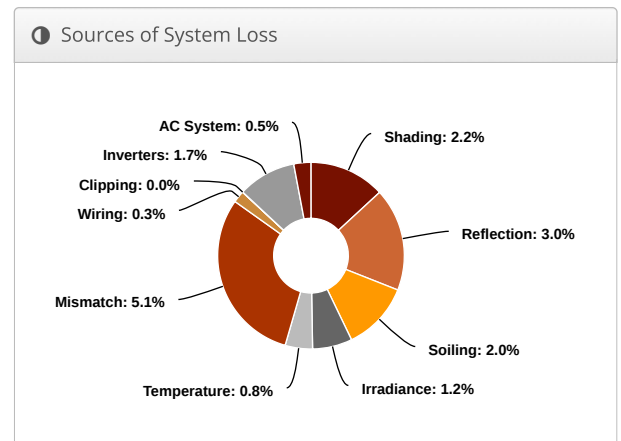
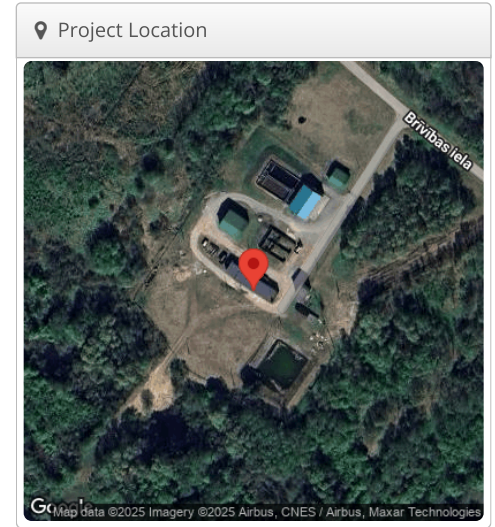


Attīrīšanas iekārtas Vizualizācija un saražotās enerģijas atskaite, Brīvības iela 35, Rūjiena, Valmieras novads, LV-4240

Report	
Project Name	Vizualizācija un saražotās enerģijas atskaite
Project Address	Brīvības iela 35, Rūjiena, Valmieras novads, LV-4240
Prepared By	

System Metrics	
Design	Attīrīšanas iekārtas
Module DC Nameplate	35.6 kW
Inverter AC Nameplate	33.0 kW Load Ratio: 1.08
Annual Production	36.28 MWh
Performance Ratio	84.3%
kWh/kWp	1,018.0
Weather Dataset	TMY, 10km Grid, Meteonorm 8 (meteonorm_v8)
Simulator Version	1ebd520c57-db3780a9a6-22fbeaa821-c44d35a0f2



⚡ Annual Production			
	Description	Output	% Delta
Irradiance (kWh/m ²)	Annual Global Horizontal Irradiance	982.6	
	POA Irradiance	1,207.1	22.9%
	Shaded Irradiance	1,180.4	-2.2%
	Irradiance after Reflection	1,144.9	-3.0%
	Irradiance after Soiling	1,122.0	-2.0%
	Total Collector Irradiance	1,122.0	0.0%
Energy (kWh)	Nameplate	40,015.9	
	Output at Irradiance Levels	39,552.0	-1.2%
	Output at Cell Temperature Derate	39,235.6	-0.8%
	Output After Mismatch	37,226.4	-5.1%
	Optimal DC Output	37,098.0	-0.3%
	Constrained DC Output	37,095.2	0.0%
	Inverter Output	36,464.5	-1.7%
		Energy to Grid	36,282.2
Temperature Metrics			
	Avg. Operating Ambient Temp		9.8 °C
	Avg. Operating Cell Temp		16.3 °C
Simulation Metrics			
	Operating Hours		4624
	Solved Hours		4624

