


Hospital Meissen

Hospital Meissen, Hospital Meissen

 Report

Project Name


Hospital Meissen

Project Address

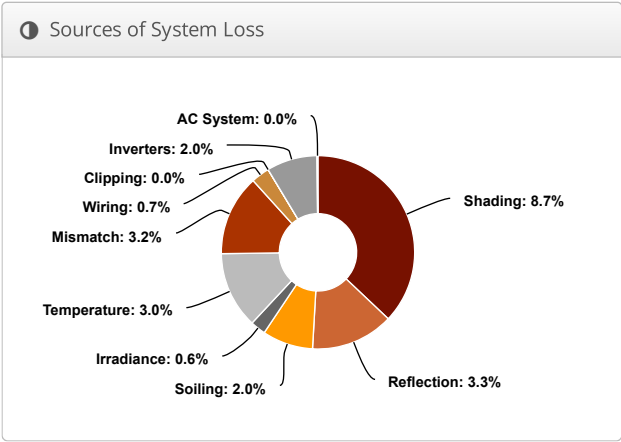
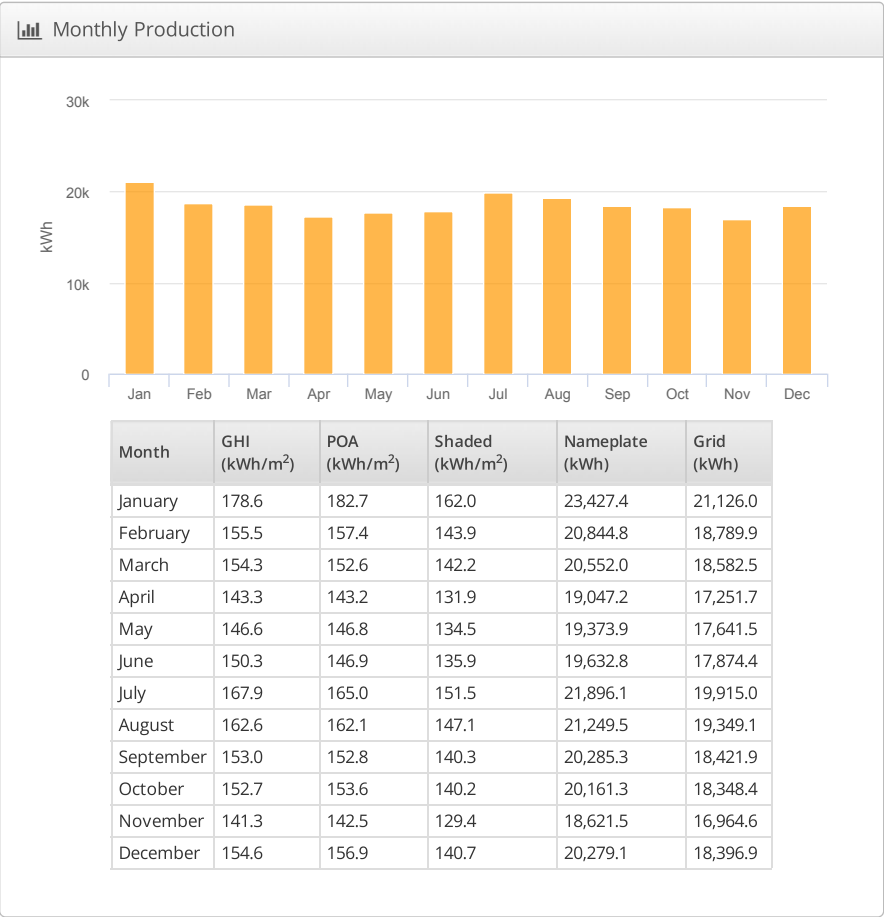
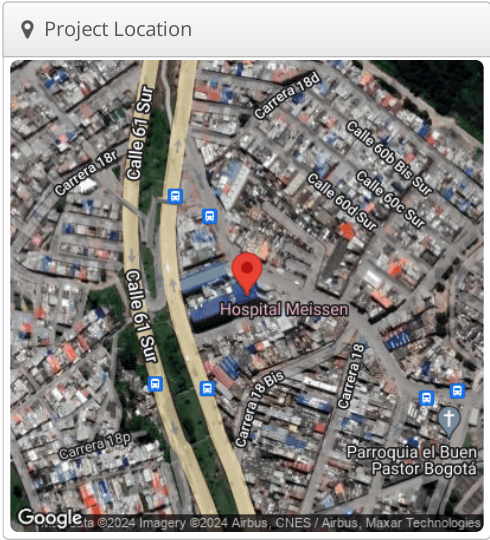
Hospital Meissen

