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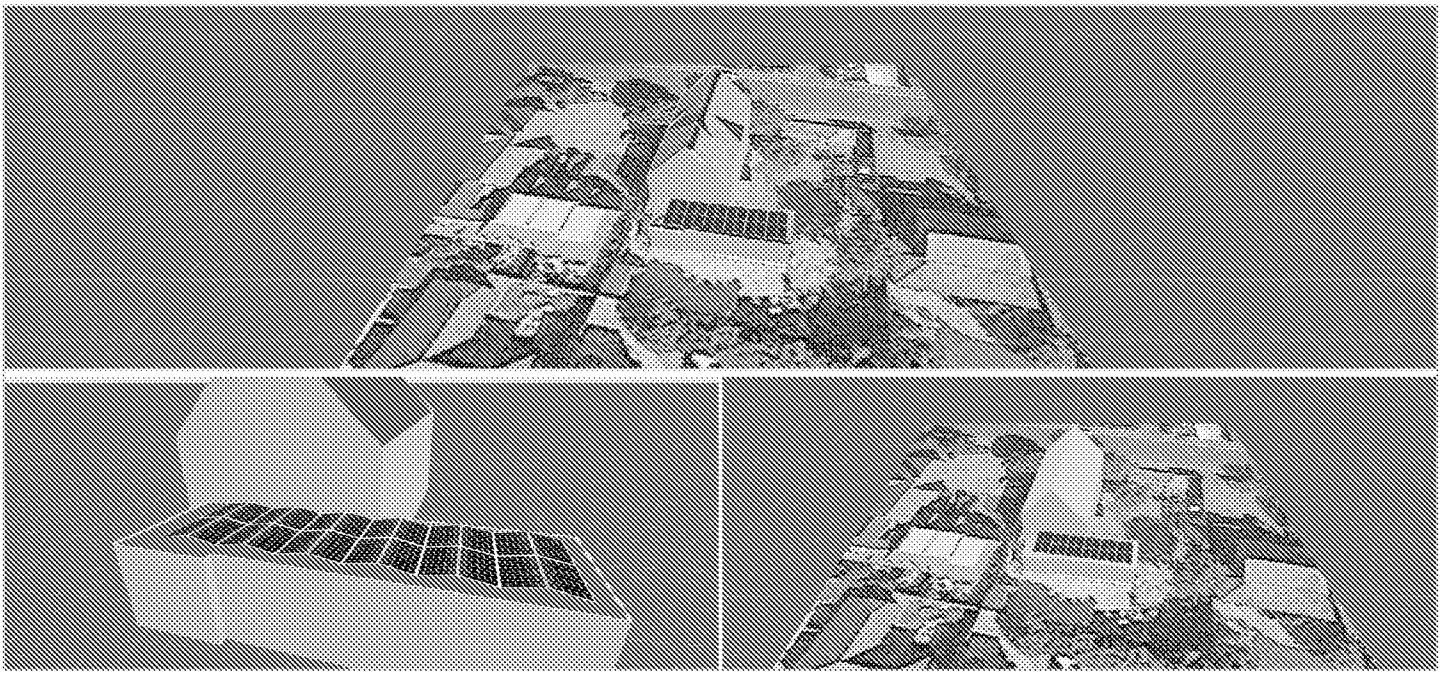
Sylvan Way 8, Bognor Regis, PO21 2RS, United Kingdom | Morgan | Oct 14, 2020

SA Energy



SYSTEM OVERVIEW

24 PV modules | 1 Inverters | 24 Optimizers | 1 Batteries

SIMULATION RESULTS

Installed DC Power	Max Achieved AC Power	Annual Energy Production	CO2 Emission Saved	Equivalent Trees Planted
8.28 kWp	6.00 kW	7.18 MWh	2.02 t	93

Max Achieved DC Power	DC/AC Oversizing	Max Active AC Power	Performance Ratio	Performance Index
7.30 kW	122 %	6.00 kW	79 %	867 kWh/kWp

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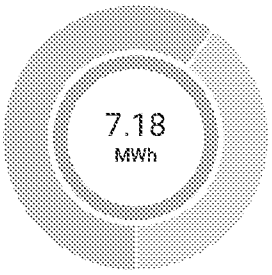
SYSTEM PRODUCTION

