

BSE EXAMPLE HOME INSTALLATION

| 1 Nov 2023



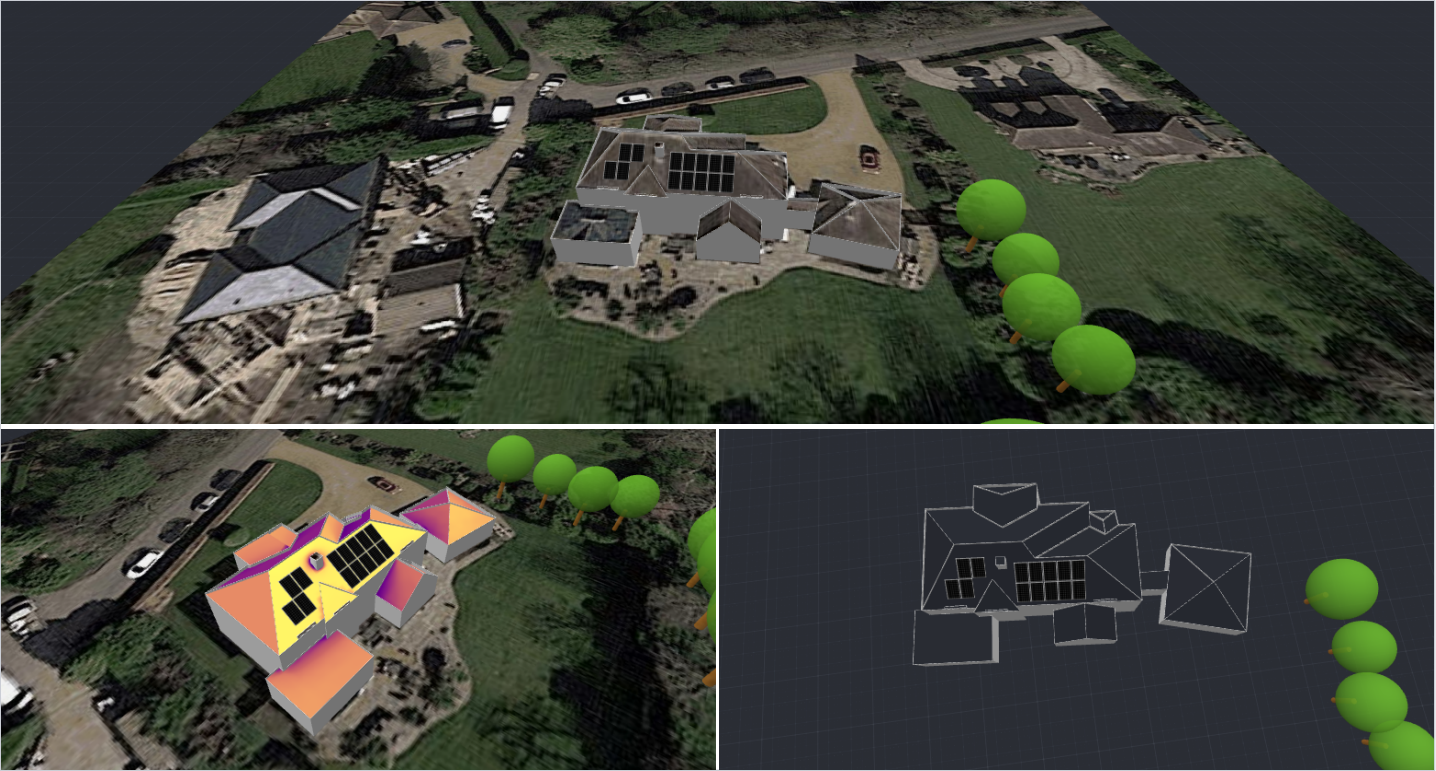
SYSTEM OVERVIEW

 14 PV modules

 1 Inverter

 14 Optimizers

 1 Battery



SIMULATION RESULTS



Installed DC Power

5.81 kWp



Max Achieved AC Power

5.00 kW



Annual Energy Production

6.63 MWh



CO2 Emission Saved
(Annually)

1.28 t



Equivalent Trees Planted
(Annually)

