Residential Roof N Barratt, CA22 2UA

Report

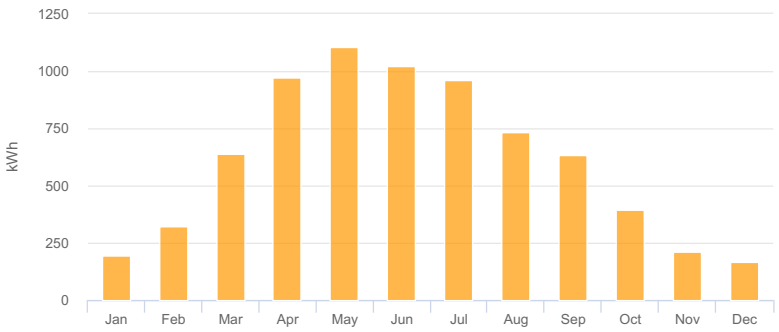
Project Name	N Barratt
Project Address	CA22 2UA
Prepared For	N Barratt
Prepared By	

System Metrics

Design	Residential Roof
Module DC Nameplate	7.60 kW
Inverter AC Nameplate	6.00 kW Load Ratio: 1.27
Annual Production	7351 kWh
Performance Ratio	84.5%
kWh/kWp	967.2
Weather Dataset	TMY, 10km Grid, meteonorm (meteonorm)
Simulator Version	a531a704d4-acbd214a9b-f77fe81ef7-e9a506aed3

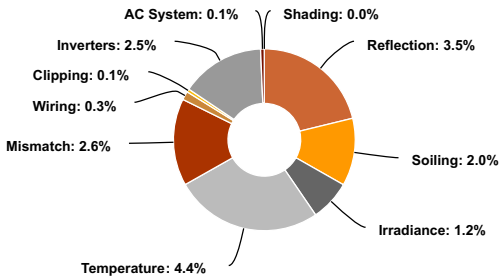
Project Location

Monthly Production



Month	GHI (kWh/m²)	POA (kWh/m²)	Shaded (kWh/m²)	Nameplate (kWh)	Grid (kWh)
January	16.3	28.9	28.9	206.8	192.3
February	30.0	47.9	47.9	343.6	320.6
March	72.2	96.8	96.8	697.4	638.8
April	126.7	151.7	151.7	1,093.8	974.3
May	160.7	172.8	172.8	1,244.2	1,104.0
June	157.7	161.9	161.9	1,165.2	1,020.3
July	147.2	151.9	151.9	1,089.9	960.8
August	108.5	116.0	116.0	832.1	734.9
September	79.8	98.7	98.7	709.2	632.2
October	43.8	60.5	60.5	433.1	392.9
November	20.1	32.6	32.6	232.5	212.8
December	12.6	25.3	25.3	180.5	167.3

Sources of System Loss



Annual Production

	Description	Output	% Delta
Irradiance (kWh/m²)	Annual Global Horizontal Irradiance	975.5	
	POA Irradiance	1,145.1	17.4%
	Shaded Irradiance	1,145.1	0.0%
	Irradiance after Reflection	1,104.7	-3.5%
	Irradiance after Soiling	1,082.6	-2.0%
	Total Collector Irradiance	**1,082.6**	**0.0%**
Energy (kWh)	Nameplate	8,228.2	
	Output at Irradiance Levels	8,129.1	-1.2%
	Output at Cell Temperature Derate	7,773.3	-4.4%
	Output After Mismatch	7,572.6	-2.6%
	Optimal DC Output	7,553.4	-0.3%
	Constrained DC Output	7,546.4	-0.1%
	Inverter Output	7,359.1	-2.5%
	Energy to Grid	**7,351.1**	**-0.1%**
Temperature Metrics			
	Avg. Operating Ambient Temp		11.3 °C
	Avg. Operating Cell Temp		23.0 °C
Simulation Metrics			
	Operating Hours		4590
	Solved Hours		4590

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									
	JAM60S20-380/MR (JA Solar)	Folsom Labs	Spec Sheet Characterization, PAN									
Component Characterizations	Device	Uploaded By	Characterization									
	Solis-1P6K3-4G (Ginlong Technologies)	Folsom Labs	Default Characterization									

Components

Component	Name	Count
Inverters	Solis-1P6K3-4G (Ginlong Technologies)	1 (6.00 kW)
AC Home Runs	6 mm2 (Copper)	1 (58.2 m)
Strings	10 AWG (Copper)	2 (35.3 m)
Module	JA Solar, JAM60S20-380/MR (380W)	20 (7.60 kW)

Wiring Zones

Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	-	3-13	Along Racking

Field Segments

Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	Flush Mount	Landscape (Horizontal)	30°	156.5°	0.0 m	1x1	20	20	7.60 kW

Detailed Layout