1 xSE10000H Home Hub 8.11kW 81% Oversizing	1 x string	 10 x S500	 10
 2 x SolarEdge Home Battery 9.7kWh	1 x string	 8 x S500	 8

SYSTEM LOSS DIAGRAM



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SIMULATION PARAMETERS



LOCATION & GRID

Time zone	BST (London)
Weather station	Nottingham Wxctr (12 km away)
Station altitude	117 m
Station data source	Meteonorm 8.2
Grid	400V L-L, 230V L-N



LOSS FACTORS

Near shading	Enabled
Albedo	0.20
Bi-Facial Albedo	0.30
Soiling/Snow	0%
Incidence angle modifier (IAM), ASHRAE b0 param.	0.05
Thermal loss factor U_c (const) Flush mount	20
Thermal loss factor U_c (const) Tilted	29
LID loss factor	0%
System unavailability	0%