

voltec 385 toiture inclinée CENTRE TECHNIQUE RUE DE LA VOIRIE, 3 Av. de l'Industrie 08000 Charleville-Mézières

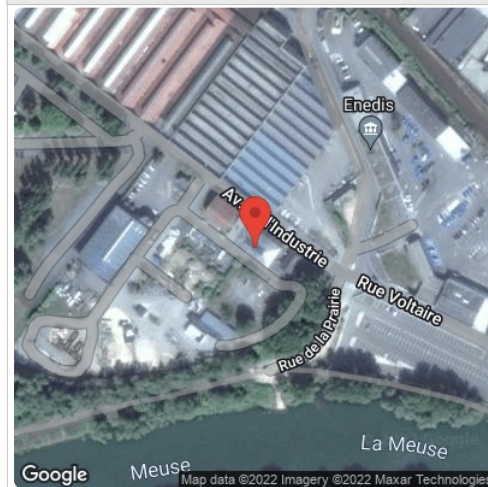
Report

Project Name	CENTRE TECHNIQUE RUE DE LA VOIRIE
Project Address	3 Av. de l'Industrie 08000 Charleville-Mézières
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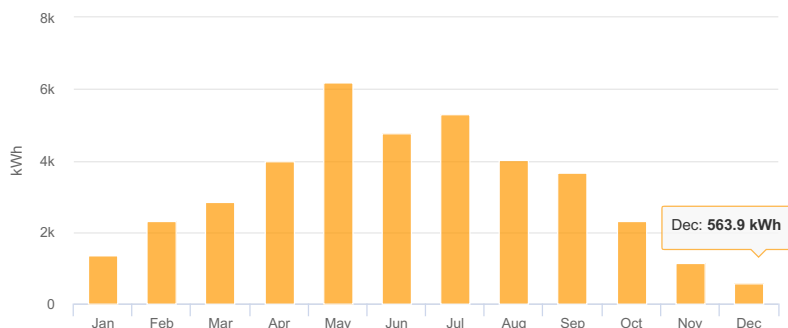
System Metrics

Design	voltec 385 toiture inclinée
Module DC Nameplate	43.9 kW
Inverter AC Nameplate	36.0 kW Load Ratio: 1.22
Annual Production	38.48 MWh
Performance Ratio	73.5%
kWh/kWp	876.8
Weather Dataset	TMY, unknown, ECMWF/ERA (custom)
Simulator Version	5662eb7cd9-b049adbefe-4f841677b4-bf9900e55c

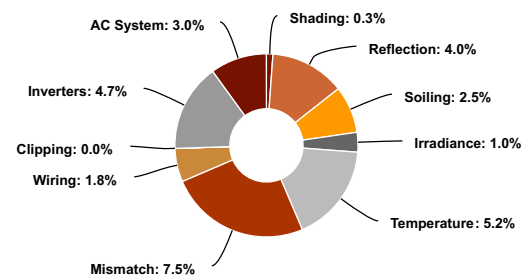
Project Location



Monthly Production



Sources of System Loss



Annual Production

	Description	Output	% Delta
Irradiance (kWh/m ²)	Annual Global Horizontal Irradiance	1,130.8	
	POA Irradiance	1,192.7	5.5%
	Shaded Irradiance	1,188.6	-0.3%
	Irradiance after Reflection	1,141.3	-4.0%
	Irradiance after Soiling	1,112.8	-2.5%
	Total Collector Irradiance	1,112.7	0.0%
Energy (kWh)	Nameplate	48,844.2	
	Output at Irradiance Levels	48,331.3	-1.0%
	Output at Cell Temperature Derate	45,806.0	-5.2%
	Output After Mismatch	42,368.4	-7.5%
	Optimal DC Output	41,613.9	-1.8%
	Constrained DC Output	41,613.8	0.0%
	Inverter Output	39,672.1	-4.7%
	Energy to Grid	38,482.0	-3.0%
Temperature Metrics			
	Avg. Operating Ambient Temp		12.0 °C
	Avg. Operating Cell Temp		25.4 °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							
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					
	Fronius CL 36.0 (Fronius)					HelioScope		Default Characterization					

🗂 Components		
Component	Name	Count
Inverters	Fronius CL 36.0 (Fronius)	1 (36.0 kW)
Home Runs	12 AWG (Copper)	2 (61.9 m)
Combiners	3 input Combiner	1
Combiners	5 input Combiner	1
Strings	10 AWG (Copper)	8 (214.2 m)
Module	Voltec Solar, TARKA 126 VSBD 385 (385W)	114 (43.9 kW)

🔌 Wiring Zones			
Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	12	10-15	Along Racking

🏗 Field Segments									
Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	Flush Mount	Portrait (Vertical)	15°	216.51106°	0.0 m	1x1	56	56	21.6 kW
Field Segment 2	Flush Mount	Portrait (Vertical)	15°	125.896126°	0.0 m	1x1	16	16	6.16 kW
Field Segment 3	Flush Mount	Portrait (Vertical)	10°	305.958°	0.0 m	1x1	5	5	1.93 kW
Field Segment 4	Flush Mount	Portrait (Vertical)	15°	308.62466°	0.0 m	1x1			0
Field Segment 5	Flush Mount	Portrait (Vertical)	25°	216.3394°	0.0 m	1x1	37	37	14.2 kW

Detailed Layout

