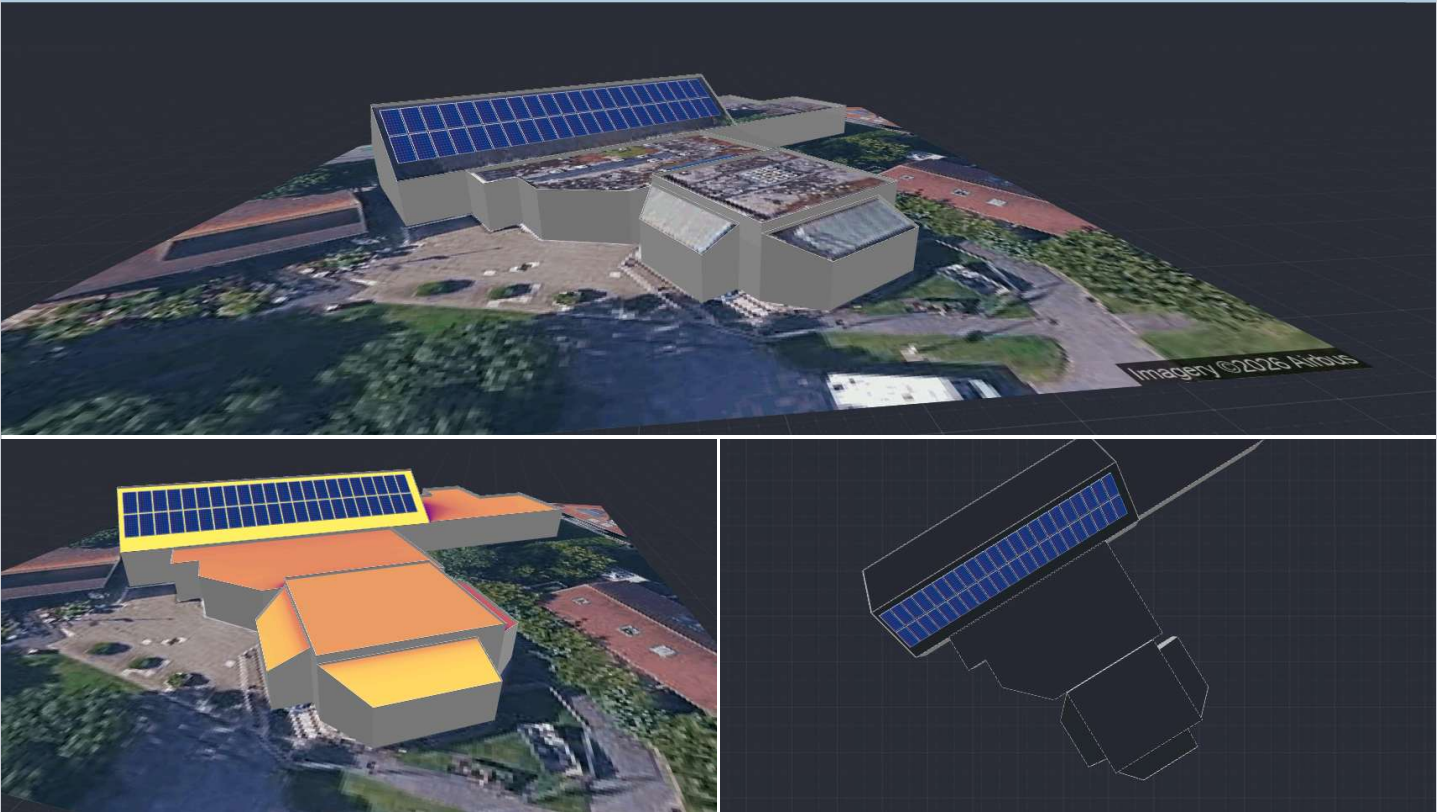


KINMEL BAY COMMUNITY BUILDING

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SMART BATTERY

Battery + PV

SolarEdge Home Battery 48V – 5
Modules | SolarEdge Home Battery 48V –
4 Modules

Smart Battery Management

 Time-of-Use Optimization Mode

Designed to maximize savings. The battery automatically charges when electricity prices are low and discharges when prices rise - reducing your energy costs.

