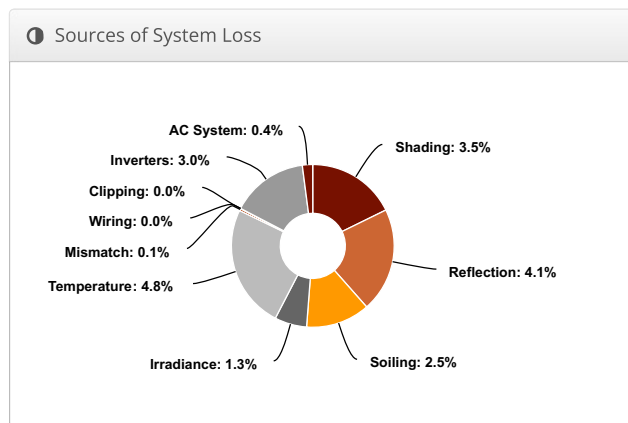
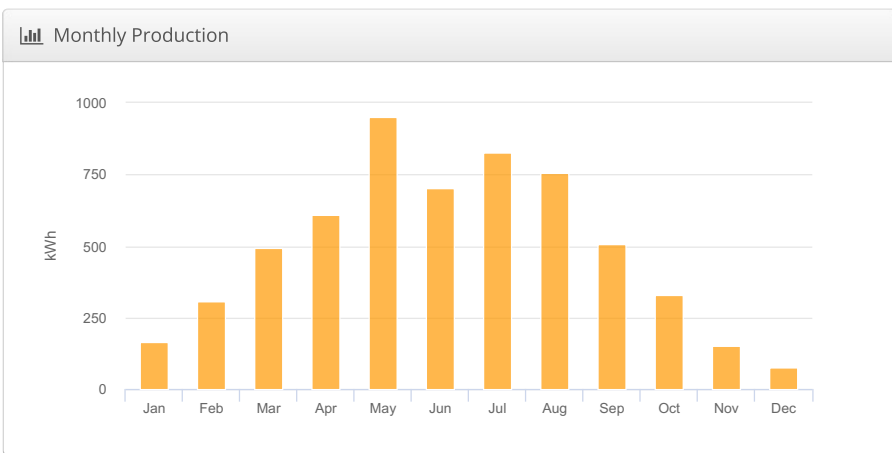


voltec 385 toiture inclinée

CENTRE DE LOISIRS AIGLEMONT, Route D58B Aiglemont

Report	
Project Name	CENTRE DE LOISIRS AIGLEMONT
Project Address	Route D58B Aiglemont
Prepared By	Kamar Amine kamin008@fiu.edu

System Metrics	
Design	voltec 385 toiture inclinée
Module DC Nameplate	6.55 kW
Inverter AC Nameplate	4.93 kW Load Ratio: 1.33
Annual Production	5.868 MWh
Performance Ratio	81.9%
kWh/kWp	896.6
Weather Dataset	TMY, unknown, ECMWF/ERA (custom)
Simulator Version	e5c63dbf40-2863ab4c71-16aaed79f5-e4285b7d40



Annual Production			
	Description	Output	% Delta
Irradiance (kWh/m ²)	Annual Global Horizontal Irradiance	1,169.8	
	POA Irradiance	1,095.0	-6.4%
	Shaded Irradiance	1,056.9	-3.5%
	Irradiance after Reflection	1,013.8	-4.1%
	Irradiance after Soiling	988.5	-2.5%
	Total Collector Irradiance	988.3	0.0%
Energy (kWh)	Nameplate	6,468.8	
	Output at Irradiance Levels	6,387.8	-1.3%
	Output at Cell Temperature Derate	6,079.9	-4.8%
	Output After Mismatch	6,074.6	-0.1%
	Optimal DC Output	6,074.6	0.0%
	Constrained DC Output	6,074.6	0.0%
	Inverter Output	5,892.1	-3.0%
	Energy to Grid	5,868.2	-0.4%
Temperature Metrics			
	Avg. Operating Ambient Temp		12.3 °C
	Avg. Operating Cell Temp		24.3 °C
Simulation Metrics			
	Operating Hours		4211
	Solved Hours		4211