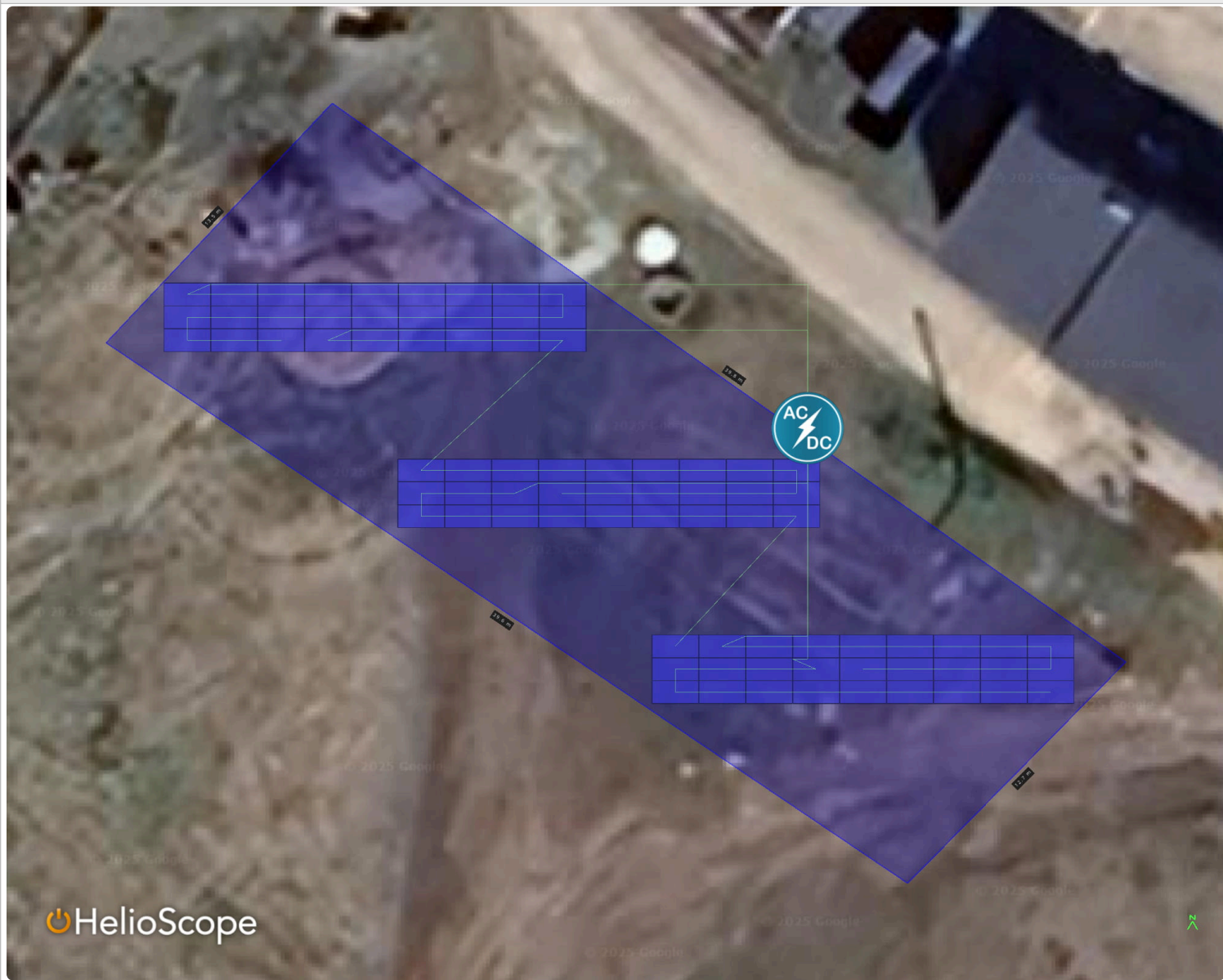
☁ Condition Set												
Description	Condition Set 1											
Weather Dataset	TMY, 10km Grid, Meteonorm 8 (meteonorm_v8)											
Solar Angle Location	Meteo Lat/Lng											
Transposition Model	Perez Model											
Temperature Model	Sandia Model											
Temperature Model Parameters	Rack 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								
	SP440-N108M10 (Sunpro power)	HelioScope		Spec Sheet Characterization, PAN								
Component Characterizations	Device	Uploaded By		Characterization								
	Solis-33K-5G (Solis)	HelioScope		Spec Sheet								

📦 Components		
Component	Name	Count
Inverters	Solis-33K-5G (Solis)	1 (33.0 kW)
Strings	6 mm2 (Copper)	5 (190.1 m)
Module	Sunpro power, SP440-N108M10 81 (440W)	35.6 (35.6 kW)

🔌 Wiring Zones			
Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	-	6-23	Along Racking

🏠 Field Segments									
Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	Fixed Tilt	Landscape (Horizontal)	Module: 35°	Module: 180°	4.4 m	3x1	27	81	35.6 kW

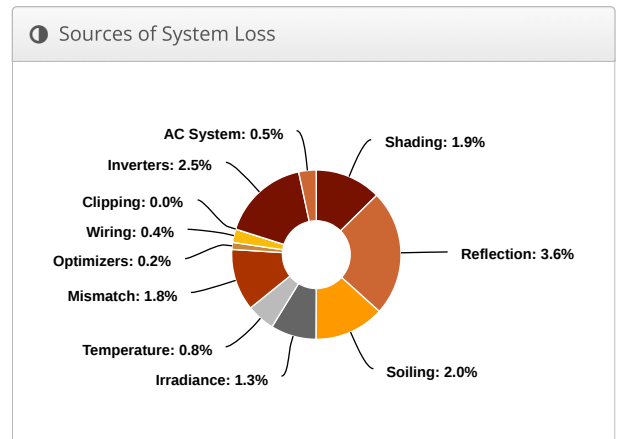
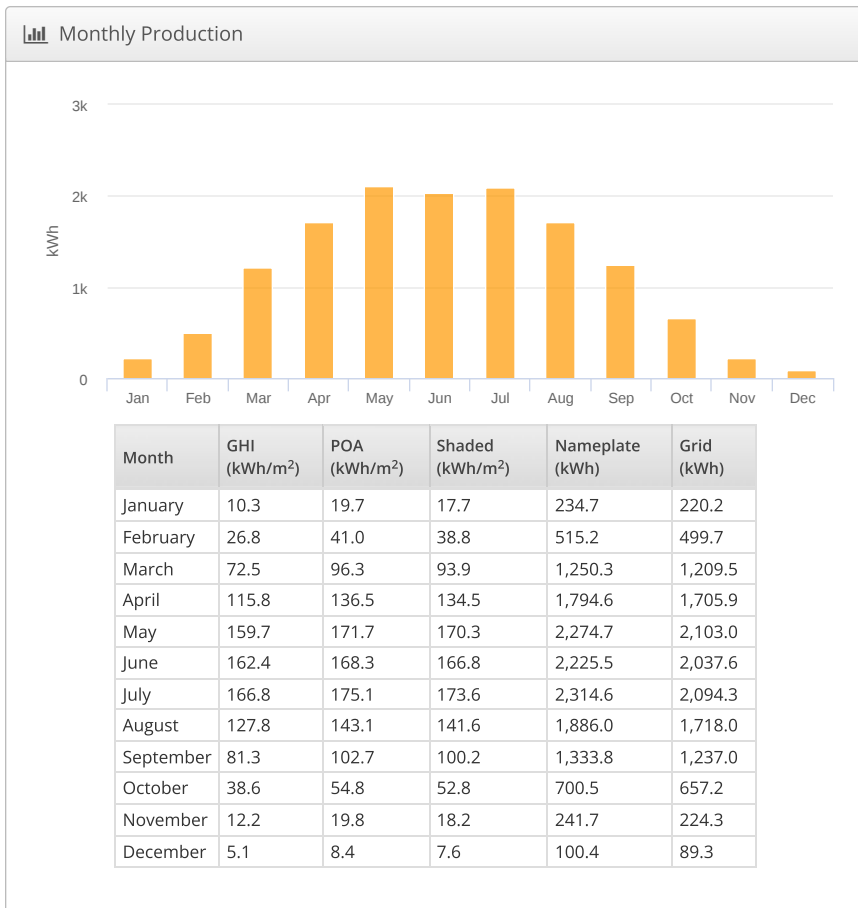
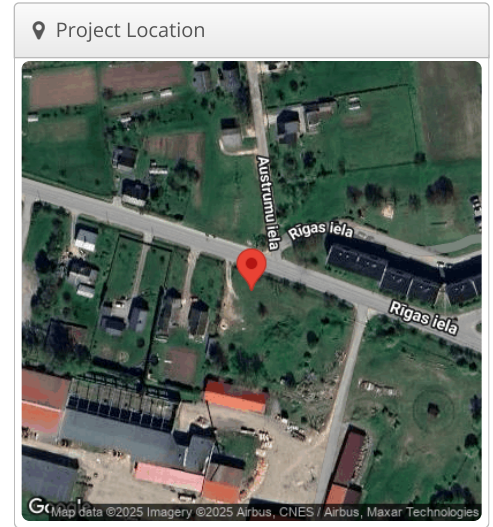
Detailed Layout2