Total Production - 100 %
7.18 MWh

Self-consumption - 60 %
4.30 MWh

Export - 40 %
2.88 MWh

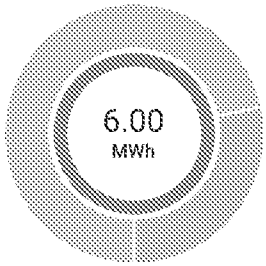


CONSUMPTION

Total Consumption - 100 %
6.00 MWh

Self-consumption - 72 %
4.30 MWh
1.85 MWh from batteries (43%)

Import - 28 %
1.70 MWh



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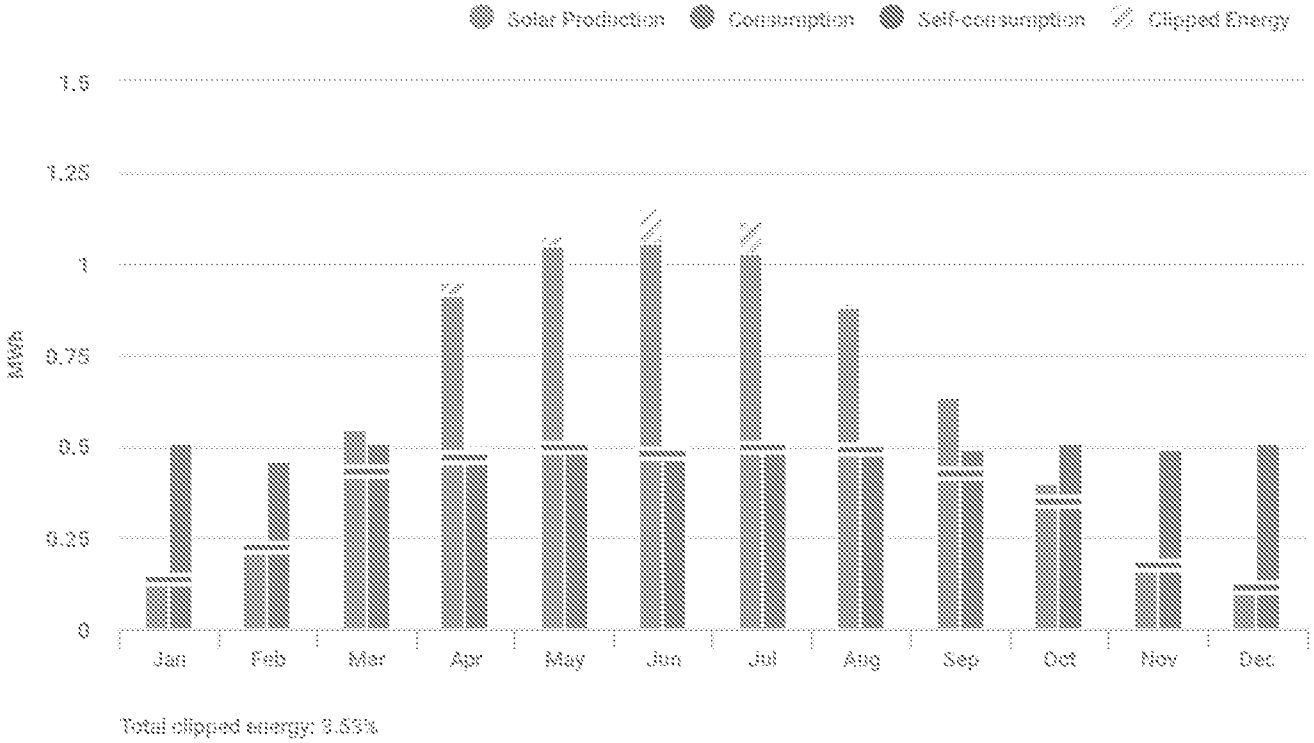
ESTIMATED MONTHLY ENERGY



Total clipped energy: 3.53%

Month	Solar Production (kWh)	Consumption (kWh)	Self-consumption (kWh)	Clipped Energy (kWh)
Jan	135	510	135	-
Feb	234	460	227	-
Mar	548	510	434	-
Apr	915	493	468	39
May	1,052	510	499	28
Jun	1,059	493	481	95
Jul	1,028	510	497	91
Aug	639	510	492	11
Sep	632	493	427	3
Oct	402	510	352	-
Nov	176	493	174	-
Dec	115	510	114	-

