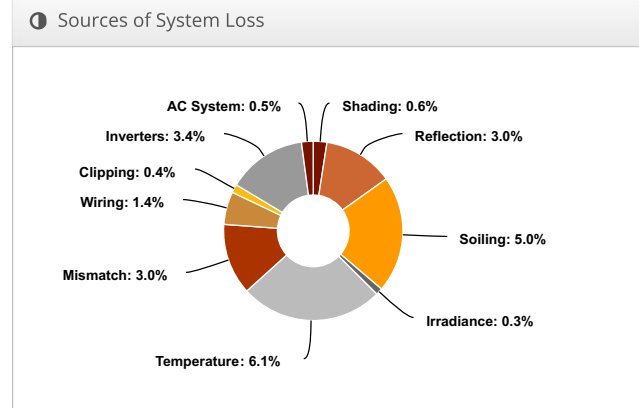
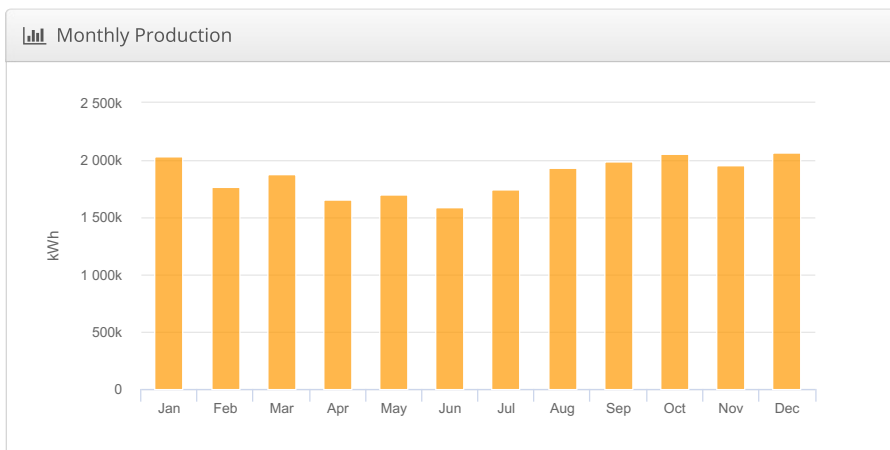
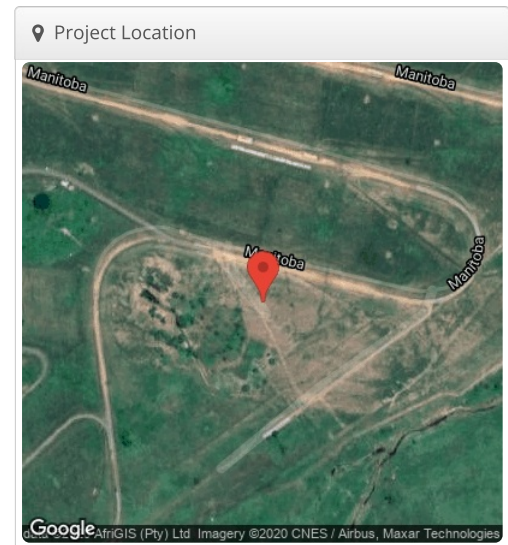


## 02 TASEZ-Roofs TASEZ, Alwyn Street, Pretoria

Report	
Project Name	TASEZ
Project Description	SADIJH (2020-05-26)
Project Address	Alwyn Street, Pretoria
Prepared For	[REDACTED]
Prepared By	[REDACTED]

[REDACTED]

System Metrics	
Design	02 TASEZ-Roofs
Module DC Nameplate	12.9 MW
Inverter AC Nameplate	10.5 MW Load Ratio: 1.23
Annual Production	22.37 GWh
Performance Ratio	78.6%
kWh/kWp	1,734.8
Weather Dataset	TMY, 10km Grid, meteonorm (meteonorm)
Simulator Version	04ecc04cf-06e047fcc2-8e5889d9c5-19c685730b