59



Max Achieved DC Power

5.77 kW



DC/AC Oversizing

115 %



Max Active AC Power

5.00 kW



Performance Ratio

88 %



Performance Index

1,142 kWh/kWp

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SIMULATION PARAMETERS



LOCATION & GRID

Time zone	GMT (London)
Weather station	Worthing (16.55 km away)
Station altitude	2 m
Station data source	Meteonorm 7.1
Grid	400V L-L, 230V L-N

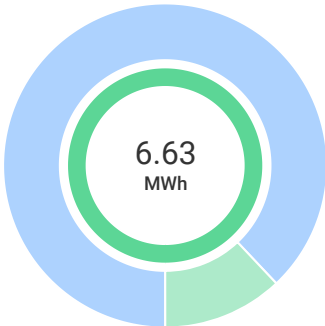


LOSS FACTORS

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%

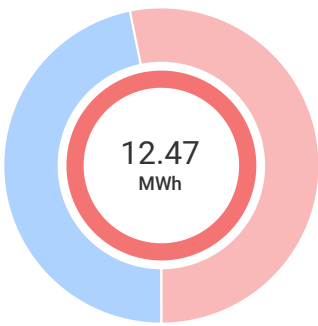
SYSTEM PRODUCTION

Total Production - 100 %	6.63 MWh
Self-consumption - 88 %	5.83 MWh
Export - 12 %	798.40 kWh



CONSUMPTION

Total Consumption - 100 %	12.47 MWh
Self-consumption - 47 %	5.83 MWh
1.78 MWh from batteries (14%)	
Import - 53 %	6.63 MWh



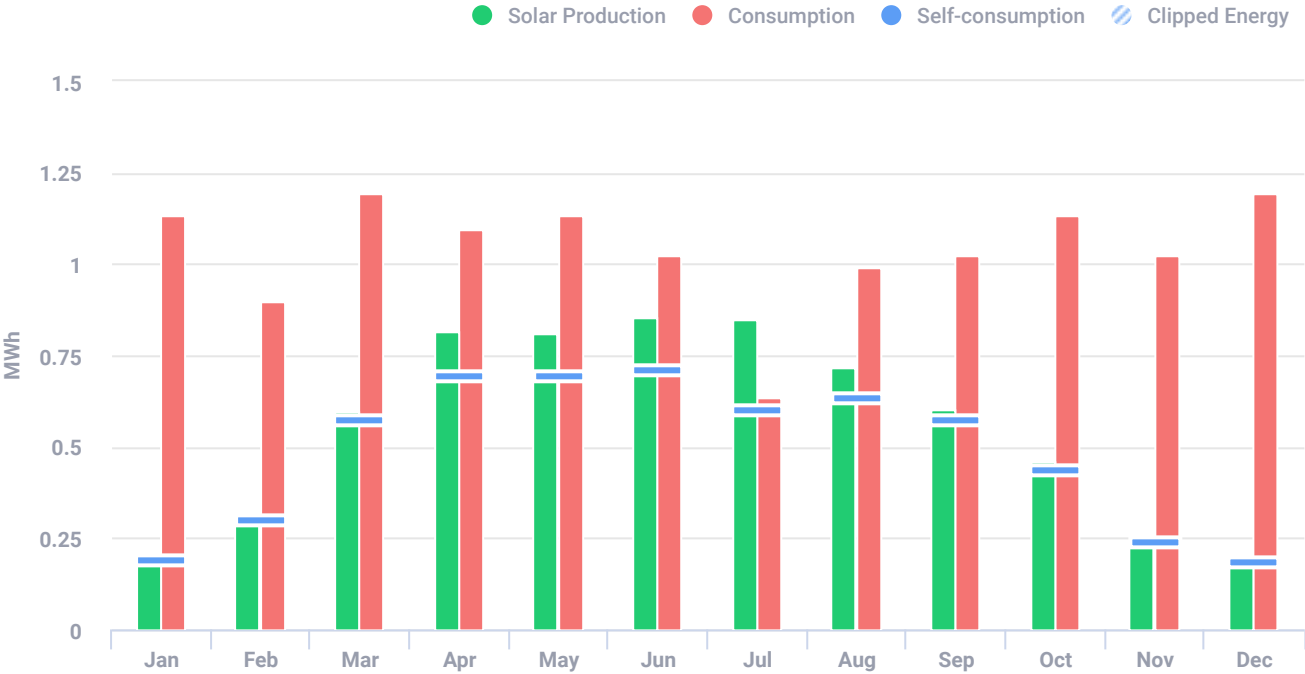
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ESTIMATED MONTHLY ENERGY



