pente 30° BATIMENT 5 RUE EGLISE, 5 Rue de l'Église, 08000 Charleville-Mézières

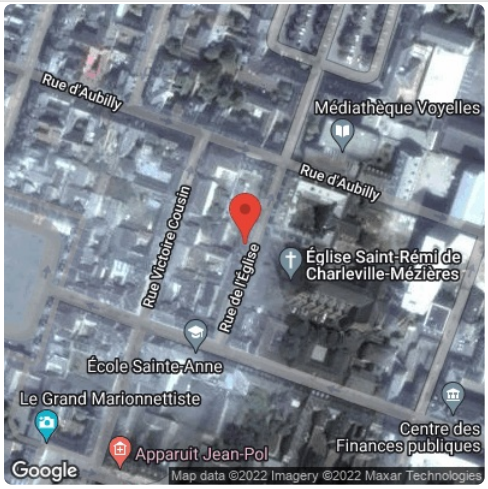
Report

Project Name	BATIMENT 5 RUE EGLISE
Project Address	5 Rue de l'Église, 08000 Charleville-Mézières
Prepared By	kh hk tomleyerzi@vusra.com

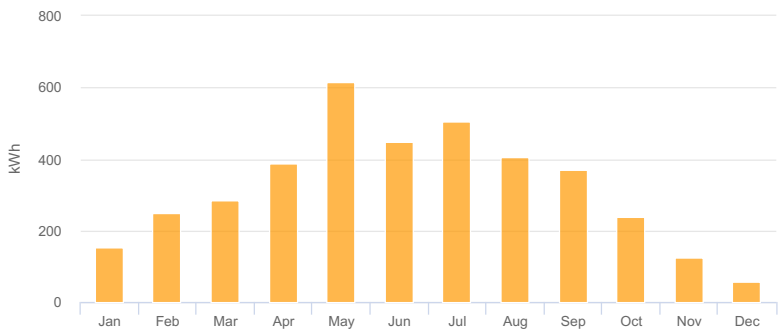
System Metrics

Design	pente 30°
Module DC Nameplate	3.85 kW
Inverter AC Nameplate	3.10 kW Load Ratio: 1.24
Annual Production	3.839 MWh
Performance Ratio	77.1%
kWh/kWp	997.0
Weather Dataset	TMY, unknown, ECMWF/ERA (custom)
Simulator Version	5662eb7cd9-b049adbefe-4f841677b4-bf9900e55c

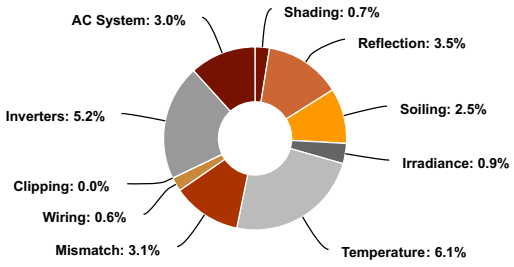
Project Location



Monthly Production



Sources of System Loss



Annual Production

	Description	Output	% Delta
Irradiance (kWh/m²)	Annual Global Horizontal Irradiance	1,130.8	
	POA Irradiance	1,293.7	14.4%
	Shaded Irradiance	1,285.3	-0.7%
	Irradiance after Reflection	1,240.7	-3.5%
	Irradiance after Soiling	1,209.7	-2.5%
	Total Collector Irradiance	**1,209.7**	**0.0%**
Energy (kWh)	Nameplate	4,660.7	
	Output at Irradiance Levels	4,618.0	-0.9%
	Output at Cell Temperature Derate	4,337.1	-6.1%
	Output After Mismatch	4,201.8	-3.1%
	Optimal DC Output	4,175.3	-0.6%
	Constrained DC Output	4,175.2	0.0%
	Inverter Output	3,957.2	-5.2%
	Energy to Grid	**3,838.5**	**-3.0%**
Temperature Metrics			
	Avg. Operating Ambient Temp		12.0 °C
	Avg. Operating Cell Temp		26.7 °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	Fronius Galvo 3.1-1 (Fronius)	1 (3.10 kW)
Strings	10 AWG (Copper)	1 (6.0 m)
Module	Voltec Solar, TARKA 126 VSBD 385 (385W)	10 (3.85 kW)

Wiring Zones

Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	-	7-13	Along Racking

Field Segments

Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	Flush Mount	Portrait (Vertical)	30°	109.61947°	0.0 m	1x1	5	4	1.54 kW
Field Segment 2	Flush Mount	Portrait (Vertical)	30°	109.61947°	0.0 m	1x1	11	6	2.31 kW

Detailed Layout