

Zone 17 v2 722191 | Groningen ZP-CAES Systeem, 53.24304069572769, 6.687871594668537

Report

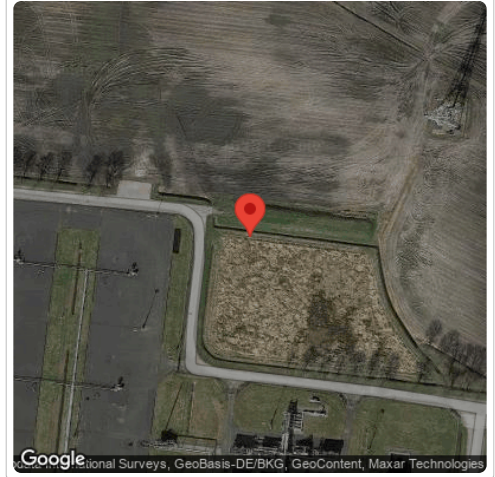
Project Name	722191 Groningen ZP-CAES Systeem
Project Address	53.24304069572769, 6.687871594668537
Prepared By	Pondera Consult w.pustjens@ponderaconsult.com



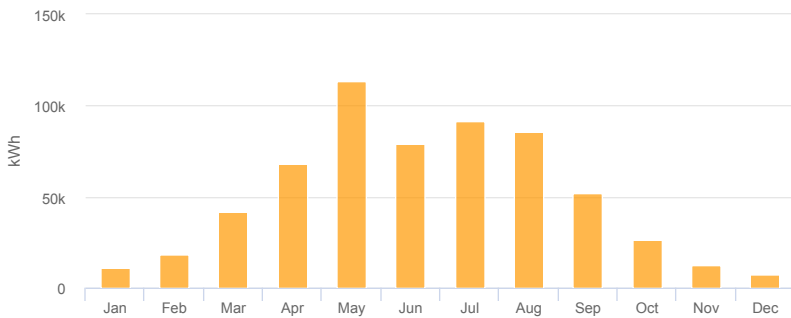
System Metrics

Design	Zone 17 v2
Module DC Nameplate	712.8 kW
Inverter AC Nameplate	525.0 kW Load Ratio: 1.36
Annual Production	606.6 MWh
Performance Ratio	85.0%
kWh/kWp	851.0
Weather Dataset	Groningen ZP (TMY), Groningen ZP, ECMWF/ERA (custom)
Simulator Version	9d53a3b848-c6f1de3103-cbfc6db688-f77d5107a9

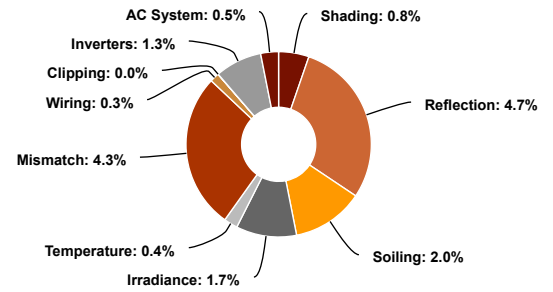
Project Location



Monthly Production



Sources of System Loss



⚡ Annual Production			
	Description	Output	% Delta
Irradiance (kWh/m²)	Annual Global Horizontal Irradiance	1,014.9	
	POA Irradiance	1,001.0	-1.4%
	Shaded Irradiance	992.5	-0.8%
	Irradiance after Reflection	946.4	-4.7%
	Irradiance after Soiling	927.4	-2.0%
	Total Collector Irradiance	927.4	0.0%
Energy (kWh)	Nameplate	661,217.6	
	Output at Irradiance Levels	650,042.2	-1.7%
	Output at Cell Temperature Derate	647,528.6	-0.4%
	Output After Mismatch	619,402.1	-4.3%
	Optimal DC Output	617,801.6	-0.3%
	Constrained DC Output	617,766.3	0.0%
	Inverter Output	609,673.2	-1.3%
	Energy to Grid	606,624.8	-0.5%
Temperature Metrics			
Avg. Operating Ambient Temp		13.2 °C	
Avg. Operating Cell Temp		18.5 °C	
Simulation Metrics			
Operating Hours		4171	
Solved Hours		4171	

☁ Condition Set												
Description	Groningen PVGIS-SARAH2 (TMY)											
Weather Dataset	Groningen ZP (TMY), Groningen ZP, 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								
	East-West	-3.56	-0.075	3°C								
	Carport	-3.56	-0.075	3°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							
	JAM72S30-550/MR (1500V) (JA Solar)		HelioScope		Spec Sheet Characterization, PAN							
Component Characterizations	Device			Uploaded By			Characterization					
	SUN2000-185KTL-H1 (@40C) (2021) (Huawei)			HelioScope			Spec Sheet					

📦 Components		
Component	Name	Count
Inverters	SUN2000-185KTL-H1 (@40C) (2021) (Huawei)	3 (525.0 kW)
Strings	10 AWG (Copper)	48 (2,212.0 m)
Module	JA Solar, JAM72S30-550/MR (1500V) (550W)	1,296 (712.8 kW)

🔌 Wiring Zones			
Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	-	13-27	Along Racking

🏠 Field Segments									
Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Zone 17	East-West	Landscape (Horizontal)	15°	298.0574°	2.5 m	6x6	18	1,296	712.8 kW

 Detailed Layout

