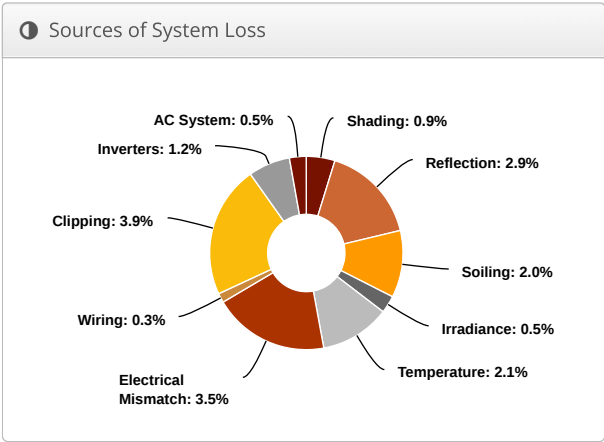
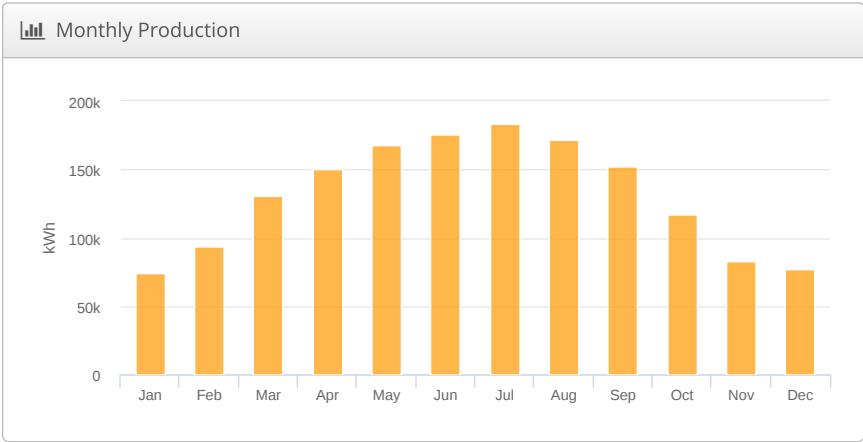
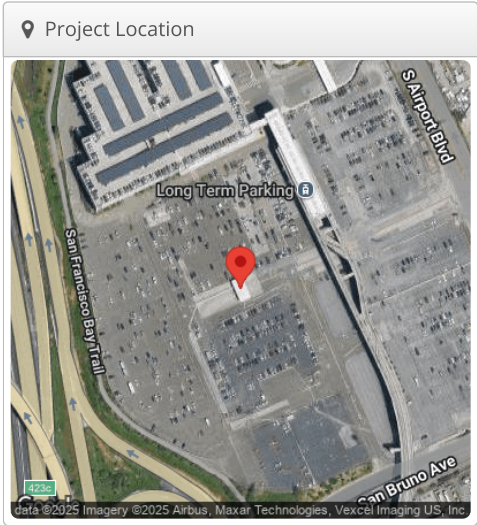


SFO_1 MW SFO_1MW_Utility_Solar, 806 S Airport Blvd, San Francisco, CA

Report	
Project Name	SFO_1MW_Utility_Solar
Project Address	806 S Airport Blvd, San Francisco, CA
Prepared By	Sajith Venattusseril Sajan svenattusserilsajan@hawk.iit.edu

System Metrics	
Design	SFO_1 MW
Module DC Nameplate	1,000.0 kW
Inverter AC Nameplate	900.0 kW Load Ratio: 1.11
Annual Production	1,578 GWh
Performance Ratio	83.5%
kWh/kWp	1,577.8
Weather Dataset	TMY, SAN FRANCISCO INTL AP, NSRDB (tmy3, I)
Simulator Version	d67dccd386-fd73aa9609-c3be554160-bc4a0318b5



⚡ Annual Production			
	Description	Output	% Delta
Irradiance (kWh/m²)	Annual Global Horizontal Irradiance	1,716.4	
	POA Irradiance	1,890.5	10.1%
	Shaded Irradiance	1,874.4	-0.9%
	Irradiance after Reflection	1,819.3	-2.9%
	Irradiance after Soiling	1,782.9	-2.0%
	Total Collector Irradiance	1,782.9	0.0%
Energy (kWh)	Nameplate	1,782,863.0	
	Output at Irradiance Levels	1,773,548.0	-0.5%
	Output at Cell Temperature Derate	1,736,521.3	-2.1%
	Output after Electrical Mismatch	1,676,369.6	-3.5%
	Optimal DC Output	1,671,705.8	-0.3%
	Constrained DC Output	1,605,804.6	-3.9%
	Inverter Output	1,585,744.6	-1.2%
	Energy to Grid	1,577,815.9	-0.5%
Temperature Metrics			
Avg. Operating Ambient Temp		15.6 °C	
Avg. Operating Cell Temp		24.2 °C	
Simulation Metrics			
Operating Hours		4527	
Solved Hours		4527	

☁ Condition Set												
Description	Condition Set 2											
Weather Dataset	TMY, SAN FRANCISCO INTL AP, NSRDB (tmy3, I)											
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 & Component Characterizations	Type	Component						Characterization				
	Module	JKM400M-72HL-V (2022) (Jinko)						Spec Sheet Characterization, PAN				
	Inverter	Sunny Highpower 100-20 (1500V) (SMA)						Spec Sheet				

📦 Components		
Component	Name	Count
Inverters	Sunny Highpower 100-20 (1500V) (SMA)	9 (900.0 kW)
Strings	10 AWG (Copper)	95 (13,889.7 ft)
Module	Jinko, JKM400M-72HL-V (2022) (400W)	2,500 (1,000.0 kW)

🔌 Wiring Zones			
Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone 1	-	23-28	Along Racking
Wiring Zone 2	-	23-28	Along Racking
Wiring Zone 3	-	23-28	Along Racking
Wiring Zone 4	-	23-28	Along Racking

🏗 Field Segments									
Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
S1	Fixed Tilt	Landscape (Horizontal)	Module: 15°	Module: 180°	4.0 ft	1x1	508	508	203.2 kW
S 2	Fixed Tilt	Landscape (Horizontal)	Module: 15°	Module: 180°	4.0 ft	1x1	1,057	1,057	422.8 kW
S 3	Fixed Tilt	Landscape (Horizontal)	Module: 15°	Module: 180°	4.0 ft	1x1	424	424	169.6 kW
S 4	Fixed Tilt	Landscape (Horizontal)	Module: 15°	Module: 180°	4.0 ft	1x1	511	511	204.4 kW

Detailed Layout2

