

Voltec solar 385W angle 18,4° RS0,9 CENTRE AQUATIQUE SEDAN, Esplanade du Lac 08200 Sedan

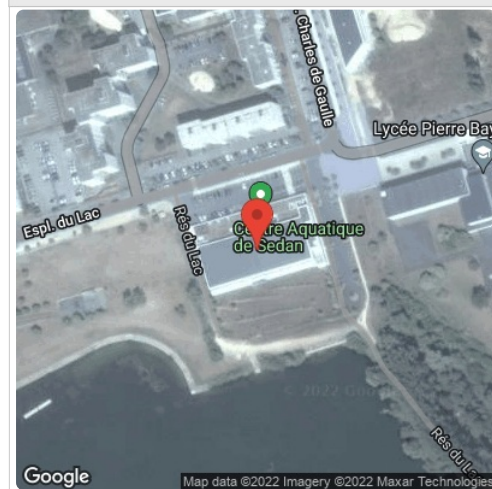
Report

Project Name	CENTRE AQUATIQUE SEDAN
Project Address	Esplanade du Lac 08200 Sedan
Prepared By	kh hk tomleyerzi@vusra.com

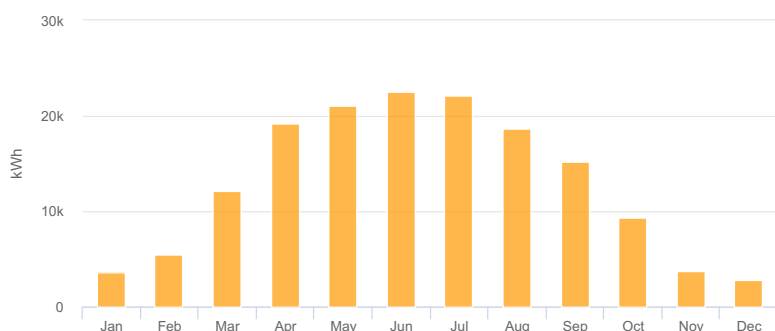
System Metrics

Design	Voltec solar 385W angle 18,4° RS0,9
Module DC Nameplate	168.2 kW
Inverter AC Nameplate	150.0 kW Load Ratio: 1.12
Annual Production	155.6 MWh
Performance Ratio	78.9%
kWh/kWp	925.1
Weather Dataset	TMY, 10km Grid, meteonorm (meteonorm)
Simulator Version	5662eb7cd9-b049adbefe-4f841677b4-bf9900e55c

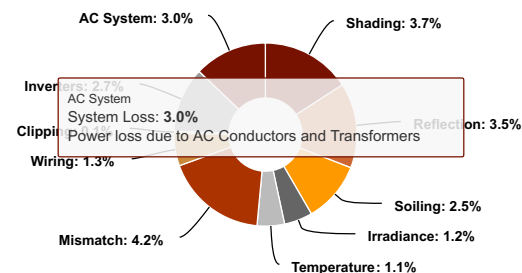
Project Location



Monthly Production



Sources of System Loss



Annual Production

	Description	Output	% Delta
Irradiance (kWh/m ²)	Annual Global Horizontal Irradiance	1,052.1	
	POA Irradiance	1,171.9	11.4%
	Shaded Irradiance	1,128.6	-3.7%
	Irradiance after Reflection	1,089.1	-3.5%
	Irradiance after Soiling	1,061.9	-2.5%
	Total Collector Irradiance	1,061.8	0.0%
Energy (kWh)	Nameplate	178,649.3	
	Output at Irradiance Levels	176,569.3	-1.2%
	Output at Cell Temperature Derate	174,575.8	-1.1%
	Output After Mismatch	167,258.4	-4.2%
	Optimal DC Output	165,013.3	-1.3%
	Constrained DC Output	164,869.6	-0.1%
	Inverter Output	160,451.8	-2.7%
	Energy to Grid	155,638.2	-3.0%
Temperature Metrics			
	Avg. Operating Ambient Temp		12.5 °C
	Avg. Operating Cell Temp		18.6 °C
Simulation Metrics			
	Operating Hours	4605	
	Solved Hours	4605	

☁ Condition Set													
Description	Condition Set 1												
Weather Dataset	TMY, 10km Grid, meteonorm (meteonorm)												
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	50 kWac inverter (Kehua)	3 (150.0 kW)
Home Runs	12 AWG (Copper)	5 (181.1 m)
Combiners	2 input Combiner	1
Combiners	3 input Combiner	2
Combiners	4 input Combiner	1
Combiners	6 input Combiner	1
Strings	10 AWG (Copper)	18 (664.4 m)
Module	Voltec Solar, TARKA 126 VSBD 385 (385W)	437 (168.2 kW)

🔌 Wiring Zones			
Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	12	23-25	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°	163.21736°	0.9 m	1x1	439	437	168.2 kW

Detailed Layout

