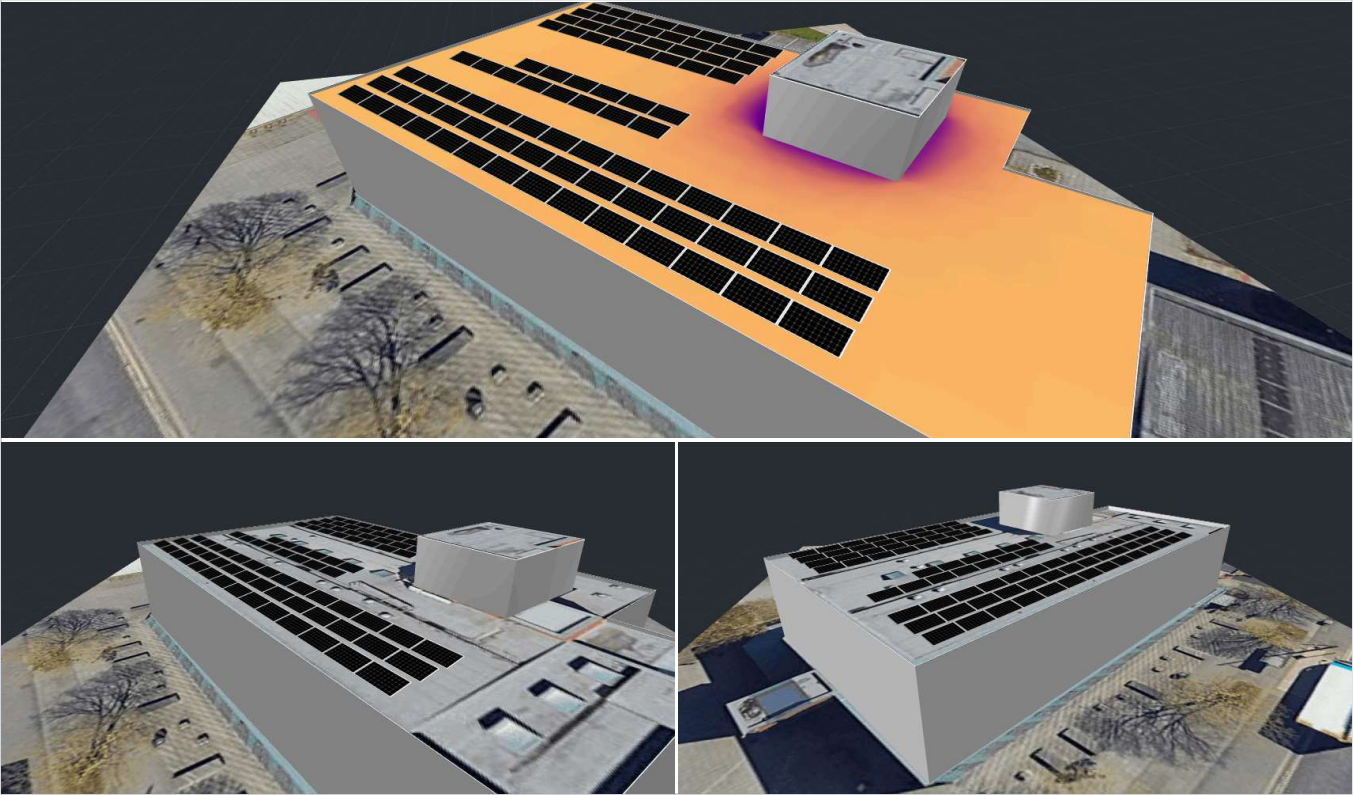


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SYSTEM OVERVIEW

 88 PV modules

 1 Inverter

 44 Optimizers

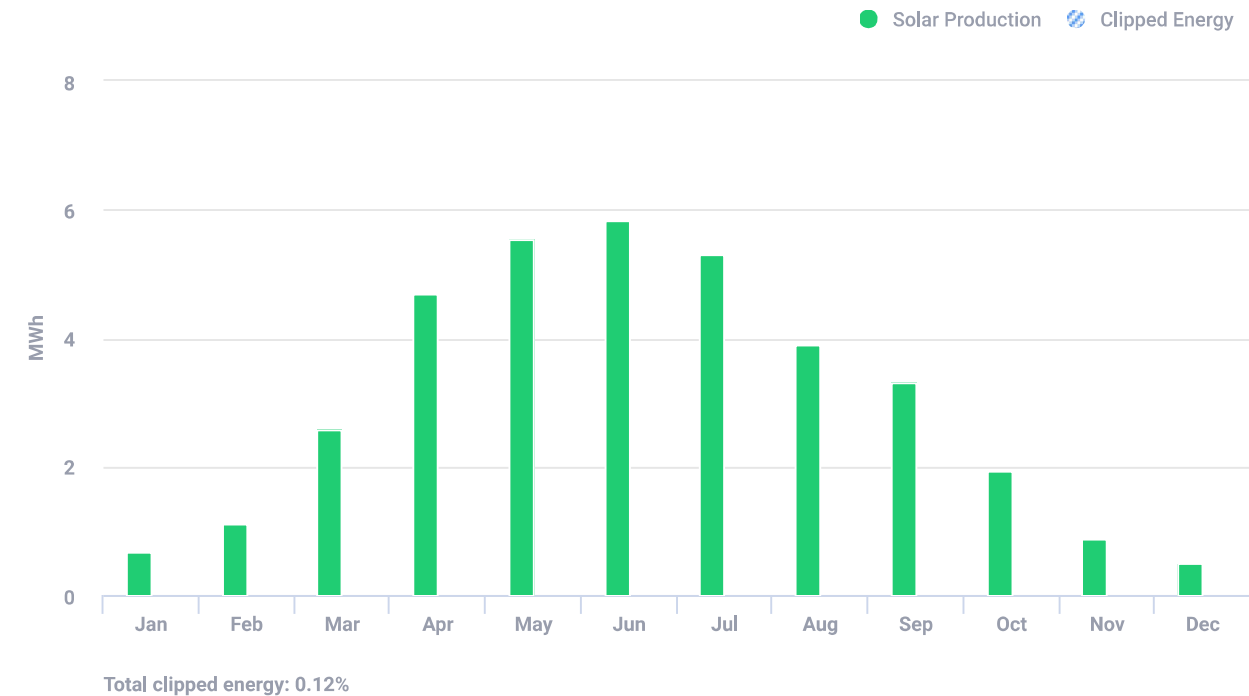
SIMULATION RESULTS

 Installed DC Power 44.00 kWp	 Max Achieved AC Power 33.30 kW	 Annual Energy Production 36.28 MWh	 CO2 Emission Saved (Annually) 7.02 t	 Equivalent Trees Planted (Annually) 322
 Max Achieved DC Power 40.31 kW	 DC/AC Oversizing 121 %	 Max Active AC Power 33.30 kW	 Performance Ratio 90 %	 Performance Index 825 kWh/kWp

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ESTIMATED MONTHLY ENERGY



Month	Solar Production (kWh)	Consumption (kWh)	Self-consumption (kWh)	Clipped Energy (kWh)
Jan	681	-	-	-
Feb	1,125	-	-	-
Mar	2,578	-	-	-
Apr	4,685	-	-	35
May	5,550	-	-	-
Jun	5,839	-	-	-
Jul	5,298	-	-	10
Aug	3,902	-	-	-
Sep	3,322	-	-	-
Oct	1,921	-	-	-
Nov	886	-	-	-
Dec	496	-	-	-