Vizualizācija un saražotās enerģijas atskaite Ūdens sagatavošanas stacija Rīgas 30, Rūjiena, Rīgas iela 30, Rūjiena

Report	
Project Name	Ūdens sagatavošanas stacija Rīgas 30, Rūjiena
Project Description	Saules elektrostacijas izbūve uz ēkas jumta
Project Address	Rīgas iela 30, Rūjiena
Prepared By	

System Metrics	
Design	Vizualizācija un saražotās enerģijas atskaite
Module DC Nameplate	14.1 kW
Inverter AC Nameplate	15.0 kW Load Ratio: 0.94
Annual Production	13.80 MWh
Performance Ratio	86.1%
kWh/kWp	979.8
Weather Dataset	TMY, 10km Grid, Meteonorm 8 (meteonorm_v8)
Simulator Version	1ebd520c57-db3780a9a6-22fbeaa821-c44d35a0f2



⚡ Annual Production			
	Description	Output	% Delta
Irradiance (kWh/m ²)	Annual Global Horizontal Irradiance	979.4	
	POA Irradiance	1,137.5	16.1%
	Shaded Irradiance	1,116.1	-1.9%
	Irradiance after Reflection	1,076.1	-3.6%
	Irradiance after Soiling	1,054.5	-2.0%
	Total Collector Irradiance	1,055.4	0.1%
Energy (kWh)	Nameplate	14,872.0	
	Output at Irradiance Levels	14,679.3	-1.3%
	Output at Cell Temperature Derate	14,560.6	-0.8%
	Output After Mismatch	14,304.0	-1.8%
	Optimizer Output	14,275.3	-0.2%
	Optimal DC Output	14,221.0	-0.4%
	Constrained DC Output	14,220.9	0.0%
	Inverter Output	13,865.4	-2.5%
		Energy to Grid	13,796.0
Temperature Metrics			
	Avg. Operating Ambient Temp		10.0 °C
	Avg. Operating Cell Temp		16.0 °C
Simulation Metrics			
	Operating Hours		4618
	Solved Hours		4618

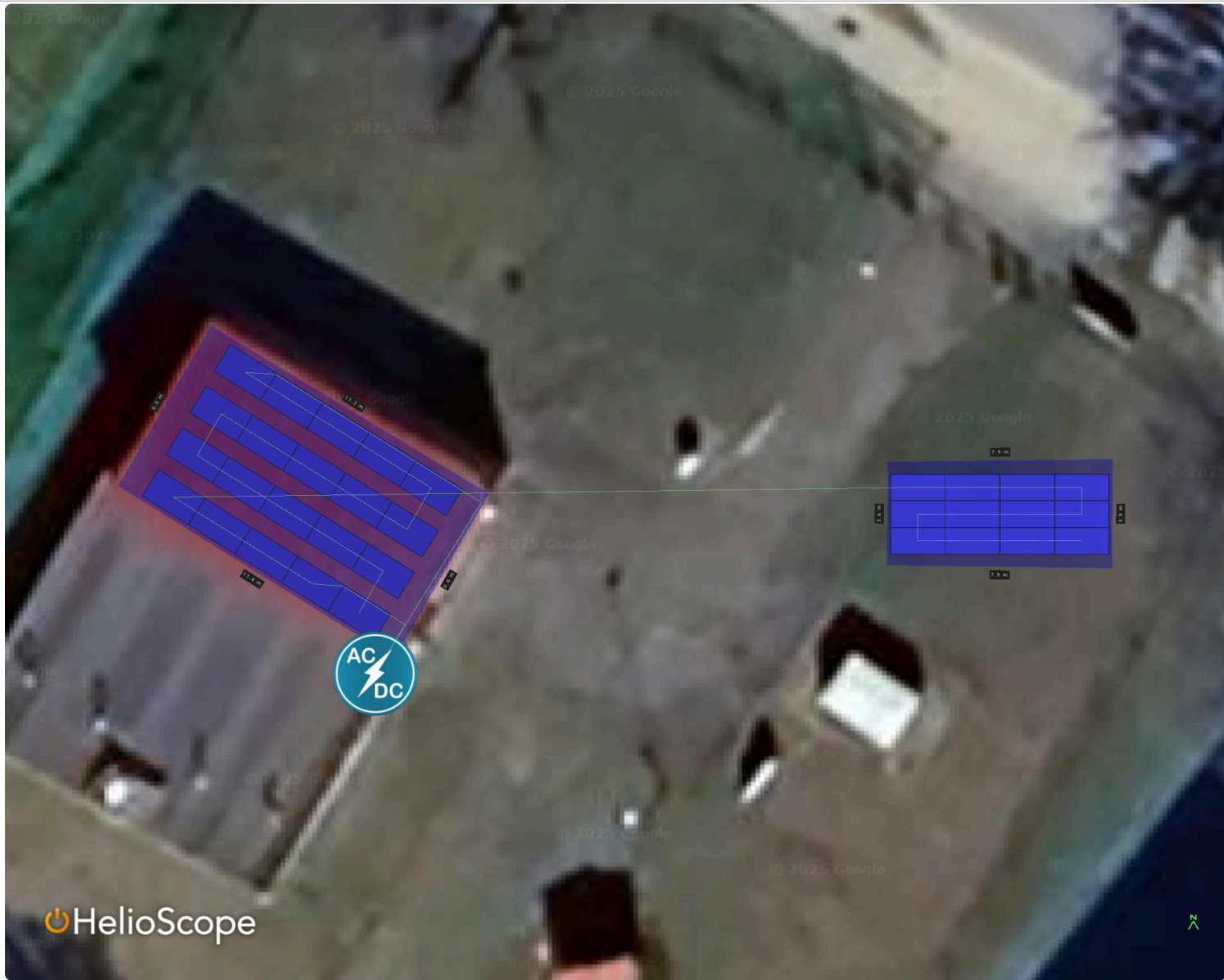
☁ Condition Set												
Description	Condition Set 1											
Weather Dataset	TMY, 10km Grid, Meteonorm 8 (meteonorm_v8)											
Solar Angle Location	Meteo Lat/Lng											
Transposition Model	Perez Model											
Temperature Model	Sandia Model											
Temperature Model Parameters	Rack 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								
	SPDG440-N108M10 (Sunpro power)	HelioScope		Spec Sheet Characterization, PAN								
Component Characterizations	Device	Uploaded By		Characterization								
	Solis-S5-GR3P15-K (Ginlong Technologies)	HelioScope		Manufacturer								
	TS4-A-O (500W) (Tigo Energy)	HelioScope		Spec Sheet								

