

Capacity Assessment Luke House, Port Hamble Marina, SO31 4QD

Report

Project Name	Luke House
Project Address	Port Hamble Marina, SO31 4QD
Prepared By	Nick Spicer nick.spicer@youreco.uk



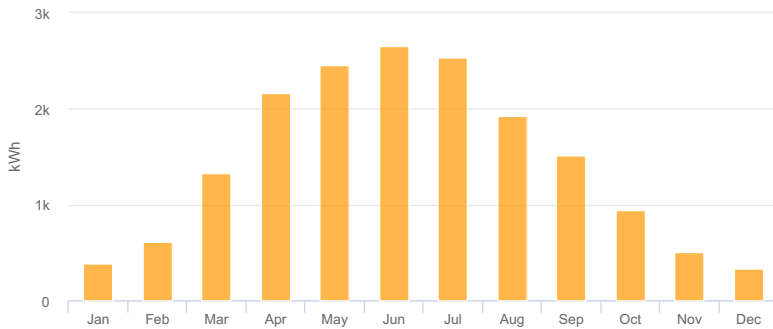
System Metrics

Design	Capacity Assessment
Module DC Nameplate	19.2 kW
Inverter AC Nameplate	17.0 kW Load Ratio: 1.13
Annual Production	17.34 MWh
Performance Ratio	84.0%
kWh/kWp	903.2
Weather Dataset	TMY, 10km Grid, meteonorm (meteonorm)
Simulator Version	0179bed5b5-bad80ec21e-0e5098992e-56bca1a4a9

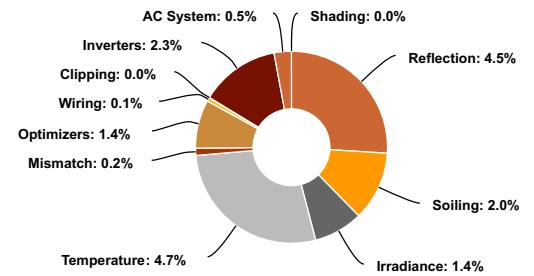
Project Location



Monthly Production



Sources of System Loss



Annual Production

	Description	Output	% Delta
Irradiance (kWh/m ²)	Annual Global Horizontal Irradiance	1,071.3	
	POA Irradiance	1,075.1	0.4%
	Shaded Irradiance	1,075.1	0.0%
	Irradiance after Reflection	1,027.1	-4.5%
	Irradiance after Soiling	1,006.6	-2.0%
	Total Collector Irradiance	1,006.6	0.0%
Energy (kWh)	Nameplate	19,330.0	
	Output at Irradiance Levels	19,054.9	-1.4%
	Output at Cell Temperature Derate	18,150.2	-4.7%
	Output After Mismatch	18,112.7	-0.2%
	Optimizer Output	17,859.1	-1.4%
	Optimal DC Output	17,840.0	-0.1%
	Constrained DC Output	17,838.7	0.0%
	Inverter Output	17,428.4	-2.3%
	Energy to Grid	17,341.3	-0.5%
Temperature Metrics			
	Avg. Operating Ambient Temp		13.4 °C
	Avg. Operating Cell Temp		25.0 °C
Simulation Metrics			
	Operating Hours	4567	
	Solved Hours	4567	

Condition Set

Description	Condition Set 1											
Weather Dataset	TMY, 10km Grid, meteonorm (meteonorm)											
Solar Angle Location	Meteo Lat/Lng											
Transposition Model	Perez Model											
Temperature Model	Sandia Model											
Temperature Model Parameters	Rack Type		a		b		Temperature Delta					
	Fixed Tilt		-3.56		-0.075		3°C					
	Flush Mount		-2.81		-0.0455		0°C					
Soiling (%)	J	F	M	A	M	J	J	A	S	O	N	D
	2	2	2	2	2	2	2	2	2	2	2	2
Irradiation Variance	5%											
Cell Temperature Spread	4° C											
Module Binning Range	-2.5% to 2.5%											
AC System Derate	0.50%											
Module Characterizations	Module					Uploaded By		Characterization				
	TSM-DE09.08 400 (Trina Solar)					Folsom Labs		Spec Sheet Characterization, PAN				
Component Characterizations	Device		Uploaded By					Characterization				

Components		
Component	Name	Count
Inverters	SE17K-EU-APAC/AUS (SolarEdge)	1 (17.0 kW)
Strings	10 AWG (Copper)	2 (30.0 m)
Optimizers	P800S (SolarEdge)	24 (19.2 kW)
Module	Trina Solar, TSM-DE09.08 400 (400W)	48 (19.2 kW)

Wiring Zones			
Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	-	11-33	Along Racking

Field Segments									
Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	Flush Mount	Portrait (Vertical)	15°	97.69354633133588°	0.0 m	1x1	48	48	19.2 kW

