Case Study 6 - East -West Racking, Belgium

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
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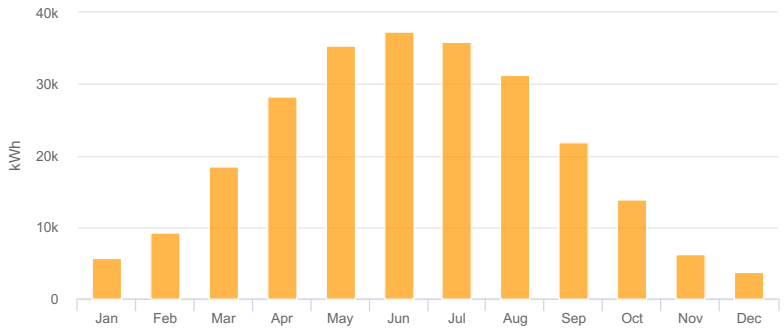
System Metrics

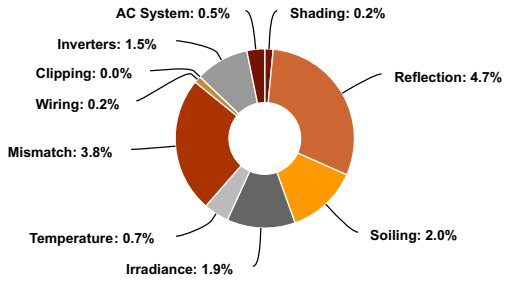
Design	Case Study 6 - East -West Racking, Belgium
Module DC Nameplate	287.0 kW
Inverter AC Nameplate	250.0 kW Load Ratio: 1.15
Annual Production	247.6 MWh
Performance Ratio	85.5%
kWh/kWp	862.8
Weather Dataset	TMY, 10km Grid, meteonorm (meteonorm)
Simulator Version	77eaf2cdb5-02f2a7f506-20068b956b-d70d5f9ff0

Project Location

Monthly Production



Sources of System Loss



Annual Production

	Description	Output	% Delta
Irradiance (kWh/m²)	Annual Global Horizontal Irradiance	1,012.7	
	POA Irradiance	1,009.0	-0.4%
	Shaded Irradiance	1,006.6	-0.2%
	Irradiance after Reflection	959.5	-4.7%
	Irradiance after Soiling	940.3	-2.0%
	Total Collector Irradiance	**940.4**	**0.0%**
Energy (kWh)	Nameplate	270,191.0	
	Output at Irradiance Levels	265,020.2	-1.9%
	Output at Cell Temperature Derate	263,138.9	-0.7%
	Output After Mismatch	253,169.6	-3.8%
	Optimal DC Output	252,676.3	-0.2%
	Constrained DC Output	252,668.0	0.0%
	Inverter Output	248,877.9	-1.5%
	Energy to Grid	**247,633.6**	**-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 (4,244.6 ft)
Module	JA Solar, JAM72D00-350/BP (350W)	820 (287.0 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°	129.62238°	1.0 ft	1x1	410	820	287.0 kW

Detailed Layout