📦 Components		
Component	Name	Count
Inverters	Solis S5-GR3P15-K (Ginlong Technologies)	1 (15.0 kW)
Strings	6 mm2 (Copper)	2 (48.1 m)
Optimizers	TS4-A-O (500W) (Tigo Energy)	32 (16.0 kW)
Module	Sunpro power, SPDG440-N108M10(440W)	32 (14.1 kW)

🔌 Wiring Zones			
Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	-	6-21	Along Racking

🏗 Field Segments									
Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 2 (copy)	Fixed Tilt	Landscape (Horizontal)	Module: 35°	Module: 180°	0.0 m	3x1	4	12	5.28 kW
Field Segment 2	Fixed Tilt	Landscape (Horizontal)	Module: 15°	Module: 211.9056°	0.6 m	1x1	20	20	8.80 kW

Detailed Layout2

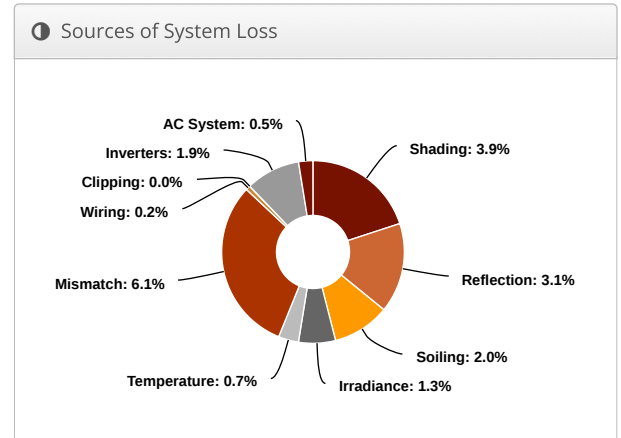
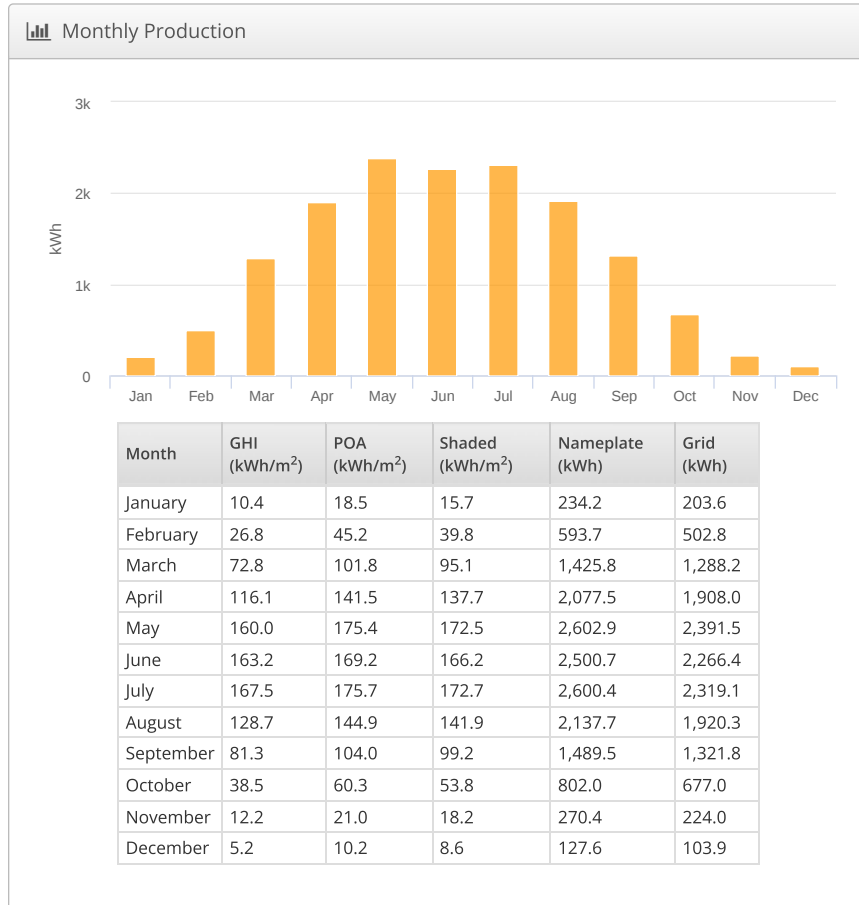
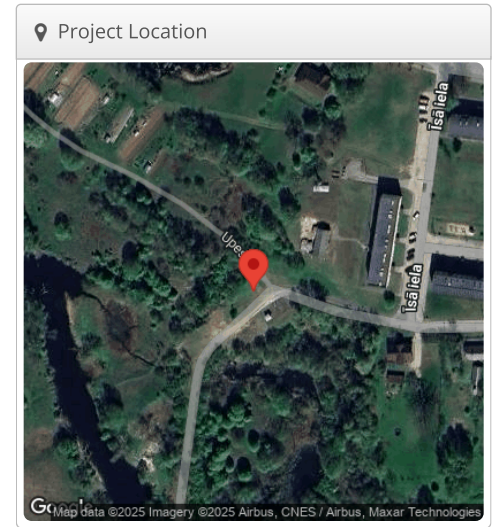


