

### voltec 385 toiture plate CUISINE CENTRALE, 26 bis Rue d'Evigny, 08000 La Francheville

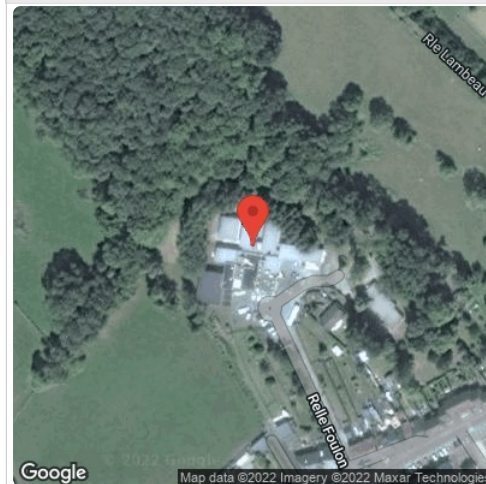
#### Report

Project Name	CUISINE CENTRALE
Project Address	26 bis Rue d'Evigny, 08000 La Francheville
Prepared By	Kamar Amine kamin008@fiu.edu

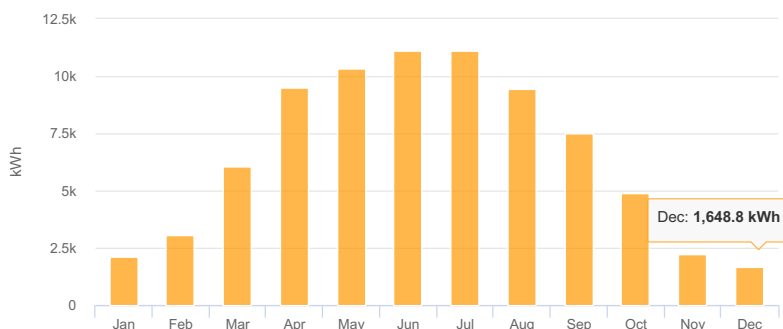
#### System Metrics

Design	voltec 385 toiture plate
Module DC Nameplate	79.3 kW
Inverter AC Nameplate	59.7 kW Load Ratio: 1.33
Annual Production	79.00 MWh
Performance Ratio	85.3%
kWh/kWp	996.1
Weather Dataset	TMY, 10km Grid, meteonorm (meteonorm)
Simulator Version	2e6e8e705a-9a4dd79db1-f021fb6a14-8ca241a239

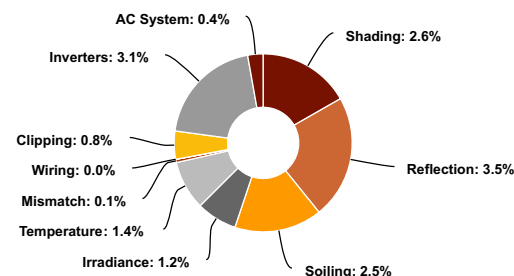
#### Project Location



#### Monthly Production



#### Sources of System Loss



#### Annual Production

	Description	Output	% Delta
Irradiance (kWh/m <sup>2</sup> )	Annual Global Horizontal Irradiance	1,063.9	
	POA Irradiance	1,167.7	9.8%
	Shaded Irradiance	1,137.0	-2.6%
	Irradiance after Reflection	1,096.8	-3.5%
	Irradiance after Soiling	1,069.4	-2.5%
	<b>Total Collector Irradiance</b>	<b>1,069.5</b>	<b>0.0%</b>
Energy (kWh)	Nameplate	84,829.4	
	Output at Irradiance Levels	83,845.6	-1.2%
	Output at Cell Temperature Derate	82,669.4	-1.4%
	Output After Mismatch	82,592.4	-0.1%
	Optimal DC Output	82,592.4	0.0%
	Constrained DC Output	81,930.9	-0.8%
	Inverter Output	79,350.7	-3.0%
	<b>Energy to Grid</b>	<b>79,002.7</b>	<b>-0.4%</b>
Temperature Metrics			
	Avg. Operating Ambient Temp		12.6 °C
	Avg. Operating Cell Temp		18.7 °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					
	IQ7A-72-2-US (208V) (2019) (Enphase)					HelioScope		Spec Sheet					

🗂 Components		
Component	Name	Count
Inverters	IQ7A-72-2-US (208V) (2019) (Enphase)	206 (59.7 kW)
AC Branches	1000 MCM (Aluminum)	5 (560.2 m)
Module	Voltec Solar, TARKA 126 VSBD 385 (385W)	206 (79.3 kW)

🔌 Wiring Zones			
Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	-	1-2	Along Racking

🏠 Field Segments									
Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	Fixed Tilt	Portrait (Vertical)	15°	187.61711°	2.2 m	1x1	50	50	19.3 kW
Field Segment 2	Fixed Tilt	Portrait (Vertical)	15°	188.06693°	2.2 m	1x1	20	20	7.70 kW
Field Segment 3	Fixed Tilt	Portrait (Vertical)	15°	187.8763°	2.2 m	1x1	10	10	3.85 kW
Field Segment 3 (copy)	Fixed Tilt	Portrait (Vertical)	15°	187.8763°	2.2 m	1x1	21	21	8.09 kW
Field Segment 5	Fixed Tilt	Portrait (Vertical)	15°	187.2429°	2.2 m	1x1	24	24	9.24 kW
Field Segment 6	Fixed Tilt	Portrait (Vertical)	15°	188.01709°	2.2 m	1x1	8	8	3.08 kW
Field Segment 7	Fixed Tilt	Portrait (Vertical)	15°	187.09918°	2.2 m	1x1	7	7	2.70 kW
Field Segment 8	Fixed Tilt	Portrait (Vertical)	15°	188.2837°	2.2 m	1x1	10	10	3.85 kW
Field Segment 9	Fixed Tilt	Portrait (Vertical)	15°	188.24632°	2.2 m	1x1	27	27	10.4 kW
Field Segment 10	Fixed Tilt	Portrait (Vertical)	15°	188.24632°	1.7 m	1x1			0
Field Segment 11	Fixed Tilt	Portrait (Vertical)	15°	188.2999°	2.2 m	1x1	13	13	5.01 kW
Field Segment 12	Fixed Tilt	Portrait (Vertical)	15°	187.9696°	2.2 m	1x1	7	7	2.70 kW
Field Segment 13	Fixed Tilt	Portrait (Vertical)	15°	186.94414°	2.2 m	1x1	9	9	3.47 kW

Detailed Layout