Total clipped energy: 0.01% | Clipped Energy Without Smart Battery: 0.02%

Month	Solar Production (kWh)	Consumption (kWh)	Self-consumption (kWh)	Clipped Energy (kWh)
Jan	195	1,131	190	-
Feb	308	896	301	-
Mar	597	1,195	573	-
Apr	817	1,095	694	-
May	808	1,131	693	-
Jun	856	1,021	711	-
Jul	849	636	601	-
Aug	717	992	636	-
Sep	603	1,021	572	-
Oct	459	1,131	438	-
Nov	238	1,021	238	-
Dec	187	1,195	187	-

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SYSTEM LOSS DIAGRAM



FINANCIAL OVERVIEW

Net Payments	Lifetime Bill Savings (NPV)	System Profit (NPV)	Internal Return Rate (IRR)	Payback Period
£ 15,281	£ 50,937	£ 35,656	17.08 %	6.6 years

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ESTIMATED BILL SAVINGS YEAR 1

Annual			
Current Annual Bill	Annual Bill with SolarEdge	Net Bill Annual Savings	Bill Offset
£ 4,056.11	£ 2,037.65	£ 2,018.46	49.76 %

Estimated Net Lifetime Bill Savings

£ 50,937

Utility Provider: **EDF Energy** | Utility Rate: **Standard Variable (May 2023) (0.3254 £/kWh)**

Export Rate: **Smart Export Guarantee Rate (15p) (0.15 £/kWh)**

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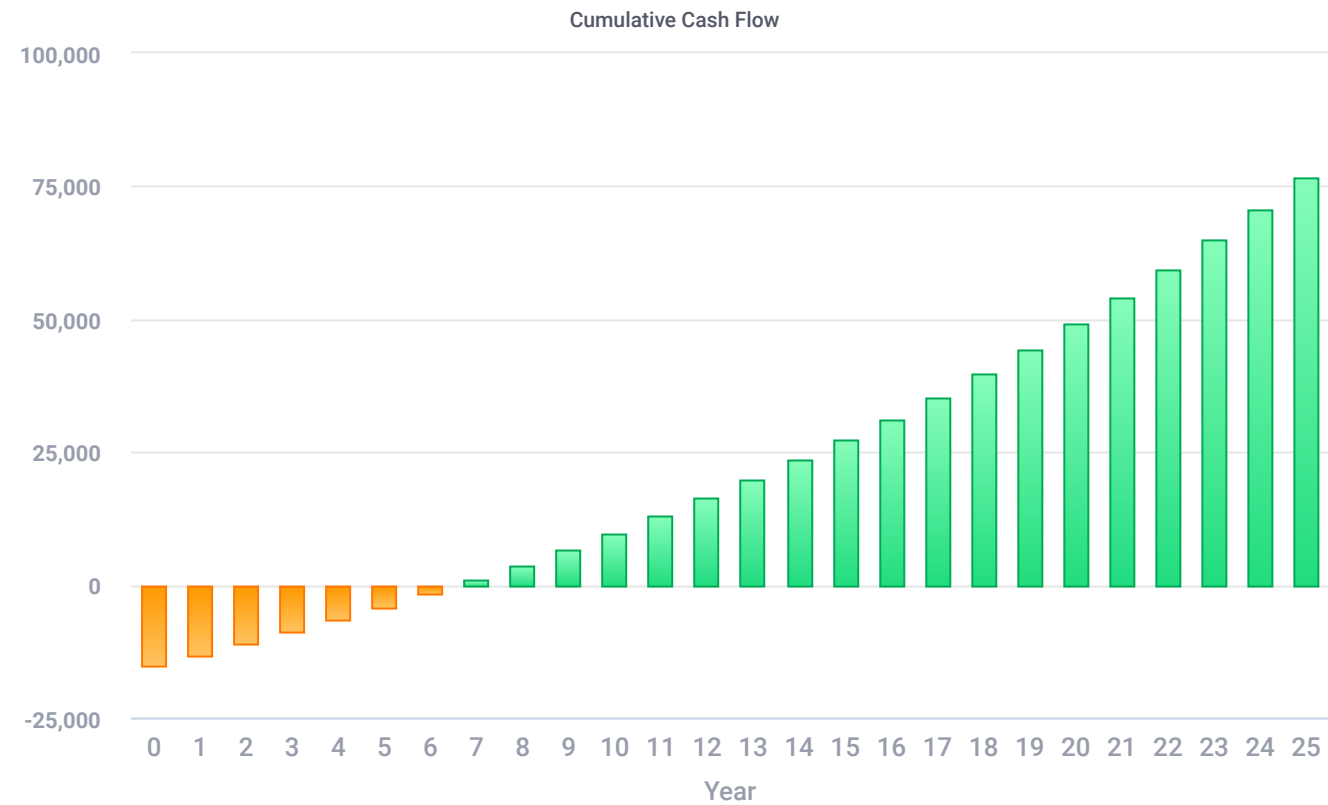
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DETAILED FINANCIAL ANALYSIS