Upes iela 23, Rūjiena, Rūjienas pilsēta, Valmieras novads, LV-4240

Kanalizācijas sūkņu stacija Upes 23, Rūjiena, MWh, Upes iela 23, Rūjiena, Rūjienas pilsēta, Valmieras novads, LV-4240

Report	
Project Name	Kanalizācijas sūkņu stacija Upes 23, Rūjiena, MWh
Project Address	Upes iela 23, Rūjiena, Rūjienas pilsēta, Valmieras novads, LV-4240
Prepared By	

System Metrics	
Design	Upes iela 23, Rūjiena, Rūjienas pilsēta, Valmieras novads, LV-4240
Module DC Nameplate	15.8 kW
Inverter AC Nameplate	15.0 kW Load Ratio: 1.06
Annual Production	15.13 MWh
Performance Ratio	81.8%
kWh/kWp	955.0
Weather Dataset	TMY, 10km Grid, Meteonorm 8 (meteonorm_v8)
Simulator Version	1ebd520c57-db3780a9a6-22fbeaa821-c44d35a0f2



⚡ Annual Production			
	Description	Output	% Delta
Irradiance (kWh/m ²)	Annual Global Horizontal Irradiance	982.6	
	POA Irradiance	1,167.5	18.8%
	Shaded Irradiance	1,121.6	-3.9%
	Irradiance after Reflection	1,086.4	-3.1%
	Irradiance after Soiling	1,064.7	-2.0%
	Total Collector Irradiance	1,063.9	-0.1%
Energy (kWh)	Nameplate	16,862.5	
	Output at Irradiance Levels	16,645.3	-1.3%
	Output at Cell Temperature Derate	16,528.2	-0.7%
	Output After Mismatch	15,522.3	-6.1%
	Optimal DC Output	15,497.9	-0.2%
	Constrained DC Output	15,497.2	0.0%
	Inverter Output	15,202.7	-1.9%
	Energy to Grid	15,126.7	-0.5%
Temperature Metrics			
	Avg. Operating Ambient Temp		9.8 °C
	Avg. Operating Cell Temp		16.0 °C
Simulation Metrics			
	Operating Hours	4624	
	Solved Hours	4624	

☁ Condition Set												
Description	Condition Set 1											
Weather Dataset	TMY, 10km Grid, Meteororm 8 (meteororm_v8)											
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									
	SP440-N108M10 (Sunpro power)	HelioScope	Spec Sheet Characterization, PAN									
Component Characterizations	Device	Uploaded By	Characterization									
	Solis-S5-GR3P-15K (Solis)	HelioScope	Spec Sheet									

📦 Components		
Component	Name	Count
Inverters	Solis-S5-GR3P-15K (Solis)	1 (15.0 kW)
Strings	6 mm2 (Copper)	2 (20.8 m)
Module	Sunpro power, SP440-N108M10(440W)	36 (15.8 kW)

🔌 Wiring Zones			
Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	-	5-21	Along Racking

🏠 Field Segments										
Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power	
Field Segment 1	Fixed Tilt	Portrait (Vertical)	Module: 35°	Module: 147.56085°	4.0 m	2x1	18	36	15.8 kW	

