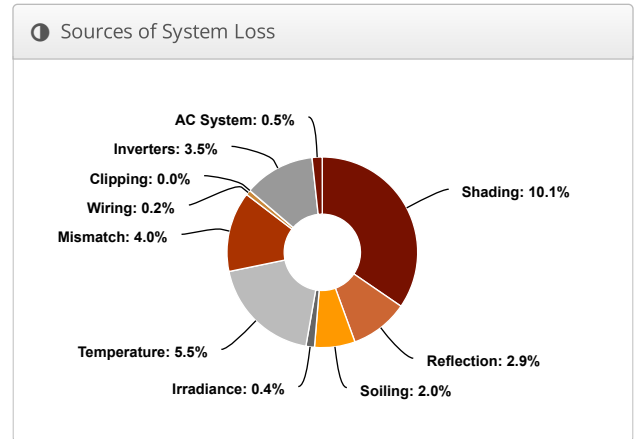
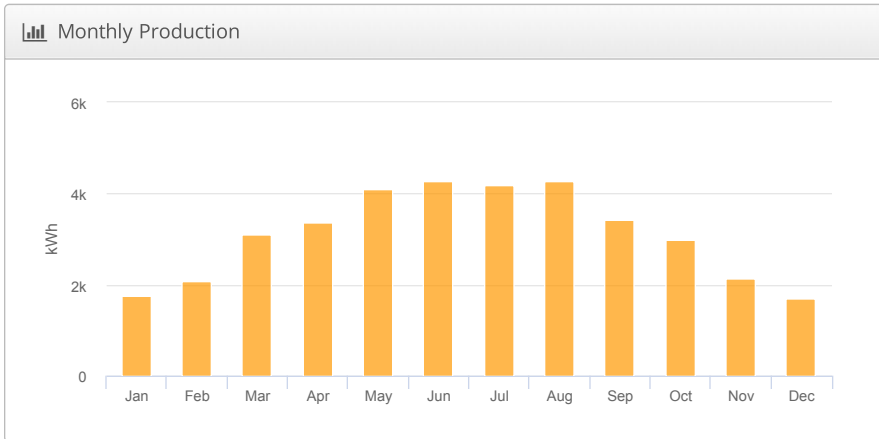
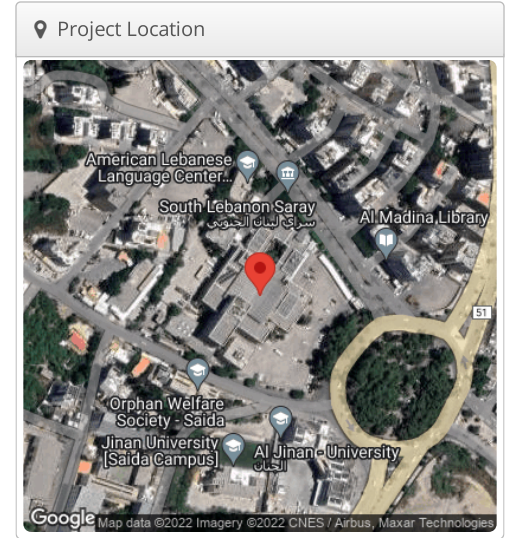


Design 1 South Governate, Lebanon

Report	
Project Name	South Governate
Project Address	lebanon
Prepared By	Omran Terro engomranterro@gmail.com

System Metrics	
Design	Design 1
Module DC Nameplate	24.8 kW
Inverter AC Nameplate	24.0 kW Load Ratio: 1.03
Annual Production	37.33 MWh
Performance Ratio	74.1%
kWh/kWp	1,508.3
Weather Dataset	TMY, 10km Grid, meteonorm (meteonorm)
Simulator Version	b5bd97ac78-2713cb39a4-d9879d265b-a730698bd8



⚡ Annual Production			
	Description	Output	% Delta
Irradiance (kWh/m ²)	Annual Global Horizontal Irradiance	1,866.1	
	POA Irradiance	2,034.3	9.0%
	Shaded Irradiance	1,829.8	-10.1%
	Irradiance after Reflection	1,777.2	-2.9%
	Irradiance after Soiling	1,741.6	-2.0%
	Total Collector Irradiance	1,742.1	0.0%
Energy (kWh)	Nameplate	43,139.0	
	Output at Irradiance Levels	42,957.6	-0.4%
	Output at Cell Temperature Derate	40,584.5	-5.5%
	Output After Mismatch	38,978.6	-4.0%
	Optimal DC Output	38,881.3	-0.2%
	Constrained DC Output	38,879.8	0.0%
	Inverter Output	37,519.0	-3.5%
	Energy to Grid	37,331.4	-0.5%
Temperature Metrics			
	Avg. Operating Ambient Temp		22.8 °C
	Avg. Operating Cell Temp		32.2 °C
Simulation Metrics			
	Operating Hours		4646
	Solved Hours		4646

☁ 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			
	BSM550M10-72HPH (1500) (BlueSun Solar)						HelioScope		Spec Sheet Characterization, PAN			
Component Characterizations	Device						Uploaded By		Characterization			
	SUN-12K-SG01LP1-EU (Deye)						HelioScope		Spec Sheet			

📦 Components		
Component	Name	Count
Inverters	SUN-12K-SG01LP1-EU (Deye)	2 (24.0 kW)
Strings	10 AWG (Copper)	6 (195.6 ft)
Module	BlueSun Solar, BSM550M10-72HPH (1500) (550W)	45 (24.8 kW)

🔌 Wiring Zones			
Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	-	4-10	Along Racking

🏠 Field Segments									
Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	Fixed Tilt	Portrait (Vertical)	25°	213°	2.0 ft	1x1	45	45	24.8 kW

Detailed Layout