Prepared By

Marco Fidel Ortiz
fcoll@e2energiaeficiente.com



System Metrics	
Design	Hospital Meissen
Module DC Nameplate	152.2 kW
Inverter AC Nameplate	150.0 kW Load Ratio: 1.01
Annual Production	222.7 MWh
Performance Ratio	78.5%
kWh/kWp	1,462.8
Weather Dataset	TMY, 0.04° Grid (4.57,-74.14), NREL (psm3)
Simulator Version	c7dea92158-bc6525c55f-4923a2eb09-5afe44b4a6



⚡ Annual Production			
	Description	Output	% Delta
Irradiance (kWh/m²)	Annual Global Horizontal Irradiance	1,860.9	
	POA Irradiance	1,862.4	0.1%
	Shaded Irradiance	1,699.4	-8.7%
	Irradiance after Reflection	1,643.8	-3.3%
	Irradiance after Soiling	1,611.0	-2.0%
	Total Collector Irradiance	1,611.0	0.0%
Energy (kWh)	Nameplate	245,370.9	
	Output at Irradiance Levels	243,881.7	-0.6%
	Output at Cell Temperature Derate	236,497.2	-3.0%
	Output After Mismatch	228,953.4	-3.2%
	Optimal DC Output	227,293.2	-0.7%
	Constrained DC Output	227,291.8	0.0%
	Inverter Output	222,746.0	-2.0%
	Energy to Grid	222,661.8	0.0%
Temperature Metrics			
Avg. Operating Ambient Temp		16.7 °C	
Avg. Operating Cell Temp		27.1 °C	
Simulation Metrics			
Operating Hours		4378	
Solved Hours		4378	

☁ Condition Set												
Description	Condition Set 1											
Weather Dataset	TMY, 0.04° Grid (4.57,-74.14), NREL (psm3)											
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					
	East-West		-3.56		-0.075		3°C					
	Carport		-3.56		-0.075		3°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-645-DE21 (Trina Solar)				HelioScope			Spec Sheet Characterization, PAN				
Component Characterizations	Device						Uploaded By		Characterization			
	Sunny Tripower CORE1 50-US (SMA)						HelioScope		Spec Sheet			

📦 Components		
Component	Name	Count
Inverters	Sunny Tripower CORE1 50-US (SMA)	3 (150.0 kW)
AC Home Runs	1/0 AWG (Aluminum)	3 (77.8 m)
Strings	10 AWG (Copper)	14 (695.4 m)
Module	Trina Solar, TSM-645-DE21 (645W)	236 (152.2 kW)

🔌 Wiring Zones			
Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	-	14-20	Along Racking

🏠 Field Segments										
Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power	
Field Segment 1	Fixed Tilt	Landscape (Horizontal)	10°	247°	0.0 m	1x1	58	58	37.4 kW	
Field Segment 2	Fixed Tilt	Landscape (Horizontal)	10°	247°	0.1 m	1x1	34	34	21.9 kW	
Field Segment 3	Fixed Tilt	Landscape (Horizontal)	10°	247°	0.0 m	1x1	72	72	46.4 kW	
Field Segment 4	Fixed Tilt	Landscape (Horizontal)	10°	247°	0.0 m	1x1	72	72	46.4 kW	

Detailed Layout

