

voltec 385 toiture inclinée CENTRE SOCIAL ANDRE DHOTEL, 88 Rue Albert Poulain 08000 Charleville Mézières

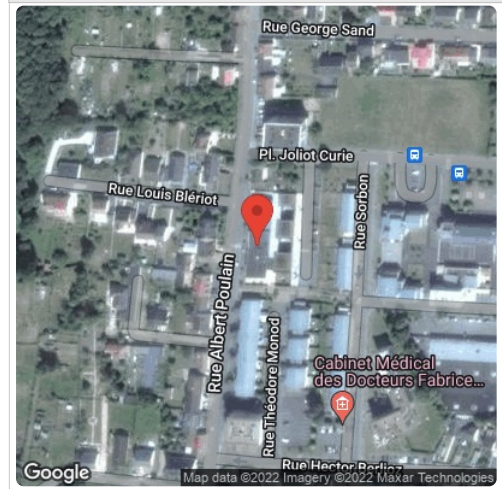
Report

Project Name	CENTRE SOCIAL ANDRE DHOTEL
Project Address	88 Rue Albert Poulain 08000 Charleville Mézières
Prepared By	Kamar Amine kamin008@fiu.edu

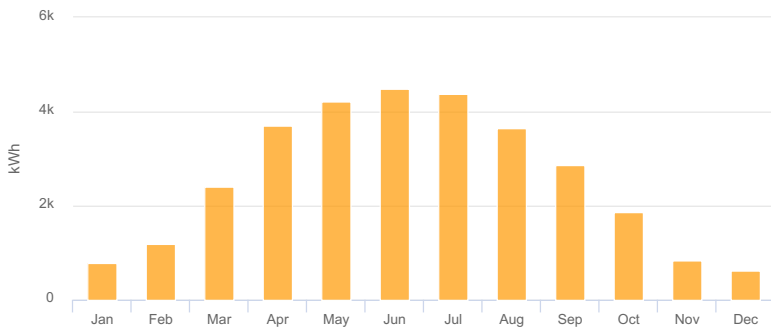
System Metrics

Design	voltec 385 toiture inclinée
Module DC Nameplate	32.7 kW
Inverter AC Nameplate	24.7 kW Load Ratio: 1.33
Annual Production	31.03 MWh
Performance Ratio	83.9%
kWh/kWp	948.2
Weather Dataset	TMY, 10km Grid, meteonorm (meteonorm)
Simulator Version	618879a04b-a65f959b90-668837a848-460061af17

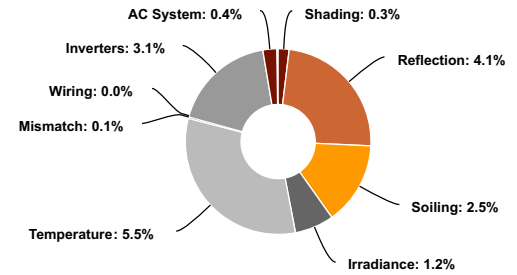
Project Location



Monthly Production



Sources of System Loss



Annual Production

	Description	Output	% Delta
Irradiance (kWh/m ²)	Annual Global Horizontal Irradiance	1,053.3	
	POA Irradiance	1,130.6	7.3%
	Shaded Irradiance	1,126.9	-0.3%
	Irradiance after Reflection	1,080.4	-4.1%
	Irradiance after Soiling	1,053.4	-2.5%
	Total Collector Irradiance	1,053.4	0.0%
Energy (kWh)	Nameplate	34,472.1	
	Output at Irradiance Levels	34,066.2	-1.2%
	Output at Cell Temperature Derate	32,179.3	-5.5%
	Output After Mismatch	32,153.0	-0.1%
	Optimal DC Output	32,153.0	0.0%
	Constrained DC Output	32,165.4	0.0%
	Inverter Output	31,159.2	-3.0%
	Energy to Grid	31,028.7	-0.4%
Temperature Metrics			
	Avg. Operating Ambient Temp		12.6 °C
	Avg. Operating Cell Temp		24.9 °C
Simulation Metrics			
	Operating Hours	4609	
	Solved Hours	4609	

☁ 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	
	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)	85 (24.7 kW)
AC Branches	1000 MCM (Aluminum)	2 (84.1 m)
Module	Voltec Solar, TARKA 126 VSBD 385 (385W)	85 (32.7 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)	10°	3.737629543410094°	0.0 m	1x1	0	0	0
Field Segment 2	Flush Mount	Portrait (Vertical)	10°	183.3774727293163°	0.0 m	1x1	52	52	20.0 kW
Field Segment 3	Flush Mount	Portrait (Vertical)	10°	183.47631274920116°	0.0 m	1x1	11	11	4.24 kW
Field Segment 4	Flush Mount	Portrait (Vertical)	10°	183.53713432671327°	0.0 m	1x1	22	22	8.47 kW

