voltec 385 toiture inclinée COMPLEXE SPORTIF HEMLER, 92 Rue des Pâquis, 08000 Charleville-Mézières

Report

Project Name	COMPLEXE SPORTIF HEMLER
Project Address	92 Rue des Pâquis, 08000 Charleville-Mézières
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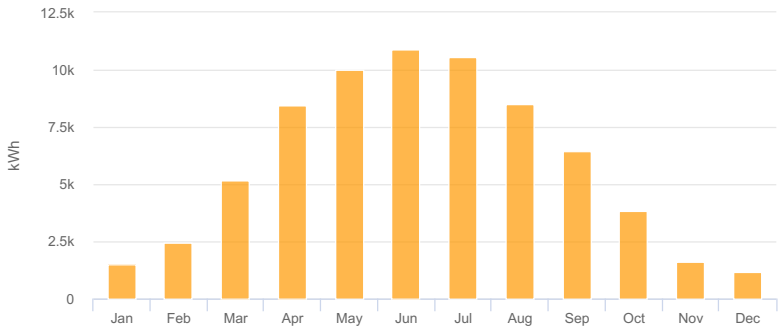
System Metrics

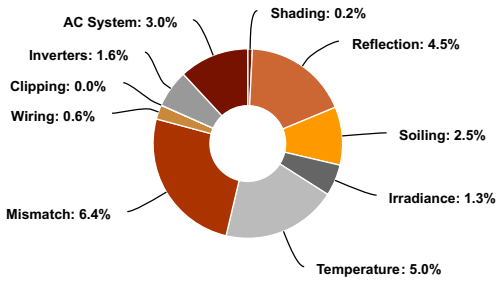
Design	voltec 385 toiture inclinée
Module DC Nameplate	87.4 kW
Inverter AC Nameplate	80.0 kW Load Ratio: 1.09
Annual Production	70.61 MWh
Performance Ratio	77.3%
kWh/kWp	808.0
Weather Dataset	TMY, 10km Grid, meteonorm (meteonorm)
Simulator Version	1c4970a1bc-3a5ddec254-65a9530ee5-2b61bd9f97

Project Location

Monthly Production



Sources of System Loss



Annual Production

	Description	Output	% Delta
Irradiance (kWh/m²)	Annual Global Horizontal Irradiance	1,053.3	
	POA Irradiance	1,045.3	-0.8%
	Shaded Irradiance	1,043.3	-0.2%
	Irradiance after Reflection	996.0	-4.5%
	Irradiance after Soiling	971.1	-2.5%
	Total Collector Irradiance	**971.1**	**0.0%**
Energy (kWh)	Nameplate	84,870.1	
	Output at Irradiance Levels	83,726.2	-1.3%
	Output at Cell Temperature Derate	79,575.5	-5.0%
	Output After Mismatch	74,460.4	-6.4%
	Optimal DC Output	74,005.1	-0.6%
	Constrained DC Output	73,998.3	0.0%
	Inverter Output	72,798.7	-1.6%
	Energy to Grid	**70,614.7**	**-3.0%**
Temperature Metrics			
	Avg. Operating Ambient Temp		12.6 °C
	Avg. Operating Cell Temp		23.9 °C
Simulation Metrics			
	Operating Hours		4609
	Solved Hours		4609

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	SPI40K-B (KEHUA)	2 (80.0 kW)
Home Runs	12 AWG (Copper)	4 (52.0 m)
Combiners	2 input Combiner	3
Combiners	3 input Combiner	1
Strings	10 AWG (Copper)	9 (260.5 m)
Module	Voltec Solar, TARKA 126 VSBD 385 (385W)	227 (87.4 kW)

Wiring Zones

Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	12	13-31	Along Racking

Field Segments

Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	Flush Mount	Portrait (Vertical)	12°	70.12346°	0.1 m	1x1	121	121	46.6 kW
Field Segment 1 (copy)	Flush Mount	Portrait (Vertical)	12°	250.24144°	0.2 m	1x1	106	106	40.8 kW
Field Segment 3	Flush Mount	Portrait (Vertical)	30°	179.81868°	0.2 m	1x1	0	0	0
Field Segment 4	Flush Mount	Portrait (Vertical)	30°	161.56505°	0.2 m	1x1	0	0	0

Detailed Layout