34 BLACKSMITHS LANE

Blacksmiths Lane 34, Abbotsley, PE19 6UG, United Kingdom | Tim Hardy | 2 Oct 2026

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SYSTEM OVERVIEW | 20 PV modules | 1 Inverter | 20 Optimizers | 1 Battery

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SIMULATION RESULTS

Installed DC Power	Max Achieved AC Power	Annual Usable Solar Production	Annual CO_2 Emission Saved	Annual Equivalent Trees Planted
9.4 kWp	8 kW	10,518 kWh	2.03 t	93

ANNUAL CONSUMPTION AND PRODUCTION RESULTS

Total Production 10,545 kWh



- To Home 5,591 kWh (53%)
- To Battery 1,936 kWh (18%)
- To Grid 3,019 kWh (29%)

Consumption 10,034 kWh



75% Energy from solar with battery

- From Solar 5,591 kWh (56%)
- From Battery 1,889 kWh (19%)
- From Grid 2,501 kWh (25%)

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ESTIMATED MONTHLY ENERGY



Total Clipped Energy PV only: 0%

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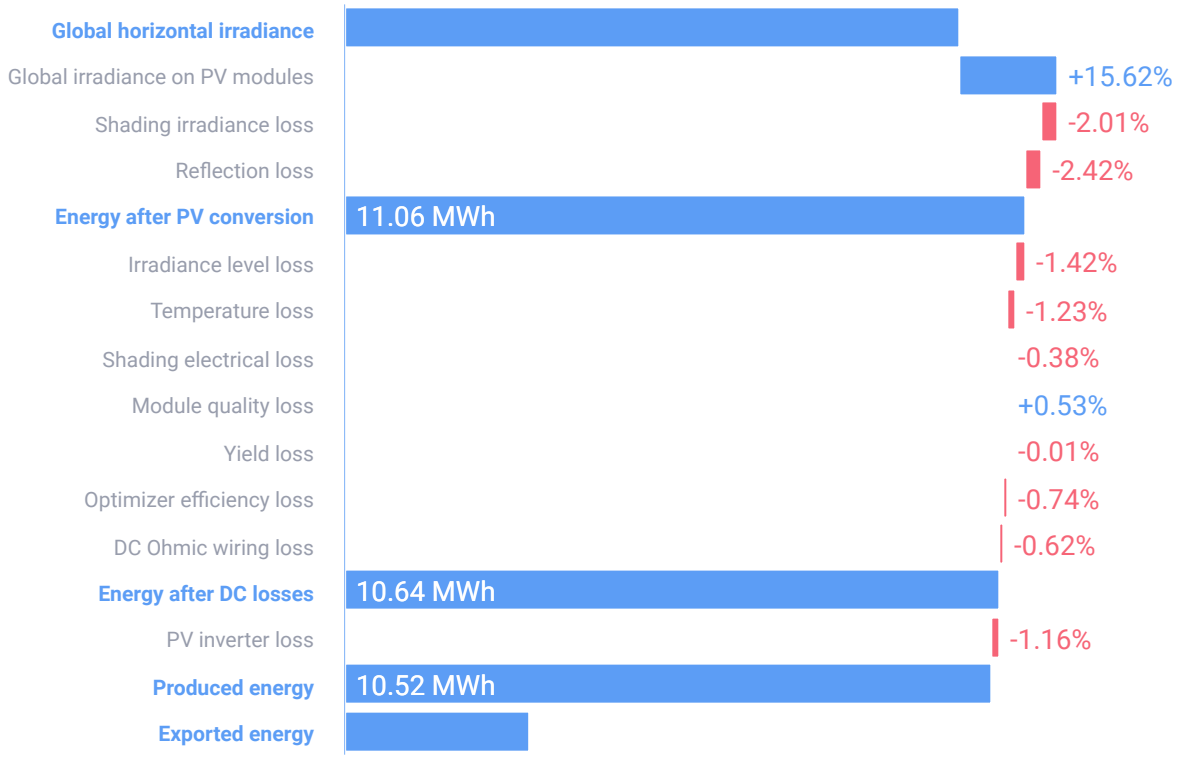
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PV MODULES

# Module	Model	Peak power	Racking type	Orientation	Azimuth	Tilt
5	REC Solar AS, REC 470 AA Pure-RX (Alpha)	2.4 kWp			271°	35°
15	REC Solar AS, REC 470 AA Pure-RX (Alpha)	7.1 kWp			181°	35°
Total: 20		9.4 kWp				

SYSTEM LOSS DIAGRAM



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SIMULATION PARAMETERS

LOCATION & GRID

Time zone	BST (London)
Weather station	Cardington (17 km away)
Station altitude	30 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%