

voltec 385 toiture inclinée COSEC DES MESANGES, 4 Rue des Mésanges, 08000 Charleville-Mézières

Report

Project Name	COSEC DES MESANGES
Project Address	4 Rue des Mésanges, 08000 Charleville-Mézières
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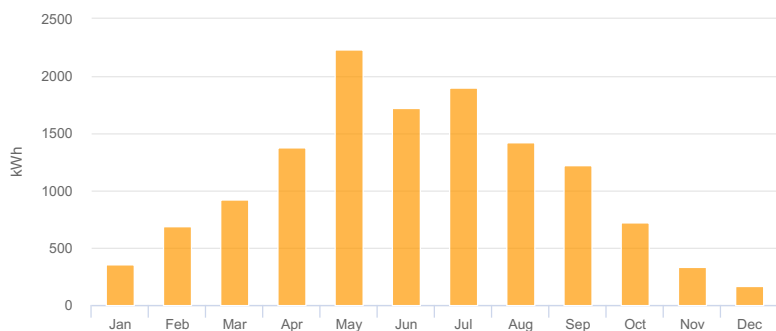
System Metrics

Design	voltec 385 toiture inclinée
Module DC Nameplate	15.0 kW
Inverter AC Nameplate	12.5 kW Load Ratio: 1.20
Annual Production	13.05 MWh
Performance Ratio	77.8%
kWh/kWp	869.3
Weather Dataset	TMY, unknown, ECMWF/ERA (custom)
Simulator Version	8baa571fa7-7044a67625-3f47635412-b223482081

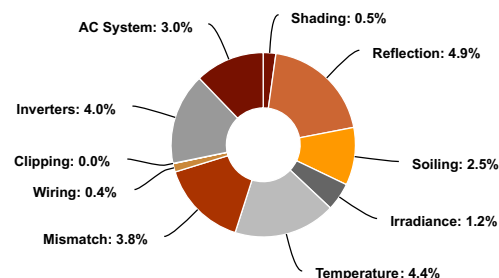
Project Location



Monthly Production



Sources of System Loss



Annual Production

	Description	Output	% Delta
Irradiance (kWh/m²)	Annual Global Horizontal Irradiance	1,130.7	
	POA Irradiance	1,117.8	-1.1%
	Shaded Irradiance	1,111.7	-0.5%
	Irradiance after Reflection	1,057.6	-4.9%
	Irradiance after Soiling	1,031.1	-2.5%
	Total Collector Irradiance	1,030.7	0.0%
Energy (kWh)	Nameplate	15,476.3	
	Output at Irradiance Levels	15,289.5	-1.2%
	Output at Cell Temperature Derate	14,614.4	-4.4%
	Output After Mismatch	14,063.0	-3.8%
	Optimal DC Output	14,011.8	-0.4%
	Constrained DC Output	14,009.8	0.0%
	Inverter Output	13,455.9	-4.0%
	Energy to Grid	13,052.2	-3.0%
Temperature Metrics			
	Avg. Operating Ambient Temp		12.0 °C
	Avg. Operating Cell Temp		24.5 °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								
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	Primo 12.5-1 / 208_OND (Fronius USA)	1 (12.5 kW)
Strings	10 AWG (Copper)	2 (42.5 m)
Module	Voltec Solar, TARKA 126 VSBD 385 (385W)	39 (15.0 kW)

Wiring Zones									
Description	Combiner Poles			String Size		Stringing Strategy			
Wiring Zone	-			4-24		Along Racking			

Field Segments									
Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	Flush Mount	Portrait (Vertical)	3°	120.34562°	0.2 m	1x1	12	12	4.62 kW
Field Segment 1 (copy)	Flush Mount	Portrait (Vertical)	3°	300.3456°	0.1 m	1x1	27	27	10.4 kW

