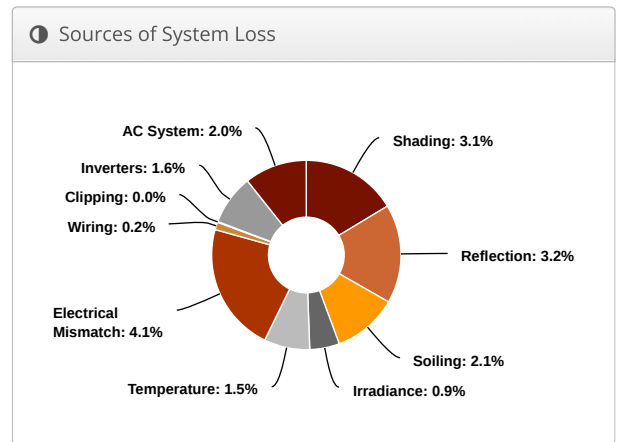
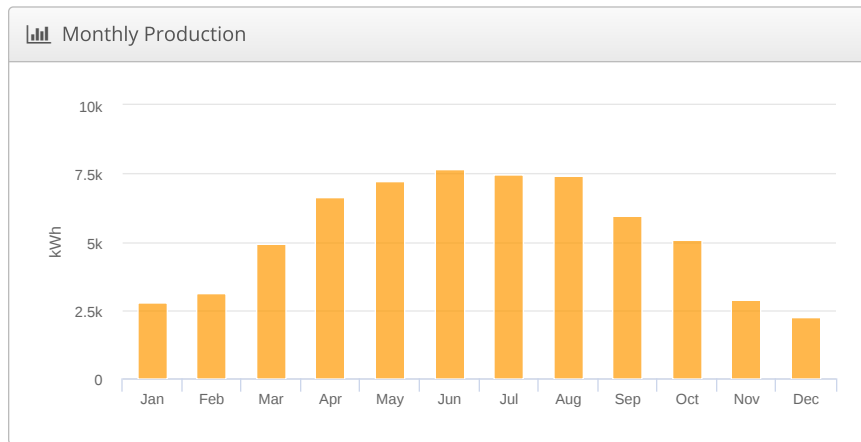
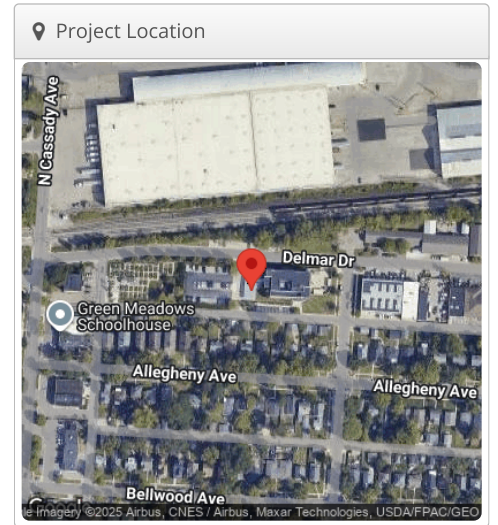


# Canopy\_Site#2 City of Bexley PD, 559 N. Cassingham Rd

Report	
Project Name	City of Bexley PD
Project Address	559 N. Cassingham Rd
Prepared By	Justin Ehren jehren@melinksolar.com

System Metrics	
Design	Canopy_Site#2
Module DC Nameplate	51.33 kW
Inverter AC Nameplate	50.00 kW Load Ratio: 1.03
Annual Production	63.36 MWh
Performance Ratio	82.8%
kWh/kWp	1,234.4
Weather Dataset	TMY, COLUMBUS, NSRDB (tmy2)
Simulator Version	bf5cff529e-4ab72af116-951c70f68a-1a24cee528



⚡ Annual Production			
	Description	Output	% Delta
Irradiance (kWh/m²)	Annual Global Horizontal Irradiance	1,402.7	
	POA Irradiance	1,491.6	6.3%
	Shaded Irradiance	1,445.9	-3.1%
	Irradiance after Reflection	1,400.2	-3.2%
	Irradiance after Soiling	1,371.1	-2.1%
	Total Collector Irradiance	1,371.3	0.0%
Energy (kWh)	Nameplate	70,407.7	
	Output at Irradiance Levels	69,739.3	-0.9%
	Output at Cell Temperature Derate	68,720.1	-1.5%
	Output after Electrical Mismatch	65,879.7	-4.1%
	Optimal DC Output	65,721.5	-0.2%
	Constrained DC Output	65,705.1	0.0%
	Inverter Output	64,653.8	-1.6%
	Energy to Grid	63,360.7	-2.0%
Temperature Metrics			
Avg. Operating Ambient Temp		13.8 °C	
Avg. Operating Cell Temp		20.6 °C	
Simulation Metrics			
Operating Hours		4723	
Solved Hours		4723	

☁ Condition Set												
Description	DNV - 7deg											
Weather Dataset	TMY, COLUMBUS, NSRDB (tmy2)											
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
	9	8	4	1	1	1	1	1	1	1	1	5
Albedo	J	F	M	A	M	J	J	A	S	O	N	D
	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Rear Mismatch Loss	10%				Rear Shading Factor				5%			
Module Transparency	0%											
Irradiation Variance	5%											
Cell Temperature Spread	4° C											
Module Binning Range	-3% to 3%											
AC System Derate	2.00%											
Trackers	Maximum Angle						Backtracking					
	60°						Enabled					
Module & Component Characterizations	Type	Component					Characterization					Bifacial
	Module	VSUN590N-144BMH-DG (VSUN)					Spec Sheet Characterization, PAN					False
	Inverter	CPS SCA50KTL-DO/480 (Chint)					Spec Sheet					N/A

Components		
Component	Name	Count
Inverters	CPS SCA50KTL-DO/480 (Chint)	1 (50.00 kW)
Strings	10 AWG (Copper)	5 (720.6 ft)
Module	VSUN, VSUN590N-144BMH-DG (590W)	87 (51.33 kW)

Wiring Zones			
Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	-	13-19	Along Racking

Field Segments									
Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	Carport	Portrait (Vertical)	10°	183.74219°	0.0 ft	3x1	29	87	51.33 kW

Detailed Layout2

