

Capacity Assessment

Saltmakers House, Hamble Point Marina, SO31 4NB

Report

Project Name	Saltmakers House
Project Address	Hamble Point Marina, SO31 4NB
Prepared By	Nick Spicer



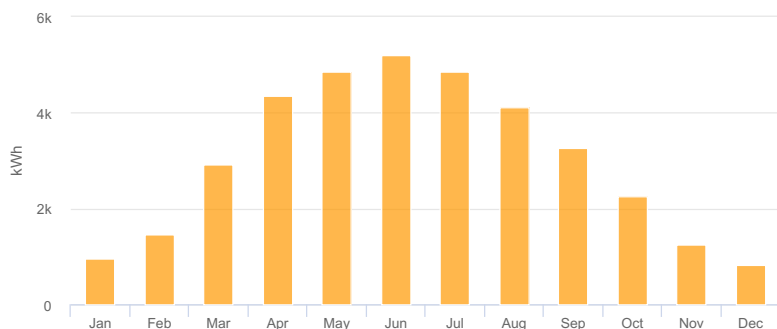
System Metrics

Design	Capacity Assessment
Module DC Nameplate	40.4 kW
Inverter AC Nameplate	33.3 kW Load Ratio: 1.21
Annual Production	36.32 MWh
Performance Ratio	83.2%
kWh/kWp	899.0
Weather Dataset	TMY, 10km Grid, meteonorm (meteonorm)
Simulator Version	0179bed5b5-bad80ec21e-0e5098992e-56bca1a4a9

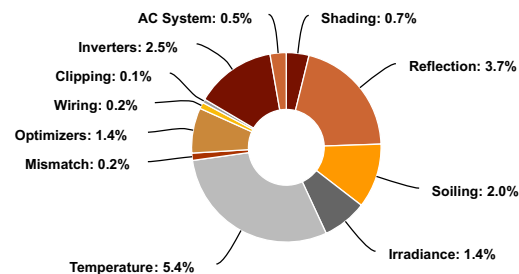
Project Location



Monthly Production



Sources of System Loss



Annual Production

	Description	Output	% Delta
Irradiance (kWh/m ²)	Annual Global Horizontal Irradiance	1,071.3	
	POA Irradiance	1,080.9	0.9%
	Shaded Irradiance	1,073.4	-0.7%
	Irradiance after Reflection	1,033.2	-3.7%
	Irradiance after Soiling	1,012.6	-2.0%
	Total Collector Irradiance	1,012.5	0.0%
Energy (kWh)	Nameplate	40,917.3	
	Output at Irradiance Levels	40,351.6	-1.4%
	Output at Cell Temperature Derate	38,175.8	-5.4%
	Output After Mismatch	38,089.5	-0.2%
	Optimizer Output	37,556.1	-1.4%
	Optimal DC Output	37,482.8	-0.2%
	Constrained DC Output	37,439.0	-0.1%
	Inverter Output	36,503.0	-2.5%
	Energy to Grid	36,320.5	-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	SE33.3KUS (2020) (SolarEdge)	1 (33.3 kW)
Strings	10 AWG (Copper)	3 (73.2 m)
Optimizers	P800S (SolarEdge)	51 (40.8 kW)
Module	Trina Solar, TSM-DE09.08 400 (400W)	101 (40.4 kW)

Wiring Zones

Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	-	13-38	Along Racking

Field Segments

Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	Flush Mount	Portrait (Vertical)	35°	258.2484°	0.0 m	1x1	30	30	12.0 kW
Field Segment 2	Flush Mount	Portrait (Vertical)	35°	258.94653°	0.0 m	1x1	22	22	8.80 kW
Field Segment 3	Flush Mount	Portrait (Vertical)	35°	258.94653°	0.0 m	1x1	14	14	5.60 kW
Field Segment 4	Flush Mount	Portrait (Vertical)	35°	258.94653°	0.0 m	1x1	15	15	6.00 kW
Field Segment 5	Flush Mount	Portrait (Vertical)	35°	258.94653°	0.0 m	1x1	8	8	3.20 kW
Field Segment 6	Flush Mount	Portrait (Vertical)	35°	258.94653°	0.0 m	1x1	12	12	4.80 kW

