

CRUMPSALL VALE CARE CENTRE
Manchester, United Kingdom | Oct 24, 2025



SYSTEM OVERVIEW



248 PV modules



1 Inverter



126 Optimizers

SIMULATION RESULTS



Installed DC Power

131.44 kWp



Max Achieved AC Power

99.90 kW



Annual Usable Solar Production

117.94 MWh



Annual CO₂ Emission Saved

22.81 t



Annual Equivalent Trees Planted

1,048



Max Achieved DC Power

112.84 kW



DC/AC Oversizing

113 %



Max Active AC Power

99.90 kW



Performance Ratio

91 %



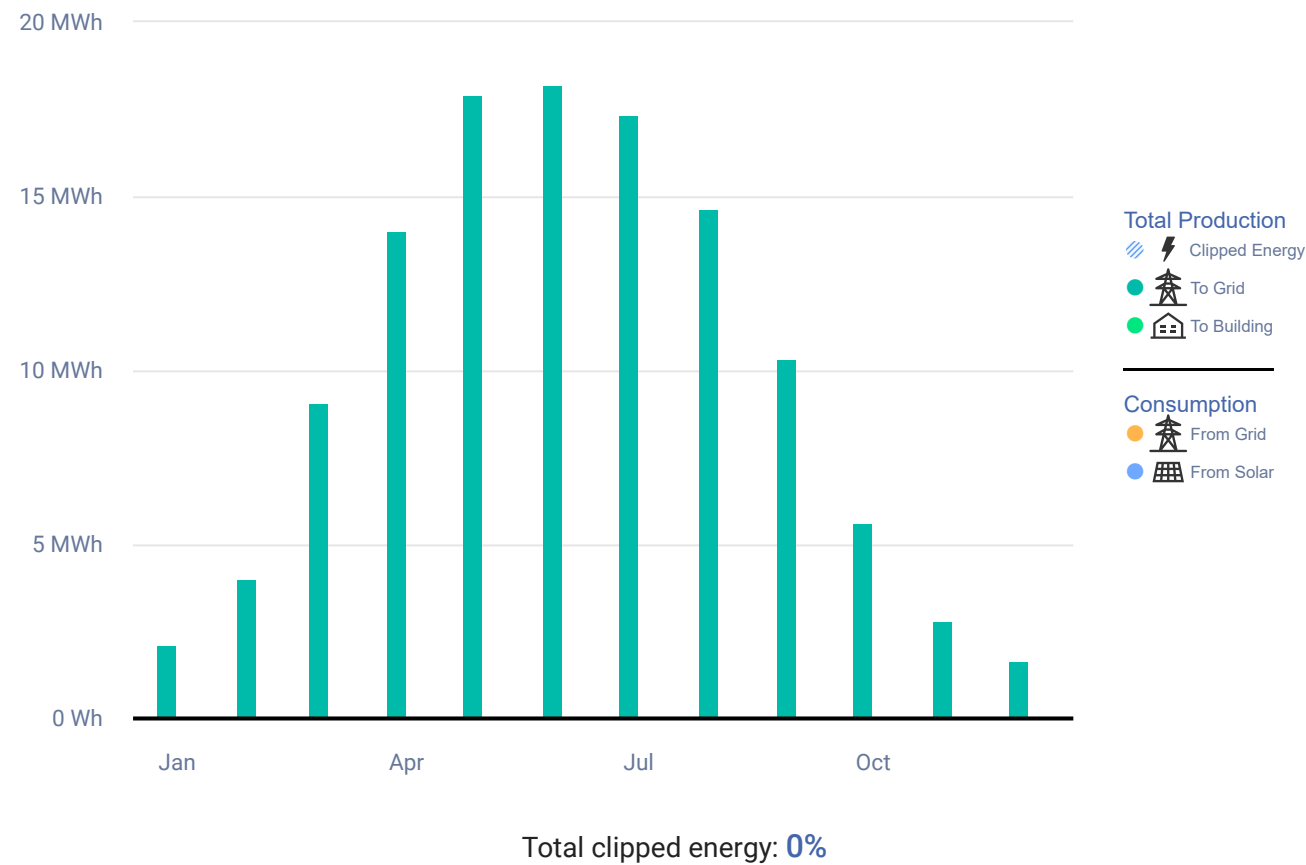
Annual Specific Production

897 kWh/kWp

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ESTIMATED MONTHLY ENERGY



Month	Production (kWh)		Clipped Energy (kWh)		Consumption (kWh)		From Grid (kWh)
	To Home (kWh)	To Grid (kWh)			From PV (kWh)		
Jan	2,141	-	2,141	-	-	-	-
Feb	4,031	-	4,031	-	-	-	-
Mar	9,079	-	9,079	-	-	-	-
Apr	14,035	-	14,035	-	-	-	-
May	17,906	-	17,906	-	-	-	-
Jun	18,227	-	18,227	-	-	-	-
Jul	17,359	-	17,359	-	-	-	-
Aug	14,630	-	14,630	-	-	-	-
Sep	10,370	-	10,370	-	-	-	-
Oct	5,652	-	5,652	-	-	-	-
Nov	2,825	-	2,825	-	-	-	-
Dec	1,690	-	1,690	-	-	-	-

