
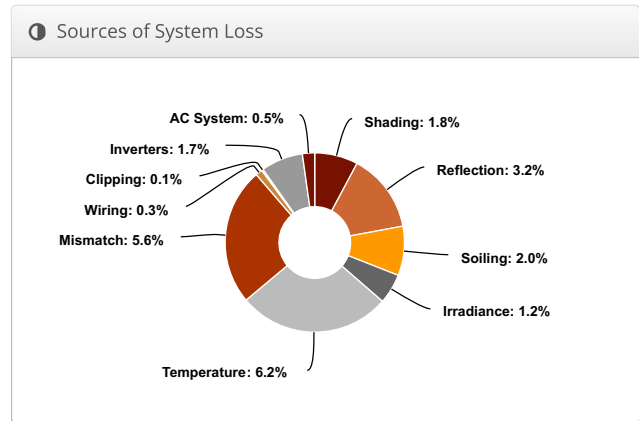
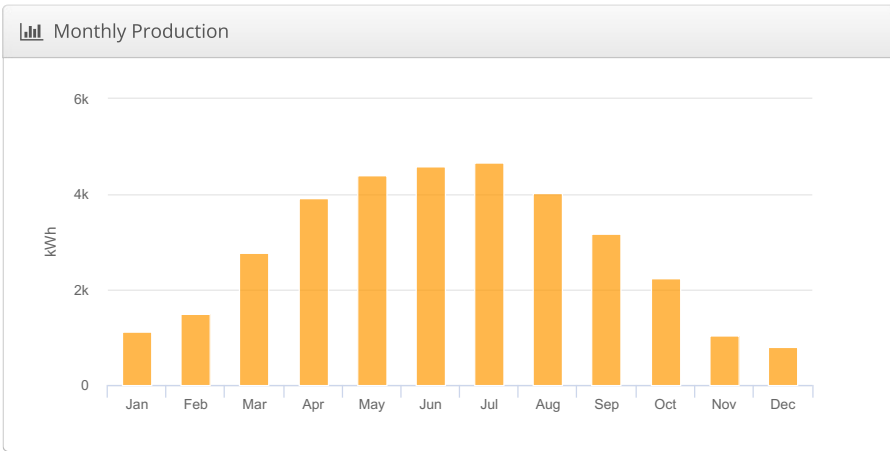
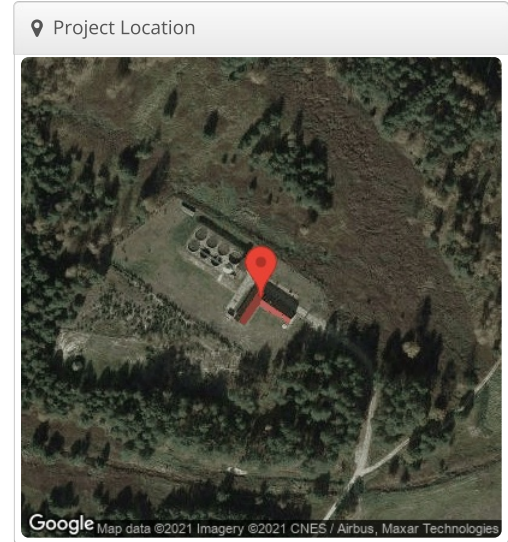


## Design 1 Oczyszczalnia Ścieków Radomyśl Nad Sanem, MXP7+JQ7 Żabno

Report	
Project Name	Oczyszczalnia Ścieków Radomyśl Nad Sanem
Project Address	MXP7+JQ7 Żabno
Prepared By	Dominik Ludwin dominik.ludwin@quantaenergy.pl
	

System Metrics	
Design	Design 1
Module DC Nameplate	36.1 kW
Inverter AC Nameplate	33.0 kW Load Ratio: 1.09
Annual Production	34.21 MWh
Performance Ratio	79.5%
kWh/kWp	948.2
Weather Dataset	TMY, 10km Grid, meteonorm (meteonorm)
Simulator Version	af7ac0ab71-7a39a152ec-d2794bfc70-b70280e0d2



Annual Production			
	Description	Output	% Delta
Irradiance (kWh/m <sup>2</sup> )	Annual Global Horizontal Irradiance	1,077.4	
	POA Irradiance	1,192.6	10.7%
	Shaded Irradiance	1,171.7	-1.8%
	Irradiance after Reflection	1,134.1	-3.2%
	Irradiance after Soiling	1,111.4	-2.0%
	<b>Total Collector Irradiance</b>	<b>1,111.5</b>	<b>0.0%</b>
Energy (kWh)	Nameplate	40,103.3	
	Output at Irradiance Levels	39,614.9	-1.2%
	Output at Cell Temperature Derate	37,165.4	-6.2%
	Output After Mismatch	35,096.0	-5.6%
	Optimal DC Output	34,998.1	-0.3%
	Constrained DC Output	34,975.9	-0.1%
	Inverter Output	34,381.3	-1.7%
	<b>Energy to Grid</b>	<b>34,209.4</b>	<b>-0.5%</b>
Temperature Metrics			
	Avg. Operating Ambient Temp		11.9 °C
	Avg. Operating Cell Temp		24.3 °C
Simulation Metrics			
	Operating Hours	4635	
	Solved Hours	4635	

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									
	JKM440M-6TL4-V (Jinko)	Folsom Labs	Spec Sheet Characterization, PAN									
Component Characterizations	Device	Uploaded By	Characterization									
	SG33CX (Sungrow)	Folsom Labs	Spec Sheet									

### Components

Component	Name	Count
Inverters	SG33CX (Sungrow)	1 (33.0 kW)
Strings	10 AWG (Copper)	4 (101.6 m)
Module	Jinko, JKM440M-6TL4-V (440W)	82 (36.1 kW)

### Wiring Zones

Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	-	17-23	Along Racking

### Field Segments

Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	Flush Mount	Portrait (Vertical)	35°	123.82017°	0.0 m	1x1	41	41	18.0 kW
Field Segment 2	Flush Mount	Portrait (Vertical)	38°	303.72513°	0.0 m	1x1	0	0	0
Field Segment 3	Flush Mount	Portrait (Vertical)	35°	213.48286°	0.0 m	1x1	41	41	18.0 kW
Field Segment 4	Flush Mount	Portrait (Vertical)	39°	33.672474°	0.0 m	1x1	0	0	0

### Detailed Layout