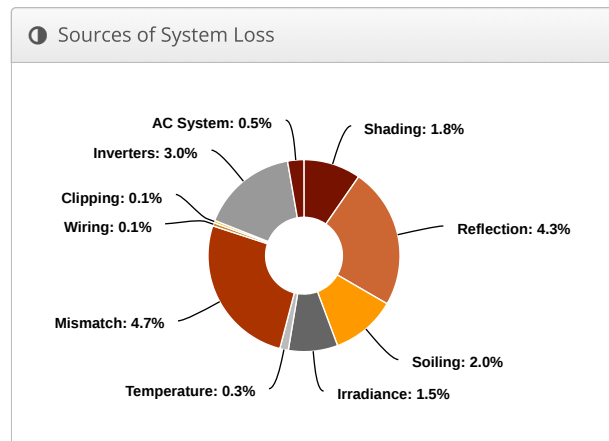
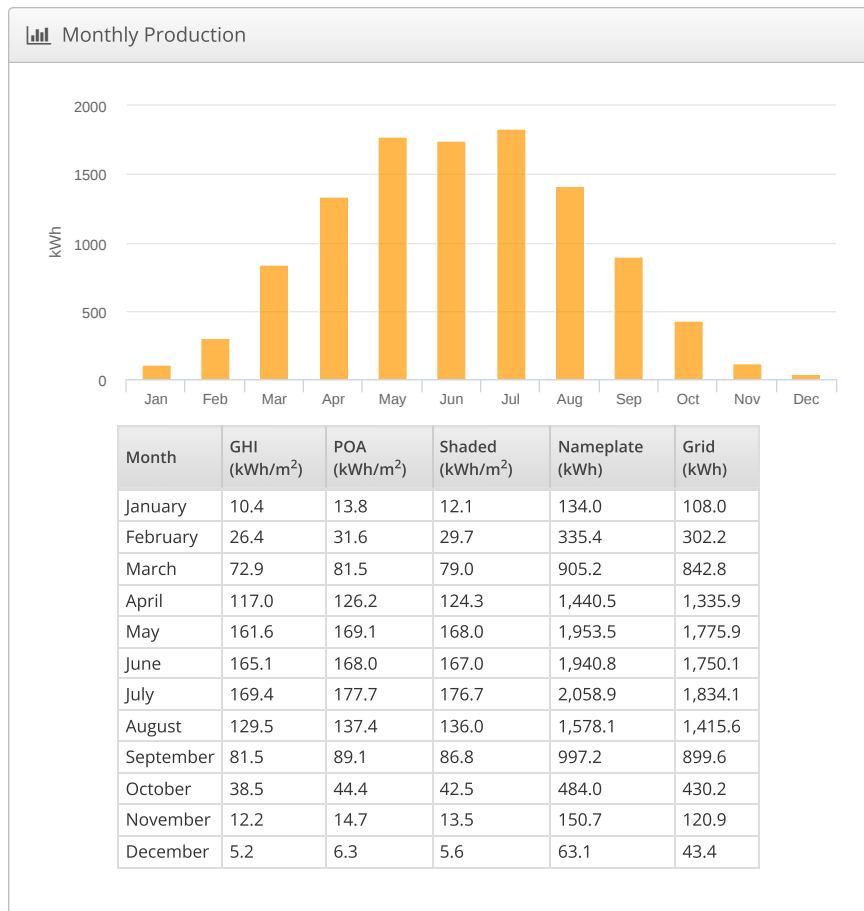
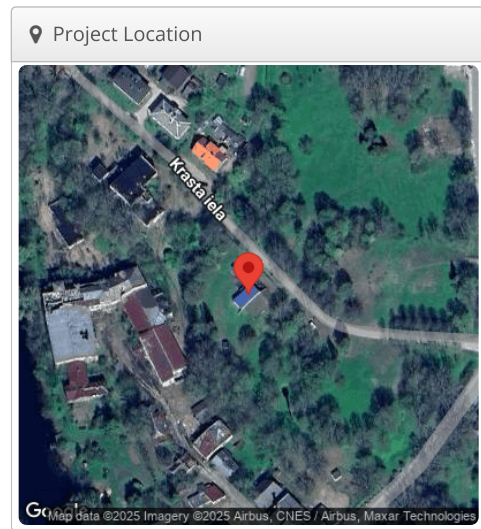
Detailed Layout2



Design 1 Saules elektrostacijas izbūve, Krasta iela 4, Mazsalaca, Mazsalacas pilsēta, Valmieras novads, LV-4215

Report	
Project Name	Saules elektrostacijas izbūve
Project Address	Krasta iela 4, Mazsalaca, Mazsalacas pilsēta, Valmieras novads, LV-4215
Prepared By	

System Metrics	
Design	Design 1
Module DC Nameplate	12.3 kW
Inverter AC Nameplate	10.00 kW Load Ratio: 1.23
Annual Production	10.86 MWh
Performance Ratio	83.2%
kWh/kWp	881.4
Weather Dataset	TMY, 10km Grid, Meteonorm 8 (meteonorm_v8)
Simulator Version	2d8f300c7d-56333c11e8-71a874582a-b41f1c68d0



⚡ Annual Production			
	Description	Output	% Delta
Irradiance (kWh/m ²)	Annual Global Horizontal Irradiance	989.7	
	POA Irradiance	1,059.7	7.1%
	Shaded Irradiance	1,041.1	-1.8%
	Irradiance after Reflection	996.0	-4.3%
	Irradiance after Soiling	976.1	-2.0%
	Total Collector Irradiance	976.3	0.0%
Energy (kWh)	Nameplate	12,041.5	
	Output at Irradiance Levels	11,858.8	-1.5%
	Output at Cell Temperature Derate	11,827.9	-0.3%
	Output After Mismatch	11,267.2	-4.7%
	Optimal DC Output	11,255.6	-0.1%
	Constrained DC Output	11,247.3	-0.1%
	Inverter Output	10,913.4	-3.0%
	Energy to Grid	10,858.8	-0.5%
Temperature Metrics			
	Avg. Operating Ambient Temp		9.8 °C
	Avg. Operating Cell Temp		15.4 °C
Simulation Metrics			
	Operating Hours	4626	
	Solved Hours	4626	

