

Voltec 385 toiture plate 18,4° AIRE COUVERTE DE LA WARENNE, 42 bis Rue Léon Dehuz 08000 Charleville Mézières

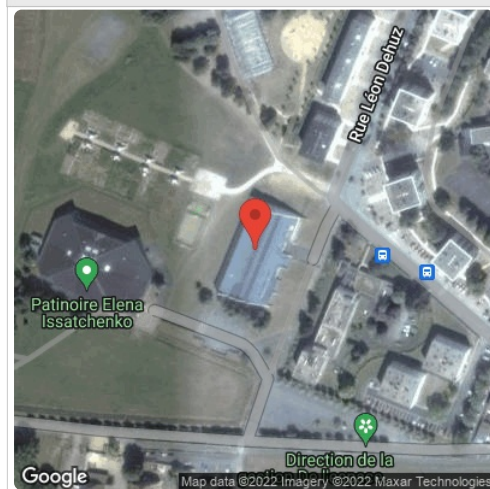
Report

Project Name	AIRE COUVERTE DE LA WARENNE
Project Address	42 bis Rue Léon Dehuz 08000 Charleville Mézières
Prepared By	kh hk tomleyerzi@vusra.com

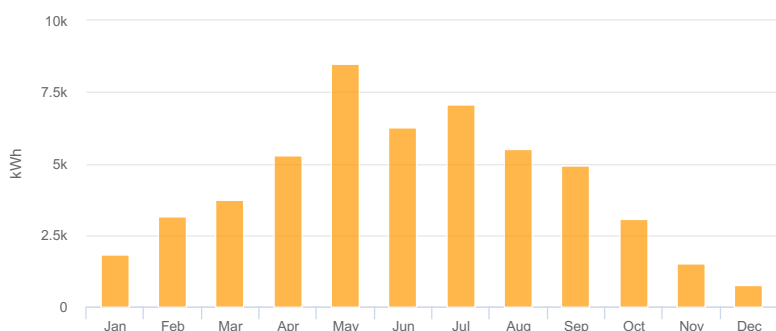
System Metrics

Design	Voltec 385 toiture plate 18,4°
Module DC Nameplate	51.2 kW
Inverter AC Nameplate	40.0 kW Load Ratio: 1.28
Annual Production	51.57 MWh
Performance Ratio	79.7%
kWh/kWp	1,007.2
Weather Dataset	TMY, unknown, ECMWF/ERA (custom)
Simulator Version	d0e8fb833c-a12c847e38-4f0cbf246d-022e42112f

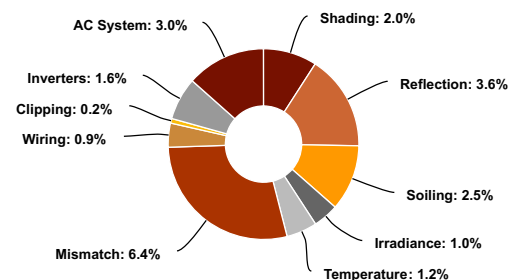
Project Location



Monthly Production



Sources of System Loss



Annual Production

	Description	Output	% Delta
Irradiance (kWh/m ²)	Annual Global Horizontal Irradiance	1,130.7	
	POA Irradiance	1,263.6	11.8%
	Shaded Irradiance	1,237.9	-2.0%
	Irradiance after Reflection	1,193.2	-3.6%
	Irradiance after Soiling	1,163.4	-2.5%
	Total Collector Irradiance	1,163.5	0.0%
Energy (kWh)	Nameplate	59,596.6	
	Output at Irradiance Levels	59,020.2	-1.0%
	Output at Cell Temperature Derate	58,334.6	-1.2%
	Output After Mismatch	54,629.3	-6.4%
	Optimal DC Output	54,131.8	-0.9%
	Constrained DC Output	54,037.7	-0.2%
	Inverter Output	53,166.3	-1.6%
	Energy to Grid	51,571.3	-3.0%
Temperature Metrics			
	Avg. Operating Ambient Temp		12.0 °C
	Avg. Operating Cell Temp		19.5 °C
Simulation Metrics			
	Operating Hours	4240	
	Solved Hours	4240	

☁ 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							
	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		
	2.5	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					

🗂 Components		
Component	Name	Count
Inverters	SPI40K-B (KEHUA)	1 (40.0 kW)
Home Runs	12 AWG (Copper)	2 (48.1 m)
Combiners	2 input Combiner	1
Combiners	3 input Combiner	1
Strings	10 AWG (Copper)	5 (140.7 m)
Module	Voltec Solar, TARKA 126 VSBD 385 (385W)	133 (51.2 kW)

🔌 Wiring Zones			
Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	12	13-31	Along Racking

🏠 Field Segments									
Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	Fixed Tilt	Portrait (Vertical)	18.4°	112.12739°	1.0 m	1x1	172	122	47.0 kW
Field Segment 2	Flush Mount	Portrait (Vertical)	30°	112.12739°	1.0 m	1x1	11	11	4.24 kW

Detailed Layout