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PV MODULES

# Module	Model	Peak power	Racking type	Orientation	Azimuth	Tilt
18	JA Solar, JAM60D-42-530-LB-TS-BF (user-defined)	9.5 kWp			50°	10°
53	JA Solar, JAM60D-42-530-LB-TS-BF (user-defined)	28.1 kWp			230°	10°
18	JA Solar, JAM60D-42-530-LB-TS-BF (user-defined)	9.5 kWp			51°	10°
35	JA Solar, JAM60D-42-530-LB-TS-BF (user-defined)	18.6 kWp			51°	10°
18	JA Solar, JAM60D-42-530-LB-TS-BF (user-defined)	9.5 kWp			231°	10°
18	JA Solar, JAM60D-42-530-LB-TS-BF (user-defined)	9.5 kWp			230°	10°
53	JA Solar, JAM60D-42-530-LB-TS-BF (user-defined)	28.1 kWp			50°	10°
35	JA Solar, JAM60D-42-530-LB-TS-BF (user-defined)	18.6 kWp			231°	10°
Total:	248	131.4 kWp				

BILL OF MATERIALS (BOM)

Items	Part Number	Quantity
 SE100K Synergy Manager		1
 S1400 (verify waiver conditions)		126
 JAM60D-42-530-LB-TS-BF		248

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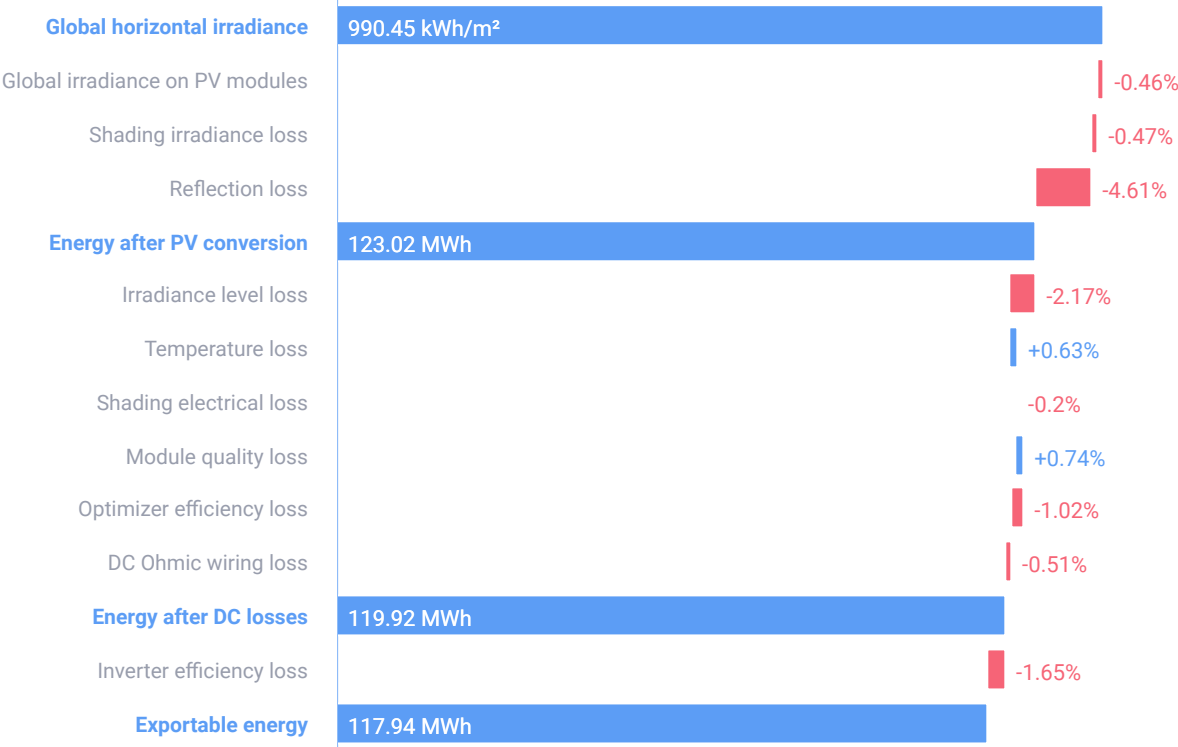
ELECTRICAL DESIGN

Inverters & Storage	Strings per inverter	Optimizers per string	PV modules per string
 1 xSE100K Synergy Manager Center Unit 112.84kW 113% Oversizing			
	⌚ 1 x string	 20 x S1400 (verify waiver conditions) (2:1)	 40
	⌚ 1 x string	 20 x S1400 (verify waiver conditions) (2:1), 1 x S1400 (verify waiver conditions) (1:1)	 41
	Left Unit		
	⌚ 1 x string	 21 x S1400 (verify waiver conditions) (2:1), 1 x S1400 (verify waiver conditions) (1:1)	 43
	⌚ 1 x string	 19 x S1400 (verify waiver conditions) (2:1), 1 x S1400 (verify waiver conditions) (1:1)	 39
	Right Unit		
	⌚ 1 x string	 19 x S1400 (verify waiver conditions) (2:1), 1 x S1400 (verify waiver conditions) (1:1)	 39
	⌚ 1 x string	 23 x S1400 (verify waiver conditions) (2:1)	 46

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SYSTEM LOSS DIAGRAM



SIMULATION PARAMETERS



LOCATION & GRID

Time zone	GMT+1 (London)
Weather station	Manchester-Ringway (19 km away)
Station altitude	69 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 Uc (const) Flush mount	20
Thermal loss factor Uc (const) Tilted	29
LID loss factor	0%
System unavailability	0%