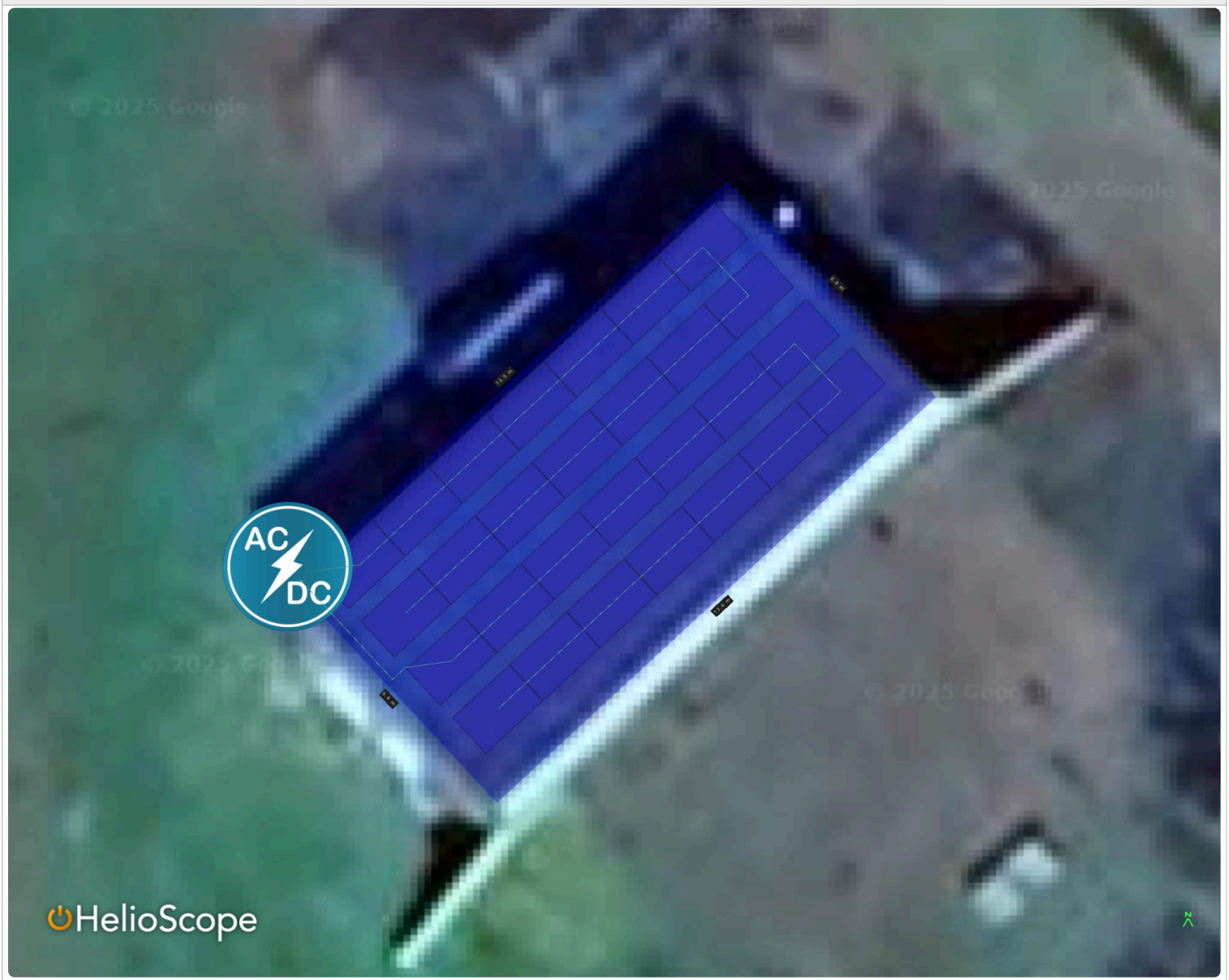
☁ Condition Set												
Description	Condition Set 1											
Weather Dataset	TMY, 10km Grid, Meteororm 8 (meteororm_v8)											
Solar Angle Location	Meteo Lat/Lng											
Transposition Model	Perez Model											
Temperature Model	Sandia Model											
Temperature Model Parameters	Rack 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							
	Sunpro power SDG-440-N108M10 (440)		HelioScope		Spec Sheet Characterization, PAN							
Component Characterizations	Device		Uploaded By		Characterization							
	Solis-S5-GR3P10K (Ginlong Technologies)		HelioScope		Default Characterization							

📦 Components		
Component	Name	Count
Inverters	Solis-S5-GR3P10K (Ginlong Technologies)	1 (10.00 kW)
Strings	6 mm2 (Copper)	2 (9.7 m)
Module	Sunpro power SDG-440-N108M10 (440W)	28 (12.3 kW)

🔌 Wiring Zones			
Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	-	5-17	Along Racking

🏠 Field Segments									
Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	Fixed Tilt	Landscape (Horizontal)	Module: 10°	Module: 137.21204°	0.4 m	1x1	28	28	12.3 kW