Self-consumption from
Batteries

89%

Bill Savings on Battery Lifetime

£ 0



Total Storage Capacity

43.6 kWh

Total Battery Power

10 kW

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SYSTEM OVERVIEW

 44 PV modules

 3 Inverters

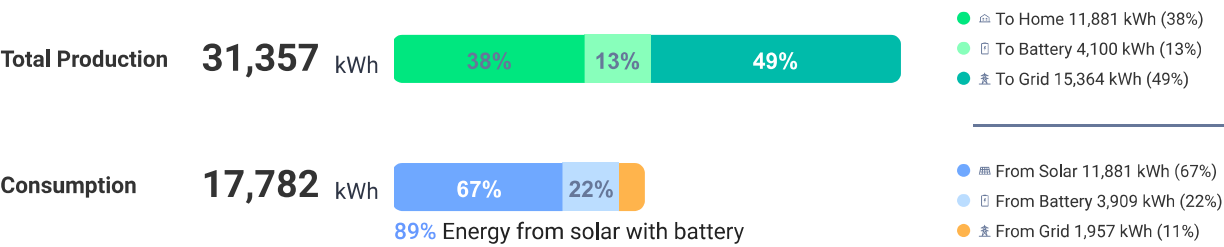
 44 Optimizers

 2 Batteries

SIMULATION RESULTS



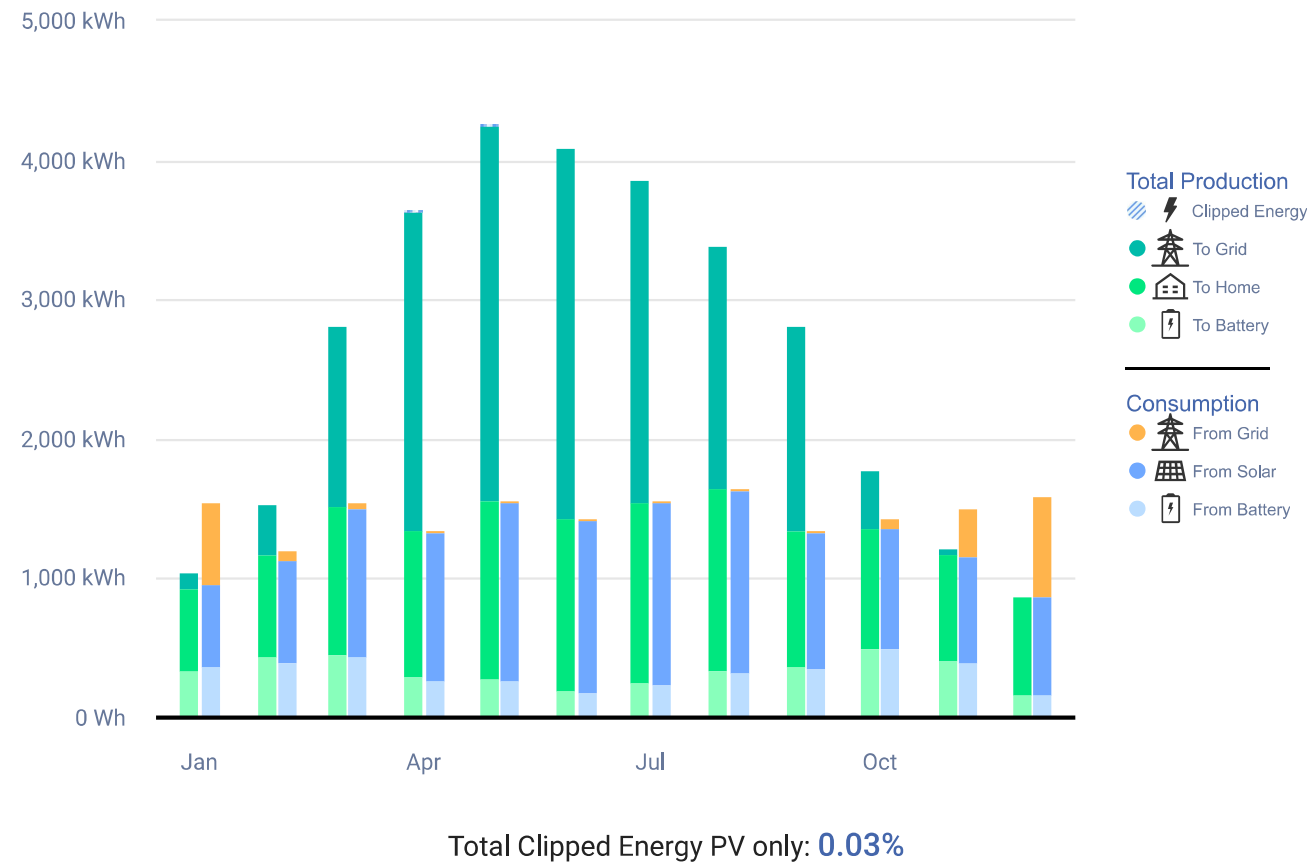
ANNUAL CONSUMPTION AND PRODUCTION RESULTS



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ESTIMATED MONTHLY ENERGY



PV MODULES

# Module	Model	Peak power	Racking type	Orientation	Azimuth	Tilt
44	SolarEdge, PV615-R66KGTN (user-defined)	27.1 kWp			149°	38°
Total: 44		27.1 kWp				

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BILL OF MATERIALS (BOM)

