
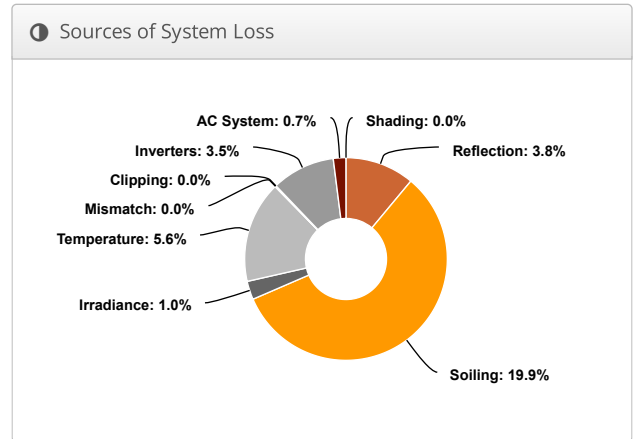
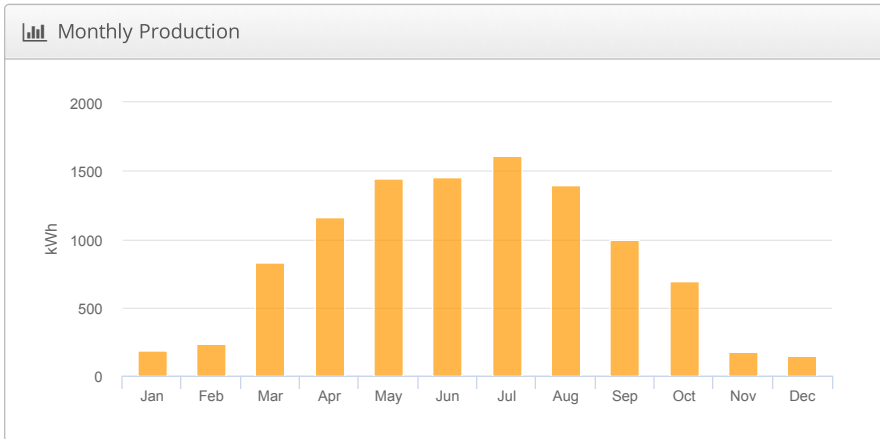
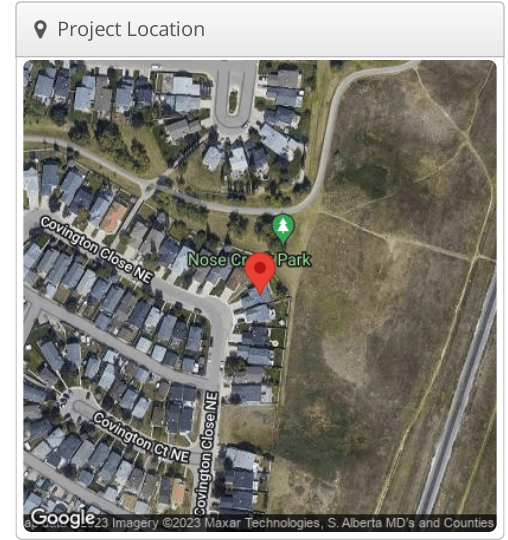


Design 1 Demo System, Demo Location

Report	
Project Name	Demo System
Project Address	Demo Location
Prepared For	Demo Customer
Prepared By	Solar Online jon@solaronline.ca



System Metrics	
Design	Design 1
Module DC Nameplate	9.10 kW
Inverter AC Nameplate	7.68 kW Load Ratio: 1.18
Annual Production	10.31 MWh
Performance Ratio	69.0%
kWh/kWp	1,133.0
Weather Dataset	TMY, Calgary Int'l, WYEC2-B-25110 (epw)
Simulator Version	f6271901a8-bae84a2786-5a9ecbb03a-b3f44c48f4



⚡ Annual Production			
	Description	Output	% Delta
Irradiance (kWh/m ²)	Annual Global Horizontal Irradiance	1,381.6	
	POA Irradiance	1,642.0	18.9%
	Shaded Irradiance	1,642.0	0.0%
	Irradiance after Reflection	1,579.2	-3.8%
	Irradiance after Soiling	1,265.4	-19.9%
	Total Collector Irradiance	1,265.4	0.0%
Energy (kWh)	Nameplate	11,523.9	
	Output at Irradiance Levels	11,406.5	-1.0%
	Output at Cell Temperature Derate	10,766.8	-5.6%
	Output After Mismatch	10,761.6	0.0%
	Optimal DC Output	10,761.6	0.0%
	Constrained DC Output	10,759.5	0.0%
	Inverter Output	10,382.6	-3.5%
	Energy to Grid	10,310.4	-0.7%
	Temperature Metrics		
	Avg. Operating Ambient Temp		8.2 °C
	Avg. Operating Cell Temp		22.1 °C
Simulation Metrics			
	Operating Hours		4398
	Solved Hours		4398

☁ Condition Set												
Description	Winter Soiling Condition											
Weather Dataset	TMY, Calgary Int'l, WYEC2-B-25110 (epw)											
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
	70	70	30	10	2	2	2	2	10	30	70	70
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								
	LR4-72HPH-455M (Longi Solar)	HelioScope		Spec Sheet Characterization, PAN								
Component Characterizations	Device	Uploaded By		Characterization								
	DS3-L (APsystems)	HelioScope		Spec Sheet								

📦 Components		
Component	Name	Count
Inverters	DS3-L (APsystems)	10 (7.68 kW)
AC Panels	2 input AC Panel	1
AC Home Runs	10 AWG (Copper)	1 (60.5 ft)
AC Branches	1000 MCM (Copper)	2 (120.7 ft)
Module	Longi Solar, LR4-72HPH-455M (455W)	20 (9.10 kW)

🔌 Wiring Zones			
Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	-	1-1	Along Racking

🏠 Field Segments									
Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	Flush Mount	Portrait (Vertical)	18.4°	185.52754°	0.0 ft	1x1	20	20	9.10 kW

Detailed Layout