System Price	Maintenance Cost (NPV)	Returns from Incentives (NPV)	Net Payments	Lifetime Bill Savings (NPV)
£ 15,281	£ N/A	£ N/A	£ 15,281	£ 50,937
System Profit (NPV)	Internal Return Rate (IRR)	Return Of Investment (ROI)	Levelized Cost Of Energy (LCOE)	Payback Period
£ 35,656	17.08 %	233.33 %	£/kWh 0.162	6.6 years



YEARLY CASH FLOW

# Year	System Price	Net Bill Savings	Annual Cash Flow	Cumulative Cash Flow
0	£ -15,281.00	£ 0.00	£ -15,281.00	£ -15,281.00
1		£ 2,018.46	£ 2,018.46	£ -13,262.54

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YEARLY CASH FLOW (CONTINUED)

# Year	System Price	Net Bill Savings	Annual Cash Flow	Cumulative Cash Flow
2		£ 2,112.86	£ 2,112.86	£ -11,149.68
3		£ 2,211.65	£ 2,211.65	£ -8,938.03
4		£ 2,315.06	£ 2,315.06	£ -6,622.97
5		£ 2,423.27	£ 2,423.27	£ -4,199.70
6		£ 2,536.55	£ 2,536.55	£ -1,663.15
7		£ 2,655.07	£ 2,655.07	£ 991.92
8		£ 2,779.07	£ 2,779.07	£ 3,770.99
9		£ 2,908.87	£ 2,908.87	£ 6,679.87
10		£ 3,044.73	£ 3,044.73	£ 9,724.60
11		£ 3,186.93	£ 3,186.93	£ 12,911.53
12		£ 3,335.74	£ 3,335.74	£ 16,247.27
13		£ 3,491.46	£ 3,491.46	£ 19,738.74
14		£ 3,654.39	£ 3,654.39	£ 23,393.13
15		£ 3,824.91	£ 3,824.91	£ 27,218.04
16		£ 4,003.39	£ 4,003.39	£ 31,221.43
17		£ 4,190.17	£ 4,190.17	£ 35,411.60
18		£ 4,385.60	£ 4,385.60	£ 39,797.20
19		£ 4,590.15	£ 4,590.15	£ 44,387.35
20		£ 4,804.19	£ 4,804.19	£ 49,191.54
21		£ 5,028.15	£ 5,028.15	£ 54,219.69
22		£ 5,262.43	£ 5,262.43	£ 59,482.12
23		£ 5,507.62	£ 5,507.62	£ 64,989.74
24		£ 5,764.20	£ 5,764.20	£ 70,753.94
25		£ 6,032.69	£ 6,032.69	£ 76,786.64
Total:		£ 92,067.64	£ 76,786.64	

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ELECTRICAL DESIGN

Inverters & Storage	Strings per inverter	Optimizers per string	PV modules per string
 1 x SE5000H Home Hub 5.77kW 115% Oversizing 1 x SolarEdge Home Battery 10kWh	1 x string	 14 x S440	 14

STORAGE

SolarEdge Home Battery 10kWh

Smart Battery Management

Self-consumption

47%

Self-consumption from Batteries

14%



Total Storage Capacity

10 kWh

Total Battery Power

5 kW