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PV MODULES

# Module	Model	Peak power	Racking type	Orientation	Azimuth	Tilt
88	JA Solar, JAM66S30-500/MR (1000V)	44 kWp			233°	10°
Total:	88	44 kWp				

BILL OF MATERIALS (BOM)

Items	Part Number	Quantity	Price (£)	Total (£)
SE33.3K		1		
S1000		44		
JAM66S30-500/MR (1000V)		88		

ELECTRICAL DESIGN

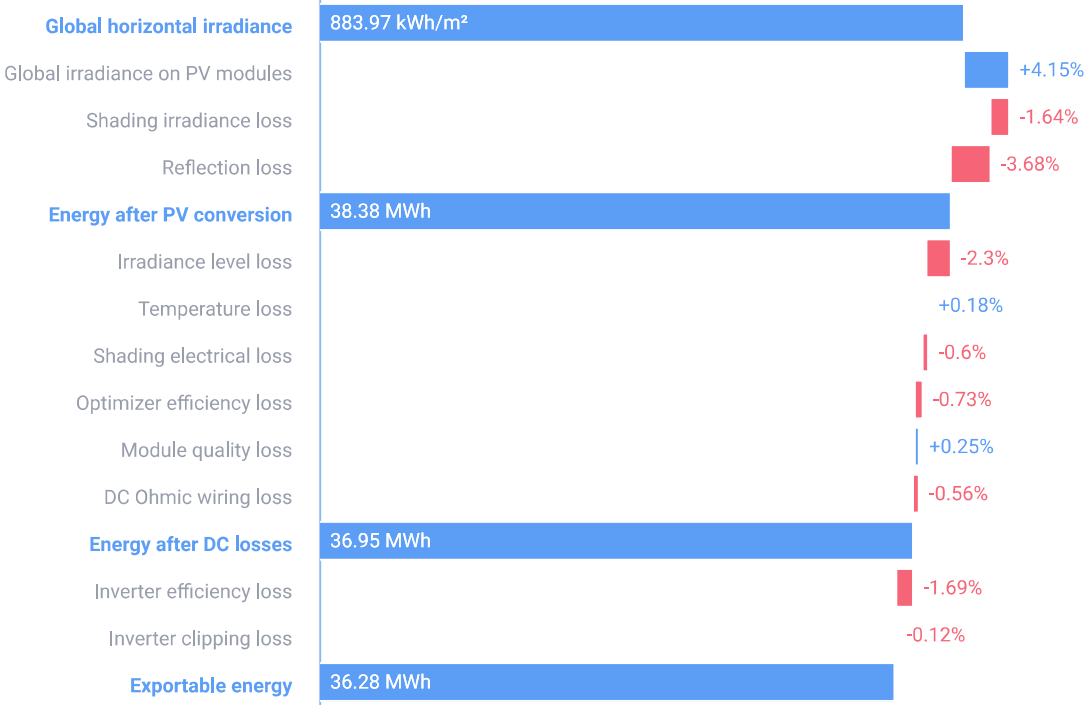
Inverters & Storage	Strings per inverter	Optimizers per string	PV modules per string
1 xSE33.3K 40.31kW 121% Oversizing	2 x strings	15 x S1000 (2:1)	30
	1 x string	14 x S1000 (2:1)	28

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SYSTEM LOSS DIAGRAM



SIMULATION PARAMETERS



LOCATION & GRID

Time zone	BST (London)
Weather station	Manchester (13.2 km away)
Station altitude	67 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 Uc (const) Flush mount	20
Thermal loss factor Uc (const) Tilted	29
LID loss factor	0%
System unavailability	0%