Scenario 1 Huis vd Provincie Utrecht, Archimedeslaan 6, 3584 BA Utrecht

Report

Project Name	Huis vd Provincie Utrecht
Project Address	Archimedeslaan 6, 3584 BA Utrecht
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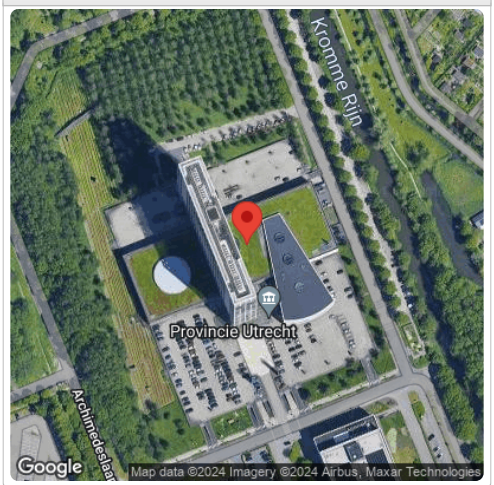
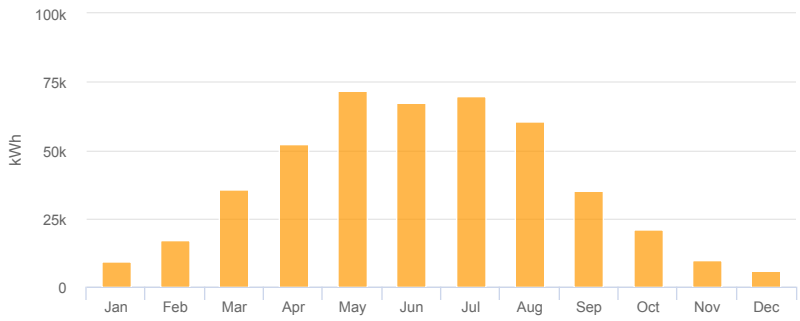
System Metrics

Design	Scenario 1
Module DC Nameplate	547.8 kW
Inverter AC Nameplate	457.1 kW Load Ratio: 1.20
Annual Production	454.7 MWh
Performance Ratio	75.9%
kWh/kWp	830.1
Weather Dataset	TMY, 10km Grid, meteonorm/nasa low resolution (meteonorm)
Simulator Version	2ef7dce9a6-89a791b56f-a4f1e46a17-b4d2c88cfc

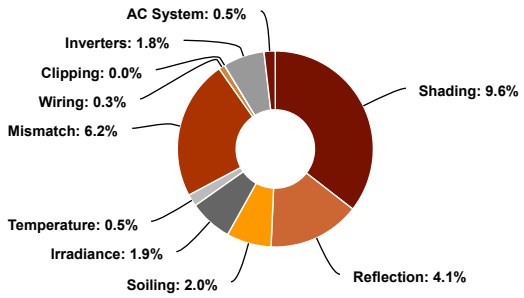
Project Location



Monthly Production



Sources of System Loss



Annual Production

	Description	Output	% Delta
Irradiance (kWh/m²)	Annual Global Horizontal Irradiance	1,103.6	
	POA Irradiance	1,093.6	-0.9%
	Shaded Irradiance	988.8	-9.6%
	Irradiance after Reflection	948.2	-4.1%
	Irradiance after Soiling	929.2	-2.0%
	Total Collector Irradiance	**929.0**	**0.0%**
Energy (kWh)	Nameplate	510,447.2	
	Output at Irradiance Levels	500,628.0	-1.9%
	Output at Cell Temperature Derate	497,938.9	-0.5%
	Output After Mismatch	466,913.6	-6.2%
	Optimal DC Output	465,615.3	-0.3%
	Constrained DC Output	465,612.4	0.0%
	Inverter Output	457,030.3	-1.8%
	Energy to Grid	**454,745.2**	**-0.5%**
Temperature Metrics			
	Avg. Operating Ambient Temp		13.0 °C
	Avg. Operating Cell Temp		18.2 °C
Simulation Metrics			
	Operating Hours		4609
	Solved Hours		4609

Condition Set

Description	Condition Set 1											
Weather Dataset	TMY, 10km Grid, meteonorm/nasa low resolution (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								
	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									
	SPR-A430-COM-MLSD (SunPower)	HelioScope	Spec Sheet Characterization, PAN									
Component Characterizations	Device	Uploaded By	Characterization									
	Sunny Tripower 24000TL-US (SMA)	HelioScope	Modified CEC									

Components

Component	Name	Count
Inverters	Sunny Tripower 24000TL-US (SMA)	19 (457.1 kW)
Strings	10 AWG (Copper)	78 (3,977.2 m)
Module	SunPower, SPR-A430-COM-MLSD (430W)	1,274 (547.8 kW)

Wiring Zones

Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	-	4-17	Along Racking

Field Segments

Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	Flush Mount	Landscape (Horizontal)	4°	338.27292°	0.6 m	1x1			0
Field Segment 4	East-West	Landscape (Horizontal)	15°	157.7°	0.1 m	1x1	66	132	56.8 kW
Field Segment 5	East-West	Landscape (Horizontal)	15°	158°	0.1 m	1x1	93	186	80.0 kW
Field Segment 6	East-West	Landscape (Horizontal)	15°	158°	0.1 m	1x1	122	244	104.9 kW
Field Segment 7	East-West	Landscape (Horizontal)	15°	159.44395°	0.1 m	1x1	64	128	55.0 kW
Field Segment 8	East-West	Landscape (Horizontal)	15°	158°	0.1 m	1x1	64	128	55.0 kW
Field Segment 9	East-West	Landscape (Horizontal)	15°	158°	0.1 m	1x1	68	136	58.5 kW
Field Segment 10	East-West	Landscape (Horizontal)	15°	158°	0.1 m	1x1	64	128	55.0 kW
Field Segment 11	East-West	Landscape (Horizontal)	15°	158°	0.1 m	1x1	64	128	55.0 kW
Field Segment 12	East-West	Landscape (Horizontal)	15°	157°	0.1 m	1x1	32	64	27.5 kW

Detailed Layout