

330s North & South Taylor McCarthy, [REDACTED]

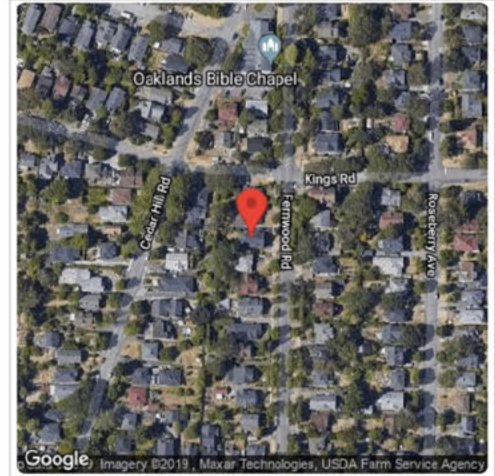
Report

Project Name	Taylor McCarthy
Project Description	Net zero reno
Project Address	[REDACTED]
Prepared By	Viridian Energy info@vecoop.ca

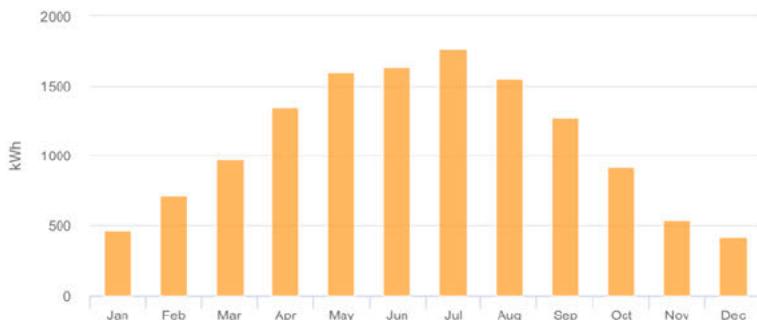
System Metrics

Design	330s North & South
Module DC Nameplate	13.5 kW
Inverter AC Nameplate	14.4 kW Load Ratio: 0.94
Annual Production	13.20 MWh
Performance Ratio	77.8%
kWh/kWp	975.8
Weather Dataset	TMY, 10km Grid, meteonorm (meteonorm)
Simulator Version	569f0d6f75-e0a274bdb6-95c0355d66-42cb0d9799

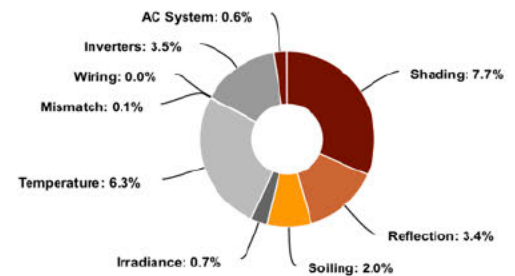
Project Location



Monthly Production



Sources of System Loss



Annual Production

	Description	Output	% Delta
Irradiance (kWh/m²)	Annual Global Horizontal Irradiance	1,143.3	
	POA Irradiance	1,254.9	9.8%
	Shaded Irradiance	1,158.1	-7.7%
	Irradiance after Reflection	1,118.8	-3.4%
	Irradiance after Soiling	1,096.5	-2.0%
	Total Collector Irradiance	1,094.5	-0.2%
Energy (kWh)	Nameplate	14,815.0	
	Output at Irradiance Levels	14,706.7	-0.7%
	Output at Cell Temperature Derate	13,774.0	-6.3%
	Output After Mismatch	13,765.2	-0.1%
	Optimal DC Output	13,765.2	0.0%
	Constrained DC Output	13,767.9	0.0%
	Inverter Output	13,283.4	-3.5%
	Energy to Grid	13,202.5	-0.6%
Temperature Metrics			
	Avg. Operating Ambient Temp		12.8 °C
	Avg. Operating Cell Temp		25.3 °C
Simulation Metrics			
	Operating Hours	4582	
	Solved Hours	4582	

Condition Set

Description	Condition Set 1											
Weather Dataset	TMY, 10km Grid, meteonorm (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								
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						Characterization					
	LG330N1C-A5_Rev003 (LG Electronics)						LG330N1C-A5_Rev003.pan, PAN					
Component Characterizations	Device						Characterization					
	QS1200 (APsystems)						Spec Sheet					

Detailed Layout



Components

Component	Name	Count
Inverters	QS1200 (APsystems)	12 (14.4 kW)
AC Branches	8 AWG (Copper)	4 (162.6 ft)
Module	LG Electronics, LG330N1C-A5_Rev003 (330W)	41 (13.5 kW)

Wiring Zones

Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	12	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)	43°	182.064°	0.0 ft	1x1	12	12	3.96 kW
Field Segment 2	Flush Mount	Portrait (Vertical)	43°	182.064°	0.0 ft	1x1	8	8	2.64 kW
Field Segment 3	Flush Mount	Portrait (Vertical)	18.4°	182.064°	0.0 ft	1x1	10	10	3.30 kW
Field Segment 4	Flush Mount	Landscape (Horizontal)	43°	181.773°	0.0 ft	1x1	3	3	990.0 W
Field Segment 5	Flush Mount	Portrait (Vertical)	18°	2.30211°	0.0 ft	1x1	8	8	2.64 kW