⚡ Annual Production			
	Description	Output	% Delta
Irradiance (kWh/m²)	Annual Global Horizontal Irradiance	2,043.6	
	POA Irradiance	2,208.4	8.1%
	Shaded Irradiance	2,195.5	-0.6%
	Irradiance after Reflection	2,129.4	-3.0%
	Irradiance after Soiling	2,023.0	-5.0%
	Total Collector Irradiance	2,023.0	0.0%
Energy (kWh)	Nameplate	26,101,445.0	
	Output at Irradiance Levels	26,025,424.8	-0.3%
	Output at Cell Temperature Derate	24,430,045.0	-6.1%
	Output After Mismatch	23,685,260.3	-3.0%
	Optimal DC Output	23,352,645.4	-1.4%
	Constrained DC Output	23,269,314.5	-0.4%
	Inverter Output	22,480,100.0	-3.4%
	Energy to Grid	22,367,700.0	-0.5%
Temperature Metrics			
Avg. Operating Ambient Temp		21.4 °C	
Avg. Operating Cell Temp		33.8 °C	
Simulation Metrics			
		Operating Hours	4596
		Solved Hours	4596

☁ 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	
	5	5	5	5	5	5	5	5	5	5	5	5	
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						
	CS3W-440MB-AG (Canadian Solar)				Folsom Labs		Spec Sheet Characterization, PAN						
Component Characterizations	Device					Uploaded By		Characterization					
	PVI-CENTRAL-250-US (480V) (ABB (Power-One))					Folsom Labs		CEC 2014-08-16					

🗂 Components		
Component	Name	Count
Inverters	PVI-CENTRAL-250-US (480V) (ABB (Power-One))	42 (10.5 MW)
Strings	10 AWG (Copper)	2,772 (552,539.0 m)
Module	Canadian Solar, CS3W-440MB-AG (440W)	29,304 (12.9 MW)

🔌 Wiring Zones			
Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	12	9-11	Along Racking

🏠 Field Segments									
Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	Fixed Tilt	Landscape (Horizontal)	15°	18.9246°	3.0 m	2x3	529	3,174	1.40 MW
Field Segment 2	Fixed Tilt	Landscape (Horizontal)	15°	18.9246°	3.0 m	2x3	2,281	13,686	6.02 MW
Field Segment 3	Fixed Tilt	Landscape (Horizontal)	15°	18.9246°	3.0 m	2x3	417	2,502	1.10 MW
Field Segment 4	Fixed Tilt	Landscape (Horizontal)	15°	18.9246°	3.0 m	2x3	165	990	435.6 kW
Field Segment 5	Fixed Tilt	Landscape (Horizontal)	15°	18.9246°	3.0 m	2x3	449	2,694	1.19 MW
Field Segment 6	Fixed Tilt	Landscape (Horizontal)	15°	18.9246°	3.0 m	2x3	129	774	340.6 kW
Field Segment 7	Fixed Tilt	Landscape (Horizontal)	15°	18.1258°	3.0 m	2x3	30	180	79.2 kW
Field Segment 8	Fixed Tilt	Landscape (Horizontal)	15°	18.5518°	3.0 m	2x3	338	2,028	892.3 kW
Field Segment 9	Fixed Tilt	Landscape (Horizontal)	15°	18.6717°	3.0 m	2x3	120	720	316.8 kW
Field Segment 10	Fixed Tilt	Landscape (Horizontal)	15°	18.8982°	3.0 m	2x3	50	300	132.0 kW
Field Segment 11	Fixed Tilt	Landscape (Horizontal)	15°	18.2654°	3.0 m	2x3	304	1,824	802.6 kW
Field Segment 12	Fixed Tilt	Landscape (Horizontal)	15°	18.7522°	3.0 m	2x3	72	432	190.1 kW

Detailed Layout

