

SDS Solar Secretaría Distrital de Salud, Secretaria distrital de salud

Report

Project Name

Secretaría Distrital de Salud

Project Address

Secretaria distrital de salud

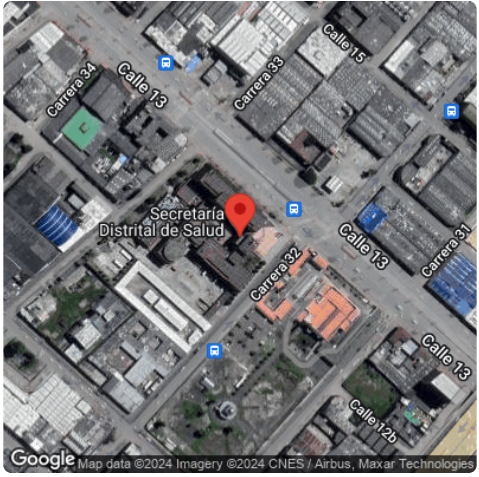
Prepared By

Marco Fidel Ortiz
fcoll@e2energiaeficiente.com

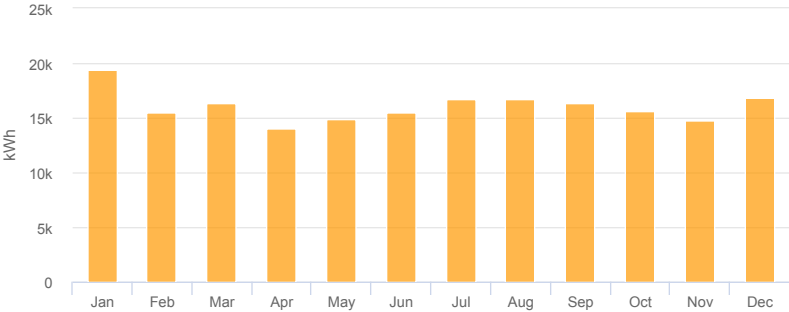


System Metrics	
Design	SDS Solar
Module DC Nameplate	149.6 kW
Inverter AC Nameplate	125.0 kW Load Ratio: 1.20
Annual Production	192.7 MWh
Performance Ratio	76.1%
kWh/kWp	1,287.6
Weather Dataset	TMY, 0.04° Grid (4.61,-74.1), NREL (psm3)
Simulator Version	04e525d874-9c149a10a8-801e132742-619ede1379

Project Location

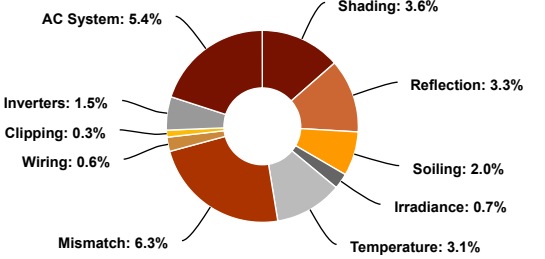


Monthly Production



Month	GHI (kWh/m²)	POA (kWh/m²)	Shaded (kWh/m²)	Nameplate (kWh)	Grid (kWh)
January	166.3	173.8	167.4	23,809.5	19,382.6
February	133.3	134.9	131.3	18,711.2	15,469.2
March	142.8	142.3	138.2	19,665.9	16,397.9
April	124.1	122.9	118.3	16,755.5	14,075.5
May	133.1	130.6	125.1	17,647.6	14,860.5
June	139.6	135.4	130.1	18,419.1	15,462.3
July	151.2	146.4	140.9	19,982.8	16,691.9
August	148.4	147.0	141.2	20,024.8	16,712.2
September	144.1	143.7	138.8	19,730.9	16,393.7
October	135.5	137.0	132.1	18,719.5	15,665.8
November	125.6	128.9	123.9	17,515.1	14,745.1
December	144.2	149.7	143.8	20,358.4	16,818.4

Sources of System Loss



⚡ Annual Production			
	Description	Output	% Delta
Irradiance (kWh/m²)	Annual Global Horizontal Irradiance	1,688.1	
	POA Irradiance	1,692.5	0.3%
	Shaded Irradiance	1,631.0	-3.6%
	Irradiance after Reflection	1,576.8	-3.3%
	Irradiance after Soiling	1,545.2	-2.0%
	Total Collector Irradiance	1,545.0	0.0%
Energy (kWh)	Nameplate	231,340.3	
	Output at Irradiance Levels	229,716.0	-0.7%
	Output at Cell Temperature Derate	222,678.9	-3.1%
	Output After Mismatch	208,722.3	-6.3%
	Optimal DC Output	207,375.1	-0.6%
	Constrained DC Output	206,720.8	-0.3%
	Inverter Output	203,610.4	-1.5%
	Energy to Grid	192,675.2	-5.4%
Temperature Metrics			
Avg. Operating Ambient Temp		16.6 °C	
Avg. Operating Cell Temp		26.6 °C	
Simulation Metrics			
Operating Hours		4375	
Solved Hours		4375	

☁ Condition Set													
Description	Condition Set 1												
Weather Dataset	TMY, 0.04° Grid (4.61,-74.1), 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 Highpower PEAK3 125-US (SMA)						HelioScope			Spec Sheet			

📦 Components		
Component	Name	Count
Inverters	Sunny Highpower PEAK3 125-US (SMA)	1 (125.0 kW)
Transformer	Primary Side: Medium Voltage (11kV) , Secondary: 208V/120V	0
AC Home Runs	1/0 AWG (Aluminum)	1 (237.7 m)
Strings	10 AWG (Copper)	8 (514.9 m)
Module	Trina Solar, TSM-645-DE21 (645W)	232 (149.6 kW)

🔌 Wiring Zones			
Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	-	20-31	Along Racking

🏠 Field Segments									
Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	Fixed Tilt	Landscape (Horizontal)	10°	223°	0.5 m	2x1	98	196	126.4 kW
Field Segment 2	Fixed Tilt	Landscape (Horizontal)	10°	223°	0.5 m	1x1	36	36	23.2 kW

Detailed Layout

