

Capacity Assessment

Teal Building, Northney Marina, PO11 0NH

Report

Project Name	Teal Building
Project Address	Northney Marina, PO11 0NH
Prepared By	Nick Spicer nick.spicer@youreco.uk



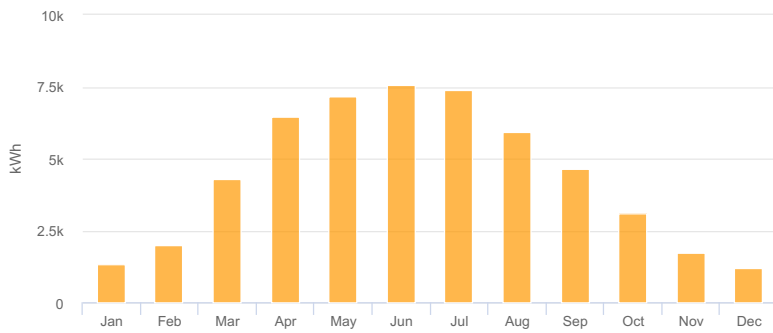
System Metrics

Design	Capacity Assessment
Module DC Nameplate	52.7 kW
Inverter AC Nameplate	55.0 kW Load Ratio: 0.96
Annual Production	52.84 MWh
Performance Ratio	84.5%
kWh/kWp	1,002.7
Weather Dataset	TMY, 10km Grid, meteonorm (meteonorm)
Simulator Version	78af4eba73-9c25b53ac8-18fc2398aa-51e04960be

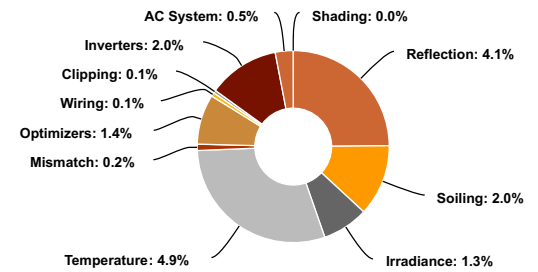
Project Location



Monthly Production



Sources of System Loss



Annual Production

	Description	Output	% Delta
Irradiance (kWh/m ²)	Annual Global Horizontal Irradiance	1,094.5	
	POA Irradiance	1,187.1	8.5%
	Shaded Irradiance	1,187.1	0.0%
	Irradiance after Reflection	1,138.1	-4.1%
	Irradiance after Soiling	1,115.3	-2.0%
	Total Collector Irradiance	1,115.3	0.0%
Energy (kWh)	Nameplate	58,786.3	
	Output at Irradiance Levels	58,026.2	-1.3%
	Output at Cell Temperature Derate	55,164.0	-4.9%
	Output After Mismatch	55,065.4	-0.2%
	Optimizer Output	54,294.4	-1.4%
	Optimal DC Output	54,237.5	-0.1%
	Constrained DC Output	54,194.0	-0.1%
	Inverter Output	53,110.1	-2.0%
	Energy to Grid	52,844.5	-0.5%
Temperature Metrics			
	Avg. Operating Ambient Temp		13.4 °C
	Avg. Operating Cell Temp		25.4 °C
Simulation Metrics			
	Operating Hours	4555	
	Solved Hours	4555	

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								
	JAM60S10-340/PR (JA Solar)	Folsom Labs		Spec Sheet Characterization, PAN								
Component Characterizations	Device	Uploaded By		Characterization								

Components		
Component	Name	Count
Inverters	SE55K-EU-APAC (SolarEdge)	1 (55.0 kW)
Strings	10 AWG (Copper)	5 (54.1 m)
Optimizers	P700 (SolarEdge)	80 (56.0 kW)
Module	JA Solar, JAM60S10-340/PR (340W)	155 (52.7 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
South Aspect	Flush Mount	Landscape (Horizontal)	12°	209.60294324003235°	0.0 m	1x1	155	155	52.7 kW

