

voltec 385 toiture inclinée Base nautique, 174 r des paquis, 08000 Charleville-Mézières

Report

Project Name	Base nautique
Project Address	174 r des paquis, 08000 Charleville-Mézières
Prepared By	kh hk tomleyerzi@vusra.com

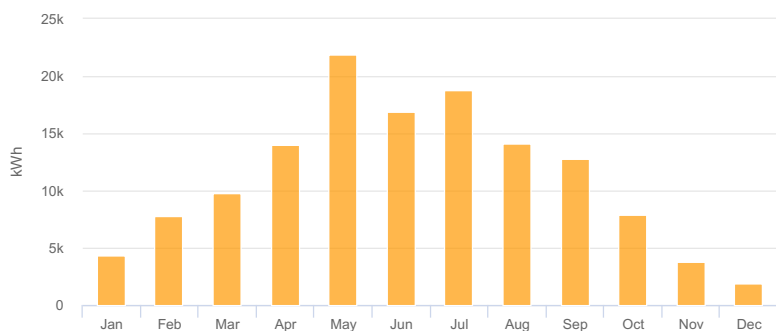
System Metrics

Design	voltec 385 toiture inclinée
Module DC Nameplate	149.4 kW
Inverter AC Nameplate	125.0 kW Load Ratio: 1.20
Annual Production	134.0 MWh
Performance Ratio	78.3%
kWh/kWp	896.8
Weather Dataset	TMY, unknown, ECMWF/ERA (custom)
Simulator Version	d0e8fb833c-a12c847e38-4f0cbf246d-022e42112f

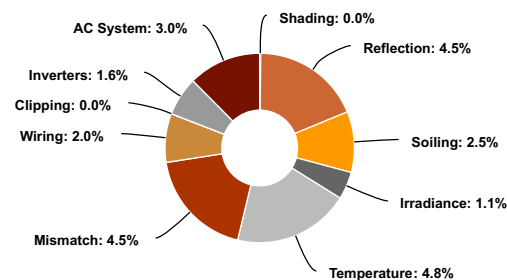
Project Location



Monthly Production



Sources of System Loss



Annual Production

	Description	Output	% Delta
Irradiance (kWh/m ²)	Annual Global Horizontal Irradiance	1,130.8	
	POA Irradiance	1,145.9	1.3%
	Shaded Irradiance	1,145.4	0.0%
	Irradiance after Reflection	1,094.1	-4.5%
	Irradiance after Soiling	1,066.8	-2.5%
	Total Collector Irradiance	1,066.8	0.0%
Energy (kWh)	Nameplate	159,370.3	
	Output at Irradiance Levels	157,563.1	-1.1%
	Output at Cell Temperature Derate	150,018.9	-4.8%
	Output After Mismatch	143,229.9	-4.5%
	Optimal DC Output	140,352.1	-2.0%
	Constrained DC Output	140,352.1	0.0%
	Inverter Output	138,106.5	-1.6%
	Energy to Grid	133,963.3	-3.0%
Temperature Metrics			
	Avg. Operating Ambient Temp		12.0 °C
	Avg. Operating Cell Temp		24.9 °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 VSB 385 (Voltec Solar)							HelioScope		Spec Sheet Characterization, PAN		
Component Characterizations	Device							Uploaded By		Characterization		
	SPI125K-B (Kehua Tech)							HelioScope		Spec Sheet		

Components		
Component	Name	Count
Inverters	SPI125K-B (Kehua Tech)	1 (125.0 kW)
Home Runs	12 AWG (Copper)	2 (82.5 m)
Combiners	5 input Combiner	1
Combiners	8 input Combiner	1
Strings	10 AWG (Copper)	13 (333.6 m)
Module	Voltec Solar, TARKA 126 VSBD 385 (385W)	388 (149.4 kW)

Wiring Zones			
Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	12	9-31	Along Racking

Field Segments									
Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	Flush Mount	Portrait (Vertical)	10°	230.19443°	0.0 m	1x1	154	154	59.3 kW
Field Segment 2	Flush Mount	Portrait (Vertical)	10°	230.19443°	0.0 m	1x1	126	126	48.5 kW
Field Segment 3	Flush Mount	Portrait (Vertical)	10°	230.19443°	0.0 m	1x1	108	108	41.6 kW

