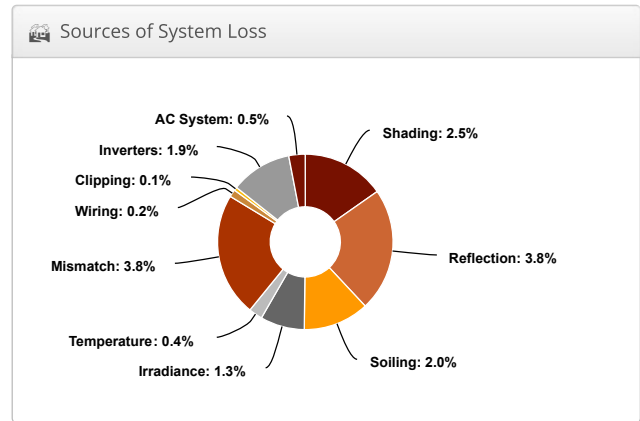
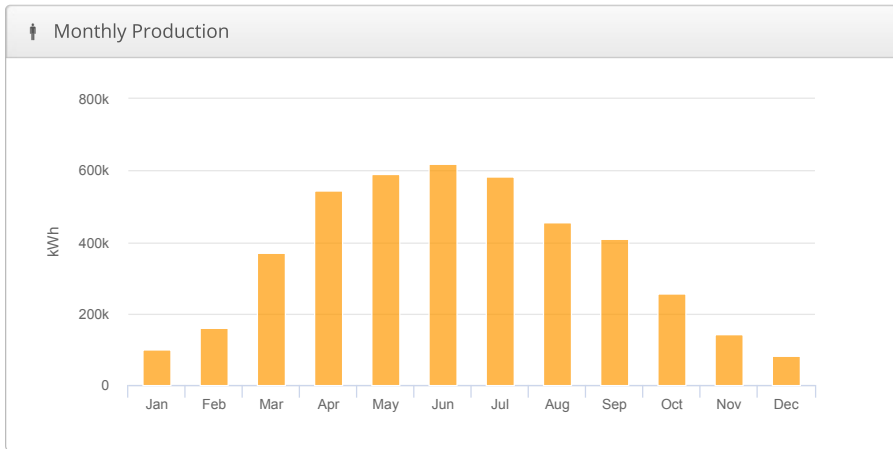
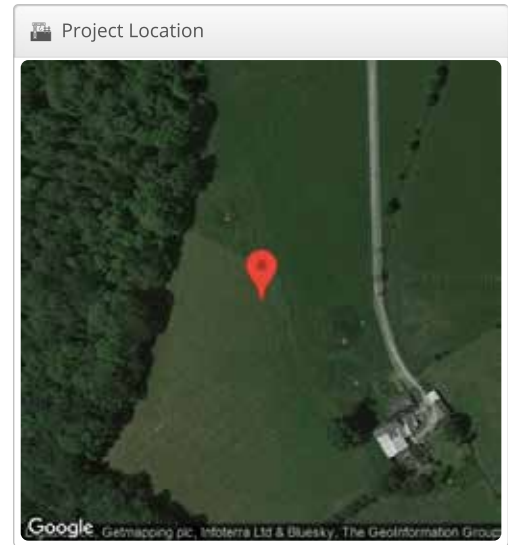


Russell Hill Ground Mount Russell Hill Farm, Russell Hill Farm Gwent wales

Report	
Project Name	Russell Hill Farm
Project Address	Russell Hill Farm Gwent wales
Prepared By	Paul Dougan pd@iamsolar.uk

System Metrics	
Design	Russell Hill Ground Mount
Module DC Nameplate	4.29 MW
Inverter AC Nameplate	3.44 MW Load Ratio: 1.25
Annual Production	4,307 GWh
Performance Ratio	84.7%
kWh/kWp	1,003.5
Weather Dataset	TMY, 10km Grid, meteonorm (meteonorm)
Simulator Version	9c02b5deb1-388eda1f11-1a6f592b1e-c8d7445e4b



Annual Production

	Description	Output	% Delta
Irradiance (kWh/m ²)	Annual Global Horizontal Irradiance	1,051.6	
	POA Irradiance	1,185.4	12.7%
	Shaded Irradiance	1,155.6	-2.5%
	Irradiance after Reflection	1,112.2	-3.8%
	Irradiance after Soiling	1,090.0	-2.0%
	Total Collector Irradiance	1,089.8	0.0%
Energy (kWh)	Nameplate	4,679,619.0	
	Output at Irradiance Levels	4,616,780.2	-1.3%
	Output at Cell Temperature Derate	4,597,534.4	-0.4%
	Output After Mismatch	4,424,816.9	-3.8%
	Optimal DC Output	4,414,898.6	-0.2%
	Constrained DC Output	4,410,476.1	-0.1%
	Inverter Output	4,328,350.0	-1.9%
	Energy to Grid	4,306,700.0	-0.5%
Temperature Metrics			
	Avg. Operating Ambient Temp		12.7 °C
	Avg. Operating Cell Temp		18.5 °C
Simulation Metrics			
	Operating Hours	4583	
	Solved Hours	4583	

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						Characterization					
	CS6U 345M (Canadian Solar)						Spec Sheet Characterization, PAN					
Component Characterizations	Device						Characterization					
	Sunny Tripower 24000TL-US (SMA)						Modified CEC					

Components		
Component	Name	Count
Inverters	Sunny Tripower 24000TL-US (SMA)	143 (3.44 MW)
Strings	10 AWG (Copper)	715 (102,872.4 ft)
Module	Canadian Solar, CS6U 345M (345W)	12,440 (4.29 MW)

Ⓢ Wiring Zones			
Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	12	4-19	Along Racking

Field Segments									
Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	Fixed Tilt	Landscape (Horizontal)	15°	180°	8.0 ft	4x1	3,110	12,440	4.29 MW

🗺 Detailed Layout

