

## Voltec 385 toiture plane 15° COSEC DES CAPUCINES, 44 Rue Ferroul 08000 Charleville Mézières

### Report

Project Name	COSEC DES CAPUCINES
Project Address	44 Rue Ferroul 08000 Charleville Mézières
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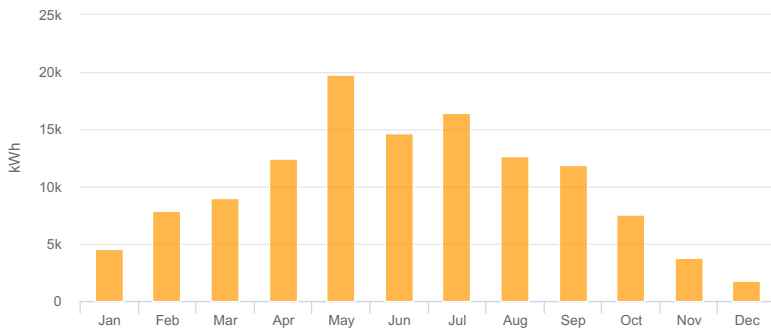
### System Metrics

Design	Voltec 385 toiture plane 15°
Module DC Nameplate	120.9 kW
Inverter AC Nameplate	100.0 kW Load Ratio: 1.21
Annual Production	122.5 MWh
Performance Ratio	81.2%
kWh/kWp	1,013.6
Weather Dataset	TMY, unknown, ECMWF/ERA (custom)
Simulator Version	1c4970a1bc-3a5ddec254-65a9530ee5-2b61bd9f97

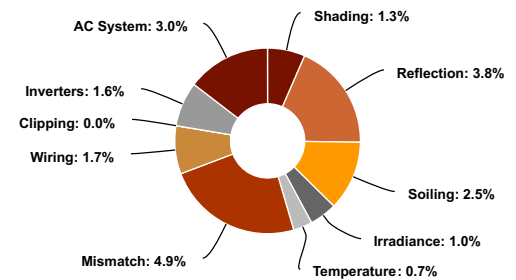
### Project Location



### Monthly Production



### Sources of System Loss



### Annual Production

	Description	Output	% Delta
Irradiance (kWh/m²)	Annual Global Horizontal Irradiance	1,130.7	
	POA Irradiance	1,248.9	10.5%
	Shaded Irradiance	1,232.1	-1.3%
	Irradiance after Reflection	1,184.8	-3.8%
	Irradiance after Soiling	1,155.1	-2.5%
	<b>Total Collector Irradiance</b>	<b>1,155.1</b>	<b>0.0%</b>
Energy (kWh)	Nameplate	139,656.0	
	Output at Irradiance Levels	138,285.6	-1.0%
	Output at Cell Temperature Derate	137,343.4	-0.7%
	Output After Mismatch	130,628.2	-4.9%
	Optimal DC Output	128,381.1	-1.7%
	Constrained DC Output	128,377.5	0.0%
	Inverter Output	126,323.4	-1.6%
	<b>Energy to Grid</b>	<b>122,533.7</b>	<b>-3.0%</b>
Temperature Metrics			
	Avg. Operating Ambient Temp		12.0 °C
	Avg. Operating Cell Temp		18.8 °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		
	SPI100K-B (Kehua Tech)							HelioScope		Spec Sheet		

Components

Component	Name	Count
Inverters	SPI100K-B (Kehua Tech)	1 (100.0 kW)
Home Runs	12 AWG (Copper)	2 (93.8 m)
Combiners	5 input Combiner	1
Combiners	6 input Combiner	1
Strings	10 AWG (Copper)	11 (353.4 m)
Module	Voltec Solar, TARKA 126 VSBD 385 (385W)	314 (120.9 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	Fixed Tilt	Portrait (Vertical)	15°	183.23817°	1.7 m	1x1	308	308	118.6 kW
Field Segment 2	Fixed Tilt	Portrait (Vertical)	18.4°	198.63116°	0.0 m	1x1	6	6	2.31 kW

