

LEYS DEPOT

Buttercross Lane 34, Witney, OX28 4DN, United Kingdom | Witney Town Council | 4 Nov 2020



SYSTEM OVERVIEW



88 PV modules



1 Inverters



45 Optimizers

SIMULATION RESULTS



Installed DC Power

36.08 kWp



Max Achieved AC Power

27.60 kW



Annual Energy Production

31.60 MWh



CO2 Emission Saved

8.88 t



Equivalent Trees Planted

408



Max Achieved DC Power

32.42 kW



DC/AC Oversizing

117 %



Max Active AC Power

27.60 kW



Performance Ratio

87 %



Performance Index

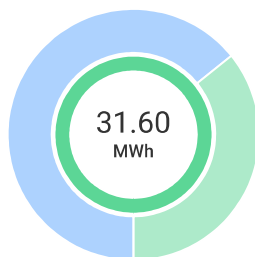
876 kWh/kWp

SYSTEM PRODUCTION

Total Production - 100 %
31.60 MWh

Self-consumption - 64 %
20.29 MWh

Export - 36 %
11.32 MWh

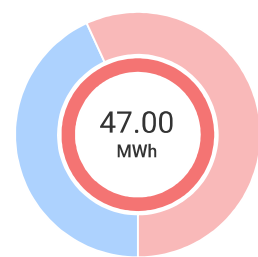


CONSUMPTION

Total Consumption - 100 %
47.00 MWh

Self-consumption - 43 %
20.29 MWh

Import - 57 %
26.71 MWh

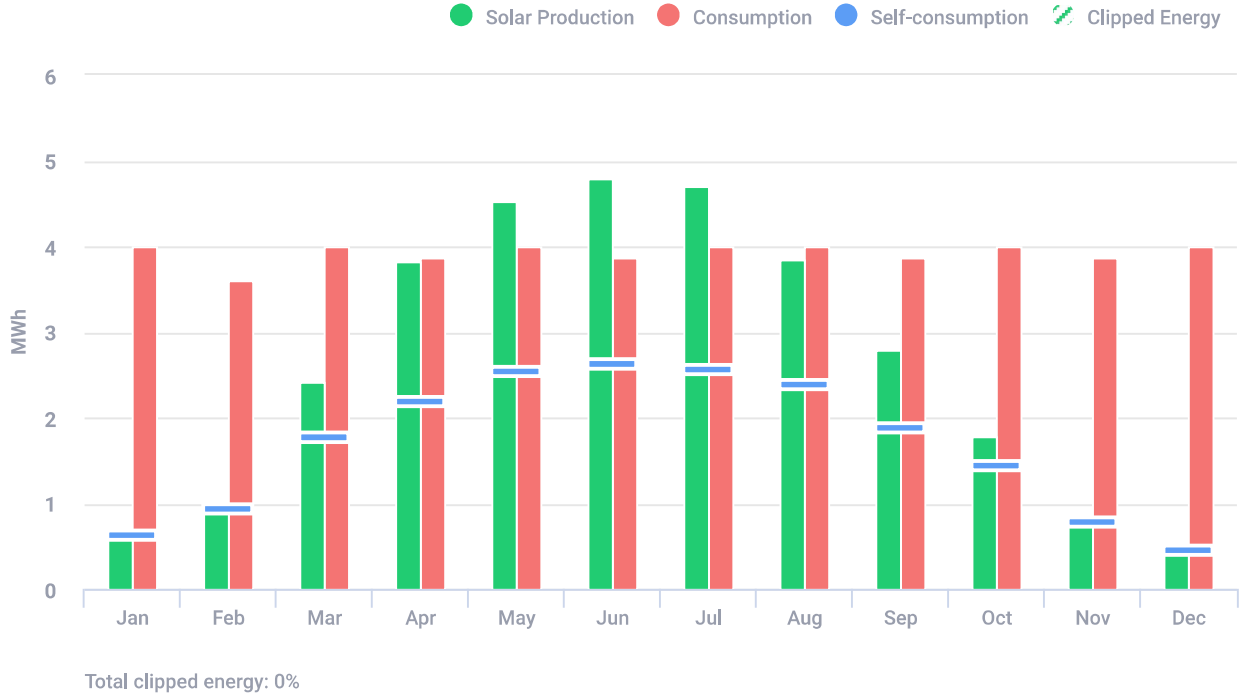


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ESTIMATED MONTHLY ENERGY



PV MODULES

# Module	Model	Peak power	Racking type	Orientation	Azimuth	Tilt
30	JA Solar, JAM72S10-410/MR (1000V)	12.3 kWp			208°	10°
9	JA Solar, JAM72S10-410/MR (1000V)	3.7 kWp			77°	10°
29	JA Solar, JAM72S10-410/MR (1000V)	11.9 kWp			257°	10°
20	JA Solar, JAM72S10-410/MR (1000V)	8.2 kWp			77°	10°
Total:	88	36.1 kWp				

BILL OF MATERIALS (BOM)

Items	Quantity	Cost (£)	Total (£)
SE27.6K	1		
P850	45		

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BILL OF MATERIALS (BOM) (CONTINUED)

Items	Quantity	Cost (£)	Total (£)
JA Solar, JAM72S10-410/MR (1000V)	88		

ELECTRICAL DESIGN

Inverters & Storage	Strings per inverter	Optimizers per string	PV modules per string
1 x SE27.6K 32.42kW 117%	1 x string	15 x P850 (2:1)	30
	2 x strings	14 x P850 (2:1), 1 x P850	29

SYSTEM LOSS DIAGRAM



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SIMULATION PARAMETERS



LOCATION & GRID

Time zone	GMT (London)
Weather station	Oxford (16.4 km away)
Station altitude	57 m
Station data source	Meteonorm 7.1
Grid	400V L-L, 230V L-N



LOSS FACTORS

Near shading	Enabled
Albedo	0.20
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%