PV MODULES

# Module	Model	Peak power	Racking type	Orientation	Azimuth	Tilt
12	JA Solar, JAM60S10-345/MR (1000V)	4.1 kWp			280°	10°

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PV MODULES (CONTINUED)

# Module	Model	Peak power	Racking type	Orientation	Azimuth	Tilt
12	JA Solar, JAM60S10-345/MR (1000V)	4.1 kWp			100°	10°
Total: 24		8.3 kWp				

BILL OF MATERIALS (BOM)

Items	Quantity	Cost (£)	Total (£)
SE6000H	1		
P404	24		
LG Chem RESU10H	1		
JA Solar, JAM60S10-345/MR (1000V)	24		

ELECTRICAL DESIGN

Inverters & Storage	Strings per inverter	Optimizers per string	PV modules per string
(1 x) SE6000H 7.3kW | 122% 1 x LG Chem RESU10H	2 x strings	12 x P404	12

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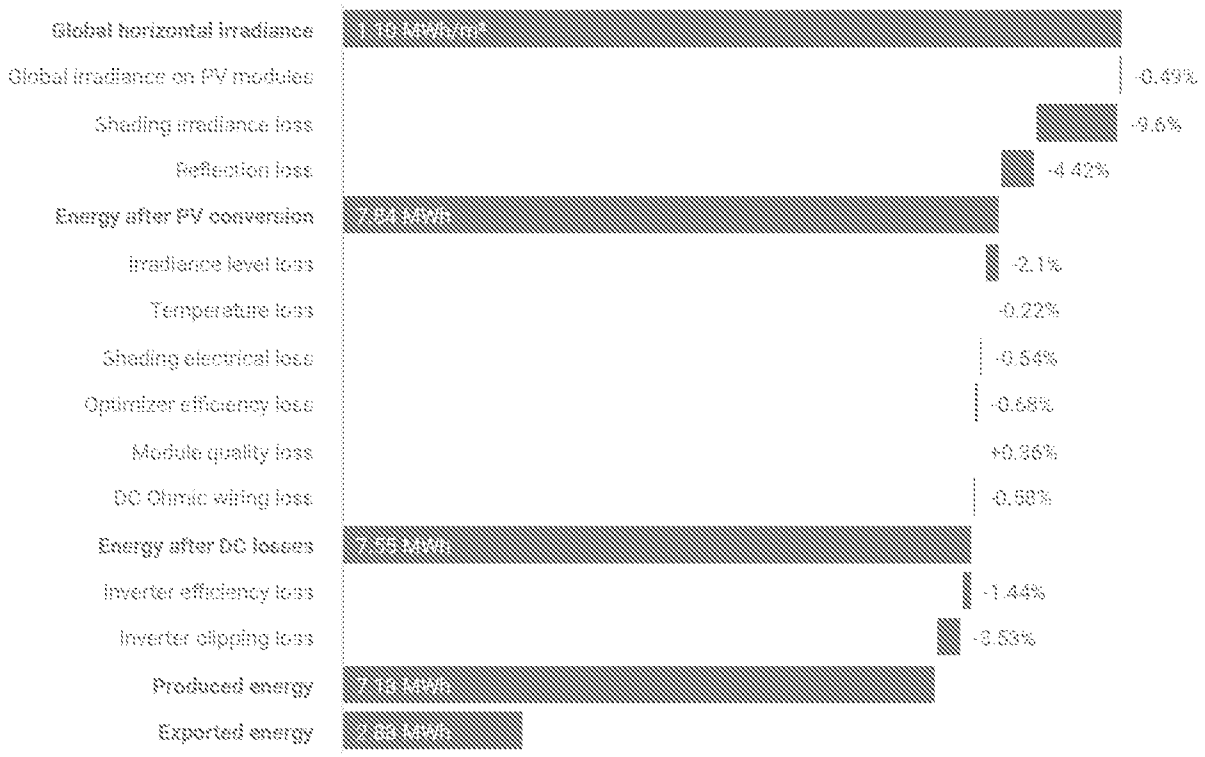
SYSTEM LOSS DIAGRAM



SIMULATION PARAMETERS

LOCATION & GRID

Time zone	GMT+1 (London)
Weather station	Fontwell (4.84 km away)
Station altitude	1 m
Station data source	Meteonorm 7.1
Grid	230V L-N
Export limit to grid	3.68 kW

LOSS FACTORS

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