☁ Condition Set													
Description	Condition Set 1												
Weather Dataset	TMY, unknown, ECMWF/ERA (custom)												
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	
	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Irradiation Variance	5%												
Cell Temperature Spread	4° C												
Module Binning Range	-2.5% to 2.5%												
AC System Derate	3.00%												
Module Characterizations	Module					Uploaded By		Characterization					
	TARKA 126 VSBD 385 (Voltec Solar)					HelioScope		Spec Sheet Characterization, PAN					
Component Characterizations	Device					Uploaded By		Characterization					
	IQ7A-72-2-US (208V) (2019) (Enphase)					HelioScope		Spec Sheet					

📦 Components		
Component	Name	Count
Inverters	IQ7A-72-2-US (208V) (2019) (Enphase)	17 (4.93 kW)
AC Branches	1000 MCM (Aluminum)	1 (85.6 m)
Module	Voltec Solar, TARKA 126 VSBD 385 (385W)	17 (6.55 kW)

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

Field Segments									
Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	Flush Mount	Portrait (Vertical)	18.6°	260.72634754100727°	0.0 m	1x1	54	17	6.55 kW
Field Segment 1 (copy)	Flush Mount	Portrait (Vertical)	18.6°	80.72634754100727°	0.0 m	1x1	77	0	0
Field Segment 5	Flush Mount	Portrait (Vertical)	16°	21.10890759845256°	0.0 m	1x1	0	0	0
Field Segment 5	Flush Mount	Portrait (Vertical)	52°	200.9997119944145°	0.0 m	1x1	0	0	0
Field Segment 5	Flush Mount	Portrait (Vertical)	15°	21.227651188635377°	0.0 m	1x1	0	0	0
Field Segment 5 (copy)	Flush Mount	Portrait (Vertical)	15°	201.22765118863538°	0.0 m	1x1	0	0	0
Field Segment 7	Flush Mount	Portrait (Vertical)	17.5°	351.3358645668919°	0.0 m	1x1	58	0	0
Field Segment 8	Flush Mount	Portrait (Vertical)	18.6°	323.5691418798376°	0.0 m	1x1	21	0	0
Field Segment 8 (copy)	Flush Mount	Portrait (Vertical)	18.6°	143.5691418798376°	0.0 m	1x1	0	0	0
Field Segment 10	Flush Mount	Portrait (Vertical)	17.6°	140.36694108349303°	0.0 m	1x1	0	0	0
Field Segment 10 (copy)	Flush Mount	Portrait (Vertical)	17.6°	320.366941083493°	0.0 m	1x1	0	0	0
Field Segment 12	Flush Mount	Portrait (Vertical)	20.5°	170.099026095235°	0.0 m	1x1	0	0	0
Field Segment 13	Flush Mount	Portrait (Vertical)	18.5°	320.9881483757755°	0.0 m	1x1	2	0	0
Field Segment 13 (copy)	Flush Mount	Portrait (Vertical)	18.5°	140.9881483757755°	0.0 m	1x1	0	0	0
Field Segment 15	Flush Mount	Portrait (Vertical)	20°	202.1001334715345°	0.0 m	1x1	0	0	0
Field Segment 15 (copy)	Flush Mount	Portrait (Vertical)	20°	22.10013347153449°	0.0 m	1x1	5	0	0
Field Segment 17	Flush Mount	Portrait (Vertical)	19.3°	260.31860676139263°	0.0 m	1x1	0	0	0
Field Segment 18	Flush Mount	Portrait (Vertical)	30°	80.39479584498702°	0.0 m	1x1	0	0	0
Field Segment 19	Flush Mount	Portrait (Vertical)	19.6°	260.5376777919744°	0.0 m	1x1	0	0	0
Field Segment 20	Flush Mount	Portrait (Vertical)	30°	80.70669140060284°	0.0 m	1x1	0	0	0

Detailed Layout