Items	Part Number	Quantity	Price (£)	Total (£)
 SE8K-RWB48 Home Hub 8kW SolarEdge Home Hub Three Phase - "backup ready" Inverter	SE8K-RWB48BFN4	1	0.00	0.00
 SE5K-RWB Home Short Strings		1		
 SE10K-RWB48 Home Hub 10kW SolarEdge Home Hub Three Phase - "backup ready" Inverter	SE10K-RWB48BFN4	1	0.00	0.00
 S500B (verify waiver conditions) input up to 500Wp, Max Isc 15A	S500b-1GM4MRM	44	0.00	0.00
 SolarEdge Home Battery 48V – 4 Modules Scalable solution that enables stacking multiple battery modules per inverter for increased capacity.	BAT-05K48M0B-02	1		
 SolarEdge Home Battery 48V – 5 Modules	BAT-05K48M0B-02	1		
 PV615-R66KGTN		44		

ELECTRICAL DESIGN

Inverters & Storage	Strings per inverter	Optimizers per string	PV modules per string
 1 xSE10K-RWB48 Home Hub 12.06kW 121% Oversizing 1 x SolarEdge Home Battery 48V – 5 Modules	1 x string	 20 x S500B (verify waiver conditions)	 20
 1 xSE8K-RWB48 Home Hub 9.05kW 113% Oversizing 1 x SolarEdge Home Battery 48V – 4 Modules	1 x string	 15 x S500B (verify waiver conditions)	 15

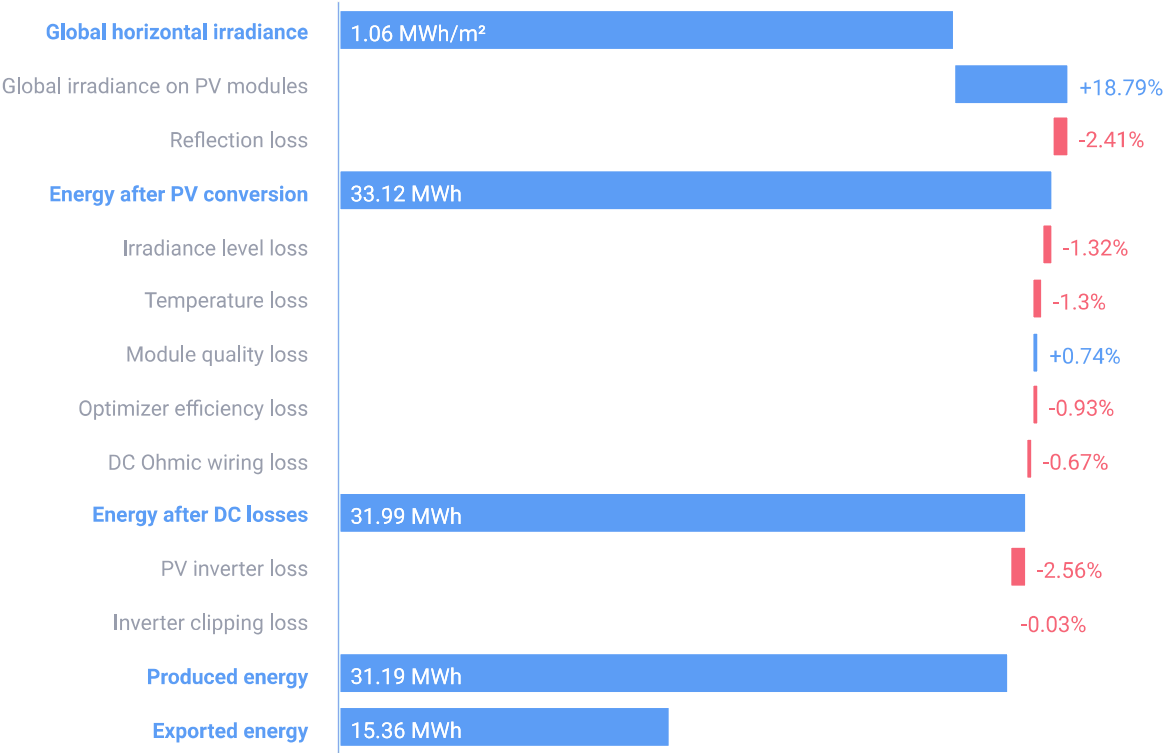
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ELECTRICAL DESIGN (CONTINUED)

Inverters & Storage	Strings per inverter	Optimizers per string	PV modules per string
 1 x SE5K-RWB Home Short Strings 5.43kW 109% Oversizing	 1 x string	 9 x S500B (verify waiver conditions)	 9

SYSTEM LOSS DIAGRAM



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SIMULATION PARAMETERS



LOCATION & GRID

Time zone	BST (London)
Weather station	Rhyl (Auto) (6 km away)
Station altitude	77 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 U_c (const) Flush mount	20
Thermal loss factor U_c (const) Tilted	29
LID loss factor	0%
System unavailability	0%