

## voltec 385 toiture inclinée Centre Communal Action Sociale CCAS, 12 Rue Bayard, Charleville-Mézières

### Report

Project Name	Centre Communal Action Sociale CCAS
Project Address	12 Rue Bayard, Charleville-Mézières
Prepared By	kh hk tomleyerzi@vusra.com

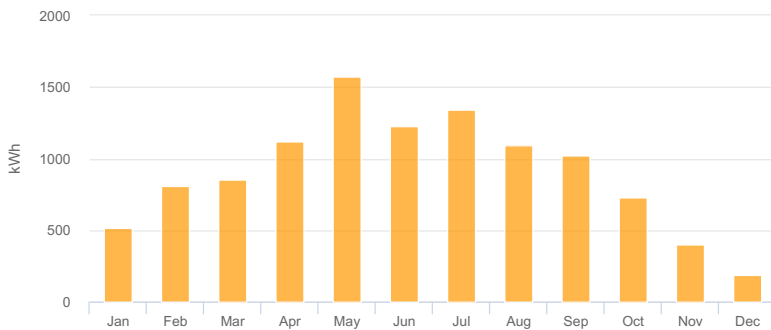
### System Metrics

Design	voltec 385 toiture inclinée
Module DC Nameplate	12.3 kW
Inverter AC Nameplate	10.00 kW Load Ratio: 1.23
Annual Production	10.88 MWh
Performance Ratio	68.7%
kWh/kWp	882.7
Weather Dataset	TMY, unknown, ECMWF/ERA (custom)
Simulator Version	5662eb7cd9-b049adbefe-4f841677b4-bf9900e55c

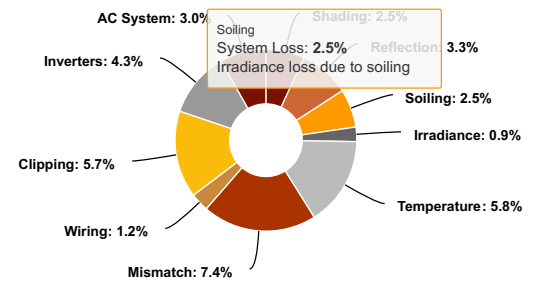
### Project Location



### Monthly Production



### Sources of System Loss



### Annual Production

	Description	Output	% Delta
Irradiance (kWh/m <sup>2</sup> )	Annual Global Horizontal Irradiance	1,130.8	
	POA Irradiance	1,285.3	13.7%
	Shaded Irradiance	1,252.8	-2.5%
	Irradiance after Reflection	1,211.6	-3.3%
	Irradiance after Soiling	1,181.3	-2.5%
	<b>Total Collector Irradiance</b>	<b>1,181.6</b>	<b>0.0%</b>
Energy (kWh)	Nameplate	14,556.0	
	Output at Irradiance Levels	14,418.5	-0.9%
	Output at Cell Temperature Derate	13,580.6	-5.8%
	Output After Mismatch	12,569.3	-7.4%
	Optimal DC Output	12,418.0	-1.2%
	Constrained DC Output	11,711.9	-5.7%
	Inverter Output	11,211.4	-4.3%
	<b>Energy to Grid</b>	<b>10,875.1</b>	<b>-3.0%</b>
Temperature Metrics			
	Avg. Operating Ambient Temp		12.0 °C
	Avg. Operating Cell Temp		26.3 °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	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 IG Plus V 10.0-1 UNI (240V) (Fronius)					HelioScope		Default Characterization					

🗂 Components		
Component	Name	Count
Inverters	Fronius IG Plus V 10.0-1 UNI (240V) (Fronius)	1 (10.00 kW)
Home Runs	12 AWG (Copper)	2 (36.0 m)
Combiners	1 input Combiner	1
Combiners	2 input Combiner	1
Strings	10 AWG (Copper)	3 (28.9 m)
Module	Voltec Solar, TARKA 126 VSBD 385 (385W)	32 (12.3 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°	187.01088°	0.0 m	1x1	7	7	2.70 kW
Field Segment 2	Flush Mount	Portrait (Vertical)	15°	96.282585°	0.0 m	1x1	4	4	1.54 kW
Field Segment 3	Flush Mount	Portrait (Vertical)	15°	276.04666°	0.0 m	1x1			0
Field Segment 4	Flush Mount	Portrait (Vertical)	30°	182.10278°	0.0 m	1x1	16	16	6.16 kW
Field Segment 5	Flush Mount	Portrait (Vertical)	45°	183.78264°	0.0 m	1x1	5	5	1.93 kW

Detailed Layout