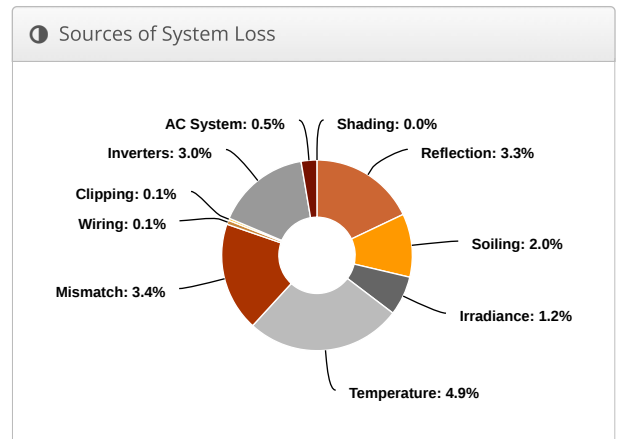
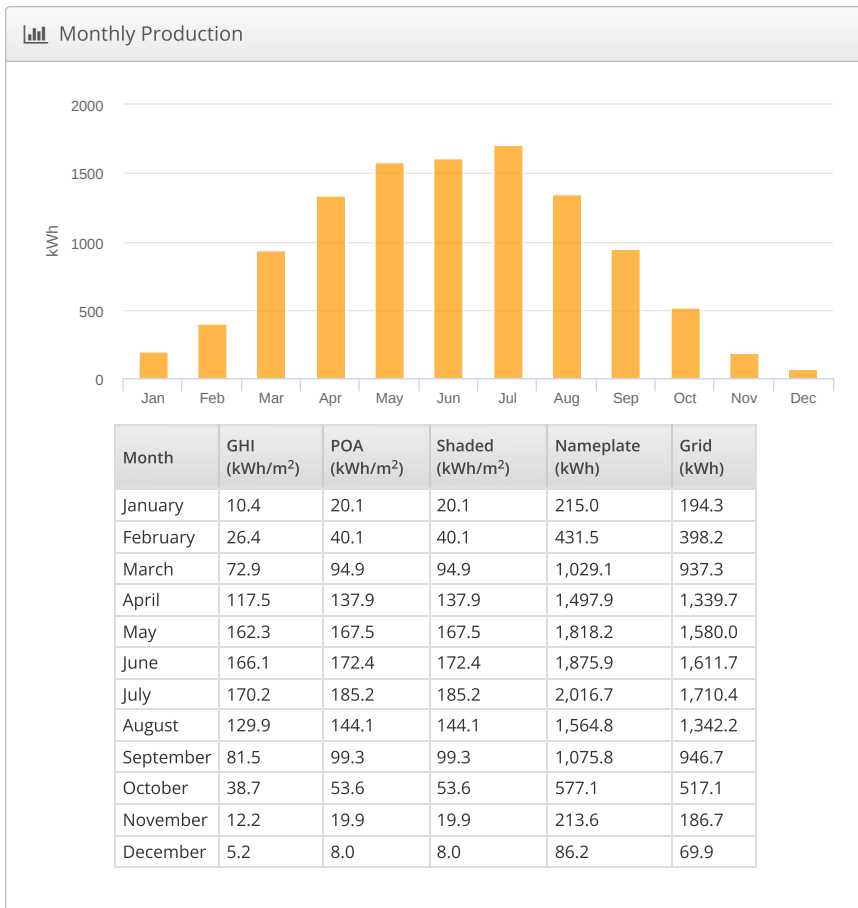
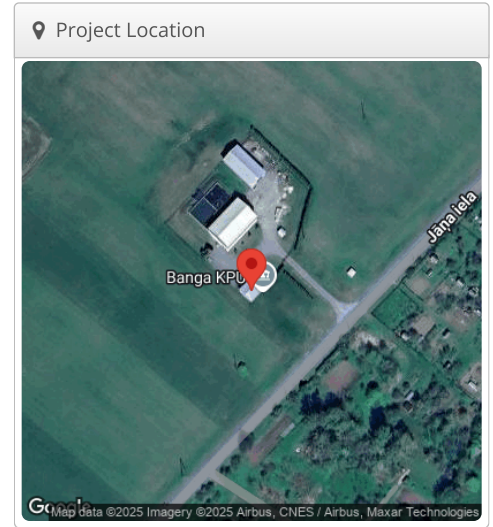
Detailed Layout2



Valmieras novads, Mazsalacas pagasts, "Attīrīšanas", LV-4215 Saules elektrostacijas izbūve, 57.86622544405789, 25.04173600077377

Report	
Project Name	Saules elektrostacijas izbūve
Project Address	57.86622544405789, 25.04173600077377
Prepared By	

System Metrics	
Design	Valmieras novads, Mazsalacas pagasts, "Attīrīšanas", LV-4215
Module DC Nameplate	11.4 kW
Inverter AC Nameplate	10.00 kW Load Ratio: 1.14
Annual Production	10.83 MWh
Performance Ratio	82.9%
kWh/kWp	947.1
Weather Dataset	TMY, 10km Grid, Meteonorm 8 (meteonorm_v8)
Simulator Version	2d8f300c7d-56333c11e8-71a874582a-b41f1c68d0



⚡ Annual Production			
	Description	Output	% Delta
Irradiance (kWh/m ²)	Annual Global Horizontal Irradiance	993.2	
	POA Irradiance	1,143.1	15.1%
	Shaded Irradiance	1,143.1	0.0%
	Irradiance after Reflection	1,104.9	-3.3%
	Irradiance after Soiling	1,082.8	-2.0%
	Total Collector Irradiance	1,082.8	0.0%
Energy (kWh)	Nameplate	12,401.9	
	Output at Irradiance Levels	12,247.8	-1.2%
	Output at Cell Temperature Derate	11,645.3	-4.9%
	Output After Mismatch	11,244.1	-3.4%
	Optimal DC Output	11,229.4	-0.1%
	Constrained DC Output	11,221.8	-0.1%
	Inverter Output	10,888.7	-3.0%
		Energy to Grid	10,834.3
Temperature Metrics			
	Avg. Operating Ambient Temp		9.9 °C
	Avg. Operating Cell Temp		22.4 °C
Simulation Metrics			
	Operating Hours		4629
	Solved Hours		4629

☁ Condition Set												
Description	Condition Set 1											
Weather Dataset	TMY, 10km Grid, Meteororm 8 (meteororm_v8)											
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							
	Sunpro power SDG 440-N108M10 (440w)	HelioScope			Spec Sheet Characterization, PAN							
Component Characterizations	Device	Uploaded By			Characterization							
	Solis-S5-GR3P10K (Ginlong Technologies)	HelioScope			Default Characterization							

📦 Components		
Component	Name	Count
Inverters	Solis-S5-GR3P10K (Ginlong Technologies)	1 (10.00 kW)
Strings	6 mm2 (Copper)	2 (38.7 m)
Module	Sunpro power SDG440-N108M10 (440W)	26 (11.4 kW)

🔌 Wiring Zones			
Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	-	5-17	Along Racking

🏗 Field Segments									
Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 2	Flush Mount	Portrait (Vertical)	35°	133.4684°	0.0 m	2x1	13	26	11.4 kW

Detailed Layout2

