

Capacity Assessment

Mallard Building, Northney Marina, PO11 0NH

Report

Project Name	Mallard Building
Project Address	Northney Marina, PO11 0NH
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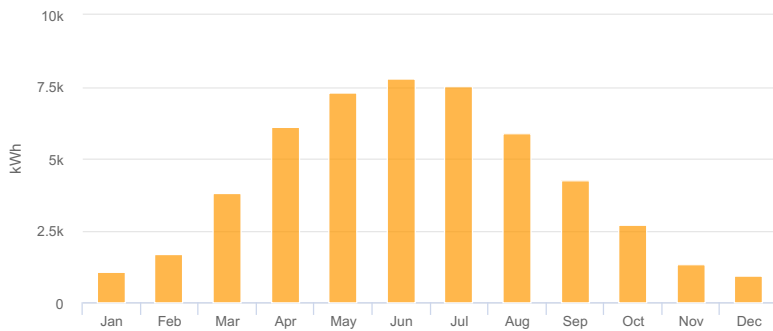
System Metrics

Design	Capacity Assessment
Module DC Nameplate	54.4 kW
Inverter AC Nameplate	55.0 kW Load Ratio: 0.99
Annual Production	50.30 MWh
Performance Ratio	84.4%
kWh/kWp	924.6
Weather Dataset	TMY, 10km Grid, meteonorm (meteonorm)
Simulator Version	78af4eba73-9c25b53ac8-18fc2398aa-51e04960be

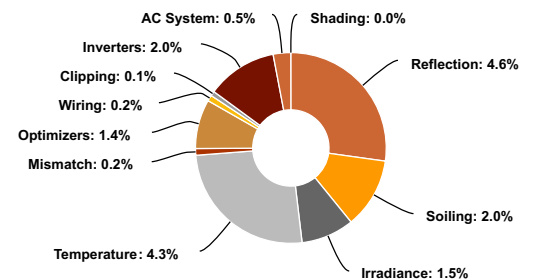
Project Location



Monthly Production



Sources of System Loss



Annual Production

	Description	Output	% Delta
Irradiance (kWh/m ²)	Annual Global Horizontal Irradiance	1,094.5	
	POA Irradiance	1,095.9	0.1%
	Shaded Irradiance	1,095.9	0.0%
	Irradiance after Reflection	1,046.0	-4.6%
	Irradiance after Soiling	1,025.0	-2.0%
	Total Collector Irradiance	1,025.0	0.0%
Energy (kWh)	Nameplate	55,771.7	
	Output at Irradiance Levels	54,933.8	-1.5%
	Output at Cell Temperature Derate	52,573.5	-4.3%
	Output After Mismatch	52,474.2	-0.2%
	Optimizer Output	51,739.4	-1.4%
	Optimal DC Output	51,653.1	-0.2%
	Constrained DC Output	51,583.8	-0.1%
	Inverter Output	50,552.1	-2.0%
	Energy to Grid	50,299.4	-0.5%
Temperature Metrics			
	Avg. Operating Ambient Temp		13.4 °C
	Avg. Operating Cell Temp		24.4 °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 (95.7 m)
Optimizers	P700 (SolarEdge)	80 (56.0 kW)
Module	JA Solar, JAM60S10-340/PR (340W)	160 (54.4 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
Main Roof	Flush Mount	Landscape (Horizontal)	12°	93.85200649343795°	0.0 m	1x1	160	160	54.4 kW

