

Case Study 6 - East -West Racking, Belgium (SW)

Case Study 6 - East -West Racking, Belgium, Kouterveldstrat 10-12

Report

Project Name	Case Study 6 - East -West Racking, Belgium
Project Address	Kouterveldstrat 10-12
Prepared By	Bhanu Swaroop Gaddam gaddambhanu9@gmail.com

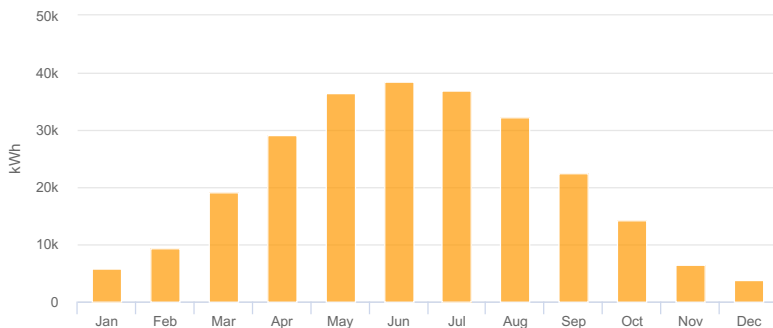
System Metrics

Design	Case Study 6 - East -West Racking, Belgium (SW)
Module DC Nameplate	296.1 kW
Inverter AC Nameplate	250.0 kW Load Ratio: 1.18
Annual Production	254.6 MWh
Performance Ratio	85.2%
kWh/kWp	859.7
Weather Dataset	TMY, 10km Grid, meteonorm (meteonorm)
Simulator Version	77eaf2cdb5-02f2a7f506-20068b956b-d70d5f9ff0

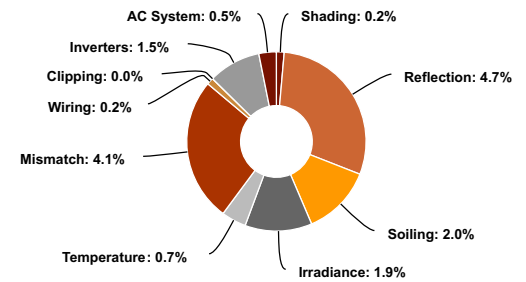
Project Location



Monthly Production



Sources of System Loss



Annual Production

	Description	Output	% Delta
Irradiance (kWh/m ²)	Annual Global Horizontal Irradiance	1,012.7	
	POA Irradiance	1,008.9	-0.4%
	Shaded Irradiance	1,006.7	-0.2%
	Irradiance after Reflection	959.5	-4.7%
	Irradiance after Soiling	940.3	-2.0%
	Total Collector Irradiance	940.2	0.0%
Energy (kWh)	Nameplate	278,695.9	
	Output at Irradiance Levels	273,356.8	-1.9%
	Output at Cell Temperature Derate	271,416.1	-0.7%
	Output After Mismatch	260,257.1	-4.1%
	Optimal DC Output	259,752.2	-0.2%
	Constrained DC Output	259,744.0	0.0%
	Inverter Output	255,847.8	-1.5%
	Energy to Grid	254,568.6	-0.5%
Temperature Metrics			
	Avg. Operating Ambient Temp		13.3 °C
	Avg. Operating Cell Temp		18.5 °C
Simulation Metrics			
	Operating Hours	4597	
	Solved Hours	4597	

☁ 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	2	2	2	2	2	2	2	2	2	2	2	
Irradiation Variance	5%												
Cell Temperature Spread	4° C												
Module Binning Range	-2.5% to 2.5%												
AC System Derate	0.50%												
Module Characterizations	Module			Uploaded By		Characterization							
	JAM72D00-350/BP (JA Solar)			Folsom Labs		Spec Sheet Characterization, PAN							
Component Characterizations	Device			Uploaded By		Characterization							
	50KTL-M (SunGrow)			Folsom Labs		Spec Sheet							

📦 Components		
Component	Name	Count
Inverters	50KTL-M (SunGrow)	5 (250.0 kW)
Strings	10 AWG (Copper)	50 (6,609.3 ft)
Module	JA Solar, JAM72D00-350/BP (350W)	846 (296.1 kW)

🔌 Wiring Zones			
Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	-	8-19	Along Racking

🏠 Field Segments									
Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	East-West	Landscape (Horizontal)	10°	219.88596°	1.0 ft	1x1	423	846	296.1 kW

Detailed Layout

